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Effects of inmate chemical dependency programs on recidivism rates

Shannon Elizabeth Mahoney

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THE EFFECTS OF INMATE CHEMICAL DEPENDENCY PROGRAMS ON RECIDIVISM RATES

By

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B.A., Carroll College, 2000

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Date
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EXECUTIVE SUMMARY

This research project is an examination of the chemical dependency programs currently in operation at the Montana State Prison, located in Deer Lodge, MT. The primary focus was to determine if successful completion of chemical dependency treatment effected recidivism rates. The study includes data gathered from the fiscal years of 2000, 2001, and 2002, and is a combination of two separate data bases that track inmate status in chemical dependency treatment and the rates of recidivism for this time period. Four treatment programs at Montana State Prison were examined: Relapse Prevention, Primary Care, Intensive Treatment Unit, and Medicine Wheel programs. The chemical dependency data from MSP were merged with the recidivism statistics for the given years, and this combined data set was analyzed using the Chi-squared test because this statistic computes the statistical differences and/or relationships between groups.

➢ Between the fiscal years of 2000 through 2002, only 44 (6.2%) of 705 inmates who participated in chemical dependency treatment did not successfully complete any of the four treatment regimens.

➢ The three-year recidivism rate, broken down by commitment type and treatment approach, shows that there was no statistically significant difference \((p=0.165)\) between treatment programs and the total for the prison for new convictions or revocations. However, due to the substantial differences between the number of participants in each group over this three year time period, these results should be viewed with caution.

➢ An examination of one-year recidivism rates for the four chemical dependency programs again showed no significant difference \((p=0.794)\) between the chemical dependency programs and prison total for new convictions and revocations. It should be noted that since the fiscal years of 2001 and 2002 do not meet the standard definition of recidivism set by the state of Montana, a negative effect on the accuracy of the data may have been produced.

➢ The Chi-Squared statistical test \((p=0.7938)\), and the overall sample size of this research project \((total\ prison\ population=3784)\) showed no statistical relationship between participation in chemical dependency treatment programs and lowered recidivism rates.

➢ Although this report found that participation and successful completion of chemical dependency treatment during incarceration was not a significant factor in reducing recidivism rates, it is still essential to provide such programs to the inmate population. Since, the data in this research project did not cover a large enough time span to ensure an extremely high level of accuracy, and the definition of recidivism for two of the three years examined was not met, this study should not adversely effect the continuation of chemical dependency programs at Montana State Prison.
ACKNOWLEDGEMENTS

The extensive evaluation of these analyses was done in conjunction with Jeff Rosky, who is a State of Montana employee and heads up the Statistical Bureau for the Department of Corrections based in Helena, MT. Mr. Rosky possesses a strong statistical background and brought several new ideas to the development of this research project. His vast knowledge helped ensure the accuracy of the statistical analysis, and helped assure that this study maintained the principles and standards of state government.
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INTRODUCTION

The United States criminal justice system is faced with many challenges, with one of the primary areas of concern consisting of the role drugs and alcohol play in creating or facilitating deviant behaviors and increasing incarceration rates. The nation’s courts and correctional facilities are exceedingly overcrowded, and rising rates of recidivism have lead to the notion of a “revolving door” within the criminal justice system (Harrison 2001). The dawn of the new millennium saw more than two million people incarcerated in U.S. correctional institutions, which represents a tripling in prison populations since 1980 (Adams and Reynolds 2002). Prisons are overflowing with inmates who have been convicted on drug charges or who committed their crimes while under the influence of an intoxicating substance (Adams and Reynolds 2002).

Chemical dependency is a severe and costly problem. The excessive use of any substance has lasting effects on an individual’s life, often producing noticeable effects on the body and mind, and seriously altering behavior. Substance abuse and chemical dependency not only affect the individual, but they also have an impact on the entire society. Presumably, we all have experienced the consequences of chemical dependency either directly or indirectly, through personal experience or support of state programs through taxation.

Substance abuse and chemical dependency are a few of the most enduring problems in American society and the treatment costs of such an affliction are considerable at both the individual and societal levels (McNeece and DiNitto 1998). Although some individuals are able to support fully their own treatment programs,
society is frequently left to handle the enormous financial burden that accompanies substance abuse and addiction.

The phenomena of substance abuse and chemical dependency are becoming an expensive reality for American society. Hundreds of thousands of people seek some form of treatment and spend an enormous amount of money to "fix" whatever problem or issue they are currently battling. The treatment of the prison inmate population in the United States is generally considered to be an substantial issue, as large sums of money are spent to "treat" offenders with the expectation that, once released, they will no longer be a burden or threat to society.

PRISON POPULATIONS, CHEMICAL DEPENDENCY, AND RECIDIVISM

The substantial increase in prison populations has lead corrections officials to examine how the effects of chemical dependency relate to incarceration rates and packed institutions. The nation's correctional systems are forced to determine the most practical and effective methods of ensuring that prison space is available for those truly dangerous offenders rather than existing as a continuous stopping point in the cycle of addiction.

Prison populations. The number of males incarcerated in the United States increased by two-thirds between the years 1986 and 1997, while the number of female inmates doubled. However, after the nation saw dramatic increases in the 1980s and 1990s, there has been more stabilization in recent years. Between 1995 and midyear 2002, the incarcerated population grew an average 3.8 percent annually, with the state prison populations only increasing by one percent within the last year (Adams and Reynolds 2002).
A key reason for this dramatic growth in prison admissions over the last decade is probation and parole failure and revocation. This growth can largely be attributed to an increased emphasis on drug testing and intensive supervision of offenders. Approximately, one-third of prison admissions are individuals who failed to meet the conditions of parole, with the primary reason for parole failure being the use or possession of drugs (Stephan and Mumola 1995).

Chemical dependency. As evidenced by the substantial increase in incarceration rates, the number of prison inmates affected by chemical dependency is staggering. It is a problem that not only involves those individuals who are drug offenders, but also encompasses those who have committed property crimes or other transgressions. Among the incarcerated population, more than 80 percent of state and 70 percent of federal prisoners reported some form of drug use in the past, and approximately the same proportion of the prison population requires some form of chemical dependency treatment (Mumola 1999; Hohman, McGaffigan, and Segars 2000). A nationally representative survey of state and federal inmates determined that approximately one-half of state prison inmates, and one-third of federal inmates, were under the influence of alcohol or drugs during the commission of the offense that lead to their captivity (Mumola 1999).

A study conducted by Parker and Auerhahn (1998) determined that substance abuse, particularly the use of alcohol, has been found to be associated with violent crimes among both adults and young offenders. Although there are varied findings regarding the effect that drugs and alcohol have on the commission of crimes, research has been able to determine that while substance abuse does not necessarily initiate criminal careers, it has
the potential to intensify and perpetuate them (Harrison 2001; Parker and Auerhahn 1998).

Although prison inmates could be considered one of the most high-risk chemical dependency populations, there is often considerable demand from the public that treatment be provided through the cheapest, quickest, and most effective means possible (Hohman et al. 2000). Though substance abuse treatment for the offender population is considered to be a positive and necessary aspect of corrections, resources are frequently inadequate for the level of care required by many inmates (Hardiman 2001).

Recidivism. One of the most complex problems that faces American corrections is finding the most effective and efficient way to deal with individuals who have drug and alcohol problems and who are also involved in criminal activity. Due to the significant increases in the nation’s recidivism rates throughout the last decade, there is an ever-expanding need to examine the potential connection between substance abuse and criminal behaviors. The complex relationships between drugs and crime have been extensively investigated, and these studies generally confirm that drug and alcohol use is associated with criminal activity (Inciardi, Martin, Butzin, Hooper, and Harrison 1997; Wexler, Falkin, and Lipton 1990).

The definition of recidivism is subjective and often varies significantly from one agency to another. It can be measured either in terms of the proportion of offenders committing a new offense, being convicted of a new offense, or violating the conditions of probation or parole within a given time period (Baumer 1997).

Recent research studies have shown that approximately one-third to two-thirds of all offenders released from prison return to some form of criminal behavior (Baumer
1997). Due to the excessively large number of offenders returning to criminal activities, there has been a sizeable body of literature examining the various levels and predictors of recidivism. These studies indicate that in the United States approximately 25 to 40 percent of persons released from prison will return for the commission of a new crime or a violation of parole conditions within a three-year time span (Baumer 1997).

There is a growing trend of parole violators being returned to prison, with 54 percent of violators being sent back to a correctional institution between 1990 and 1998 (Beck 2000). Chemical dependency has been shown to be a significant predictor of recidivism among offenders, and is among the top-ranked criminogenic factors in need of direct intervention (Gendreau, Little, and Goggin 1996). Within the last decade, offenders with drug-related crimes or chemical dependency issues accounted for over half of the total increase in parole violators returned to state prisons (Beck 2000). However, there is some encouraging evidence that prison-based drug and alcohol programs can be effective at reducing recidivism (Lipton 1996; Peters, Kerns, Murin, Dolente, and May 1993; Wexler, Falkin, Lipton, and Rosenblum 1994).

Studies conducted in the United States, Great Britain, and Australia have also examined the impact of various offender, offense, and prison characteristics on the possibility of recidivism. Research in these nations consistently shows that the likelihood of recidivism decreases with the age of the offender, that it is more likely to occur among males than females and those imprisoned for property crimes rather than violent crimes, and that the likelihood of recidivism increases with an offender’s number of arrests or prior convictions (Beck and Shipley 1989; Broadhurst and Maller 1990; Roeger 1994). Gottfredson and Mitchell-Herzfeldt (1982) report finding that the risk of recidivism is
higher among drug offenders than those who are not involved in the sale or use of illicit substances.

In addition to individual and offense characteristics, a substantial amount of research has measured the influence of the nature of the prison environment to which offenders are exposed on the likelihood of recidivism (MacKenzie, Layton, Brame, McDowall 1995). These studies have largely focused on the influence of offenders' involvement and contribution to an array of correctional treatment programs (e.g., educational or vocational training, drug and alcohol treatment, and life-skills training) and on the effects of being exposed to diverse levels of discipline on the likelihood of recidivism (MacKenzie et al. 1995).

Recent reviews of the research examining the effect of various treatment programs on lowering the possibility of recidivism have reached inconsistent conclusions, but there is a strong indication that exposure to more disciplined environments does not itself reduce recidivism, but may in fact increase the chances of criminal activity (Palmer 1992; MacKenzie et al. 1995).

TREATMENT

Chronic drug abusers make up a substantial percentage of the individuals supervised by the criminal justice system, thus making prison systems an ideal place to organize and provide needed treatment services. In recent years, the criminal justice system has become the leading source of mandated, or coerced, drug treatment in the United States (Leukefeld and Tims 1992). Many individuals employed within the justice system (i.e., police, judges, probation/parole officers, correctional personnel, and others)
serve as key sources of referrals to, and payment for, substance abuse treatment (O'Brien and McClelland 1996). A prime example of mandated treatment would be the involuntary sending of inmates to prison treatment programs. Mandated treatment within the criminal justice system can have various degrees of intensity and can be imposed at different levels within the process, ranging from those individuals who have just completed the intake process to those who have resided within the institution for a number of years (Farabee, Prendergast, and Anglin 1998).

The rapid escalation of prison populations has increased the demands placed on the criminal justice system to handle and treat the substance-abusing offender more effectively. Due to mounting concerns over public safety and the financial outlook of various state programs, prison-based substance abuse interventions have become an increasingly essential piece of the puzzle (Winnet, Mullan, Rowe, and Missakian 1992; Wolk and Hartmann 1996). In the rehabilitation literature, reoffending has been identified as one of the principal variables influencing program effectiveness. However, these broad conclusions fail to make it clear to practitioners in the field what precedence risk should be given among the range of considerations facing policy-makers located at different points throughout the criminal justice system (Brown 1996).

While incarceration clearly halts the commission of crimes against society and restricts access to illicit substances, research has shown that those individuals who had prior addictions will quickly resume their addicted and criminal behavior upon returning to the community (Beck 2000). Taking into account the sizeable costs to society, it is necessary to develop and implement resources for ex-offenders and their communities. Without intervention, there is an increased likelihood that these individuals will repeat
the same types of behaviors that ultimately lead to their incarceration (Gilliard and Beck 2000). By successfully addressing the treatment needs of drug-involved offenders, society is able to substantially reduce the costs of crime, including incarceration and other criminal justice and social costs (Harrison 2001).

Within the last two decades there has been a great deal of governmental efforts that have attempted to implement and improve effective chemical dependency treatment programs within correctional settings. One of the most influential was the implementation of the Residential Substance Abuse Treatment (RSAT) program. In September 1996, the Violent Crime Control and Law Enforcement Act of 1994 was amended to require states to “have a program of intervention for convicted offenders during periods of incarceration by no later than September 1, 1998” (Lipton, Pearson, and Wexler 2000:477). At this time, every state has requested and obtained RSAT resources to execute or expand the capacity for treatment within prison systems and jails. One stipulation is that states are required to give preference to programs that provide aftercare services that are coordinated between the correctional treatment program and other human service and rehabilitation programs (Lipton et al. 2000).

Another significant program began under the Anti-Drug Abuse Act of 1986 and was sponsored by the Bureau of Justice Assistance. This program’s main goal was to allocate funds for the expansion of drug law enforcement, but also for prevention and treatment efforts (Inciardi, Martin, Lockwood, Hooper, and Wald 1992). Part of this endeavor included the Comprehensive State Department of Corrections Treatment for Drug Abuse program, which created an initiative called “Project Reform” (Inciardi et al. 1992). The guiding principle of the project was:
Meaningful rehabilitation can occur when the efforts of the corrections officials and program managers are aligned to promote pro-social change, and to sustain that change through an offender's time of custody and following release into the community (Wexler, Blackmore, and Lipton 1991:484).

In 1997, only 40 percent of the correctional facilities in the U.S. provided on-site substance abuse treatment to inmates (Henderson and Lyman 2000). Although the amount of treatment available in the criminal justice system has generally increased in the last several years, the need for treatment far surpasses the availability of treatment. There are obviously more inmates who require treatment than receive it, and many programs are either short-term or not intensive enough to address inmates' specific needs. Frequently, the treatment programs in correctional institutions have waiting lists, and considering the depth of a typical inmate's addiction, self-help and drug education programs are unlikely to achieve long-lasting changes (Gilliard and Beck 2000).

Research is increasingly demonstrating the effectiveness of treatment for incarcerated populations in reducing recidivism and chemical dependency. Although treatment options are expanding in correctional institutions, there are a substantial number of offenders who could benefit from treatment who don't receive it. There is a great deal that remains unknown about how best to reach chemically dependent offenders to stop the revolving door of drug addiction and incarceration (Harrison 2001).

Correctional Treatment Ideology. The issue of effective and efficient chemical dependency programs for the offender population is one of complex dimensions. On one hand, the goal is to deal successfully with the issue of recidivism, criminal thinking, and
behavior. On the other hand, however, criminal behavior and recidivism must not become the main focus of treatment in place of substance abuse, as neglecting to effectively treat chemical dependency issues contributes directly to higher rates of recidivism (Rotgers and Graves 1999). Effective treatment for all offenders requires that every aspect of criminal behavior and thinking, substance abuse included, be adequately addressed.

Providing effective treatment for chemical dependency issues, while also addressing appropriate behavior and thinking patterns, are areas of corrections that must be balanced along with suitable punishments for offenses. Also, it is essential to consider the barriers that exist to providing treatment within a prison setting. There are often constraints on resources or changes in priorities for specific types of programs, as well as resistance from inmates and staff. Although treatment is a key element in "correctional" system ideology, one must also remember that prisons and jails are first and foremost institutions designed for control and punishment of criminal offenders (Chaiken 1989).

One of the fundamental concerns for correctional facility treatment programs is to "rehabilitate," "reintegrate," or "correctively treat," with the primary objective being a reduction in recidivism rates (Andrews and Bonta 2003). Correctional treatment is based upon the key principles of risk, need, and responsivity of each individual offender. The implementation of these principles into the philosophy of a treatment program is an attempt to find the most appropriate level of treatment for each offender at the lowest level of intensity necessary.

Risk. The risk principle involves two key elements. First is the notion that criminal behavior can be predicted and the second involves matching levels of treatment
behavior. On the other hand, however, criminal behavior and recidivism must not become the main focus of treatment in place of substance abuse, as neglecting to effectively treat chemical dependency issues contributes directly to higher rates of recidivism (Rotgers and Graves 1999). Effective treatment for all offenders requires that every aspect of criminal behavior and thinking, substance abuse included, be adequately addressed.

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Risk. The risk principle involves two key elements. First is the notion that criminal behavior can be predicted and the second involves matching levels of treatment
services to the risk level of the offender (Andrews and Bonta 2003). It is at this point that the gaps between assessment and effective treatment must be filled. The most intensive and extensive treatment programs need to be provided to those higher-risk offenders, where less intense forms of treatment should be available for lower-risk individuals (Andrews and Bonta 2003). This view argues that the least intrusive form of treatment will often prove to be the most effective (Wanberg and Milkman 1998). The risk principle is ultimately based on the fact that high-risk offenders have the most to gain from treatment in terms of reducing risk for further criminal involvement.

Need. Successful offender treatment and reduced recidivism rates are one of the primary goals for any form of correctional program. To ensure that offender needs are being met, it is essential not to focus solely on chemical dependency needs, but to also address issues facing the criminal personality. Aspects of the criminal personality are generally thought to include such traits as antisocial tendencies, lacking remorse for actions, poor moral development, and the need for greater stimulation to produce excitement. Though these traits may vary in frequency and intensity from one individual to another, the combination of any of these characteristics is believed to enhance the likelihood of criminal behavior (Mealey 1995).

The need principle focuses its attention on the distinction between criminogenic and non-criminogenic needs. Criminogenic needs, which refer to pro-criminal attitudes, criminal associates, substance abuse, antisocial personality, lack of problem-solving skills, and anger/hostility, are considered a subset of an offender's risk level and when altered are associated with changes in the probability of recidivism (Andrews and Bonta 2003; Weekes, Moser, and Langevin 1997).
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The practical significance of the criminogenic need factors is that they form the intermediate goals of treatment. Corrections officials are not often able to observe an offender’s criminal behavior directly and must focus their attention to changing these aspects of personality or situations that are believed to be linked to criminal behavior. When attempting to confront the criminal personality, it is essential to adjust common thinking errors, or criminogenic needs (Weekes et al. 1997).

Thinking errors are generally defined as the thoughts that people have during irresponsible behavior, that result in the tendency for self-destructive and/or criminal behaviors. Thinking errors is a concept that has been regularly utilized in the field of corrections, and is especially prevalent within the area of treatment (Youchelson and Samenow 1993). Using the terms of this approach, the most common errors in thinking that are dealt with in a correctional treatment setting include: anger, excuses, blaming, fronting, justifying, minimizing, power-play, silent power, victim stance, secretiveness, lack of empathy, hot shot or cockiness, let’s fight or splitting, get backs or keeping score, and refusal to acknowledge fear (Youchelson and Samenow 1993). When these errors in thinking are successfully targeted in treatment, there is an increased chance that the likelihood of recidivism will be reduced (Andrews and Bonta 2003).

It is important to remember that thinking errors are a common element of all human thinking, and not limited to the criminal population. Errors in thinking are viewed as “errors” solely from the perspective of responsibility that is determined by society. This notion of responsibility is defined to extend beyond legal responsibility to incorporate an entire lifestyle that is the outcome of removing defective thinking patterns and learning new ones (Youchelson and Samenow 1993).
Responsivity. The responsivity principle refers to characteristics that influence the individual's response to treatment, and acknowledges that the style of treatment delivery must be consistent with the learning style and ability of the offender for it to be effective (Weeks et al. 1997). The general premise of the responsivity principle is based upon the notion that cognitive-behavioral strategies, which are generally classified as thought and behavior modification therapies, are the most powerful influence on human behavior (Bonta 1995). Also, there are more specific areas of an offender's personality that must be taken into consideration, which significantly effect an individual's level of responsivity. Characteristics such as interpersonal sensitivity, anxiety, verbal intelligence, and cognitive maturity influence what mode and style of treatment services are the most appropriate for each individual offender (Bonta 1995).

A comprehensive model of chemical dependency treatment effectively merges the principles of medical and social/behavioral program models. A complete recovery program is centered on the notion that improvement is a process that occurs over time, in particular stages, where each stage has tasks to be completed and skills to be developed. It is likely that if a recovering individual is unaware of this progression, or unable to accomplish the tasks or gain the skills, he or she will relapse (Gorski and Kelley 1996).

THEORETICAL PERSPECTIVES OF ADDICTION

Substance abuse and chemical dependency are considerable topics that are prevalent within the literature in such fields as sociology, psychology, social work, and the medical profession, just to name a few. The subject extends its interest to the All of these areas are interested in determining why and how chemical dependency occurs, how
it persists, and what are the best ways of treating and controlling such a complex problem. Since there are an overwhelming number of theories related to this specific topic, this paper will focus on the three broad areas of the biological, sociocultural, and psychological theories.

BIOLOGICAL THEORIES

Biological theories consider addicts to be constitutionally predisposed to develop some type of chemical dependency and encourage a medical model of addiction and treatment. Advocates of such concepts apply disease terminology to "symptoms" and generally place responsibility for treatment in the hands of medical personnel (McNeece and DiNitto 1998).

Biological theories assert that chemical dependency operates on the human body in much the same manner as any disease, and present specific and consistent physical and psychological symptoms (McNeece and DiNitto 1998). As with any disease, the effects of chemical dependency will have certain, discernable symptoms that include a progression over time, lasting effects on the body and mind, and a deteriorated functioning of internal organs like the liver, stomach, and esophagus, just to name a few (McNeece and DiNitto 1998).

As a result of this disease, and the physical effects of the chemicals, people are unable to control the use of alcohol and/or drugs despite the negative consequences of using. According to this theory, chemical dependency occurs most frequently in people who have a family history of the disease. As the disease progresses, recovery becomes increasingly difficult. Chemical dependency has the potential to be fatal if the person...
does not completely cease the use of alcohol and other mood-altering drugs (Gorski and Kelley 1996).

According to the disease model of chemical dependency, there exists four main goals in the primary treatment of substance abuse. These elements include: the recognition that chemical dependency is a biological, psychological, and social issue; recognition of the need for lifelong abstinence from all substances; development and utilization of an ongoing recovery program; and a diagnosis and treatment of other problems or conditions that may hinder recovery (Gorski and Kelley 1996). A complete recovery process must encompass all of these elements, as the use and abuse of chemicals often invades every aspect of human life. Comprehensive chemical dependency programs generally encourage people to completely abstain from any substance use, and provide options for continued treatment or relapse prevention programs, once the initial treatment is completed (McNeece and DiNitto 1998).

SOCIOCULTURAL THEORIES

Sociocultural theories have primarily been generated by observations and interpretations of the differences and similarities between cultural groups and subgroups. Since definitions are produced in the social environment surrounding the use of each substance, sociocultural theorists attribute differences in substance use and abuse patterns to environmental factors (McNeece and DiNitto 1998). The heart of the sociocultural theories is based on the assumption that all societies create a definition and quota of deviance, which is essential for establishing boundaries and behavioral norms (Vygotsky 1934). The “rules” that exist surrounding drug and alcohol use are a part of establishing
social limits and expectations, and substance use and abuse are defined by behaviors or attitudes that a certain society or culture has deemed appropriate (McNeece and DiNitto 1998).

The sociocultural model is one that looks at substance abuse and chemical dependency as more of a social problem than a medical issue, and generally claims that the rapid growth of treatment in the United States, predicated on the idea that substance abuse is a disease, is a public relations triumph and not a triumph of science or reason (Addiction Research Foundation 1994). According to Peele and Brodsky (1992:42), “Addiction is an ingrained habit that undermines an individual’s health, work, relationships, self-respect, but that one feels cannot be changed.”

Within the sociocultural theories exists the notion of cultural transmission learning. This is the idea that the standards and interpretation of chemical use are passed on through cultural values, thus forming belief systems and acceptable behaviors surrounding the use and abuse of specific substances. Such learning styles are the product of an individual’s cultural background and upbringing, and have a significant influence on the development of values, beliefs, and ways of perceiving (Heredia 1999). A prime example of the effect of cultural transmission on substance use is the fact that the Italian culture drinks small amounts of alcohol frequently with meals and at celebrations, but there is a low incidence of alcoholism within the heritage. At the opposite end of the spectrum is the Irish culture, where they also drink frequently but in excessive amounts. Such behavior is often not accompanied by meals or for celebratory purposes and subsequently demonstrates the highest level of alcoholism in the European Union (Heredia 1999). Although there are many examples of this theory, these two cultures
clearly illustrate how cultural learning impacts an individual’s norms and behavior towards various substances.

Within the sociocultural model, chemical dependency is thought to be difficult to change due to the fact that the use of substances has been relied on, in many cases for years or decades, as a means of getting through life, gaining satisfaction, spending time, and defining self (Peele and Brodsky 1992). Individuals often determine they are chemically dependent when they cannot achieve the feelings they need and desire in ordinary ways. In viewing chemical dependency largely as a social issue, one can clearly determine that attitudes, values, and the opportunities available in a person’s surroundings have much to do with whether an individual has a significant risk for a particular addiction (Peele and Brodsky 1992).

Treatment within the sociocultural theories is based on the concept that substance use and experiences are shaped by environmental factors, and all of the social phenomena surrounding chemical use must be taken into account. For an individual to use and experience the drug in a socially acceptable manner, it is essential that they be familiar with certain effects of the drug, and be able to interpret, categorize, and place them within the accepted experiential and conceptual realms (Becker 1953). Treatment then focuses on altering people’s perceptions and beliefs surrounding drug use, as well as the experience of being “high,” in an attempt to significantly alter the desire and social acceptability of chemical use (Becker 1953).
PSYCHOLOGICAL THEORIES

Another explanation for chemical dependency and substance abuse resides in the literature that examines the human mind and emotions. Psychological models define addiction as an individual phenomenon, but do not necessarily eliminate or minimize social factors or other elements as playing an integral part in the development of an addiction (McNeece and DiNitto 1998). Often, within the psychological theories of chemical dependency, the areas of tension reduction, opponent-process model, modeling, and criminal thinking are addressed as specific areas of cause and are frequently addressed in treatment (Lee 1995).

_Tension-Reduction_. The tension-reduction model of chemical dependency is currently a popular explanation for substance abuse issues. This theory states that alcohol, and other substances, reduce the amount of tension or stress and individual may be experiencing in life, thereby reinforcing the behavior. Although the theory explains why some people may be more prone to become addicted than others, it does not take into account those individuals who abuse a substance but do not become addicted, or those individuals who experience high levels of stress but do not use substances to relieve tension (Lee 1995).

_Opponent-Process Model_. The opponent-process model proposes that abused substances have two processes or functions which produce two extreme experiences that are completely opposite of one another. The primary reaction to any substance is likely to be pleasure, which is often fast-acting but has a short duration. The second reaction is a homeostatic one that works to lessen the effects of the primary reaction, and tends to be slower and more long-lasting. However, if this reaction were experienced by itself, it
would most likely be an unpleasant experience. The two reactions sum together to create the desired affective state, but due to the different timing, the initial effect is pleasant where the secondary effect is undesirable. The tendency then is to continually repeat this process to override any potential negative experiences, thus creating a cycle of abuse and addiction (Lee 1995).

**Modeling.** Aside from the biological theory that parents may contribute to the chemical dependency of their offspring through genetics lies the notion that the overt behavior of parents may also contribute to the likelihood that their children will also display substance abuse problems. Parents model all different types of behavior to their children, including the inappropriate use of drugs and alcohol. If a child observes their parent frequently abusing a substance, this may become the norm for the child and such behavior has the potential to be interpreted as expected or acceptable. Also, children possess the tendency to imitate the actions performed by their parents and other authority figures, making the likelihood of substance use increase substantially if children imitate parental behaviors (Catalano, Haggerty, Gainey, Hoppe, and Brewer 1998). It is possible for substance abusing parents to model a variety of stress-inducing behaviors along with poor coping skills. Also, chemical dependency issues in the family increases the likelihood of a stressful home environment, which encourages or enables children to use substances as a coping skill or form of escape (Catalano et al. 1998).

**Criminal Thinking.** Within the psychological theories there also exists the notion that an offender should not be treated solely for chemical dependency, but that some other psychological issues need to be adequately addressed. Samenow states that,
The present reform programs, which have given hardened criminals social and vocational skills without coming to grips with the way they view the world, are costly, useless, and dangerous. It is vital that we know who the criminal is and how and why he acts differently from responsible citizens. From that understanding can come reasonable, compassionate, and effective solutions (1984:251).

The psychological theory of the criminal mind and criminal thinking includes the notion that criminals, themselves cause crime, not outside forces such as troubled neighborhoods, incompetent parents, television, schools, drugs and alcohol, or unemployment. Although these factors may increase the potential for criminal behavior, they do not create the behavior (Samenow 1984). This idea argues that crime resides within the minds of human beings, and criminals act on a thought process and make conscious decisions. They are not merely products of their environment. The psychology of criminal behavior is determined to follow in the wake of thought, and to eliminate criminal behavior, it is essential to first alter the way these individuals think (Samenow 1984).

Within the psychological approach, there exists a diverse range of chemical dependency treatment approaches, which often include attendance at support group meetings, adhering to goals of abstinence, examining of the effect substances have had over the life course, and frequently a host of behavior modification techniques which are employed to “recondition” the addicted individual to respond to social and internal cues with behavior rather than substance use/abuse (Mathias 1999).

According to Samenow (1984), to embark on an institutional program that is truly corrective, it is essential to understand that the criminal chooses crime. To “treat” effectively an offender it is crucial to eliminate criminal behavior and thinking. This is
by no means a quick and simple process, for it requires demolishing old thinking patterns, laying new foundations by teaching new concepts, and building a new structure, which enables the offender to put into action what they have learned (Samenow 1984).

THEORETICAL PERSPECTIVES OF TREATMENT

There are numerous theories that attempt to explain the existence and persistence of chemical dependency within our society. Although many of these models and theories are in direct contradiction with one another, to understand fully all of the aspects of substance abuse and addiction, one must examine what each theory has to offer and apply it to their current knowledge of the topic. The one thing these theories all have in common is a desire to understand fully chemical dependency and devise a treatment plan that will be effective for all of society.

SOCIAL LEARNING

Social learning theory, which was applied to the study of crime by Burgess and Akers in 1966, is a modification of Sutherland’s work and operates under the central principles of modern behaviorism. The concept of social learning is a broad attempt to explain all criminal and delinquent behavior and maintains that such behavior is learned through direct conditioning and imitation or modeling of others (Akers 1998).

Reinforcement and punishment are the two major processes that are involved in operant conditioning, and each of these has positive and negative features. The reinforcement of behavior occurs when the consequences or reactions of others encourage an individual to do the same thing again when similar circumstances are
presented. In other words, reinforcement causes a certain behavior to increase in frequency (Akers 1998). If a particular behavior is rewarded, it is considered positive reinforcement. A prime example of this is when an individual is given social or tangible rewards for criminal activities. Negative reinforcement occurs when engaging in a behavior prevents or avoids an unpleasant stimulus. This frequently occurs when participating in delinquent activities prevents one from being humiliated or excluded from a particular social group, but could also include involvement in conventional behaviors to avoid being caught and punished.

Punishment may also have both positive and negative elements, but unlike reinforcement, the primary objective of punishment is to weaken a behavior or extinguish it altogether (Akers 1998). When a behavior elicits an unpleasant or painful response, the punishment is considered to be positive. An example of this would be a person committing a crime and getting caught and punished for the act (Akers 1998).

Along with direct conditioning, behavior may also be developed or extinguished through imitation or modeling. Behavior models may be real or fictitious, and the observers may be passive onlookers or active participants in activities with these individuals (Akers 1998). According to Akers (1985:46), “modeling is a more complicated process than monkey see, monkey do.” There are a number of factors that influence the modeling process, as people tend to imitate those they like, respect, and admire (Akers 1998).

Akers, Krohn, Lanza-Kaduce, and Radosevich (1979:38) contend, “Whether deviant or conforming behavior is acquired and persists depends upon past and present rewards or punishments for the behavior and the rewards and punishments attached to
alternative behavior." This ideology is the principle behind differential reinforcement. This is largely a social process, which takes place primarily in the context of interactions with others. The people with whom one has the greatest amount of contact, those who reinforce or punish the most, will have the most significant influence over that individual (Akers 1998). In general, these individuals will consist of family and friends, but may also include institutional agents, such as school personnel, employers and coworkers, government and law enforcement, and media personalities. These individuals not only provide models for behavior, but also supply definitions and norms to behaviors as being right or wrong (Akers 1998).

COGNITIVE-BEHAVIORAL

Cognitive-behavioral theories had their beginning in the nineteenth century and were utilized by such thinkers as Freud and Kant. These theories are quite contradictory in that they offer a rather realistic view of both pessimism and optimism regarding human nature. Cognitive-behavioral theories operate under the assumption that human beings have a strong propensity to sabotage themselves, but at the same time have an enormous potential for change and self-actualization (Engler 1999).

The more recent developments in cognitive-behavioral theories also concur that people possess the potential for change. These theorists believe that human behavior is both free and determined and is influenced by both environmental and hereditary factors and though there are some similarities among people, each individual develops a unique way of coping with life's problems (Engler 1999). Although learning is a vital element in
shaping our behaviors, people are capable of acting primarily on their own initiative (Engler 1999).

Cognitive-behavioral theories generally encompass the concepts of modifying an individual's behavior and altering the thought processes that impact conduct. The idea of behavior modification focuses primarily on assembling possibilities of positive reinforcement to develop and maintain appropriate and accepted patterns of behavior (Bandura 1969; Skinner 1953). Theories of behavior modification frequently incorporate contingency contracts or token economies in an effort to increase the motivation of participants. Contingency contracts are agreements devised with an understanding of specific desirable behaviors earning specific rewards. Token economies are programs whereby specific desirable behaviors earn tokens that can be exchanged later for goods or privileges (Pearson, Lipton, Cleland, and Yee 2002).

The thought processes that impact an individual's conduct, which are most frequently considered to be the backbone of the cognitive-behavioral theories, focus attention on the cognitive and emotional processes that function between the stimuli received and the overt behaviors enacted (Pearson et al. 2002). McGuire (1996) indicates that there is no single cognitive-behavioral method or theory that is fundamentally the best. Cognitive-behavioral theories frequently incorporate therapy ideologies such as social skills training, rational-emotive therapy, social problem-solving skills, a cognitive skills program, and a relapse prevention model (McGuire 1996).
CHEMICAL DEPENDENCY TREATMENT STUDIES

A report released by the National Institute of Justice (NIJ) stated that in-prison treatment programs and aftercare have the potential to effectively turn offenders away from a life of crime. The NIJ, along with researcher Douglas S. Lipton, have evaluated programs in California, New York, Oregon, and Delaware, and found that they were remarkably consistent in reducing recidivism among inmates for up to three years following release from incarceration. The program implemented in the state of California cut the usual 60 percent recidivism rate to about 25 percent (Lipton 2001).

These research studies have found that without treatment, many of these offenders will relapse into chemical dependency upon release from custody and subsequently return to a criminal lifestyle. The NIJ report maintains that it makes sense to consider the criminal justice system to be a prime location for substance abuse treatment, as a large proportion of drug users have some form of contact with the system at one time or another (Lipton 2001). According to Jeremy Travis, the Director of NIJ, “While it is true that there has been growth in the percentage of prisoners receiving treatment, for the majority of inmates with substance abuse problems, treatment is still not an option (Patman 2002:21).

According to Lipton (2001), the model that seems to produce the greatest benefits is the therapeutic community, which is a treatment protocol that separates offenders with chemical dependency issues from the general prison population so that they are able to more successfully address the many problems that are associated with and attributed to lifestyles of addiction and crime (Lipton 2001). One of the key elements of success for the therapeutic programs in reducing recidivism rates was the length of time in the
program. Those offenders who participated in the program for longer periods of time were the least likely to relapse or re-offend (Lipton 2001).

One of the first, and most extensively studied therapeutic communities was the state of New York’s Stay’n Out program. This program, which was established by recovered addicts who were also ex-offenders, produced lower recidivism rates when not only compared to those inmates who did not receive any treatment, but also when compared to those who received some other form of treatment (Lipton 2001). Another successful program that was examined in this research study was the state of California’s Amity Rightturn program. Within this program, roughly a quarter of the participants who completed the program and the required follow-up treatment were re-incarcerated after six months, while more than 60 percent of inmates not treated were re-incarcerated (Lipton 2001).

The research conducted over the last two decades indicates that there is a substantial amount of benefit available to both offenders and society if adequate treatment programs are provided. Various states all over the U.S. have had a great deal of success in reducing recidivism rates when treatment programs or therapeutic communities are introduced into their penal institutions. The programs in New York and California are among the most extensively studied, and continue to offer a great deal of hope to the corrections community to provide an effective way of reducing costs and protecting the safety of society.
MONTANA STATE CHEMICAL DEPENDENCY PROGRAMS

The Montana State Prison system has adopted the model of the therapeutic community, which has been a component of prison-based strategies that emerged in the early 1960s (Hartmann, Wolk, Johnston, and Colyer 1997). The therapeutic community is a residential substance abuse treatment modality that contains aspects of social learning and cognitive behavioral models, and utilizes peer support for the development and enhancement of pro-social values and behaviors. These programs are structured so that individuals are able to recognize and alter destructive behavior patterns and choices and utilize the structured environment of the prison system and the notion of “peer culture” as therapeutic tools (DeLeon 1995).

The current chemical dependency programs at Montana State Prison are largely based on the principles developed in a 1999 study conducted by the state of Maine. The model is called the Differential Substance Abuse Treatment Model, in which the overall objective is to target reductions in the rates of chemical dependency and recidivism among inmate populations. This is to be accomplished by developing and implementing a correctional treatment model that thoroughly and reliably assess the need level of the inmate population and provides a parallel treatment service that addresses criminal risk (Rotgers and Graves 1999).

The treatment tracks that are currently in effect at Montana State Prison include four diverse programs of treatment, program supervision, and care. These treatment tracks, which include Relapse Prevention, Primary Care, Intensive Treatment Unit, and a Native-American-oriented group known as the Medicine Wheel, all incorporate different levels of intensity and individually deal with varying stages of addiction. All of the
prison’s chemical dependency programs are designed to provide or enhance the self-intervention skills of all participating offenders and the amount of time spent in a particular group is dependent upon the level of intensity deemed appropriate for each individual.

RELAPSE PREVENTION

The Relapse Prevention program provides an opportunity for those offenders who have either completed treatment or are determined to not possess a significant risk of relapse, the chance to hone their prevention abilities and to practice the skills necessary to ensure continued abstinence. The expectations for this program are the successful completion of a Relapse Prevention Workbook, as well as regular attendance in individual and group counseling and active participation in group activities.

The Relapse Prevention Workbook consists of various assignments that enhance an offender’s awareness about their chemical dependency issues. Several assignments include recognizing and developing skills to deal with situations, events, or individuals that might trigger substance abusing episodes. Other activities involve communicating the negative effect that drugs have had on a individual’s life and making plans on how to improve their relationships in the future. The main objective of the use of the workbook is to enhance the life and coping skills of the offenders to improve their ability to reintegrate back into society.
PRIMARY CARE

The Primary Care program is designed for offenders with no prior treatment history or for those individuals whose denial is determined to be too strong to benefit from the relapse prevention format. The treatment regimen is based on the disease model of addiction and recovery is the primary focus with a great deal of emphasis being placed on eroding denial. Group work within the Primary Care format ties back to the steps of Alcoholics and Narcotics Anonymous, and groups currently meet twice a week for two-hour sessions. Participants also meet for individual counseling sessions on a weekly basis.

INTENSIVE TREATMENT UNIT (ITU)

The Intensive Treatment Unit is located in a specific unit on the low-security side of the institution and houses 28 offenders. This sixty-day program incorporates the chemical dependency concepts utilized in both the Relapse Prevention and Primary Care programs. The ITU also includes assignments from Stanton Samenow's Inside the Criminal Mind workbook, as well as Cognitive Principles and Restructuring (CP&R) to assist offenders in altering thinking errors and criminal personality traits. The Intensive Treatment program consists of group and individual counseling sessions, completion of the appropriate workbooks and work with senior peers as mentors. Group members are required to keep criminal thinking logs and complete Thinking Error Reports to effectively monitor potential problems and changes.
MEDICINE WHEEL

The Medicine Wheel program offered at the institution is a treatment component created especially for the Native American population and was recently designated one of the 10 promising practices by the U.S. Department of Justice and the Attorney General (Bonta 1997). The Medicine Wheel program provides a treatment modality that is sensitive to Native American spiritual and cultural beliefs, as approximately 15 percent of the prison population in the state of Montana is Native American. This group utilizes a different approach that comes from White Bison, which is a group ideology that offers sobriety, recovery, addiction prevention, and wellness learning resources to the Native American community nationwide. Along with the White Bison approach, the Medicine Wheel incorporates the lessons and beliefs that make up the Twelve-Step programs. Although this treatment group is aimed at the Native American population, it is open to any interested offender.

OTHER PROGRAMS

In addition to the previously mentioned chemical dependency treatment programs, Montana State Prison also utilizes the popular 12-step Alcoholics Anonymous, Narcotics Anonymous, and Gambler's Anonymous programs. Group meetings are held regularly within the institution, and are often conducted in conjunction with the other forms of treatment being offered. Several offenders are also required to attend CP&R groups, to reform criminal thinking and behavioral patterns (Yochelson and Samenow 1995). All of these groups interact with one another to ensure the highest level of consistency within an offender's treatment program.
Almost all of these programs are designed within a cognitive-behavioral approach, and utilize the principle that attitudes and thoughts are more influential upon behavior than events and the meaning of events trigger emotions rather than the behavior itself (Wanberg and Milkman 1998). Through the cognitive-behavioral approach, a counselor will actively participate in helping inmates to discover alternative ways of thinking and appraising situations. These intervention approaches include problem-solving, modeling strategies, restricting of cognitive distortions, identifying automatic thoughts, and challenging maladaptive assumptions (Wanberg and Milkman 1998).

The issue of substance abuse treatment for offenders is complex. Goals of such treatment often include dealing with criminal behavior and recidivism, as well as substance abuse and relapse. Given the direct relationship between substance abuse and criminal behavior, neglecting to treat effectively substance abuse contributes directly to higher rates of recidivism (Bell and Rollnick 1996). It is essential to ensure that offenders are receiving well-rounded treatments that address the vital issues with the same amount of consistency and progress available within each program.

Numerous reviews and research indicate that there is no single program or technique that is effective in treating all substance abusers (Addiction Research Foundation 1994). However, there are a wide variety of valuable models and techniques that are available to guide successfully an abuser to a clean and sober lifestyle. Programs that promote a positive participant-therapist relationship, while following a structured format, are strongly associated with a decrease in relapse rates (Millson, Weekes, and Lightfoot 1995).
METHODS

The primary objective of this study is to determine if successful completion of chemical dependency programs reduces the likelihood that an offender will recidivate. This research project has fiscal implications for chemical dependency programs at Montana State Prison and also has potential to enhance the quality and quantity of treatment provided to offenders, as well as enhance the safety of the public.

The hypothesis is that those offenders at Montana State Prison who have successfully completed chemical dependency treatment are less likely to recidivate by the commission of or conviction for another crime or substance abuse relapse than those offenders who did not complete any chemical dependency programs. A comparison is made between the recidivism rates of offenders who participated in chemical dependency treatment programs and those who were non-participants.

DATA

The chemical dependency data at Montana State Prison is stored in a database that is referred to as MS-ACCESS, and it exists primarily as a record-keeping tool for chemical dependency treatment, is a system that was created by an offender with an interest in substance abuse issues and considerable computer knowledge. In order to test the research hypothesis, information was obtained from this database that draws from chemical dependency treatment records of offenders incarcerated at this institution who had completed treatment, were currently participating in a program, or who were on a waiting list. The data for this research project are composed of the number of offenders...
who participated in a chemical dependency program while incarcerated at MSP and were released from prison during the fiscal years of 2000, 2001, and 2002.

The data obtained by the staff at MSP includes extensive background information, including personal characteristics such as age, gender, height, weight, ethnicity, tattoos and/or scars, marital status, family information, medical history, work history, and criminal record. This particular database outlines individual treatment characteristics, and incorporates current assessments regarding existing chemical dependency needs. The database provides up-to-date information on offender treatment status by separating those offenders who were presently in treatment from those who had successfully completed treatment, were on a waiting list, or those who did not require chemical dependency services.

To determine if the successful completion of chemical dependency treatment had a positive effect on recidivism rates, recidivism rates were examined for the fiscal years of 2000, 2001, and 2002. Recidivism for the Montana Department of Corrections is generally defined as a return to prison within three years of release for any reason, such as the commission of a new offense or a violation of probation or parole provisions. The rates used in this study were calculated on a fiscal year basis, which means that years elapsed since time of release must be calculated using this fiscal year basis rather than the standard calendar measure to ensure the accuracy of actual rates. The recidivism rates were broken down into both one-year and three-year components to determine their overall effectiveness.

The purpose for breaking the recidivism rates into three-year and one-year components was an attempt to increase the accuracy of the chemical dependency data.
obtained from each of the four separate programs at Montana State Prison. By taking two
different measures of time in calculating recidivism rates, this analysis took into account
the substantial amount of variation that can take place from one year to another in various
types of treatment due to unknown outside influences. Examining two different measures
takes into account the spurious variations that have the potential to take place in a field
such as chemical dependency treatment.

CASES

The four different treatment groups at Montana State Prison show significant
differences in the number of offenders who are required to go through chemical
dependency treatment. The Relapse Prevention and Intensive Treatment Unit are the
largest chemical dependency programs at the institution and over the three-years
examined in this study, it served a combined total of 477 offenders. The Medicine Wheel
and Primary Care programs were substantially smaller and totaled 228 offenders during
this three-year period. The total sample size for this research project equaled 3,784; this
included all individuals incarcerated at Montana State Prison (whether or not in chemical

Due to the substantial variation in group numbers, it is anticipated that there will
exist a noticeable difference in the amounts of recidivism between the four groups. The
Relapse Prevention and Intensive Treatment Unit programs are likely to have higher
prevalence of recidivism due to the large number of offenders who have participated in
the program, where the Medicine Wheel and Primary Care programs will demonstrate
lower numbers returning back to prison. Though this may look as if the two smaller
programs are more effective at treating chemical dependency issues, the size of the group must be accounted for, and analyzed using the Chi-squared test to determine if a significant difference does exist.

In looking at the recidivism cases for this study, it is important to note a difference between revocation and commission of a new offense. The more obvious form of recidivism is the commission of a new offense, where an individual is adjudicated and convicted of a new crime. A return to prison due to a revocation occurs when an offender is re-incarcerated for violating the conditions of parole or probation that were initially set at the time of release. Many offenders violate the conditions of their parole or probation by using or possessing substances such as drugs or alcohol, which are frequently prohibited. Other violations may include, but are not limited to, curfew violations, contact with particular individuals, and failure to report or make restitution or fine payments. For the purposes of this study, the definition of recidivism will incorporate both revocation and new offenses.

ANALYSIS

Chemical dependency data were merged with the State of Montana’s offender tracking data base, ACIS/PRO-Files. This data set monitors incarceration and release dates and the resulting information was processed using the SAS software program. By comparing treatment stop dates against incarceration and release dates, it was possible to accurately determine if the treatment occurred in the correct time frame. There was 100 percent correspondence between ACIS and the chemical dependency data, which indicates that the data entry staff are diligent in their efforts to capture the data.
The analysis compared the rates of recidivism for those individuals who participated in any of the four chemical dependency treatment programs to the recidivism rate of the general prison population, which included primarily those individuals who did not participate in or require chemical dependency treatment. The combined chemical dependency and recidivism data are analyzed using the Chi-squared test, as there were not enough cases to run a logistic regression type of analysis. The Chi-squared test is also a suitable measure for this research project as it computes the statistical differences and/or relationships between groups; observations of the comparative percentages between these treatment groups. Covariate correlations were also examined by utilizing the risk factors relapse, age, race, completion of treatment, length of incarceration, and program length. However, there existed no statistical significance between any of these factors and the likelihood of relapse or re-incarceration.

FINDINGS

Table 1 demonstrates the treatment status of Montana State Prison offenders for the fiscal years of 2000, 2001, and 2002. This table indicates the total number of individuals who passed, failed, quit, or received an incomplete in their treatment requirements at the institution during this stated time period.

The incomplete compliant category refers to those offenders who were unable to complete chemical dependency treatment through no fault of their own, often being transferred to other correctional facilities or prerelease centers.
TABLE 1. Frequency Distribution for the Outcome of Chemical Dependency Programs at Montana State Prison between the fiscal years of 2000 through 2002

<table>
<thead>
<tr>
<th>Treatment Outcome</th>
<th>Frequency</th>
<th>Percent</th>
<th>C. Freq.</th>
<th>C. Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAILED</td>
<td>18</td>
<td>2.55</td>
<td>18</td>
<td>2.55</td>
</tr>
<tr>
<td>INCOMPLETE</td>
<td>1</td>
<td>0.14</td>
<td>19</td>
<td>2.70</td>
</tr>
<tr>
<td>INCOMPLETE COMPLIANT</td>
<td>11</td>
<td>1.56</td>
<td>30</td>
<td>4.26</td>
</tr>
<tr>
<td>PASSED</td>
<td>661</td>
<td>93.75</td>
<td>691</td>
<td>98.01</td>
</tr>
<tr>
<td>QUIT</td>
<td>14</td>
<td>1.98</td>
<td>705</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 2 shows the frequency of offender status in the chemical dependency treatment programs at Montana State Prison for the fiscal years 2000, 2001, and 2002, separated out by the four individual programs.

TABLE 2. Frequency and Percentages for the Treatment Outcomes of the Four Primary Chemical Dependency Groups at Montana State Prison between the fiscal years of 2000 through 2002

<table>
<thead>
<tr>
<th></th>
<th>Medicine Wheel</th>
<th>Primary Care</th>
<th>Relapse Prevention</th>
<th>Int. Treatment Unit</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAILED</td>
<td>2 (1.87)</td>
<td>5 (4.13)</td>
<td>6 (2.46)</td>
<td>5 (2.15)</td>
<td>18 (2.55)</td>
</tr>
<tr>
<td>INCOMPLETE</td>
<td>0 (0.00)</td>
<td>0 (0.00)</td>
<td>1 (0.41)</td>
<td>0 (0.00)</td>
<td>1 (0.14)</td>
</tr>
<tr>
<td>INCOM. COMP.</td>
<td>1 (0.93)</td>
<td>1 (0.83)</td>
<td>8 (3.28)</td>
<td>1 (0.43)</td>
<td>11 (1.56)</td>
</tr>
<tr>
<td>PASSED</td>
<td>102 (95.33)</td>
<td>111 (91.74)</td>
<td>223 (91.39)</td>
<td>225 (96.57)</td>
<td>661 (93.76)</td>
</tr>
<tr>
<td>QUIT</td>
<td>2 (1.87)</td>
<td>4 (3.31)</td>
<td>6 (2.46)</td>
<td>2 (0.86)</td>
<td>14 (1.99)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>107</td>
<td>121</td>
<td>244</td>
<td>233</td>
<td>705</td>
</tr>
</tbody>
</table>

Note: Numbers in parenthesis are the percentages of the outcomes for each treatment group.
Table 3 shows the figures provided by the Chi-Squared statistical test, and the overall sample size of this research project. As evidenced by this table, with eight degrees of freedom, there exists no statistical relationship between participation in chemical dependency treatment programs and lowered recidivism rates.

### TABLE 3. Chi-Squared Statistical Test Conducted on the Relationship between Participation in Chemical Dependency Treatment and Recidivism Rates at Montana State Prison between the Fiscal Years of 2000 through 2002

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>DF</th>
<th>VALUE</th>
<th>PROB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>8</td>
<td>4.6543</td>
<td>0.7938</td>
</tr>
<tr>
<td>Likelihood Ratio Chi-Square</td>
<td>8</td>
<td>4.8975</td>
<td>0.7685</td>
</tr>
<tr>
<td>Mantel-Haenszel Chi-Square</td>
<td>1</td>
<td>1.5744</td>
<td>0.2096</td>
</tr>
<tr>
<td>Phi Coefficient</td>
<td></td>
<td>0.0351</td>
<td></td>
</tr>
<tr>
<td>Contingency Coefficient</td>
<td></td>
<td>0.0350</td>
<td></td>
</tr>
<tr>
<td>Cramer’s V</td>
<td></td>
<td>0.0248</td>
<td></td>
</tr>
</tbody>
</table>

Sample Size=3784

![Figure 1. The Three-Year Recidivism Rate for Montana State Prison between the Fiscal Years of 2000 through 2002, By Program and Commitment Type.](image)
Figure 1 shows the three-year recidivism rate for the fiscal year 2000, broken down by commitment type and treatment approach. This table demonstrates that there was no statistically significant difference (p=0.165) between the treatment programs and the total for the prison for new convictions or revocations.

![Figure 1. The Three-Year Recidivism Rate for the Fiscal Year 2000, Broken Down by Commitment Type and Treatment Approach.](image)

Figure 2 shows the fiscal years 2000 through 2002 one-year recidivism rates for the four chemical dependency programs being examined along with the overall recidivism rate for the prison. Again, there was no significant difference (p=0.794) between the four chemical dependency programs and prison for new convictions and revocations. It should be noted for two of the three years examined, the standard definition of recidivism was altered, and this may have a negative effect on the accuracy of the data. Since recidivism in the state of Montana is defined as the revocation of a probationary or parolee status or the commission of a new offense within a three-year time period after being released from incarceration, the fiscal years of 2001 and 2002 do not meet the standard measurements of recidivism outlined in this study.

![Figure 2. The One-Year Recidivism Rate for Montana State Prison between the Fiscal Years of 2000 through 2002, By Program and Commitment Type.](image)
DISCUSSION

Although this analysis was conducted over a three-year time period, there were numerous limitations to the study. The first issue deals with the three-year time constraint that was placed on the data, and its inherent disagreement with the standard definition of recidivism, which is generally considered to be a return to prison within three-years of being released. Since the fiscal years through 2000 and 2002 were utilized, the customary three-year definition for recidivism could only be incorporated for the fiscal year 2000. By utilizing the fiscal years of 2001 and 2002, we were forced to operate under a different definition of recidivism and were only able to include information gathered in within a time frame of two years or less. This inconsistent time lapse may have produced a negative effect on the overall outcome of the study and it is a constraint that has the potential to provide an unclear picture of the recidivism rates within the prison's chemical dependency programs. Due to the fluctuation in recidivism rates from year to year, being unable to follow a standard definition of recidivism may appear to make specific programs ineffective, when that is most likely not the case.

The second limitation that had an adverse effect on the outcome of the study was the lack of an appropriate control group to compare against the data. In this study there was a very small sample size to draw from given the previously mentioned time constraints. By utilizing the 2000 through 2002 fiscal year time constraints, this number falls to 705 offender treatment episodes. There were 661 (93.8%) offenders who successfully completed the program, 18 (2.6%) offenders who failed the program, 14 (1.9%) offenders that quit the program, and 12 (1.7%) offenders who were incomplete or incomplete compliant. Since there were only 32 total treatments that ended
unsuccessfully, there wasn’t an adequate sample size to compare the outcomes of treatment failures to those of treatment completion. One must also call into question the exceptionally large number of individuals who completed treatment over the time period studied, and the relatively small number of individuals who failed or quit chemical dependency treatment. It is essential for program success to determine if an individual passed by being an active participant in the treatment process, or just merely showed up and put in their time, as this may have a significant impact on their future potential to relapse or commit a new crime. As successful completion of the chemical dependency treatment programs is poorly measured, the institution would benefit from a stricter set of definitions regarding passing, failure, and compliance. This would have the potential to produce more accurate results when attempting to determine recidivism rates for institutional chemical dependency programs.

Another element that may prove beneficial for successful outcomes in chemical dependency treatment would be the examination of how certain individuals are placed into particular programs. Investigating the area of the initial assessment may have an influence on an inmate’s success in treatment. An individual is much more likely to benefit, and succeed, in a treatment program if they are placed in groups that fit their particular needs more closely.

These issues severely limited the scope of this analysis and may have produced a negative effect on the outcome of treatment programs and their effect on recidivism rates. Ultimately, this study did not consider all the elements that needed to be considered to make this analysis truly effective. In the future, it would be wise to take random samples of inmates, look through their files to determine treatment need, participation, success,
and recidivism rates, and develop a clear and defined control group which to compare rates against.

CONCLUSION

Providing chemical dependency treatment during incarceration is an often-missed chance to intervene in the cycle of drugs and crime that could ultimately help relieve prison overcrowding and reduce costs associated with recidivism (Shapiro 2001). Although this research study indicates that there is no significant difference between the recidivism rates of those offenders who participated in chemical dependency treatment programs and the general prison population, the literature indicates that treatment is a key component to enhancing the well-being of both the offender and society as a whole. Andrews and Bonta (1998) report that there are several program characteristics that must be present for chemical dependency treatment to be effective. It is essential that the level of treatment be matched with the level of risk and that criminogenic needs are specifically addressed (not only chemical dependency, but also antisocial attitudes and criminal companions). Also, treatment must be consistent with an offender's learning style and personality, and should be based on cognitive-behavioral principles (Andrews and Bonta 1998). All treatment should be delivered with integrity and within a structured format, with continuing care being provided to ease offender transition from institutional living to being reintegrated into society. Last, programs must have a consistent method of recording data to provide for successful outcome research (Andrews and Bonta, 1998).

The array of chemical dependency programs that are offered at Montana State Prison provide an appropriate amount of diversity for that particular population and need
only to set clearer definitions of success and failure to effectively determine treatment outcomes. Also, keeping the staff full of dedicated and knowledgeable individuals provides a strong foundation for any chemical dependency program, but it is often a difficult goal to reach given the limited resources within the state government.

Although the chemical dependency treatment programs were determined to be ineffective at lowering recidivism rates within this study, it is still useful to keep them in operation for a number of reasons. First, the annual budget for Montana State Prison is an estimated $30.5 million, with approximately $126,000 being spent on chemical dependency treatment (Olcott 2003). The costs of running these four programs are not unreasonable or excessive when compared to the overall budget, thus making their continuation a potentially positive element of the institution. Second, it is important to provide the opportunity for reform and treatment since many of these individuals will be released back into society. Numerous organizations within the community (such as probation/parole offices and pre-release centers, to name a few) endorse treatment within correctional institutions, with the understanding that though the treatment may have not been internalized, it had at least been offered. The basis for the “correctional institution” lies in providing treatment to the inmate population in the areas where they may be lacking direction in their lives to make them contributing members of society once they are released from prison.

Overall, the chemical dependency programs at MSP are a necessary aspect of prison life, and should continue to be funded as a primary responsibility within the institution. At this time, the limitations of these data and findings do not justify an alteration of the chemical dependency treatment programs at Montana State Prison.
BIBLIOGRAPHY


