"TREATMENT EFFECTS OF IN-PRISON THERAPEUTIC COMMUNITIES"

by Michelle Foster, Kent State University and Cuyahoga Community College

Abstract

Therapeutic communities provide valuable resources toward recovery for addicted individuals. This study looks at how treatment programs of in-prison therapeutic communities affect incarceration rates. Data on individuals from SCI-Chester, a correctional facility in Pennsylvania housing only substance abusing offenders, are used. The findings indicate that the type of program (either an in-prison therapeutic community or out of prison therapeutic community) does not matter as long as individuals participate in a program. The treatment variables that are statistically significant upon examination are persons who do not stop using drugs, and thus have positive drug screens, and offenders who are placed on a higher level of supervision. Both of these variables are statistically significant and increase an offender's likelihood of reincarceration. Further research as to the necessary length of therapeutic community experience and the role of choice in the therapeutic community warrant attention.

Introduction

"Our current system is broken." "Unfortunately, many ex-offenders return to prison over and over again – the door is often a revolving one. The only way to close it is to open another one." These words were from Senator Joseph Biden, Chairman of Senate Judiciary Committee on Crime and Drugs on April 9, 2008 (Biden, 2008). According to the Bureau of Justice Statistics, at year-end 2006, "over 5 million adult men and women were under Federal, state, or local probation or parole jurisdiction" (U.S. Department of Justice, Online, 2008, http://www.ojp.usdoj.gov/bjs/pandp.htm). Almost all offenders are eventually released (Petersilia, 2003; Travis, 2005); therefore, it is important for all persons involved (policymakers, corrections personnel, and community leaders) to have a unified goal. Further, since approximately two-thirds of offenders have substance abuse problems (Petersilia, 2003), it is apparent that steps to continuously understand, evaluate, and improve treatment methods are needed.

The purpose of this paper is to examine treatment effects of in-prison therapeutic communities on incarceration rates. The scope of the study includes an analysis of secondary data collected by Wayne Welsh in 2003 and 2004 of male prisoners in the State Correctional Institution in Chester, Pennsylvania (SCI-Chester). The background and a historical overview about therapeutic communities will be covered first. Next, information about understanding addiction will be provided. What is known in the literature about therapeutic communities and the connection to assisting substance abusers with a reduced likelihood of returning to drug use and criminal activity will then be covered. Information pertaining to the focus of the analysis, including the data, measures, tests, and results, will follow. Lastly, the importance of this analysis in relation to corrections policy, along with limitations of this work, and remarks will conclude the paper.

History and Evolution of Therapeutic Communities

Therapeutic communities are "characterized by a democratic philosophy with foundations in social learning theory" (Inciardi and McElrath, 2008, p. 421). Based on this idea, essentially, what therapeutic communities offer is the ability for substance abusers to be open with other persons in the group setting which garners a sense of trust among the members. The

residential community setting which characterizes non-prison therapeutic communities helps to reinforce the treatment goal of learning new non-self-destructive behaviors. Therapeutic communities are also understood as being "drug-free residential settings that use a hierarchical model with treatment staff and those in recovery, as key agents of change" (National Institute of Drug Abuse, Research Report Series, Therapeutic Community, www.drugabuse.gov/Research Reports/Therapeutic/Therapeutic2.html). The residential setting enables the feeling and structure of a family or community. These ideas follow with social learning theory; as the basis of the theory involves behaviors and responses to situations that are learned in a social setting.

Therapeutic communities in the United States are based on a model utilized by Dr. Maxwell Jones on mental patients in which the patients were to be actively involved in their treatment (Inciardi & McElrath, 2008). Taking that model and applying it to drug addicts involves motivating the individuals to behave responsibly, like adults, and thus, find a way to change the urge to behave like a "dope fiend" (Kooyman, 1993). In therapeutic communities, residents have regular group therapy sessions that focus on open communication, understanding and encouragement to change. The treatment philosophy places the focus on the individuals. Inciardi and McElrath (2008) note that "drug abuse is a disorder of the whole person; that the problem is the *person* and not the drug; that addiction is a *symptom* and not the essence of the disorder" (p. 421). By this statement, Inciardi and McElrath mean that for substance abusers to be able to have a drug-free life, they need to recognize and acknowledge the root cause for their self-destructive behavior. They need to recreate a foundation to build a positive lifestyle.

The first therapeutic community in the United States, known as Synanon, was started in 1958 by Charles Dederich in California (Yablonsky, 1989). An alcoholic himself, he used the methods he learned from Alcoholics Anonymous (AA) as a guide for treatment. Group meetings evolved into sessions called encounter groups which consisted of a "highly confrontational and intense form of verbal communication in a group setting" (Inciardi and McElrath, 2008, p. 422). Dederich noticed that the group meetings he was holding with friends and acquaintances helped these persons refrain from use. The establishment of Synanon, with its good intentions, unfortunately did encounter opposition by the community and with local zoning laws. However, the negative circumstances did not curtail the advancement of Synanon, and by 1969, had 1,400 residents (Inciardi and McElrath, 2008, p. 422).

Yablonsky's (1989) book entitled *The Therapeutic Community* covers an in-depth discussion about his visit to Synanon in 1961. This visit fueled his interest to study therapeutic communities as a career for over 25 years. Yablonsky, on his first visit to Synanon, was impressed by the professional appearance of the building and demeanor of the staff person who greeted him upon his arrival (who was noticeably a former addict by the scars on his arms from past drug use). During this visit, he had an opportunity to join group therapy sessions, speak with attendees, and learn about the program's operations. He was able to obtain first-hand knowledge pertaining to why the addicts thought Synanon worked for them. (This was a rare opportunity to gain insight into the thoughts of an addict that were not concealed by ulterior motives and partial truths.) At Synanon, the members, all former addicts themselves, held psychotherapy sessions, three times a week. What Yablonsky discovered was that the members felt these "psychotherapy" sessions enabled them to talk openly with other addicts who understood what it was like to be a "dope fiend." A dope fiend can be thought of someone who will do anything, even subject themselves or persons they care about to harm to get their "fix." Because addiction drives these behaviors, when members are in group sessions sharing stories with fellow addicts, they feel as though they are talking to people who truly understand, as they believe it is too

difficult for a non-addict to grasp. These sharing experiences help the addicts feel like real people; they are not trying to say words they thought doctors or social workers, etc. wanted them to say. They could be more open and honest about their addiction and what they have done to get their drugs; i.e., acting like a "dope fiend." This open communication and support from fellow addicts in Synanon gave them strength to "stay clean." In addition, since all therapeutic communities are run by former addicts themselves, they have role models who truly have been at their lowest point; a true mentor who encourages change from experience. Thus, having these former addicts as their role models gives them hope they were unable to find or thought existed.

Synanon influenced the beginnings of another therapeutic community in New York called Daytop Lodge which was a halfway house that had evolved into a larger style "village" and the name changed to Daytop Village. The plan for Daytop was a larger style of community (hence the use of the term village) for drug addicts (Kaplan and Broekaert, 2003). The ultimate goal for addicts residing in Daytop, unlike Synanon, was to leave and return to regular society at some point (Kooyman, 1993). Additionally, Daytop differed in leadership style as well as the therapeutic community was not run by one person but included multiple persons involved in the leadership of the program. The treatment philosophy still centered on the individual as being responsible for their behavior but changed to the view that "you are an addict because you are stupid, immature, and irresponsible, and cannot bear the realities of life as an adult!" (Inciardi and McElrath, 2008, p. 422) Although this statement had a sense of harshness to it, it did appear to be effective. The clear, upfront statement also had the purpose of reminding the members that their addiction was the result of their own actions and not the fault of some other person, area, or circumstance (Inciardi and McElrath, 2008).

The design of therapeutic community programs incorporates professionals (psychiatrists, psychologists, and social workers), leadership roles by former addicts, entry/intake procedures, confrontation methods, full disclosure, graduation, inclusion of family, among others. Therapeutic communities are typically started by former addicts and other addicts have roles important to the operation of the therapeutic community as well. Leadership roles within modern therapeutic communities, unlike Synanon, consist of multiple persons as leaders of the community. Synanon II and III provided a change from rehabilitation to a focus on recovery with the use of former addicts as the persons who guided therapy and were role models for others in the community (Inciardi and McElrath, 2008).

The mission of current programs is providing "a holistic approach . . . to treat the whole person and not just the addiction" (Therapeutic Communities of America, Online, http://www.therapeuticcommunities ofamerica.org/main, p. 1). Persons who live in therapeutic communities are not seen as patients but as members of a community. Each of these members are role models for one another. The goal is to "gain insight into one's problems . . . through group and individual interaction, but also by learning through experience, failing and succeeding and understanding accountability are considered to be the most integral influences toward achieving a lasting change" (Therapeutic Communities of America, Online, http://www.therapeuticcommunitiesofamerica.org/main, p. 2).

Theoretical Underpinnings and the Multi-Faceted Nature of Addiction

Addiction is "a disease that affects both brain and behavior" (National Institute Drug Addiction, www.drugabuse.gov.scienceofaddiction, p. 1). Kooyman (1993) describes addiction as "a condition caused by many factors which can interact and reinforce each other. . . . [Thus, it is multifaceted and] a symptom of an underlying disturbance . . . which can be psychological,

interpersonal and/or social" (p. 23). Risk factors that drive addiction and relapse are connected to human biological functions. A recovering addict has to learn how to react differently to triggers to prevent relapse (Chiauzzi, 1991). Chiauzzi (1991) explains biological risk factors as being multi-dimensional and interactive and may include genetics, neurological and psychological difficulties, and certain cues which can contribute to a relapse into drug use. Children of addicts are thought to be more susceptible to following the same pattern of addiction. Alcoholism is especially a concern because children of alcoholics are thought to have a "genetic vulnerability" (Chiauzzi, 1991, p. 34) to become alcoholics. The linkage between alcoholism and genetics is not completely understood; however, it is suspected that biological factors are linked to psychological and social factors as well. Addiction also affects neurological and biochemical functions because drugs affect the neurotransmitters in the brain (Abadinsky, 2008). Another biological function affecting the ability to control relapse and use consists of cues from environmental and circumstantial factors. A particular group of friends, a part of town, a specific house, smells, sights, sounds, etc. are cues that can prompt a desire to use. Again, in these situations, addicts need to learn how to respond differently. Treatment to learn different reactions to stimuli comes in the form of teaching the individual, first, how to recognize the cues that affect that particular person and, second, what actions can be done to prevent use. Here, the focus is upon the *individual* to be *aware* of the personal barriers to change (Tucker, Donovan, and Marlatt, 1999).

Due to the complex nature, it is impossible to completely understand why addicts continue to use or relapse (Chiauzzi, 1991). However, even though addiction has many layers, Therapeutic communities have been able to demonstrate effectiveness. It is possible success had been achieved due to the multi-modal design of therapeutic communities that attempt to address deficiencies or impairments. A research monograph edited by Tims, DeLeon, and Jainchil (1994) state that "what distinguishes the therapeutic community from other treatment approaches is the purposeful use of the community as the primary method for facilitating growth and change in individuals" (p. 3). Thus, it would seem this new "community" or "lifestyle" or "environment" is able to help the addict stop self-destructive behaviors and learn new, beneficial, behaviors. The hope, then, is that upon exiting the therapeutic community, addicts will be better equipped to prevent relapse.

Connection to Recidivism Rates

The connection between substance abuse and reoffending rates is so strong that a majority of substance abusing offenders recidivate. Two-thirds of offenders recidivate within three years upon release from incarceration (Petersilia, 2003, p. v). "Three-quarters of all prisoners have a history of substance abuse" (Petersilia, 2003, p. 3). However, substance abuse relapse rates for addicted persons who participated in a therapeutic community are substantially lower. Specifically, according to Soyez and Broekaert (2003) relapse after completion of therapeutic community occurs at a rate of 10-28% (p. 211). This difference is markedly lower. Comparatively, the success rate for addicts after exiting a therapeutic community indicate a reduced likelihood of recidivism as opposed to persons who do not participate in the program. Therefore, it is worth exploring the connection to reducing reoffending rates.

Aftercare programs upon release from confinement are needed to empower, educate, and provide treatment to offenders to enable a greater likelihood of success. The studies available that utilize statistical techniques to determine the effectiveness of reentry programs have varying results (both positive and negative). The negative results could possibly be attributed to

methodological problems of the studies, lack of comparison groups in the analyses (Wilson, Gallagher, and MacKenzie, 2000), barriers to implementation, and poor program design. Given the success of therapeutic communities for substance abusers, and that a majority of offenders have substance abuse problems, it seems intuitive that therapeutic communities should be common practice in corrections policy and possibly utilized in combination with aftercare.

If there is still cause for concern about the success of therapeutic communities for substance abusing offenders, employing an evidence-based corrections philosophy to ensure effectiveness of programs is possible. Evidence-based corrections utilize analytic techniques to determine if a program has been successful and holds agencies accountable for their outcomes (MacKenzie, 2000; 2001). A program, designed by researchers at the University of Maryland, was developed to identify what does work in crime prevention in order for agencies to use these proven methods. This analysis revealed that, to be effective, rehabilitation programs need to utilize skill development and cognitive-behavioral methods, prison-based treatment and follow-up treatment for drug offenders, post-release, vocational programs and community employment programs (MacKenzie, 2000).

A policy brief by the National Association of State Alcohol and Drug Abuse Directors (NASADAD) regarding offender reentry states that "$1 spent on treatment yields $7 in future savings" (Online, 2005, http://www.nasadad.org/resource.php?doc_id=473, p. 1). NASADAD also mentions how an incredibly small amount of offenders receive substance abuse treatment during confinement. Specifically, **90%** of inmates **do not** get the treatment they need (2005). Since 70% of voters believe services should be provided to inmates both during incarceration and upon release (Krisberg and Marchionna, 2006, p. 3), public sentiment might not be to blame as a barrier either. (Of course, how voters would stand on the view might depend on how the question is worded at the polls.)

In an attitudinal study of US voters regarding offenders' rehabilitation and reentry policies, 79% are concerned and some are even fearful about the release of prisoners into their communities (Krisberg and Marchionna, 2006, p. 1). However, it is interesting that few citizens believe that criminality is inherent. If citizens are afraid of offenders being released, and they do not believe they are hardened criminals, then what are they afraid of? It appears that their fear is stemmed from their belief that the likelihood of reoffending is high and offenders do not get rehabilitation services needed to reduce the likelihood of recidivism. Thus, citizens may believe they could be subjected to some type of crime; not because ex-offenders have a criminal nature, but because the offenders have not been given resources to change their criminal behavior! Interestingly, 70% of the citizens polled favor rehabilitation services during and after release from incarceration (Krisberg and Marchionna, 2006, p. 1). If citizens believe in rehabilitation, then what is the problem? The problem appears to be the lack of rehabilitative and reentry programs. Fortunately, our government seems to be addressing this deficiency. On April 9, 2008, the Second Chance Act (Public Law 110-199) was signed into law. "This first-of-its-kind legislation authorizes federal grants to government agencies and nonprofit organizations to provide employment assistance, substance abuse treatment, housing, family programming, mentoring, victims support, and other services that can help reduce recidivism" (CSG Justice Center, Online, 2011, http://www.nationalreentryresourcecenter.org/about/second-chance-act). Once access and availability increases, then possibly instituting a requirement for offenders to move to a therapeutic community would assist with pressures incurred upon release. This plan seems logical since it is known that community-based treatment, when offered in conjunction with in-prison based treatment, provides a pathway from confinement to free society and helps

reduce anxiety ex-offenders may encounter upon release. They are helped because referral services are provided for treatment, employment, housing, etc. In addition, if the offender suffers from a mental illness and/or substance abuse problems, community-based treatment can direct the ex-offender to the services necessary to continue medication and therapy. Also, social ties and connections with members in the community can start to be established.

Interested in understanding the success rates for in-prison therapeutic communities between males and females, Chan, et al. (2007) conducted a study of the process in June 2002. The sample consisted of two different therapeutic communities; one with 205 females and one with 190 males (subsequently 36 survey respondents were removed from the sample due to some missing data). Since treating substance abusers is complex due to the many factors involved that can contribute to the behavior, such as family situation, lack of parental involvement, deviant peer groups during adolescent years, low economic status, lack of education and resources, etc. Chan, et al. (2007) found that older prisoners, prisoners with children, and poly-substance abusers achieve the most success in therapeutic communities. They surmise older prisoners are successful due to age alone. Persons "age-out" of the behavior and are more apt to be willing to consider changing their behavior. This explanation may also be the reason poly-substance abusers are more cooperative and successful in therapeutic communities. Less successful persons were ones who had multiple arrests. Chan, et al. (2007) suspected a lengthy history of arrests may cause anti-social behavior to be too strong and more difficult to ignore. In terms of the outcomes for males and females in therapeutic communities, they found that females were more community-oriented than males.

A study by O'Connell, et al. (2007) examines ex-offenders who had substance abuse histories and who participated in a therapeutic community after being released from prison. The subjects in the study (N=628) were significantly less likely to return to drug use between 18 and 42-month follow ups, and reduced drug use had been correlated with economic status and high self-esteem. Specifically, if persons were able to sustain employment, their incomes would increase and their self-esteem would increase as well.

One of the major problems with trying to obtain successful results from rehabilitation and reentry programs is the lack of resources. Even though there may be an established policy for providing reentry services to all offenders upon release from confinement and to provide rehabilitation services for all offenders with rehabilitative needs, it may not be possible to provide all of these services to all offenders. Some services such as substance abuse programs, temporary housing, job referral services, etc. may need to be cut to meet budget constraints. For decades, it has been well-documented in research and criminal justice literature that the common predictors of reoffending include, among others, employment history, substance abuse history, and level of education (Hartman, Friday, and Minor, 1994). Without adequate resources, reentry and rehabilitation programs are unable to be implemented as intended and recidivism rates could continue to rise, resulting in a perceived failure of the program and policy.

With such successful results that have been obtained from therapeutic communities, why does correctional policy not formally institute a requirement for all convicted criminals who are substance abusers to be placed in a therapeutic community during confinement and then upon release as well? One concern is cost. Petersilia's (2003) book entitled *When Prisoners Come Home: Parole and Prisoner Reentry* covers a wide range of topics regarding prisoners and their reentry needs. She notes that offenders are "largely uneducated, unskilled, and usually without solid family supports," and fewer than one-third of ex-offenders receive any kind of treatment (Petersilia, 2003, p. 1). What is the reason? Why are ex-offenders unable to get the services they

need when the overwhelming majority of scholars have demonstrated time and time again that they are necessary and effective? The explanation is, in part, because of cost. With a majority of the state corrections budgets going to construction and overhead, there is little money left that can be allocated for rehabilitation (Petersilia, 2003); the result, the endless revolving door in corrections. However, the concern over cost may be unwarranted. McCollister, et al. (2003) were able to establish that the Amity in-prison therapeutic community had been more cost-effective (36%) at reducing recidivism than the alternative of not providing any services. A savings of $80 per day was documented for incarcerated offenders in Therapeutic communities and $51 per day for incarcerated offenders in therapeutic communities and who were provided aftercare services. This additional savings of almost $30 per day was seen for offenders who got both in-prison treatment and services upon release. Since providing an in-prison therapeutic community and aftercare services yielded a cost savings, McCollister, et al. (2003) recommended that aftercare services be consistently used for all offenders.

From the literature, it appears that the best course of action is that services be provided in prison and also upon release. Ideally, upon release from a correctional institution, the next phase could include a move to a therapeutic community, or, in the alternative, if the person participated in an in-prison therapeutic community, then during reentry, the person can be referred to an aftercare program. Aftercare programs enable the final phase of transition, further instill alternatives to substance use, and encourage family and community ties. It is known that enabling offenders' involvement in the community achieves success when utilizing "informal agents" of social control (Young, Taxman, and Byrne, 2002). These persons consist of local citizen groups, members of the clergy, business owners, employers, friends, and family. To understand how inmates' social ties are connected to reoffending, Bales and Mears (2008) examined recidivism data and visitation rates. The analysis consisted of a total sample of 7,000 inmates from the Florida Department of Corrections. The findings revealed that, as literature on the topic stresses, not many inmates receive visits, but those that did receive visits from family or friends, they were 30.7% less likely to commit another crime (Bales and Mears, 2008, p. 304).

Based on the literature, the hypotheses for this analysis are as follows: 1) Offenders who have a history of substance abuse are more likely to have a positive drug test, and, thus, more likely to be reincarcerated; 2) Employed offenders who have a history of addiction are less likely to reoffend; 3) Substance abusing offenders who are placed on a higher level of supervision are more likely to reoffend who on parole; and 4) Addicted offenders who are placed in in-prison therapeutic community programs are less likely to be reincarcerated upon release from prison than substance abusing offenders who are not placed in an in-prison program.

Methods

The hypotheses will be tested using secondary data obtained from the collected over a period of 15 months from January 2003 to March 2004 by Wayne Welsh (Welsh, 2007). The scope of the study was to evaluate treatment programs that were being used in the State Correctional Institution (SCI) at Chester, Pennsylvania. This institution is a medium security prison for males who have substance abuse addictions. Various treatment programs are offered at SCI-Chester and include an in-prison therapeutic community and outpatient treatment programs that run for 12 months. SCI-Chester opened in 1998 and is one of 26 State Correctional Institutions in Pennsylvania that are operated by the Department of Corrections (DOC). SCI-Chester is the first correctional facility in Pennsylvania (PA) for substance abusing offenders. The PA DOC has an established policy that Alcohol and Other Drugs Treatment Programs

(AODs), like SCI-Chester, need "to reduce incidents of relapse and recidivism to promote pro-social behavior and . . . to successfully reintegrate back into the community" (Alcohol and Other Drug Abuse Treatment Programs Procedures Manual, Online, http://www.portal.state.pa.us/portal/server.pt/gateway/PTARGS_0_129555_916489_0_0_18/07.04.01%20Alcohol%20and%20Other%20Drug%20Treatment%20Programs.pdf, p. 1), PA AODs treatment framework incorporates social learning theories, motivational and change goals, along with cognitive-behavioral techniques to assist the offender with relearning proper responses to situations.

In this specific study, inmates who volunteered to participate were randomly assigned to one of two groups; a therapeutic community (TC) (n=347) or an outpatient program (OP) (n=384) (Welsh, 2007). The TC group was considered to be the treatment group. The OP group was categorized as the non-treatment group. The type of treatment for both groups was identical but varied only by the number of treatment hours provided. Treatment included structured programs that included peer support and professional counseling sessions both individually and in groups. The number of treatment hours TC participants received were substantially higher than the OP group. Specifically, the TC group received 1,300 hours of structured therapy; while the OP persons received only 150 hours of treatment over a 12-month time period.

Data were collected from abstracts in administrative records, self-enumerated questionnaires, face-to-face interviews, rearrest and reincarceration records, drug tests and parole records. The goal of the primary project by Welsh (2007) (TC n=347, OP n=384) was to provide explanations for the gaps in corrections literature pertaining to the effectiveness of in-prison based treatment. This researcher's goal is to take this data and demonstrate that substance abusing offenders need the services provided in therapeutic communities upon release as well as in-prison services. Although it may be true that in-prison based treatment may be effective, substance abusing offenders need treatment via some form of TC upon release for recidivism rates to truly decrease.

Measures

Reincarceration rates for parolees released from SCI-Chester are examined in this project. The dependent variable is dichotomous and includes whether or not parolees had been reincarcerated after their release from SCI-Chester (0=no; 1=yes). The independent variables being used in the final model include "positive drug test," employment, level of supervision, race, and type of program. The variable positive drug test deals with whether or not a parolee had any positive drug test while on parole (coded 0 for no and 1 for yes). The variable for employment covers whether or not parolees had been employed while on parole and included the following categories: full-time employment = 1, part-time employment=2, unemployed but able to work=3, and unemployed but not able to work=4. The four employment categories were recoded into employed (1) and unemployed (0). A parolee's level of supervision is set by the PA Board of Probation and Parole and ranges from minimum supervision to enhanced supervision. The supervision levels, as assigned by the board, were recoded for ease of testing. Minimum and medium supervision levels, originally coded 1 and 2, respectively, were recoded to 0. Maximum and enhanced supervision levels were recoded to 1 from 3 and 4, respectively. The independent variable race is included in the analysis as a control variable and has been recoded into dummy variables; with White serving as the reference group. The type of program is another variable used in this analysis. Persons randomly assigned to the therapeutic community group are considered to be the treatment group (TC) and persons assigned to the outpatient treatment

program (OP) are the non-treatment group. The coding is as follows for the type of program: 1=TC; 2=OP. The total n prior to deleting missing data was 347 for the TC group and 384 for the OP group. Missing observations deleted for the variables are as follows: reincarceration=366, positive drug=184, employment=11, supervision level=9, race=1.

Results

In order to have a properly fitted model, missing observations for the variables were deleted from the analysis before regression diagnostics and tests were conducted. Unfortunately, there is a large amount of missing data on the reincarceration rates, which depleted the sample down to an n of 160. This analysis uses logistic regression through STATA statistical software. Summary statistics of all of the variables can be found in Table 1. Regression statistics for all variables are contained in Table 2.

Table 1. Summary Statistics for all Variables

Variables	Minimum	Maximum	Mean	Standard Deviation
Reincarceration	0	1	.2188	.4147
Positive Drug	0	1	.2188	.4147
Employment	0	1	.4688	.5006
Supervision Level	0	1	.4938	.5015
White	0	1	.3375	.4743
Black	0	1	.4938	.5015
Hispanic	0	1	.1438	.3520
Asian	0	1	.1566	.1566
Program	1	2	1.5563	.4984
n=160				

Table 2. Regressions of Reincarceration Rates on all Variables

Variables	Coefficients	P Value	SE
Positive Drug	1.0238	**.032***	.4788
Employment	-1.7310	**.001*****	.5237
Supervision Level	.8068	**.008****	.3039
Black	.0210	.966	.5003
Hispanic	1.3378	.050	.6837
Asian	.3903	.770	1.3329
Program	.0793	.857	.4416
Cons	-3.2437	.005	1.1581

*p<.05 **p<.01 ***p<.001
n=160
Note: Dependent variable: Reincarceration of parolee.
LR chi2=32.72, Pseudo R2=.1947, Log likelihood=-67.6892

The logistic regression analysis was examined for near perfect multicollinearity between the predictors by testing the variance inflation factor (VIF) and tolerance levels. The tolerances

appeared to be quite high, however, so a correlation matrix was examined to further explore this issue. It was determined that multicollinearity was not a serious concern in the model.

Wald tests were run to test the significance of the b coefficients. Additional diagnostic tests included the standardized residuals and Cook's statistics tests for outliers and bivariate partial regression plots. Standardized residuals reveal outliers that may affect the model by causing discrepancy in the results. Numerous observations were found that moved beyond the standard cutoff for the tests for outliers. To determine how influential the outliers were to the regression analysis, these observations were dropped and the regression analysis was conducted again. The exclusion of these observations did not substantially change the results; therefore, the observations were kept in the analysis.

The data were also tested for additivity problems. The variables of concern for interaction were positive drug screen and level of supervision. After creating a multiplicative variable combining positive drug screen and level of supervision, it was determined that non-additivity was not a concern in the final model; as there was minimal change in the regression output. Thus, it was determined that combining the variables in the final model was unnecessary. Other interactions effects were also taken into consideration such as employment and positive drug screen and race with positive drug screen. Again, multiplicative variables were created for employment and positive drug screen and Hispanic with positive drug screen. A review of the output determined that interaction effects were minimal for each multiplicative variable (employment and positive drug screen and, similarly, Hispanic and positive drug screen). Therefore, none of these variables were cause for concern upon examination of the logistic regression output. Next, the scalar measures of fit were reviewed to determine the model's fit. The results provided strong support for the original model to not include an interaction term for positive drug use and level of supervision.

The likelihood of offenders being reincarcerated is examined with logistic regression analysis. Logistic regression demonstrated that both employment ($p=.001$) and level of supervision ($p=.008$) achieved statistical significance at $p<.01$. Positive drug use yielded a statistically significant outcome; resulting in a p value less than .05 ($p=.032$). Type of program (TC or OP) did not achieve statistical significance in the analysis.

The marginal change in the values of the independent variables yields specific results about the increase or decrease of reincarceration rates as the variables move from their minimum values to their maximum values. The marginal effect yields the slope of the probability curve. The slope essentially demonstrates the predicted probability of reincarceration rates as a variable moves from its minimum to its maximum value. As shown in Table 3, from this test, the predicted probabilities provided an increase in reincarceration rates as the variables positive drug test, supervision level and type of program move from their minimum value to their maximum value. Thus, for each of these variables, the likelihood of reoffending increases as the slope moves away from 0. For the variable positive drug test, when moving from the minimum of 0 (for no positive drug test) to the maximum of 1 (for positive drug test) there is an increased likelihood of reincarceration of 16% (from .13 to .29). Thus, offenders who have positive drug screens are more likely to be reincarcerated. Likewise, as the level of supervision increases (from less stringent supervision to enhanced supervision) there is a 37% increase (from .06 to .43). Offenders who are at a higher risk of reoffending, then, are offenders who are classified and placed on a higher level of supervision. This is a natural outcome as offenders who receive higher levels of supervision are ones who are more likely to reoffend based on their background characteristics, offense type, and prior criminal record. A review of the outcome for employment

demonstrates the expected outcome; being persons who move from not being employed to employed have a decreased predicted probability of being reincarcerated. From these results, support is provided for hypotheses one, two and three. No support could be found for hypothesis four regarding type of program.

These results indicate the programs do work. Drug use continues, however, to be a determining factor in reoffending and reincarceration rates. Also, stable, full-time employment is demonstrative of a person's level of success and a statistically significant predictor for reoffending in this study and the literature as well. This outcome reflects the findings of O'Connell, et al. (2007). The subjects were substance abusers, who participated in a therapeutic community (N=628), were significantly less likely to return to drug use at 18-42 months follow ups. The reduced drug use correlated with economic status and self-esteem.

This project adds to the available information on treatment programs and treatment communities because the solution to reducing a person's likelihood of returning to prison might not just be depending upon the type of program and services in prison and out of prison, but it is also the level of supervision the offender receives as well. All of the factors appear to be connected and indicative of success; success being not returning to drug use and not returning to criminal lifestyles.

Table 3. Marginal Change in the Values of the Independent Variables

Variables	Min to Max	Marginal Effect (b)
Positive Drug	.1625	.1346
Employment	-.2249	-.2276
Supervision Level	.3698	.1061
Black	.0028	.0028
Hispanic	.2350	.1759
Asian	.0581	.0513
Program	.0104	.0104

n=160

Note: Dependent variable: Reincarceration of parolee.

Limitations

A main limitation with this analysis is the amount of missing data on reincarceration rates. If more data had been made available, it is this researcher's opinion that the type of program is quite likely to have been a significant predictor of reincarceration in this study. Additionally, measurement error could be a problem with the collection of the data due to the inaccurate collection and coding. However, since the data were collected by the primary researcher, more accuracy and consistency may result.

Further limitations concern therapeutic communities themselves. Therapeutic communities have high dropout rates and are not appropriate for some offenders. Relapse is also a concern as well (Abadinsky, 2008). Moreover, concerns over the issue about whether or not a therapeutic community is an appropriate environment for certain offenders exist. It is a possibility, however, that these concerns could be addressed upon initial intake into a correctional facility. An additional limitation with this analysis is that SCI-Chester is a prison that houses only offenders with a history of substance of abuse. It is possible that generalization might be a problem with other institutions. If a therapeutic community is offered in a prison that

includes offenders who do not have substance abuse issues, the program might not be as effective.

Conclusion

With successful results that have been obtained from therapeutic communities, why is it not possible to institute a requirement that offenders be placed in institutions such as SCI-Chester for offenders who have a history of substance abuse? Then, upon release why is it not possible to require, as part of their sentencing options, that all substance abusing offenders be placed in some form of a therapeutic community? Although these options might seem logical, there are still problems that can result. One other possible explanation could be that few results have been published about therapeutic communities and made available for scrutiny. The environment in which the addicts reside is artificial as well. Not being subjected to the stresses and violence of the outside world, while residing in the therapeutic community, can be reasons as to why there are boasted and some documented successes in therapeutic communities (Abadinsky, 2008).

In addition, there is the controversy about forcing individuals to participate. Further research is necessary in order to determine the effectiveness of forced participation by offenders. It has been determined that mandatory involvement in a therapeutic community is equally as successful as voluntary involvement (this can be understood by examining the outcomes for in-prison therapeutic communities). At some defined timeframe, however, persons need to be allowed to return to their "normal" lives and be considered to have their sentence served. Thus, the exact length of time that clients need to remain in the residential program is another area of needed future research. Longer stays contribute to higher degrees of success (Tims, DeLeon, & Janchill, 1994). Determining how much time is enough is critical. At some point, diminished returns are likely as well; as reductions in recidivism may stop and turn in the opposite direction. Further, at some point, the programs may reach a point to where they are cost prohibitive. The magic number, it seems, is one year. However, cost and availability of these programs remain as concerns. Of course, a few studies have shown cost savings, but that savings is *over time*.

Given all the information obtained from analyzing programs and attempting to determine what methods and procedures are effective, it appears possible that all of this knowledge, taken together, can lead corrections in the proper direction to answer the enduring question of "what works" to reduce reoffending and addiction. It is possible that therapeutic communities are the step in the right direction since they encompass multi-dimensional approaches. Specifically, it is known that inmates need to be assessed at intake into the correctional facility to refer them for proper treatment. This first step is especially important since a majority of offenders have substance abuse histories. Next, upon completion of assessment, the inmate (who is determined to have high risk scores and a history of addiction) is determined to be a good candidate for an in-prison therapeutic community, then prior to release the inmate can be referred to an aftercare program or another therapeutic community (depending on risk and level of supervision need).

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