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The Effect of Substance Abuse Rehabilitative Programming on Recidivism

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Walden University

2019

Abstract

The Effect of Substance Abuse Rehabilitative Programming on Recidivism

by

Cindy Roberta Whitten

Dissertation Submitted in Partial Fulfillment

Of the Requirements for the Degree of

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Public Policy and Administration – Criminal Justice

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Abstract

Drug addiction is a known cause of recidivism and contributes greatly to inmate populations in prisons in North America. Little, though, is understood at the program level whether substance abuse rehabilitative programs are statistically associated with reductions in recidivism. Using conceptualizations of both punctuated equilibrium and differential association as the foundation, the purpose of this quasi-experimental design was to determine if participation in one moderate intensity program oriented toward the treatment of substance abuse is associated with reductions in recidivism. Secondary data were acquired from department of justice databases to compare a sample of 100 offenders who completed the program against 100 offenders who did not to determine whether there was a statistically significant difference between the groups. Data were analyzed using a t-test. Findings indicated no statistically significant difference between groups, thereby suggesting that program completion does not impact recidivism. Inmates who did not complete the program had, on average, slightly higher rates of recidivism than those inmates who did and the overall 12-month post release recidivism rate was 69.5%. Implications for positive change include recommendations to consider other forms of rehabilitative programming to better serve the needs of offenders and improve re-entry efforts, thereby improving the success of offenders and offering additional protections to communities.

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Chapter 1: Introduction to the Study

Introduction/Research Problem

Rates of recidivism are problematic for adult offenders in Canadian correctional institutions. Researchers have shown that the incarceration rate in Canada is approximately 116 per 100,000, a statistic much higher than other comparable countries including France who incarcerates approximately 90 per 100,000 and Germany who incarcerates approximately 84 per 100,000 (Lynch & Pridemore, 2011). Specifically, incarcerated individuals with substance abuse issues account for the vast majority of recidivists and of overall prison populations (Boyum, Caulkins, & Kleiman, 2011). Similarly, drug-related offenses comprise a substantial proportion of the prison population in many countries, such as the United States of America and Canada alike (Lynch & Pridemore, 2011). This study will specifically address whether participation in a moderate intensity substance abuse program lowers a drug offender's rate of recidivism.

Purpose

The purpose of this quantitative study is to discover if rehabilitative programming during incarceration is effective in lowering drug offenders' rates of recidivism. This study will specifically examine if a moderate intensity substance abuse program had an effect at lowering recidivism. The aim of this study is to address the high rates of incarceration and recidivism within Canadian correctional institutions in the province of Newfoundland and Labrador, especially as it relates to drug offenders as they account for vast majorities of prison populations (Boyum et al., 2011).

Significance

This research will fill a gap in understanding the role that rehabilitative programming has on a drug offender's rate of recidivism. Unlike other studies, this research will specifically examine if a drug offender's rate of reoffending can be lowered effectively through participating in rehabilitative programming which is consistent with the risk-need-responsivity model of intervention. This is of paramount importance given the overrepresentation of drug offenders incarcerated in prisons among the United States and Canada alike (Boyum et al., 2011). Specifically, this study examined whether a moderate intensity substance abuse program for provincial inmates in the province of Newfoundland and Labrador is an effective treatment program to lower a drug offender's rate of recidivism. This study may contribute to the field of criminal justice by highlighting the need for effective rehabilitative initiatives and the best practices for lowering rates of recidivism. Furthermore, this study's results can impact Canada's prison population by indicating ways to address criminogenic risks and need areas throughout incarceration which can subsequently foster reintegration back into the community. This research will therefore provide insight into rehabilitation and recidivism, subsequently adding to the knowledge base of the discipline of criminal justice and therefore playing a pivotal role in evoking positive social change within corrections.

Framework

There are several theoretical frameworks that are applicable to the topic relating to the examination of the effect that rehabilitative programming has on drug offender's recidivism rates; an effective relevant framework is the punctuated-equilibrium theory.

The punctuated-equilibrium theory suggests that policies are often characterized by stability and that change is usually incremental and normally requires great effort or conflict (True, Jones, & Baumgartner, 2007). This theory posits that social systems exist in extended periods of stasis, but can be punctuated by sudden shifts in radical change (True et al., 2007). Revolutionary periods disrupt stability and established patterns, giving way to new equilibrium patterns, thus fostering change (Romanelli & Tushman, 1994). This is applicable to the examination of offender rehabilitation within correctional institutions in an effort to address high rates of recidivism because, historically, American and Canadian corrections favored very punitive responses to criminality which often lacked any therapeutic element (Roth, 2011). Therefore, implementing rehabilitative programming within prisons would be a drastic change in correctional policy, thus showing that criminal justice policy can be understood using the theory of punctuated-equilibrium given that it has remained fairly consistent with punitive measures as opposed to rehabilitation throughout the past few decades (Roth, 2011).

A second theory of which this topic is based upon is the theory of differential association. This theory postulates that criminal behavior is learned by interacting with others and that association with delinquent others is an effective predictor of criminal behavior (Cullen & Agnew, 2011). The theory of differential association posits that it is through interaction with others that individuals learn the values, attitudes, techniques, and motives for criminal behavior (Cullen & Agnew, 2011). This theory suggests that the principle part of the learning of criminal behavior occurs within intimate personal groups and not through impersonal agencies of communication, such as media (Cullen & Agnew, 2011). Furthermore, the theory of differential association posits that a person

becomes delinquent because of an excess of definitions favorable to a violation of the law (Cullen & Agnew, 2011). According to Cullen & Agnew (2011), “when persons become criminal, they do so because of contacts with criminal patterns and also because of isolation from anti-criminal patterns” (p. 127). This theory would therefore help understand that low-risk offenders may likely have an increased risk of recidivism through incarceration given that they interact with delinquent others and criminal behavior may therefore be learned through this interaction. Research indicates that incarceration can be more harmful than effective in terms of lowering a low-risk offender’s rate of recidivism (Andrews et al., 2011) and, as such, the theory of differential association lends itself effectively to this dissertation topic.

Research Questions and Hypotheses

The following main research question will be addressed in this study:

RQ1. Are the rates of recidivism lower for those inmates who have completed the moderate intensity substance abuse program?

RQ2. Are the rates of recidivism higher for those inmates who did not complete the program?

RQ3. What is the difference in means of recidivism rates between the group of inmates who have completed the program and those who did not complete this program?

The independent variable for this study is participation in rehabilitative programming while the dependent variable for this study is rate of recidivism. The null hypothesis of this study is that there is no difference between the mean of the group of inmates who completed the moderate intensity substance abuse program and those who did not complete this program. The alternative hypothesis of this study is that there is a

statistical significance in means between the two groups and that the rate of recidivism was therefore lower for the treatment group of inmates.

Nature of the Study

The purpose of quantitative research is to explain, predict, investigate relationships, describe current conditions, or to examine possible impacts or influences on specific outcomes (Walden University Center for Research Design, 2018s). This study is quantitative in nature and has examined possible impacts that rehabilitative programming that focuses on substance abuse intervention has on drug offenders' rates of recidivism. It is important to note that quantitative research allows the researcher to test numerical data by comparing or finding correlations among population attributes in order to make generalizations of the population (Walden University Center for Research Design, 2018s). This study has consisted of a quasi-experimental, non-equivalent groups design. A non-equivalent groups design is a between-subjects design in which participants have not been randomly assigned to conditions (Millsap & Maydeu-Olivares, 2009). In non-equivalent groups design, one group receives the treatment and the other groups does not; the relative effectiveness of the treatment is assessed by comparing the performances of the participants across the groups (Millsap & Maydeu-Olivares, 2009). Though experimental study designs are often considered the preferred design, they may not be ideal or feasible for both ethical reasons and practical reasons. Quasi-experimental studies are often more realistic in service delivery settings (Millsap & Maydeu-Olivares, 2009), thus allowing this methodology to be very appropriate for this particular study as it relates to rehabilitative program service delivery for incarcerated drug offenders. Quasi-experimental designs do not randomly assign participants into groups, rather pre-

existing groups may be utilized whereby the researcher does have a control and treatment group (Walden University Center for Research Design, 2018s). Pre-existing groups have been used for this study whereby inmates who have completed the moderate intensity substance abuse program will be placed in the treatment group and inmates who have not completed this program will be placed in the control group. As such, the quasi-experimental design has utilized a group of 100 drug offenders who have been subjected to rehabilitative programming and a group of 100 drug offenders who did not participate or complete the program. I will then compare the treatment group to the control group to test the invention's effect on recidivism. Quasi-experimental designs are weaker on internal validity than experimental designs and, as such, researchers must depend on data analysis techniques as a method of control (Frankfort-Nachmias & Nachmias, 1996). The data will therefore be analyzed through the utilization of statistical analysis. Statistical methods are beneficial when examining relationships and patterns and expressing the information with numbers (Rudestam & Newton, 2015). Descriptive statistics will be utilized as descriptive statistics describe patterns of behavior, which in this case will be criminal recidivism (Rudestam & Newton, 2015).

Limitations

It is important to note that there is an inherent problem in measuring recidivism. There is a lack of complete information on crimes committed and who committed each crime; recidivism data are based on crimes that are reported to the police and research shows that there is a dark figure of crime (Spohn & Holleran, 2002). The term *dark figure of crime* was first used by the Belgian mathematician and sociologist Adolphe Quetelet in 1832 and continues to be a problematic concept for obtaining accurate criminality

statistics (Penney, 2014). The dark figure of crime is crime that is neither reported nor recorded by law enforcement agencies; the dark figure includes criminal incidents/occurrences that meet the definition of recordable crime that are not recorded in official statistics (Penney, 2014). Because not all crimes are reported to the police and not all reported crimes result in arrest, recidivism data are not necessarily complete (Spohn & Holleran, 2002). As such, this study will be limited as to the accuracy of the rates of recidivism for those inmates who completed the program and those inmates who did not complete the program. For the purpose of this study, recidivism will refer to an arrest 12 months post-release from prison.

This chapter has outlined the problem of recidivism as it relates to adult offenders, namely those with substance abuse concerns. Specifically, this chapter explained that this study will examine if a moderate intensity substance abuse program had an effect at lowering recidivism. The aim of this study is to address the high rates of incarceration and recidivism within Canadian correctional institutions in the province of Newfoundland and Labrador, especially as it relates to drug offenders as they account for vast majorities of prison populations (Boyum et al., 2011). In order to more fully understand the research problem identified in chapter one, a thorough literature review was conducted. The literature review encompassed within Chapter 2 helps illustrate the originality of this specific study and the identified research gap which this study addresses effectively.

Chapter 2: Literature Review

Introduction

This chapter includes a thorough literature review which illustrates how this specific study will address a prevalent gap in the research pertaining to the rehabilitation of adult offenders with substance abuse concerns. This chapter also provides context which facilitates an understanding of what constitutes effective rehabilitation for drug offenders and the best practices for fostering offender rehabilitation and reintegration. Also encompassed within this chapter is an explanation of the framework which provided a strong research base and support for this specific study. Both the punctuated-equilibrium theory and the theory of differential association help to conceptualize this study's research problem and understand it from different perspectives (Walden University, n.d.). Finally, this chapter outlines explicit limitations inherent in measuring recidivism and provides definitions of recidivism which are specific to this study.

Literature Review

Rates of recidivism are problematic for adult offenders in Canadian correctional institutions. Much of the prison population in both the United States and Canada alike is attributed to drug-related crimes and drug-related disorders among the incarcerated (Zanis, Coviello, Lloyd, & Nazar, 2009). Studies show that the incarceration rate in Canada is approximately 116 per 100,000 (Lynch & Pridemore, 2011); specifically, incarcerated individuals with substance abuse issues account for the vast majority of recidivists and of overall prison populations (Boyum, Caulkins, & Kleiman, 2011). Similarly, drug related offences comprise a substantial proportion of the prison population in many countries, such as the United States of America and Canada alike

(Lynch & Pridemore, 2011). Increasing numbers of offenders admitted into Canadian correctional facilities report to have substance abuse issues; studies show that approximately 7 out of 10 of those admitted to federal institutions within Canada report significant issues with drugs and/or alcohol (Canadian Centre on Substance Abuse (CCSA), n.d.). Studies show that more than half of those incarcerated in Canada's correctional facilities report to be regular users of illegal drugs and substances throughout incarceration (Brochu et al., 2001). Studies show that a questionnaire known as the Computerized Lifestyle Assessment Instrument (CLAI) is given to Canadian inmates which helps to capture data pertaining to the inmate's drug use history and frequency of drug abuse prior to incarceration (Brochu et al., 2001). According to a study which utilized data from the CLAI assessment, 63% of Canadian inmates reported to be regular users of alcohol and 81% reported to have abused illegal drugs prior to incarceration with 52% reporting to be regular users, using illegal drugs at least once a week for an extended period (Brochu et al., 2001). Marijuana, alcohol, opiates, and cocaine appear to be among the most prevalently abused substances among those incarcerated in Canadian prisons (CCSA, n.d.). Studies show a strong link between using alcohol and/or illegal drugs and criminality, one specific study concluded that 79% of alcohol users and 77% of drug users stated they would not have committed the offence in question in a sober state (Brochu et al., 2001). Furthermore, Canadian studies postulate that drug and alcohol abuse is correlated with specific offending patterns in this country (Brochu et al., 2001). For instance, as concluded by Brochu et al. (2001):

Drug use, either exclusively or combined with alcohol consumption, on the day of the crime is more strongly linked to crimes of acquisitiveness. There

were proportionately more instances of drug use (either exclusively or combined with alcohol consumption) on the day of the crime among offenders incarcerated for committing theft (47%), robbery (42%), and breaking and entering (36%) than for any other crime. (p. 22)

Substance abuse is specifically problematic when offenders are incarcerated and not offered rehabilitative programming to target substance abuse; researchers have shown that incarceration without any rehabilitative programming has no positive effect on drug offenders' rates of recidivism (Mitchell, Cochran, Mears, & Bales, 2017). The number of drug offense sentences has increased substantially in Canada and the United States alike and the assumption that sentencing drug offenders to lengthy terms of incarceration will deter current and prospective drug offenders is based on the false premise that incarceration has a strong deterrence effect (Spohn & Holleran, 2002). Unfortunately, studies show that increased penalties and increased incarceration terms for drug offenders has not had a strong deterrent effect and, at best, has only had a very modest impact on the operation of illicit drug markets (Spohn & Holleran, 2002). In fact, research shows that incarceration can increase risk of recidivism, especially for low risk offenders (Gendreau, Goggin, & Cullen, 1999). Studies show that incarceration can enhance criminality by diminishing the psychological and emotional well-being of inmates and this psychological change that inmates undergo is correlated with an increased recidivism rate upon release (Gendreau et al., 1999). Incarceration alone does not reduce recidivism; rather, in some cases, such as with regards to drug offenders, this actually increases recidivism especially when compared to the recidivism rates of those drug offenders on probation (Spohn & Holleran, 2002). Spohn and Holleran (2002) conducted a logistic

regression analysis which concluded that offenders who were sentenced to a term of incarceration were significantly more likely than offenders placed on probation to reoffend; this study specifically found that inmates were 2.3 times more likely to reoffend than probationers. Compelling evidence therefore exists which posits that imprisonment has a more pronounced criminogenic effect on drug offenders than on other types of offenders (Spohn & Holleran, 2002); as such, rehabilitative programming for drug offenders exists in many Canadian correctional facilities in order to combat the prevalence of substance abuse and the barriers this poses for rehabilitation. Research shows that criminal sanctioning without the inclusion of rehabilitative programming encompassing clinical principles of rehabilitation will not reduce recidivism (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990). Rehabilitative programming occurs in correctional institutions in order to promote effective rehabilitation and reintegration. There are several best practices for facilitating offender based rehabilitative programming.

The risk-need-responsivity model has become a leading approach for effective offender case management (Dyck & Campbell, 2018). The research shows that the best practices of offender rehabilitation adhere to the Risk-Need-Responsivity (RNR) Model; this model posits that in order to effectively rehabilitate criminal offenders, their criminogenic risks must be identified, their need areas must be targeted, and the intervention must be responsive to their individual learning styles (Andrews, Bonta, & Wormith, 2011). As such, this model contains three foundational principles: the risk, need, and responsivity principles (Andrews et al., 2011). The risk principle states that intervention intensity should match the individual's recidivism risk (Dyck, Campbell, &

Wershler, 2018). It is important to note that focusing intervention on higher-risk offenders improves rehabilitative outcomes (Greenwood & Turner, 2011). The risk principle suggests that higher levels of service are most effective for higher risk cases and that low-risk cases are best assigned to minimal service (Andrews et al., 1990). Intensive treatment services and interventions should be reserved for higher risk cases only because they respond better to intensive service than to less intensive service (Andrews, Bonta, & Hoge, 1990). Studies show that an integrated approach which combines close judicial supervision and high-intensity treatment has been found to be effective for high-risk offenders (Evans, Huang, & Hser, 2011). The effects of treatment are therefore found to be greater among higher risk cases than among low-risk cases (Andrews et al., 1990). Importantly, this is expected unless the need and/or responsivity principles are violated (Andrews et al., 1990). The need principle states that intervention must identify and target the offender's specific criminogenic risk and need; research indicates eight core criminogenic needs which encompass the following:

- Alcohol and drug abuse,
- education/employment,
- family/marital,
- companions,
- criminal history,
- leisure and recreation,
- antisocial pattern,
- Pro-criminal attitude and orientation (Andrews et al., 2011).

The risk-need-responsivity (RNR) model has had success when used in a variety of settings with a variety of clients; correctional programs and case plans that adhere to the RNR model show decreased levels of recidivism in males and females, youth and minority offenders, and in community and custodial settings (Dyck & Campbell, 2018). Strong adherence to the RNR model has been associated with decreases in substance abuse relapses and a variety of criminal behaviors including: nonviolent, violent, gang related, and sexual offenses (Dyck & Campbell, 2018). As such, intervention which specifically targets the offender's need area(s), specifically those noted above, will be most effective at lowering recidivism (Andrews et al., 1990). It is important to note that risk factors may be static or dynamic in nature whereby static factors (such as criminal behavior) cannot be addressed through intervention and dynamic risk factors (such as substance abuse) are those risk factors that can be addressed and changed (ie: lowered) through intervention (Andrews et al., 1990). Clinically, dynamic risk factors are called criminogenic needs and, when changed, are associated with subsequent variations in criminal behavior (Andrews et al., 1990). The responsivity principle outlines guidelines for how to provide intervention services consistent with the individual's learning styles (Dyck et al., 2018); for example, some offenders may be more responsive to individual therapy sessions as opposed to group sessions. Therefore, the responsivity principles refers to the selection of styles and modes of service delivery that are both capable of influencing the specific types of intermediate targets that are set with offenders and that are also appropriately matched to the individual learning styles of offenders (Andrews et al., 1990). Appropriate types of service often involve the use of behavioral and social learning principles of interpersonal influence, skill enhancement, and cognitive change

(Andrews et al., 1990). Specifically, these types of appropriate service include modeling, graduated practice, rehearsal, role playing, reinforcement, resource provision, and detailed verbal guidance and explanations (Andrews et al., 1990). A core component of the RN model and evidence-based case management is the use of risk assessment measures (Dyck & Campbell, 2018). It is important to note that an offender's specific criminogenic risk and need areas are identified by using a validated assessment tool such as the Level of Service/Case Management Inventory (LS/CMI) (Andrews et al., 2011). The LS/CMI is a contemporary risk tool that integrates the risk appraisal process with case management planning and progress assessments (Dyck & Campbell, 2018). The LS/CMI is a case management and assessment tool which measures the core criminogenic risk and need factors of late adolescent and adult offenders (Andrews et al., 2011). This single application provides all the essential tools needed to aid professionals in treatment planning and case managing offenders in justice, forensic, correctional, prevention, and related agencies (Andrews et al., 2011). Researchers have identified eight core criminogenic risk areas which require consideration in order to foster effective rehabilitation; substance abuse is one of these core criminogenic risk and need areas (Andrews, Bonta, & Wormith, 2006). Substance abuse is noted as a dynamic risk factor, meaning that it can be addressed through intervention (Andrews et al., 2006). This is in contrast to static criminogenic risks, such as criminal history, which cannot be addressed through intervention (Andrews et al., 2006). The RNR model has become a leading approach for treatment and case management of criminal offenders as it provides guidance for effective offender risk assessment (Dyck et al., 2018). This model reflects an integrated theory of criminal behavior encompassing personality, cognitive, and social

approaches (Dyck et al., 2018). Programs that are individually tailored to offenders' needs using evidence based methods are more successful than generic programs (Greenwood & Turner, 2011). A specific approach that works well with institutionalized offenders is cognitive-behavioral therapy (Greenwood & Turner, 2011).

Researchers have shown that offender rehabilitation must incorporate cognitive-behavioral-therapy (CBT) approaches in order to target pro-criminal thinking patterns, a catalyst for continued offending (Butler, Chapman, Forman, & Beck, 2005). CBT refers to a class of interventions that share the basic premise that mental disorders and psychological distress are maintained by cognitive factors (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012). CBT is a time-limited approach to psychotherapy that utilizes specific skill building in order to improve cognitions and to subsequently improve behavior patterns (Greenwood & Turner, 2011). It is based on the concept that our thoughts create our feelings which subsequently result in our behaviors; this therapy attempts to get patients to reframe negative thinking patterns into positive thoughts (Greenwood & Turner, 2011). The core premise of this treatment approach posits that maladaptive cognitions contribute to the maintenance of emotional distress and behavioral problems (Hofmann et al., 2012). Consistent with the medical model of psychiatry, the overall goal of CBT includes symptom reduction and improvement in functioning (Hofmann et al., 2012). In order to achieve this goal, the client becomes an active participant in a collaborative problem-solving process to test and challenge the validity of maladaptive cognitions and to modify maladaptive behavioral patterns (Hofmann et al., 2012). Thus, as noted by Hofmann et al. (2012), modern CBT refers to interventions that combine a variety of cognitive, behavioral, and emotion-focused

techniques. Offender based programming that includes an examination of the effect that thinking has on behavior has proven to have longer lasting positive effects (Butler et al., 2005). It is important to note that, while CBT is useful in targeting a multifarious array of disorders and behavioral concerns, studies show that it can be particularly useful in combating substance abuse (Hofmann et al., 2012). For instance, evidence exists for the efficacy of CBT for cannabis dependence and drug relapse, with evidence for higher efficacy of multi-session CBT versus single session or other briefer interventions (Hofmann et al., 2012). While current research highlights the necessity of rehabilitation, this is certainly a contemporary trend in corrections. Robert Martinson, an American sociologist, long argued that ‘nothing works’ regarding the effective rehabilitation of offenders and that, rather, recidivism is irrevocable (Cullen, Jonson, & Nagin, 2011). Martinson argued that rehabilitative programming included popular psychotherapy cannot overcome or reduce the powerful tendency to continue criminal behavior and that rehabilitation is simply a myth (Cullen et al., 2011). However, it is worth noting that Martinson’s studies did not include research on cognitive-behavioral programs and, importantly, this category of rehabilitative programming has been associated with best practices of offender rehabilitation (Cullen et al., 2011).

Relapse prevention is a cognitive-behavioral approach that also incorporates the RNR model of offender rehabilitation and focuses on the identification and management of high risk situations that could lead to relapse (Ward, Mann, & Gannon, 2006). The development of a relapse prevention model for offenders was based on previous research that demonstrated that there are common cognitive, behavioral, and affective pathways that are associated with the process of relapsing (Dowden, Antonowicz, & Andrews,

2003). The relapse prevention model has been used primarily with drug offenders and sexual offenders, however many studies have stressed that relapse prevention should also be applied within the treatment models of general offender populations wherever possible given its effectiveness (Dowden et al., 2003). Relapse prevention strategies can be applied in multiple problem situations, thus making it a useful approach at facilitating criminal rehabilitation. The primary goal of relapse prevention is to help offenders understand their offense pattern and cope with situational and psychological risk factors that place them at risk of reoffending (Ward et al., 2006). According to Dowden, Antonowicz, and Andrews (2003), “programs that incorporate relapse prevention focus on teaching an individual how to identify high-risk situations, circumvent habitual coping styles, and enhance feelings of self-efficacy in dealing with these situations” (pp. 516). Relapse prevention is used within the traditional maintenance model to augment treatment services and has become the underlying framework within which various treatment services are developed upon (Dowden et al., 2003). Relapse prevention is of paramount importance when examining the best practices and most effective approaches of drug offender rehabilitation (Ward et al., 2006). Researchers have shown that addressing an offender’s criminogenic risk, such as substance abuse, is certainly more effective than incarceration alone (Cullen et al., 2011).

It is important to encompass effective rehabilitation programming to those incarcerated. Researchers have shown a very high prevalence of substance abuse among those incarcerated and, furthermore, prison may provide the only opportunity that a marginalized population has to engage with treatment services (Fazel, Bains, & Doll, 2006). The period of incarceration is a potentially critical opportunity to intervene in the

cycle of recidivism for drug offenders especially (Mitchell, Wilson, & MacKenzie, 2008). Furthermore, many prisons in Canada and the United States alike are operating at capacity or even over-capacity. For example, Zanis et al. (2009) showed that many prisons operate at capacity in the United States and much of the increase has been attributed to drug-related crimes and substance abuse among offenders. The prevalence of substance abuse and dependence, although highly variable, is typically much higher in prisoners than the general population (Fazel et al., 2006). This highlights the need for screening for substance abuse and dependence at reception into prison, effective treatment while in custody, and follow-up on release. An absence of effective substance abuse intervention in correctional institutions can be a catalyst for drug offender recidivism and a leading cause behind the prevalence of recidivism of drug offenders, especially in comparison to non-drug offenders (Mitchell et al., 2007).

In this study, I will specifically examine if the program had an effect at lowering recidivism. The program adheres to the best practices of offender based rehabilitative programming as indicated by the research. The purpose of this program is to provide substance abuse intervention through a variety of treatment modalities that will assist offenders in making informed lifestyle changes conducive to wellness and prosocial behaviour (John Howard Society, n.d.). The program is designed to reduce the risk of relapse into substance abuse and deals with the impact of addictions by taking into account the offender's spiritual, emotional, mental, and physical needs (Correctional Service Canada, n.d.a). It also includes modern treatment techniques; the program participants learn how to understand the healing process and recognize the impacts of substance abuse (Correctional Service Canada, n.d.a). This helps them manage risk and

prevent relapse. The target group for this program are adult male offenders with an identified addictive behavior issue, targeted at those who present with a moderate to high level of alcohol and/or other drug dependence (John Howard Society, n.d.). The admission criteria for this rehabilitation substance abuse program is as follows:

- Individuals with addictive behaviour issues,
- moderate (or higher) level of dependence,
- those with psychosocial problems related to drinking and/or other drug use,
- those individuals whose criminality can be linked to drug dependence (John Howard Society, n.d.).

Offenders are assessed using the LS/CMI whereby an identified criminogenic risk of substance abuse must be present. This program is often offered to incarcerated offenders, mainly those incarcerated at a specific institution in Canada, but is also offered to those in the community on community supervision orders, such as probation or those on early release from custody programs (John Howard Society, n.d.). This program is a continuous intake program which encompasses three sessions per week in addition to individual counselling (John Howard Society, n.d.).

Gap in the Research

This research will fill a gap in understanding the role that rehabilitative programming has on a drug offender's rate of recidivism. Other researchers have identified that there is a significant gap in the literature, noting specifically that there is very limited research that evaluates drug offender recidivism and the effect that imprisonment may have on a drug offender (Mitchell et al., 2017). Unlike other studies, this research will specifically examine if a drug offender's rate of reoffending can be

lowered effectively through participating in rehabilitative programming which is consistent with the risk-need-responsivity model of intervention, such as through the MIMOSA program. This is of paramount importance given the overrepresentation of drug offenders incarcerated in prisons among the United States and Canada alike (Nally, Lockwood, Ho, & Knutson, 2014). This study can strongly contribute to the field of criminal justice by highlighting the need for effective rehabilitative initiatives and the best practices for lowering rates of recidivism. Furthermore, this study's results can impact Canada's prison population by indicating ways to address criminogenic risks and need areas throughout incarceration which can subsequently foster reintegration back into the community. This research will therefore provide insight into rehabilitation and recidivism, subsequently adding to the knowledge base of the discipline of criminal justice and therefore playing a pivotal role in evoking positive social change within corrections. The program is the core substance abuse program for all provincial offenders in the province of Newfoundland and Labrador, Canada, those incarcerated within the provinces five prisons as well as those offenders serving community custodial sentences, such as those on probation are referred to this program if substance abuse is an identified criminogenic need area as per the LS/CMI assessment results (John Howard Society, n.d.). However, despite the focus placed upon this program as a primary means of facilitating offender rehabilitation, the impact that his program has had on the recidivism rates for drug offenders has not been studied to date. Since the program's effectiveness has not yet been studied, this study will specifically add to the field of criminal justice as it pertains to drug offender recidivism, especially in the province of Newfoundland and Labrador, Canada.

Framework

There are several frameworks that are applicable to the topic relating to the examination of the effect that rehabilitative programming has on drug offender's recidivism rates; grounding research on theory helps to conceptualize a problem from different perspectives as well as not only describe a phenomenon, but to also explain it (Walden University, n.d.). An effective relevant framework is the punctuated-equilibrium theory. The punctuated-equilibrium theory suggests that policies are often characterized by stability and that change is usually incremental and normally requires great effort or conflict (True, Jones, & Baumgartner, 2007). This theory posits that social systems exist in extended periods of stasis, but can be punctuated by sudden shifts in radical change (True et al., 2007). Revolutionary periods disrupt stability and established patterns, giving way to new equilibrium patterns, thus fostering change (Romanelli & Tushman, 1994). This is applicable to the examination of offender rehabilitation within correctional institutions in an effort to address high rates of recidivism because, historically, American and Canadian corrections favored very punitive responses to criminality which often lacked any therapeutic element (Roth, 2011). The 1970s were characterized by ideologies consistent with a get tough on crime approach; a number of jurisdictions in the United States and Canada alike embarked on sentencing reforms that favored punitive responses to crime and did not encompass rehabilitative initiatives within justice and correctional policy (Andrews et al., 1990). According to Andrews et al. (1990):

The rapidly changing sociopolitical context of the decade preceding the mid-1970s propelled conservatives to seek "law and order", while liberals attached to class-based perspectives on crime became discouraged about the

benevolence of the state and the promise of direct intervention. Second, an emerging social science, informed by labelling and critical/Marxist approaches, embraced anti-psychological and often anti-empirical themes. These emergent perspectives played an important role in legitimating the decision of many academic criminologists and juridical policymakers to declare rehabilitation fully bankrupt. (p. 370)

The changes in sentencing resulting from the War on Drugs has been a leading catalyst for mass incarceration in the United States, with Canada following the American ideology (Mauer, 2001). The movement towards determinate sentencing was brought about in the 1980s and continues today (Mauer, 2001). Subsequently, law enforcement quickly responded to the War on Drugs, giving more attention to drug offenses which resulted in a doubling of drug arrests in the 1980s (Mauer, 2001). Noteworthy during this time period was Robert Martinson's conclusion that rehabilitation does not reduce recidivism and that 'nothing works' in relation to offender based rehabilitation (Andrews et al., 1990). Martinson's "nothing works" notion became the accepted doctrine; it satisfied conservatives political reactions to the apparent disorder of the 1960s (Andrews et al., 1990). This certainly was a catalyst to the subsequent get tough on crime approaches which characterized America and Canada throughout the mid-late 1970s. For instance, the introduction of mandatory sentencing laws began in 1973 when New York State experimented with the Second Felony Offender Law, which required those convicted of selling illegal drugs to serve a minimum prison sentence (Roth, 2011). Furthermore, in 1974, Florida followed New York's example by imposing three-year minimum prison sentences without parole for any felony involving firearms and, by the

mid-1970s, many other states implemented mandatory sentencing guidelines (Roth, 2011). Congress implemented more than 20 new mandatory sentencing laws between 1985 and 1991 (Roth, 2011). By 1994, every state had adopted at least some form of mandatory sentencing legislation (Roth, 2011). Additionally, habitual offender laws, also known as three-strikes laws, were first implemented by individual states and then subsequently by the American federal government in 1995 (Roth, 2011). The first three-strikes law was passed in 1993 in Washington when Initiative 593 was approved; this initiative required life sentencing without the possibility of parole for third-time serious felony offenders (Roth, 2011). Other states, including California, were quick to follow this sentencing trend (Roth, 2011). Furthermore, as a direct result of the War on Drugs, the proportion of incarcerated drug offenders has increased substantially (Roth, 2011). This “get tough on crime” approach favored punishment (as opposed to rehabilitation) as the core purpose of prisons (Roth, 2011). Similar sentencing practices ensued in Canada; a major development in Canadian corrections has been the emergence of a conservative, American-style approach to correctional policy and practice (Griffiths & Murdoch, 2014). This change was characterized by harsh sentences and mandatory minimum sentences for drug crimes as well as for sexual offenses (Griffiths & Murdoch, 2014). For instance, Bill C-10 stipulated mandatory minimum sentences for a multifarious array of offenses, including drug offenses. The Safe Streets and Communities Act is a law that was introduced in the House of Commons as Bill C-10 introduced mandatory jail sentences for many crimes including drug trafficking, sex crimes, child exploitation and some violent offenses (Correctional Service Canada, n.d.b). Critics of this law say minimum sentences will lead to overcrowding in prisons and removes the judges'

discretion to tailor sentences to the specifics of a particular case (Canadian Broadcasting Corporation, n.d.). Furthermore, studies posit that this law will disproportionately punish small time offenders and have little rehabilitative effect, leaving them more likely to re-offend (Webster & Doob, 2015). The crime control policies pursued in response to the War on Drugs rests largely on the philosophy of deterrence, however, evidence certainly lacks pertaining to the deterrence effect of imprisonment for drug offenders (Spohn & Holleran, 2002). It is evident that, historically, the focus was on a punitive response to crime without facilitating rehabilitation programming. For over 30 years, criminal justice policy has been dominated by this “get tough” approach to offenders, however, increasing punitive measures have failed to reduce recidivism and have instead led to rapidly growing prison populations and strained criminal justice systems (Andrews & Bonta, 2010). However, there is a much stronger focus on offender based programming in contemporary Canadian corrections and the best practices for offender rehabilitation now encompass programming consistent with a focus on identifying and addressing offender risks and needs in a manner consistent with responsivity approaches (Andrews et al., 1990). A better option for addressing criminality is to place a greater emphasis on the rehabilitation of offenders, especially those which adhere to the best practices of offender rehabilitation. As such, implementing rehabilitative programming within prisons would be a drastic change in correctional policy, thus showing that criminal justice policy can be understood using the theory of punctuated-equilibrium given that it has remained fairly consistent with punitive measures as opposed to rehabilitation throughout the past few decades (Roth, 2011).

A second theory of which this topic is based upon is the theory of differential association. This theory postulates that criminal behavior is learned by interacting with others and that association with delinquent others is an effective predictor of criminal behavior (Cullen & Agnew, 2011). The theory of differential association posits that it is through interaction with others that individuals learn the values, attitudes, techniques, and motives for criminal behavior (Cullen & Agnew, 2011). This theory suggests that the principle part of the learning of criminal behavior occurs within intimate personal groups and not through impersonal agencies of communication, such as media (Cullen & Agnew, 2011). Furthermore, the theory of differential association posits that a person becomes delinquent because of an excess of definitions favorable to a violation of the law (Cullen & Agnew, 2011). According to Cullen & Agnew (2011), “when persons become criminal, they do so because of contacts with criminal patterns and also because of isolation from anti-criminal patterns” (p. 127). This theory would therefore help understand that low-risk offenders may likely have an increased risk of recidivism through incarceration given that they interact with delinquent others and criminal behavior may therefore be learned through this interaction. Research indicates that incarceration can be more harmful than effective in terms of lowering a low-risk offender’s rate of recidivism (Andrews et al., 2011) and, as such, the theory of differential association lends itself effectively to this dissertation topic.

Limitations

It is important to note that there is an inherent problem in measuring recidivism. There is a lack of complete information on crimes committed and who committed each crime; recidivism data are based on crimes that are reported to the police and research

shows that there is a dark figure of crime (Spohn & Holleran, 2002). The term “dark figure of crime” was first used by the Belgian mathematician and sociologist Adolphe Quetelet in 1832 and continues to be a problematic concept for obtaining accurate criminality statistics (Penney, 2014). The dark figure of crime is crime that is neither reported nor recorded by law enforcement agencies; the dark figure includes criminal incidents/occurrences that meet the definition of recordable crime that are not recorded in official statistics (Penney, 2014). Because not all crimes are reported to the police and not all reported crimes result in arrest, recidivism data are not necessarily complete (Spohn & Holleran, 2002). As such, this study will be limited as to the accuracy of the rates of recidivism for those inmates who completed the program and those inmates who did not complete the program. For the purpose of this study, recidivism will refer to an arrest 12 months post-release from prison.

This chapter included a thorough literature review which illustrated how this specific study will address a prevalent gap in the research pertaining to the rehabilitation of adult offenders with substance abuse concerns. This chapter encompassed context which facilitated an understanding of what constitutes effective rehabilitation for drug offenders and the best practices for fostering effective rehabilitation and reintegration. The following chapter provides an outline of research methods that this study will include and the steps that will be undertaken in order to address the hypotheses and research questions; this will subsequently help to address the research gap as identified in the literature review.

Chapter 3: Research Method

Methodology

The purpose of quantitative research is to explain, predict, investigate relationships, describe current conditions, or to examine possible impacts or influences on specific outcomes (Walden University Center for Research Design, 2018s). This study is quantitative in nature and includes possible impacts that rehabilitative programming that focuses on substance abuse intervention has on drug offenders' rates of recidivism. It is important to note that quantitative research allows the researcher to test numerical data by comparing or finding correlations among population attributes in order to make generalizations of the population (Walden University Center for Research Design, 2018s). As such, this study will contribute to the field of criminal justice by allowing for a deeper understanding of what encompasses effective rehabilitative programming for drug offenders specifically. This study consists of a quasi-experimental, non-equivalent groups design. A non-equivalent groups design is a between-subjects design in which participants have not been randomly assigned to conditions (Millsap & Maydeu-Olivares, 2009). In non-equivalent groups design, one group receives the treatment and the other groups does not; the relative effectiveness of the treatment is assessed by comparing the performances of the participants across the groups (Millsap & Maydeu-Olivares, 2009). Though experimental study designs are often considered the preferred design, they may not be ideal or feasible for both ethical reasons and practical reasons. Quasi-experimental studies are often more realistic in service delivery settings (Millsap & Maydeu-Olivares, 2009), thus allowing this methodology to be very appropriate for this particular study as it relates to rehabilitative program service delivery for incarcerated drug offenders.

Quasi-experimental designs do not randomly assign participants into groups, rather pre-existing groups may be utilized whereby the researcher does have a control and treatment group (Walden University Center for Research Design, 2018s).

Participants and Sample

Pre-existing groups have been used for this study whereby inmates who have completed a moderate intensity substance abuse program will be placed in the treatment group and inmates who have not completed the program will be placed in the control group. All of the secondary data will be inmate files from a single penitentiary. As such, the quasi-experimental design has utilized a group of 100 drug offenders who have been subjected to rehabilitative programming and a group of 100 drug offenders who have not been subjected to the program. I then compared the treatment group to the control group to test the intervention's effect on recidivism.

Variables

The independent variable for this study is participation in rehabilitative programming while the dependent variable for this study is rate of recidivism.

Quasi-experimental designs are weaker on internal validity than experimental designs and, as such, researchers must depend on data analysis techniques as a method of control (Frankfort-Nachmias & Nachmias, 1996). The data will therefore be analyzed through the utilization of statistical analysis. Statistical methods are beneficial when examining relationships and patterns and expressing the information with numbers (Rudestam & Newton, 2015). Both descriptive and inferential statistics will be utilized as descriptive statistics describe patterns of behavior, which in this case will be criminal recidivism and inferential statistics draw on probabilistic arguments to generalize

findings from samples to populations of interest, which in this case will be drug offenders (Rudestam & Newton, 2015).

Data Analysis

A *t*-test procedure has been utilized for this study. A *t*-test is used to assess hypotheses involving a single mean or differences between two means (Green & Salkind, 2014). The *t*-test can be applied to address research questions for designs that involve a single sample, paired samples, or two independent samples (Green & Salkind, 2014). This specific study will address research questions for two independent samples. As such, an independent samples *t*-test will be the statistical analysis utilized for this study in order to determine whether the rate of recidivism was lower for those drug offenders who participated in the program. Independent *t*-tests are used to analyze data from a variety of types of studies, including: experimental, quasi-experimental, and field studies (Salkind, 2011); therefore, this study's quasi-experimental design will be conducive to the independent samples *t*-test. This specific test will be useful and appropriate for this particular study given that an independent samples *t*-test evaluates the effect between two independent samples; this test looks at the *t*-statistic, the *t*-distribution values and the degrees of freedom to determine the probability of difference between two sets of data (Frankfort-Nachmias & Nachmias, 1996). A *t*-test is a type of inferential statistic which is used to determine if there is a significant difference between the means of two groups (Green & Salkind, 2014), as such, this will benefit this study as it will allow an inference to be made on whether the moderate intensity substance abuse program lowers a drug offender's rate of recidivism. The independent samples *t*-test evaluates the difference between the means of two independent groups. Specifically, each case must have scores

on two variables, the grouping variable and the test variable (Green & Salkind, 2014). According to Green and Salkind (2014), the grouping variable divides cases into two mutually exclusive groups or categories, which in this case will be those inmates who have participated in rehabilitative programming and those inmates who have not participated in rehabilitative programming. According to Green and Salkind (2014), the test variable describes each case on some quantitative dimension, which for this study will be recidivism. The t-test evaluates whether the population mean of the test variable for one group differs from the population mean of the test variable for the second group (Green & Salkind, 2014). While the information for this study can also be analyzed by using a one-way analysis of variance, the advantage of utilizing an independent-samples t-test over a one-way ANOVA using the general linear model-univariate procedure is that the t-test procedure calculates a t-test that does not require the population variances to be equal (Green & Salkind, 2014). In order to ensure reliability, the test-retest approach will be utilized.

Recidivism has been measured by examining government database information retrieved from both the Integrated Provincial Court Information System (IPCIS) and the Provincial Corrections Offender Management System (PCOMS) to determine if there was an arrest 12 months post-release.

Null and Alternative Hypothesis

The null hypothesis of this study is that there is no difference between the mean of the group of inmates who completed the program and those who did not complete this program. The alternative hypothesis of this study is that there is a statistical significance

in means between the two groups and that the rate of recidivism was therefore lower for the treatment group of inmates.

Research Questions

The following main research questions will be addressed in this study:

RQ1. Are the rates of recidivism lower for those inmates who have completed the moderate intensity substance abuse program ?

RQ2. Are the rates of recidivism higher for those inmates who did not complete the moderate intensity substance abuse program?

RQ3. What is the difference in means of recidivism rates between the group of inmates who have completed the program and those who did not complete the program?

Data Sources

The types and sources of data for this proposed study encompass official records from the Department of Justice and Public Safety, Government of Newfoundland and Labrador, Canada and include:

1. De-identified inmate files of those who have completed rehabilitative programming, specifically a moderate intensity substance abuse program, while incarcerated at Her Majesty's Penitentiary (located in St. John's, N.L., Canada).
2. De-identified inmate files of those who have not participated in rehabilitative programming, specifically a moderate intensity substance abuse program, while incarcerated at Her Majesty's Penitentiary.
3. Secondary data collected from Provincial Government (Department of Justice and Public Safety) databases, namely Integrated Provincial Court Information

System (IPCIS) and the Provincial Corrections Offender Management System
(PCOMS)

Data Collection

This research study has been based upon secondary data. The data for this study was extracted from records that already exist and have also consisted of inmate files and secondary data; it is necessary to use this existing data as it is utilized for the administration of a program or intervention. Research involving secondary data encompasses re-analysing, interpreting, or reviewing past data and has been used within the social sciences with great success (Frankfort-Nachmias & Nachmias, 1996). There are several methodological advantages to secondary data analysis; it is useful as it is inexpensive and often less time-consuming than primary data and is often necessary in order to study certain phenomenon (Babbie & Benaquisto, 2002). Approval has been granted to the researcher of this dissertation study by the Department of Justice and Public Safety, Adult Corrections Division of the Provincial Government of Newfoundland and Labrador, Canada to collect data by reviewing the files on 100 inmates from Her Majesty's Penitentiary who have completed the program and 100 inmates from Her Majesty's Penitentiary who have not; this data was acquired from records from 2015. Her Majesty's Penitentiary is a medium-maximum security provincial institution which houses adult, male inmates who are either sentenced or remanded into custody (Department of Justice and Public Safety, Government of Newfoundland and Labrador, n.d). Secondary data was utilized to determine arrest rates (where applicable) 12 months post-release to determine recidivism rates of the 200 inmate files comprising those inmates who completed the moderate intensity substance abuse program and those

who did not participate in this rehabilitative program. Secondary source analysis will be conducted to determine whether any post-release convictions occurred in order to determine recidivism rates. The secondary data collected from the Integrated Provincial Court Information System (IPCIS) and the Provincial Corrections Offender Management System (PCOMS) databases has determined the recidivism rates of those inmates who completed the program and those inmates who did not.

Threats to Validity

It is of paramount importance for the researcher to consider any threats to validity when conducting research. External validity refers to the generalizability of a study's findings (Rudestam & Newton, 2015). In order to ensure external validity, the characteristics of the subjects must reflect the characteristics of the population to which the researcher is studying (Frankfort-Nachmias & Nachmias, 1996). As such, this study will utilize secondary data on inmates who have completed the program and those who did not; these inmates will be from both provincial and federal status and will have substance abuse concerns. This will help to ensure the results can be generalized to the entire population of inmates in the province of Newfoundland and Labrador, Canada. Quasi-experimental designs do not randomly assign participants into groups, rather pre-existing groups may be utilized whereby the researcher does have a control and treatment group (Walden University Center for Research Design, 2018s).

The researcher must also consider threats to internal validity. Internal validity refers to the validity of causal inference between variables and whether it avoids confounding variables (Rudestam & Newton, 2015). Quasi-experimental designs such as this study are weaker on internal validity than experimental designs and, as such,

researchers must depend on data analysis techniques as a method of control (Frankfort-Nachmias & Nachmias, 1996). The data will therefore be analyzed through the utilization of statistical analysis. Statistical methods are beneficial when examining relationships and patterns and expressing the information with numbers (Rudestam & Newton, 2015). Both descriptive and inferential statistics will be utilized as descriptive statistics describe patterns of behavior, which in this case will be criminal recidivism and inferential statistics draw on probabilistic arguments to generalize findings from samples to populations of interest, which in this case will be drug offenders (Rudestam & Newton, 2015).

Ethical Concerns

A researcher must always consider any ethical concerns when undertaking a research study. It is the researcher's responsibility to ensure adherence to all ethical standards and to also follow institutional procedures. The researcher has adhered to ethical standards and International Review Board (IRB) protocol. Furthermore, confidential information will be utilized for the purpose of this study. The Department of Justice and Public Safety, Government of Newfoundland and Labrador has approved the researcher to obtain data on recidivism rates of inmates who have completed the moderate intensity substance abuse program and those who have not. The researcher will ensure confidentiality in order to uphold ethical and professional standards.

This chapter has provided an overview of the research design and methodology for the study. This study is quantitative in nature and has examined possible impacts that rehabilitative programming that focuses on substance abuse intervention has on drug offenders' rates of recidivism. This study has consisted of a quasi-experimental, non-

equivalent groups design. A non-equivalent groups design is a between-subjects design in which participants have not been randomly assigned to conditions (Millsap & Maydeu-Olivares, 2009). In non-equivalent groups design, one group receives the treatment and the other groups does not; the relative effectiveness of the treatment is assessed by comparing the performances of the participants across the groups (Millsap & Maydeu-Olivares, 2009). The data was analyzed through the utilization of descriptive statistical analysis. An independent samples t-test will be the statistical analysis utilized for this study in order to determine whether the rate of recidivism was lower for those drug offenders who participated in the Moderate Intensity Maintenance of Substance Abuse program. The results of this quantitative study can be found in the following chapter.

Chapter 4: Results

Introduction

An independent samples t-test was conducted on secondary data in order to examine whether there was a difference in means between the recidivism rates of 100 inmates who completed the moderate intensity substance abuse program and 100 inmates who did not complete this rehabilitative program. This chapter contains the results of this independent samples t-test which were used to answer the following research questions:

RQ1. Are the rates of recidivism lower for those inmates who have completed the moderate intensity substance abuse program?

RQ2. Are the rates of recidivism higher for those inmates who did not complete the moderate intensity substance abuse program?

RQ3. What is the difference in means of recidivism rates between the group of inmates who have completed the program and those who did not complete the program?

Data Collection

The data for this study was extracted from records that already exist and will consist of inmate files and secondary data. Approval has been granted to the researcher of this dissertation study by the Department of Justice and Public Safety, Adult Corrections Division of the Provincial Government of Newfoundland and Labrador, Canada to collect data by reviewing the files on 100 inmates from Her Majesty's Penitentiary who have completed the moderate intensity substance abuse program and 100 inmates from Her Majesty's Penitentiary who have not; this data will be taken from records from 2015. Secondary source analysis was conducted to determine whether any post-release convictions occurred in order to determine recidivism rates. For the purpose of this study,

recidivism is define as a conviction within 12 months post-release from prison. The secondary data collected from the Integrated Provincial Court Information System (IPCIS) and the Provincial Corrections Offender Management System (PCOMS) databases have allowed the researcher to determine the recidivism rates of those inmates who completed the program and those inmates who did not.

Results

An independent samples t-test was conducted in SPSS to evaluate the hypothesis that recidivism rates would be lower for those inmates who completed the MIMOSA program as opposed to those inmates who did not complete this rehabilitative program. The test was not significant, $t(198) = -1.075$, $p = .284$. Table 1 shows the results graphically.

Table 1

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differ ence	Std. Error Differ ence	95% Confidence Interval of the Difference	
									Lower	Upper
Recidivism (in months; post-release from custody)	Equal variances assumed	.204	.652	-1.07	198	.284	-.56000	.52115	-1.5877	.46771
	Equal variances not assumed			-1.07	197.5	.284	-.56000	.52115	-1.5877	.46772

Inmates who did not complete the program ($M = 4.04$, $SD = 3.65$) had, on average, slightly higher rates of recidivism than those inmates who did complete the program ($M = 3.48$, $SD = 3.72$) as shown in Table 2. The 95% confidence interval ranged from -1.59 to .47. These results are shown in Table 2.

Table 2

Group Statistics

	Completed Rehabilitative Program	N	Mean	Std. Deviation	Std. Error
					Mean
Recidivism (in months; post-release from custody)	yes	100	3.4800	3.71859	.37186
	no	100	4.0400	3.65126	.36513

As shown in Table 3, there were 61 out of 200 inmates who did not reoffend in the 12 months post-release timeframe which indicated recidivism for this study.

Unfortunately, there were several inmates who reoffended within a few months post-release from custody; 21 inmates of the 200 participants reoffended within one month post-release from prison, 10 inmates of the 200 participants reoffended within two months post-release from prison, and 18 of the 200 participants reoffended within three months post-release from prison. Overall, 30.5% of the inmates in this study did not reoffend while 69.5% did reoffend within 12 months post-release from adult custody.

Table 3

Recidivism (in months; post-release from custody)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	61	30.5	30.5	30.5
	1.00	21	10.5	10.5	41.0
	2.00	10	5.0	5.0	46.0
	3.00	18	9.0	9.0	55.0
	4.00	15	7.5	7.5	62.5
	5.00	13	6.5	6.5	69.0
	6.00	10	5.0	5.0	74.0
	7.00	8	4.0	4.0	78.0
	8.00	10	5.0	5.0	83.0
	9.00	16	8.0	8.0	91.0
	10.00	8	4.0	4.0	95.0
	11.00	8	4.0	4.0	99.0
	12.00	2	1.0	1.0	100.0
	Total	200	100.0	100.0	

Table 4 shows that there were 200 cases in the dataset used for this study and that there were no missing data; all 200 cases were included. Table 5 shows a comparison of the means of recidivism rates for the inmates who completed the moderate intensity substance abuse program and the inmates who did not complete this program. Inmates who did not completed the program ($M = 4.04$, $SD = 3.65$) had, on average, slightly

higher rates of recidivism than those inmates who did complete the program ($M = 3.48$, $SD = 3.72$). Overall, the mean was 3.76 with a standard deviation of 3.69. Comparing the standard deviations of each group of inmates will show if there is a difference in dispersion among inmates who completed the program and those who did not. It is interesting to note that, because the means and standard deviations were similar, there is not a notable difference in the distribution of recidivism rates between the two groups.

Table 4

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Recidivism (in months; post-release from custody) * Completed Rehabilitative Program	200	100.0%	0	0.0%	200	100.0%

Table 5

Report of Recidivism in Months

Recidivism (in months; post-release from custody)			
Completed Rehabilitative Program	Mean	N	Std. Deviation
yes	3.4800	100	3.71859
no	4.0400	100	3.65126
Total	3.7600	200	3.68651

Summary

An independent samples t-test was conducted in SPSS to evaluate the hypothesis that recidivism rates would be lower for those inmates who completed the program as opposed to those inmates who did not complete this rehabilitative program. There were 200 cases in the dataset used for this study and that there was no missing data; all 200 cases were included. The test was not significant, $t(198) = -1.075$, $p = .284$; as such, it can be concluded that the program was not effective at lowering the recidivism rates for those inmates who completed the program. The means between the two groups of inmates were compared in SPSS. Inmates who did not completed the moderate intensity substance abuse program program ($M = 4.04$, $SD = 3.65$) had, on average, slightly higher rates of recidivism than those inmates who did complete the program ($M = 3.48$, $SD = 3.72$); because the means and standard deviations were similar, there is not a notable difference in the distribution of recidivism rates between the two groups. Unfortunately, of the 200 cases in the dataset used for this study, there was an overall recidivism rate of 69.5%, meaning that only 30.5% of the inmates in this study did not reoffend 12 month post-release from prison. The following chapter will provide insight into

recommendations for future research on how to best address the rehabilitation of drug offenders in order to successfully lower rates of recidivism among this prevalent inmate population. The recommendations made from this study can subsequently foster positive social change in the field of criminal justice.

Chapter 5: Discussion, Conclusions, and Recommendations

Interpretation of the Findings

An independent samples t-test was conducted in SPSS to evaluate the hypothesis that recidivism rates would be lower for those inmates who completed the program as opposed to those inmates who did not complete this rehabilitative program. The test was not significant, $t(198) = -1.075$, $p = .284$; as such, the program was not effective at lowering the recidivism rates for those inmates who completed the program. Inmates who did not complete the program ($M = 4.04$, $SD = 3.65$) had, on average, slightly higher rates of recidivism than those inmates who did complete the program ($M = 3.48$, $SD = 3.72$); because the means and standard deviations were similar, there is not a notable difference in the distribution of recidivism rates between the two groups. Unfortunately, of the 200 cases in the dataset used for this study, there was an overall recidivism rate of 69.5%, meaning that only 30.5% of the inmates in this study did not reoffend 12 months post-release from prison. Given these results, there are several recommendations to follow in this chapter in order to help evoke positive social change in the field criminal justice as it relates to the rehabilitation of drug offenders. The findings of this study also relate and support the theoretical framework of the research problem portrayed in this study.

The findings of this study relate to the theoretical framework. The theory of differential association certainly facilitates an understanding of the research problem relating to high numbers of recidivists for drug offenders in Canadian prisons. This theory provides a useful lens through which to evaluate this research problem by offering an explanation into the high rates of recidivism among adult inmates in Canada. This

theory postulates that criminal behavior is learned by interacting with others and that association with delinquent others is an effective predictor of criminal behavior (Cullen & Agnew, 2011). The theory of differential association posits that it is through interaction with others that individuals learn the values, attitudes, techniques, and motives for criminal behavior (Cullen & Agnew, 2011). As such, the findings of this study certainly relate to this theoretical framework given the high overall rates of recidivism among the 200 inmates examined for this study. The results of this study showed that 69.5% of the inmates had a conviction within 12 months post-release from prison. The interaction with other inmates throughout incarceration could be a contributing factor to recidivism by fostering pro-criminal values and attitudes and could therefore help explain why participation in the moderate intensity substance abuse program was not statistically significant in lowering the rates of recidivism for its participants. Similarly, the results of this study also relate to the punctuated equilibrium theory given the large numbers of inmates who actually completed a substance abuse program. Historically, Canadian corrections favored very punitive responses to criminality which often lacked any therapeutic element (Roth, 2011). Therefore, implementing rehabilitative programming within prisons would be a drastic change in correctional policy, thus showing that criminal justice policy can be understood using the theory of punctuated-equilibrium given that it has remained fairly consistent with punitive measures as opposed to rehabilitation throughout the past few decades (Roth, 2011).

Implications for Social Change

The results of this study can help facilitate positive social change. Walden University defines positive social change as “a deliberate process of creating and

applying ideas, strategies, and actions to promote the worth, dignity, and development of individuals, communities, organizations, institutions, cultures, and societies” (Walden University, n.d.). This study examined whether participation in a moderate intensity substance abuse rehabilitative program was successful at lowering recidivism rates in comparison to those who did not complete the program. A substance abuse program was examined given that incarcerated individuals with substance abuse issues account for the vast majority of recidivists and of overall prison populations (Boyum, Caulkins, & Kleiman, 2011). While the program under examination for this study yielded very minimal and not statistically significant lower rates of recidivism in comparison to those who did not complete this program, several specific areas for further research have been identified throughout the research for this study. It is evident that additional facets must encompass rehabilitative programming which target substance abuse in order to effectively lower rates of reoffending. Understanding what works and what has not proven to be effective can allow for substance abuse to be adequately addressed throughout rehabilitative programming initiatives. Successfully addressing substance abuse concerns among criminal offenders can subsequently foster lower rates of recidivism given that substance abuse is a core criminogenic risk and need area (Andrews et al., 2011). Much of Canada’s inmate population suffers substance abuse concerns and this proves to be a catalyst for continued offending (Lynch & Pridemore, 2011). For example, one study showed that over half of Canadian inmates reported to be under the influence of illegal drugs at the time of their present conviction(s) (CCSA, n.d.). Given that substance abuse is correlated with criminality and contributes to high rates of incarceration, targeting this can result in lower prison populations which will

subsequently reduce the strain on the criminal justice system (Andrew et al., 2011). Effectively addressing substance abuse among criminal offenders can promote the worth, dignity, and development of these individuals by facilitating prosocial lifestyles void of incarceration and drug dependence along with allowing for successful reintegration back into the community upon release from prison. Similarly, targeting substance abuse among criminal offenders can improve their overall health which can increase successful reintegration. Additionally, effectively addressing substance abuse among criminal offenders can also promote development of communities, organizations, institutions, cultures, and societies alike by lowering rates of criminality, fostering lower prison populations, and establishing safer environments.

In order to foster a greater degree of positive social change by improving substance abuse rehabilitative programs for criminal offenders, there are specific recommendations for further research.

Recommendations for Further Research

There are several recommendations for further research that can be made subsequent to completing the research for this study. It is evident that rehabilitative programming which targets substance abuse should encompass additional considerations which were not entirely incorporated into the moderate intensity substance abuse program. It is recommended that future research be conducted into the following topics in order to more fully understand how substance abuse rehabilitative program can be made more effective: the relationship between neuroplasticity and drug addiction, the relationship between literacy and rehabilitative programming, and evidence-based programming.

Neuroplasticity and Addiction

Previous studies undertaken suggest that further research is required regarding the correlation between drug addiction and neuroplasticity (Mandyam & Koob, 2012).

According to Mandyam and Koob (2012), drug and alcohol addiction is a chronic relapsing disorder associated with compulsive drug taking, drug seeking, and a loss of control in limiting intake. Studies show that relapse is reflected in three stages of a recurrent cycle: binge/intoxication, withdrawal/negative affect, and preoccupation/anticipation (also known as a “craving”) (Mandyam & Koob, 2012).

Repeated drug use leads to changes in neuronal structure and function that cause long-lasting or permanent neurotransmission abnormalities (O’Brien, 2009). The clinical significance of these brain changes is that addiction becomes a chronic illness characterized by relapses and remissions and, because of this, chronic treatments which encompass both medication and behavioral therapies that address these changes in the brain are required (O’Brien, 2009). Understanding neuroplastic changes that underlie relapse can improve treatment options for drug addiction (Mandyam & Koob, 2012).

When a person becomes addicted to a substance, their neural pathways have been rerouted and they seek out the familiarity in using drugs (Mandyam & Koob, 2012).

When a person stops using drugs, the neural transmitters must find a new path and this could be an optimal time to build neural pathways through the formation of new positive habits (Mandyam & Koob, 2012). Eventually, the brain will adapt and follow the newly formed neural pathways that are not associated with drug use (Mandyam & Koob, 2012).

As such, future research is recommended on this correlation between drug addiction and neuroplasticity so that rehabilitative programming can possibly encompass treatment

which focuses on addressing the brain changes which occur once an addiction to drugs has been established. This could possibly improve cognitive-behavioral-therapy components which the literature review has deemed an integral component to effective rehabilitation for criminal offenders (Butler, Chapman, Forman, & Beck, 2005).

Given that cognitive-behavioral therapy is a time-limited approach to psychotherapy that utilizes specific skill building in order to improve cognitions and to subsequently improve behavior patterns (Greenwood & Turner, 2011), incorporating the consideration that neural pathways have formed and changed due to drug addiction (Mandyam & Koob, 2012) may improve the effectiveness of cognitive based therapy. Cognitive-behavioral therapy is based on the concept that our thoughts create our feelings which subsequently result in our behaviors (Greenwood & Turner, 2011); as such, understanding how thinking patterns may have been altered through the process of neuroplasticity could certainly improve the rehabilitative effects of substance abuse intervention by facilitating a deeper understanding of thinking patterns of criminal offenders which substance abuse concerns.

Literacy and Rehabilitative Programming

The Risk-Need-Responsivity (RNR) model of offender rehabilitation posits that, in order to maximize the offender's ability to learn from a rehabilitative intervention, rehabilitative programs must include cognitive behavioural treatment and must also tailor the intervention to the learning style, motivation, abilities and strengths of the offender (Bonta, Andrews, & Wormith, 2011). It is imperative to ensure that rehabilitative programming is delivered at a literacy level to which the participants can understand and comprehend. This is of specific importance to future studies and recommendations of this

study given that the literacy rates among Canadian inmates is quite low. Studies suggest that a large percentage of Canadian inmates are illiterate; many inmates in Canada read below the sixth-grade level (Taylor & McAtee, 2003). Low levels of education are among the core criminogenic risk areas of adult offenders, meaning that low educational attainments contribute to continued reoffending (Bonta, Andrews, & Wormith, 2011). It would likely improve program outcomes if delivery was consistent with the inmate participants' literacy levels; this would ensure adherence to the RNR model of offending rehabilitation. There is no research to suggest that the program under review for this study is facilitated in a manner which tailors the program delivery to specific levels of literacy. Therefore, it is possible that inmate participants of this moderate intensity substance abuse program may not understand the program's content and, as a result, may not utilize the information in order to lower their rates of recidivism.

Given the importance of tailoring program delivery to the participants' learning and comprehension (Bonta, Andrews, & Wormith, 2011), it is recommended that future research focus on how to successfully delivery rehabilitative programming to the inmate population by ensuring that the delivery method matches the individual level of literacy and comprehension of each participant. Further research in this area can facilitate improvements to substance abuse intervention programs by allowing the participants to understand and subsequently apply the information in order to address addiction and rates of recidivism.

Evidence-Based Programming

Ensuring that correctional based rehabilitative programs are evidence-based is imperative to reducing rates of recidivism (MacKenzie, 2000). According to the National

Institute of Corrections (n.d), evidence-based practice in criminal justice refers to “the objective, balanced, and responsible use of current research and the best available data to guide policy and practice decisions, such that outcomes for consumers are improved”. While correctional decision making should be evidence based, correctional rehabilitative programs and services often lack evaluations which subsequently hinders practices to follow evidence-based guidelines (MacKenzie, 2000). Correctional decision making is of paramount importance and should utilize research to guide practice, policy, and program development (MacKenzie, 2000). Rehabilitative programs should undergo periodic assessments in order to examine whether they have an impact on criminal behavior (MacKenzie, 2000). Program evaluations should be independent, should employ scientifically recognized standards and methodologies, and should also perform cost/benefit analyses which examine whether the benefits and results of the program outweigh the costs (MacKenzie, 2000). Program evaluation could help to ensure that the rehabilitative program is following best practices and meeting program outcomes, thus allowing for evidence-based practices. According to the National Institute of Corrections,

An evidence-based approach involves an ongoing, critical review of research literature to determine what information is credible, and what policies and practices would be most effective given the best available evidence. It also involves rigorous quality assurance and evaluation to ensure that evidence-based practices are replicated with fidelity, and that new practices are evaluated to determine their effectiveness (n.d.)

Studies argue that the evaluation of programs has been a missing link in corrections (MacKenzie, 2000) and, as such, it is recommended that further research should be

conducted to determine how to best evaluate substance abuse programming for criminal offenders given the prevalence of substance abuse concerns among Canada's inmate population (Boyum et al., 2011).

Future research on how to best evaluate and assess substance abuse rehabilitative programming could certainly improve a program's effectiveness by ensuring that best-practices which are evidence-based are followed. The program has not been evaluated prior to this study and this could have been a factor causing ineffective results in terms of not lowering rates of recidivism.

Limitations

It is important to note that there is an inherent problem in measuring recidivism. There is a lack of complete information on crimes committed and who committed each crime; recidivism data are based on crimes that are reported to the police and research shows that there is a dark figure of crime (Spohn & Holleran, 2002). The term "dark figure of crime" was first used by the Belgian mathematician and sociologist Adolphe Quetelet in 1832 and continues to be a problematic concept for obtaining accurate criminality statistics (Penney, 2014). The dark figure of crime is crime that is neither reported nor recorded by law enforcement agencies; the dark figure of crime includes criminal incidents that meet the definition of recordable crime that are not officially recorded by an agency (Penney, 2014). Because not all crimes are reported to law enforcement and not all reported crimes result in arrest, recidivism data are not necessarily complete (Spohn & Holleran, 2002). As such, this study will be limited as to the accuracy of the rates of recidivism for those inmates who completed the rehabilitative

program and those inmates who did not complete the program. For the purpose of this study, recidivism refers to an arrest 12 months post-release from prison.

Conclusions

The results and recommendations of this study can help evoke positive social change in the discipline of criminal justice by facilitating an understanding of how to most effectively address substance abuse among criminal offenders. Effective rehabilitation of substance abuse can lead to lower rates of recidivism given that substance abuse is a core criminogenic risk and need area which contributes to reoffending among adult criminal offenders (Andrews et al., 2011). Successful rehabilitation programs for those with drug addiction can combat the alarmingly high rates of drug addicts among Canada's prison population (Boyum, Caulkins, & Kleiman, 2011); this can subsequently reduce the strain on Canada's criminal justice system. The results of this study did not yield statistically significant results when comparing the recidivism rates for those who completed the moderate intensity substance abuse program with those who did not complete the program. A catalyst for this could be that the program under examination for this study did not take into consideration the correlation between drug addiction and neuroplasticity, the importance of program delivery being conducive to the program participants' literacy levels, and the fact that this program lacked evaluation which certainly hindered the program's lack of evidence-based elements. As such, these three areas are topics recommended for future research.

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Appendix: Tables

Table 1

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differ ence	Std. Error Differ ence	95% Confidence Interval of the Difference	
									Lower	Upper
Recidivism (in months; post-release from custody)	Equal variances assumed	.204	.652	-1.07	198	.284	-.56000	.52115	-1.5877	.46771
	Equal variances not assumed			-1.07	197.934	.284	-.56000	.52115	-1.5877	.46772

Table 2

Group Statistics

	Completed Rehabilitative Program	N	Mean	Std. Deviation	Std. Error
					Mean
Recidivism (in months; post-release from custody)	yes	100	3.4800	3.71859	.37186
	no	100	4.0400	3.65126	.36513

Table 3

Recidivism (in months; post-release from custody)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	61	30.5	30.5	30.5
	1.00	21	10.5	10.5	41.0
	2.00	10	5.0	5.0	46.0
	3.00	18	9.0	9.0	55.0
	4.00	15	7.5	7.5	62.5
	5.00	13	6.5	6.5	69.0
	6.00	10	5.0	5.0	74.0
	7.00	8	4.0	4.0	78.0
	8.00	10	5.0	5.0	83.0
	9.00	16	8.0	8.0	91.0
	10.00	8	4.0	4.0	95.0
	11.00	8	4.0	4.0	99.0
	12.00	2	1.0	1.0	100.0
	Total	200	100.0	100.0	

Table 4

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Recidivism (in months; post-release from custody) * Completed Rehabilitative Program	200	100.0%	0	0.0%	200	100.0%

Table 5

Report of Recidivism in Months

Recidivism (in months; post-release from custody)			
Completed Rehabilitative Program	Mean	N	Std. Deviation
yes	3.4800	100	3.71859
no	4.0400	100	3.65126
Total	3.7600	200	3.68651