AN OUTCOME EVALUATION OF THE INNERCHANGE FREEDOM INITIATIVE IN MINNESOTA

MINNESOTA DEPARTMENT OF CORRECTIONS

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Research Summary

This study evaluated the effectiveness of the InnerChange Freedom Initiative (InnerChange), a faith-based prisoner reentry program, by examining recidivism outcomes among 732 offenders released from Minnesota prisons between 2003 and 2009. Results from the Cox regression analyses revealed that participating in InnerChange significantly reduced reoffending (rearrest, reconviction, and new offense reincarceration), although it did not have a significant impact on reincarceration for a technical violation revocation. The findings further suggest that the beneficial recidivism outcomes for InnerChange participants may have been due, in part, to the continuum of mentoring support some offenders received in both the institution and the community. The results imply that faith-based correctional programs can reduce recidivism, but only if they apply evidence-based practices that focus on providing a behavioral intervention within a therapeutic community, addressing the criminogenic needs of participants, and delivering a continuum of care from the institution to the community. Given that InnerChange relies heavily on volunteers and program costs are privately funded, the program exacts no additional costs from the State of Minnesota. Yet, because InnerChange lowers recidivism, which includes reduced reincarceration and victimization costs, the program may be especially advantageous from a cost-benefit perspective.

Introduction

The beneficial effects of religious involvement are numerous. Existing research generally shows, for example, that religiosity is associated with higher educational attainment; increased levels of hope, purpose, and sense of well-being; longer lifespan; reduced hypertension; less depression; reduced likelihood of suicide; lower levels of drug and alcohol use and abuse; less promiscuous sexual behaviors; lower rates of divorce; and higher levels of satisfaction among married couples (Chatters, 2000; Ellison and Levin, 1998; George, Larson, Koenig, and McCullough, 2000; Johnson, Tompkins, and Webb, 2002; McCullough and Willoughby, 2009; Sherkat and Ellison, 1999). In short, the empirical evidence suggests that religion not only promotes pro-social behavior, but it also serves as a protective factor that buffers individuals from harmful outcomes.

But do the salutary effects of religion extend to crime and, more narrowly, recidivism? In one of the first empirical studies on the impact of religion on delinquency, Hirschi and Stark (1969) reported that religious beliefs and church attendance were not associated with delinquent behavior among the youths they studied in Richmond, California. In the more than 40 years since the publication of Hirschi and Stark's research, several studies have reported similar findings (Burkett and White, 1974; Cochran, Wood, and Arneklev, 1994; Ellis and Thompson, 1989; Giordano, Longmore, Schroeder, and Seffrin, 2008), whereas others have found a significant negative association between religiosity and crime (Cochran and Akers, 1989; Elifson, Peterson, and Hadaway, 1983; Evans, Cullen, Dunaway, and Burton, 1995; Evans, Cullen, Burton, Dunaway, Payne, and Kethineni, 1996; Jang and Johnson, 2001; Johnson, Jang, Larson, and De Li, 2001; Stark, Kent, and Doyle, 1982; Stark, 1996).

On the whole, research has generally found that religiosity is negatively associated with crime and delinquency (Johnson, De Li, Larson, and McCullough, 2000). In their meta-analysis of the literature, Baier and Wright (2001) reported that religious behavior and beliefs exert a significant, albeit moderate, deterrent effect on crime. Over the last decade, additional research has found that religious involvement is linked with lower levels of domestic violence (Ellison, Trinitapoli, Anderson, and Johnson, 2007), desistance from marijuana and hard drug use (Chu, 2007; Chu and Sung, 2008), decreased crime among African-Americans (Entner Wright and Younts, 2009), and reduced institutional misconduct for prisoners (Kerley, Mathews, and Blanchard, 2005; Kerley, Allison, and Graham, 2006).

Although the research by Kerley and colleagues suggests that greater participation in religious services improves institutional behavior for inmates, the evidence is inconclusive as to whether involvement in religious or faith-based prison programming is associated with better recidivism outcomes. In their study of a Prison Fellowship (PF) program that operated in the federal prison system, Young, Gartner, O'Connor, Larson and Wright (1995) found lower recidivism rates among offenders who were trained as volunteer prison ministers. In addition, Sumter (1999) and O'Connor (2003) both found that inmates who were frequently involved in prison religious activities were significantly less likely to be rearrested than those with little or no involvement while incarcerated.

In contrast, other research has shown that while religious programming has a beneficial effect for the most active participants, it does not have a significant effect for all participants. In an evaluation of PF programming in four New York prisons, Johnson, Larson, and Pitts (1997) found no significant difference in reoffending between PF

participants and a group of inmates who did not participate in PF programming. Johnson et al. (1997) observed lower recidivism rates, however, for inmates who were the most active participants in Bible studies. In a second study of the same program, Johnson (2004) used a longer follow-up period to analyze recidivism outcomes. Again, the results showed that PF programming did not have a significant overall effect on recidivism. Inmates with greater levels of Bible study participation, however, were rearrested at a slower pace during the first three years following release from prison.

In 2003, Johnson and Larson published their evaluation of the InnerChange Freedom Initiative (InnerChange), a faith-based program run by PF Ministries that had been operating in a state correctional facility in Texas since 1997. Whereas other PF programming (e.g., volunteer-led seminars or Bible studies) focused mainly on religious instruction, the InnerChange program was different to the extent that it attempted to connect spiritual development with educational, vocational, and life skills training (Johnson and Larson, 2003). The results from the evaluation showed, however, that the program did not significantly reduce recidivism for all offenders who entered the program. Similar to the two aforementioned evaluations of PF programming, Johnson and Larson (2003) reported that offenders who graduated from the program had lower recidivism rates.

Given the findings that program completion is associated with reduced recidivism, a few recent studies have examined the factors that predict completion of faith-based programs. In the preliminary evaluation of the Ridge House residential program in Reno, Nevada, Roman and colleagues (2007) found that an increased sense of a higher power significantly increased the odds of program completion. In the final report

published three years later, Willison et al. (2010) reported that program participation did not affect the incidence of rearrest except for "society crimes" (e.g., gambling, disorderly conduct, vagrancy, prostitution, drunkenness, etc.). Furthermore, whereas marital status was the only variable significantly associated with program completion, unmet service needs were positively associated with program failure. And in their evaluation of the Life Connections Program (LCP), a faith-based program provided in five federal correctional facilities, Daggett, Camp, Kwon, Rosenmerkel, and Klein-Saffran (2008) found that scripture reading, perception of self-worth, and degree of desire for community integration significantly increased the odds that participants completed LCP.

Present Evaluation

This study evaluates the InnerChange program for male offenders that has operated in Minnesota's prison system since 2002. The effectiveness of InnerChange is assessed by comparing recidivism outcomes among 366 offenders who participated in the program and 366 offenders who were eligible but did not participate. The 732 offenders were released from Minnesota prisons between 2003 and 2009 and outcome data were collected through 2010, resulting in an average follow-up period of three years. To minimize observable selection bias, propensity score matching (PSM) was used to individually match the non-participants with those who entered InnerChange.

In the following section, this study explores the theoretical framework for the religion-crime relationship before moving on to a brief review of the "what works" literature. Following a detailed description of the InnerChange program in Minnesota, the study hypothesizes why it may have an impact on recidivism. After discussing the data and methods used in this study, the results from the statistical analyses are presented. The

report concludes by discussing the implications of the findings for criminological theory and correctional policy and practice.

Hellfire: Religion, Deterrence, and Crime

In what is perhaps the best known formulation of the hypothesized deterrent effect of religion on crime, Hirschi and Stark (1969) proposed in their "hellfire" hypothesis that religiosity deters crime through a system of eternal rewards and punishment (i.e., damnation and hellfire for sinners), which help promote adherence to pro-social beliefs, rites, and rituals. Although research on the connection between religion and crime has been characterized as largely atheoretical (Jang and Johnson, 2001; Tittle and Welch, 1983), several major criminological theories have been used to explain the religion-crime relationship. For example, rational choice theory holds that religious individuals are deterred from committing crime because they are, due to their belief system, more likely to experience shame and embarrassment from deviant acts (Grasmick, Bursik, and Cochran, 1991). With its emphasis on explaining conformity through attachment, commitment, involvement, and belief, social control theory has often been aligned with the hellfire hypothesis. Social learning and differential association theories also point out, however, that individuals committed to religion surround themselves with those who share similar, conventional beliefs, which may inhibit criminal activity by fostering pro-social values, attitudes, and behaviors (Akers, 1998; Sutherland, 1947).

The social bonds developed through religious involvement may be particularly important in explaining why religiosity is negatively associated with crime. Recent research has shown, for example, that religious involvement increases well-being because individuals are able to build social networks in their congregations or faith communities

(Lim and Putnam, 2010). The literature has demonstrated, moreover, that social support significantly improves recidivism outcomes (Duwe, 2011; Wilson, Cortoni, and McWhinnie, 2009). In addition, inmates who are visited in prison are less likely to recidivate (Bales and Mears, 2008; Derzken et al., 2009; Duwe and Clark, 2011). The Duwe and Clark (2011) study, in particular, found that while visits from certain family members (in-laws, siblings, and fathers) were especially beneficial, visits from clergy and, to a lesser extent, mentors were helpful in reducing recidivism. Strengthening social bonds for offenders may be important not only because it can help prevent them from assuming a criminal identify (Clark, 2001; Rocque, Bierie, and MacKenzie, 2010), but also because many released prisoners rely on family and friends for employment opportunities, financial assistance, and housing (Berg and Huebner, 2010; Visher, LaVigne, and Travis, 2004).

"What Works" in Correctional Programming

Just as the study by Hirschi and Stark (1969) cast a long shadow on subsequent religion-crime research, so, too, did the 1974 report by Robert Martinson wherein he proclaimed that "nothing works" in correctional programming. As with the literature on religion and crime, however, a substantial amount of research since the Martinson (1974) report has shown that correctional programming can be effective in reducing recidivism. The "what works" literature, which has been spearheaded by Canadian researchers such as Paul Gendreau, Don Andrews, and James Bonta, has helped identify what types of programming are most effective in lowering recidivism. The findings from meta-analyses of correctional program evaluations have shown that a number of interventions are effective in reducing recidivism, including cognitive-behavioral therapies (Pearson,

Lipton, Cleland, and Yee, 2002), therapeutic communities (Lipton, Pearson, Cleland, and Yee, 2008), chemical dependency treatment (Mitchell, Wilson, and MacKenzie, 2007), sex offender treatment (Lösel and Schmucker, 2005), educational programming (Wilson, Gallagher, and MacKenzie, 2000), and vocational/employment programming (Wilson, Gallagher, and MacKenzie, 2000).

Findings from the "what works" literature also suggest that service delivery is most effective when interventions target the risk, needs, and responsivity of offenders. The risk principle holds, for example, that treatment interventions should be used primarily with higher-risk offenders (Lowenkamp, Latessa, and Holsinger, 2006). Interventions should also target the known dynamic predictors of recidivism, which include criminogenic needs (e.g., attitudes supportive of an antisocial lifestyle, substance abuse, companions, etc.), personal distress (e.g., anxiety, depression, schizophrenia, etc.), and social achievement (e.g., marital status, level of education, employment, etc.) (Gendreau, Little, and Goggin, 1996). In contrast to static predictors (e.g., gender, race, criminal history, etc.), which cannot change, targeting the criminogenic needs of offenders is more likely to lower recidivism because these are dynamic factors in which changes can be made. In addition to risk and need, treatment interventions should take into account a number of considerations such as using well-trained staff, matching styles and modes of treatment services to the learning styles of offenders, and providing a continuity of care, which includes relapse prevention and aftercare (Dowden, Antonowicz, and Andrews, 2003). Finally, due to the demonstrated efficacy of cognitive-behavioral interventions, treatment services should be behavioral in nature (Cullen and Gendreau, 2000).

The InnerChange Program in Minnesota: A Description

As noted above, the InnerChange program was first implemented in the United States in Texas in 1997. Developed by, and affiliated with, PF Ministries, InnerChange is a values-based, prisoner reentry program. The program, which is voluntary, attempts to help inmates prepare for reentry to society, employment, family and social relationships, and religious and community service through educational, values-based programming. Although InnerChange programming is based on the values reflected in the life and teaching of Jesus Christ, inmates do not have to be Christian to apply to, or participate in, the program.

The programming covers areas relating to substance abuse education, victim-impact awareness, life-skills development, cognitive skill development, educational attainment, community reentry, religious instruction, and moral development. InnerChange also strives to build community support for participants by not only involving local faith communities in religious events and activities, but also by matching each participant with a mentor while still incarcerated. In addition to Texas, InnerChange programs currently are operating in Arkansas, Kansas, Minnesota, and Missouri. There are eight InnerChange programs operating in these five states, three of which are women's programs.

In Minnesota, the first male inmates entered the InnerChange program at the Minnesota Correctional Facility (MCF)-Lino Lakes, a medium-security prison, during the summer of 2002. Similar to programs operated in other states, InnerChange programming and staffing costs are privately funded. Still, the program depends heavily on volunteers from local churches and religious organizations for the delivery of many of the services

provided. As is the case with inmates in general, the responsibilities relating to the security, housing, employment, and cost of other services provided to InnerChange participants are borne by the Minnesota Department of Corrections (MnDOC).

Inmates proceed through the Minnesota program in a cohort comprised of roughly 40 men and begin participating 18-24 months prior to their release from prison. As a result, the main eligibility criterion to participate in InnerChange is having a length of stay in prison no less than 18 months. Similar to a therapeutic community, participants live together in the same housing unit during the two highly structured, in-prison phases of the program. Phase 1, which lasts for the first twelve months, includes three hours of instruction each weekday morning followed by work or compulsory educational programming in the afternoon and additional programming in the evening. The curriculum for the first phase, delivered primarily during the morning instruction period by InnerChange counselors, is divided into four quarters. The first quarter introduces participants to the core values upon which InnerChange is based. In addition, the program teaches cognitive skills based on Truthought material developed by Stanton Samenow as well as "A New Direction" curriculum collaboratively developed by the Hazelden Foundation and MnDOC chemical dependency program staff. Quarters two and three introduce reentry and addiction issues while covering a host of topics that encourage participants to accept responsibility for their criminal behavior. The fourth quarter focuses on chemical dependency education and relapse prevention.

Phase 2 lasts for a minimum of six months, and much of the offender's time is spent working within the facility during the day and attending classes during the evening. Offenders also are matched with a mentor from the community during this time, and they

meet with their assigned mentor on a weekly basis throughout the second phase. Each offender also works with InnerChange counselors to establish reentry goals.

Throughout the in-prison phases, offenders participate in evening programming approximately four nights each week. All evening programming is provided by screened and trained volunteers from local churches and religious organizations. Activities vary considerably, ranging from small group Bible study to discussion of life skills topics. Churches and other community organizations provide special programs on Friday nights, which are open to all inmates within the prison. The intent of the evening programming is to provide additional opportunities that allow InnerChange participants to build ties to the community and acquire valuable socialization skills.

Phase 2 culminates in the release of the inmate from prison, typically on supervised release or through the MnDOC's work release program. A small number of InnerChange inmates enter the Challenge Incarceration Program (CIP), the MnDOC's boot camp. The third and final phase of InnerChange begins at release, and is the 12-month, reentry phase of the program. During the reentry phase, mentors and the InnerChange reentry team work with participants to build pro-social relationships within the community by providing them with support groups, peer mentoring, one-on-one counseling, and interaction with volunteers. These relationships create opportunities for offenders to interact with individuals who are successfully involved in their communities, families, and social circles. The program also attempts to address housing and employment issues by developing relationships with employers, housing providers, and other reentry service providers.

According to PF staff, the Minnesota program is very similar in design and operation to the other InnerChange programs running today. All programs moved toward a standardized curriculum following Johnson and Larson's (2003) evaluation of the Texas program. The greatest changes began in 2004, however, when the InnerChange curriculum began to incorporate the recommendations emanating from the evidence-based practices movement, most notably the suggestions made by Cullen and Gendreau (2000) regarding the characteristics of effective correctional programs. As a result, InnerChange began to augment some of the biblical instruction with values-based programming that specifically addressed the criminogenic needs of participants. Hence, there are likely significant differences between the InnerChange programs currently operating and the original InnerChange model that was evaluated by Johnson and Larson (2003).

Reasons Why InnerChange Can Reduce Recidivism

Based on the content and delivery of InnerChange programming, combined with the evidence from the religion-crime and "what works" literatures, it is hypothesized that InnerChange may have an impact on recidivism for the following reasons. First, traditional or mainstream Christian doctrine promotes a pro-social, crime-free lifestyle, and existing research shows that religiosity is negatively associated with criminal offending. Second, since 2004, the InnerChange program has attempted to address the criminogenic needs of participants by introducing programming that focuses on issues such as education, criminal thinking, and chemical dependency. Third, although the program does not specifically target high-risk offenders, it does not exclude them either, as having a sufficient length of stay in prison is the main eligibility criterion. Fourth,

similar to a therapeutic community, offenders participating in InnerChange live in one housing unit that is separated from the general prison population. Fifth, InnerChange participants receive a "continuum of care" insofar as the program lasts for at least 18 months in the institution and then for the first 12 months following release when offenders are supported by a mentor and a faith community. Finally, by providing participants with mentors and connecting them with faith communities after their release from prison, InnerChange may expand the social support networks for offenders both during and after their confinement.

Data and Methodology

A retrospective quasi-experimental design was used to determine whether InnerChange has had an impact on recidivism. Recidivism outcomes were compared among InnerChange participants and a matched comparison group of non-participants who were released from Minnesota prisons between August 2003 and December 2009. This time period was selected because the initial participants in the InnerChange program first began to be released from prison in August 2003. Moreover, because recidivism data were collected through the end of 2010, the study includes offenders who were released by the end of 2009 so as to ensure that they had at least one full year in the community to allow for a sufficient recidivism follow-up period.

Due to the small number of female inmates who had been released from prison prior to 2010 and had participated in InnerChange at MCF-Shakopee (the lone female state correctional facility in Minnesota), this evaluation focuses on assessing the effectiveness of the male program at MCF-Lino Lakes. Between August 2003 and December 2009, there were 421 male offenders released from prison who had

participated in InnerChange. During this same 77-month period, there were 18,462 individual male offenders released from Minnesota prisons who did not participate in InnerChange.

In matching non-participants with those in the InnerChange group and analyzing differences in recidivism outcomes between the two groups, it was imperative to control for recidivism risk. The Level of Service Inventory-Revised (LSI-R), which is designed to predict recidivism, is a validated assessment tool used by the MnDOC. However, not all offenders, including some InnerChange participants, had been administered an LSI-R assessment prior to their release from prison. In fact, 87 percent (366 of 421) of the InnerChange participants received a LSI-R score at some point during their confinement compared to 71 percent (13,188 of 18,462) of the non-participants. Propensity score matching and recidivism analyses were conducted both with and without LSI-R data, and the results were very similar for both sets of analyses. Still, because the LSI-R data add another layer of control, the study presents findings from the analyses that included LSI-R data. The results from the analyses that excluded the LSI-R data can be obtained from the MnDOC, however, upon request. After excluding those without LSI-R data, there were 13,484 offenders in the sample. Of these, 366 were InnerChange participants while the remaining 13,188 offenders were eligible for InnerChange but did not participate.

Dependent Variable

Recidivism

In this study, recidivism was defined as a 1) rearrest, 2) reconviction, 3) reincarceration for a new sentence, or 4) revocation for a technical violation of release conditions. It is important to emphasize that the first three recidivism variables strictly

measure new criminal offenses. In contrast, technical violation revocations (the fourth measure) represent a broader measure of rule-breaking behavior. Offenders can have their supervision revoked for violating the conditions of their supervised release. Because these violations can include activity that may not be criminal in nature (e.g., use of alcohol, failing a community-based treatment program, failure to maintain agent contact, failure to follow curfew, etc.), technical violation revocations do not necessarily measure reoffending.

Recidivism data were collected on offenders through December 31, 2010. Considering that offenders from both the InnerChange and comparison groups were released between August 2003 and December 2009, the follow-up time for the offenders examined in this study ranged from one year to a little more than seven years. At 38 months, the average follow-up time for the 732 offenders in this study was a little more than three years. Data on arrests and convictions were obtained electronically from the Minnesota Bureau of Criminal Apprehension. Reincarceration and revocation data were derived from the Correctional Operations Management System (COMS) database maintained by the MnDOC. The main limitation with using these data is that they measure only arrests, convictions or incarcerations that took place in Minnesota. As a result, the findings presented later likely underestimate the true recidivism rates for the offenders examined here.

To accurately measure the total amount of time offenders were actually at risk to reoffend (i.e., "street time"), it was necessary to account for supervised release revocations in the recidivism analyses. More specifically, for the three recidivism variables that strictly measure new criminal offenses (rearrest, reconviction, and new

offense reincarceration), it was necessary to deduct the amount of time they spent in prison for technical violation revocations from their total at-risk period. Failure to deduct time spent in prison as a supervised release violator would artificially increase the length of the at-risk periods for these offenders. Therefore, to achieve a more accurate measure of "street time," the time that an offender spent in prison as a supervised release violator was subtracted from his at-risk period, but only if it preceded a rearrest, a reconviction, a reincarceration for a new offense, or if the offender did not recidivate prior to January 1, 2011.

Independent Variables

The main objective of this evaluation is to determine whether InnerChange has had an impact on recidivism. For this variable, InnerChange participants were assigned a value of "1", whereas those in the comparison group received a value of "0". As shown later, this study also looks at whether recidivism outcomes varied by program outcome (completion or drop out). It is worth noting that InnerChange considers graduates to be offenders who complete all three phases of the program. Like Johnson and Larson (2003), this definition of completion was considered to be overly restrictive. As a result, for the purposes of the analyses conducted here, completers were regarded as offenders who, at the time of release from prison, were either successfully participating or had completed the first two in-prison phases of the program. InnerChange drop outs, then, consisted of those offenders who quit or were terminated from the program prior to their release from prison.

The independent, or control, variables included in the statistical models were those that were not only available in the COMS database but also might theoretically

have an impact on recidivism. A description of the covariates used in the statistical models can be found in Table 1.

Propensity Score Matching

Propensity score matching (PSM) is a method that estimates the conditional probability of selection to a particular treatment or group given a vector of observed covariates (Rosenbaum & Rubin, 1985). The predicted probability of selection, or propensity score, is typically generated by estimating a logistic regression model in which selection (0 = no selection; 1 = selection) is the dependent variable while the predictor variables consist of those that theoretically have an impact on the selection process. Once estimated, the propensity scores are then used to match individuals who entered treatment with those who did not. Thus, an advantage with using PSM is that it can simultaneously "balance" multiple covariates on the basis of a single composite score.

In matching InnerChange participants with non-participants on the conditional probability of entering InnerChange, PSM reduces selection bias by creating a counterfactual estimate of what would have happened to the InnerChange offenders had they not participated in the program. PSM has several limitations, however, that are worth noting. First, and foremost, because propensity scores are based on observed covariates, PSM is not robust against "hidden bias" from unmeasured variables that are associated with both the assignment to treatment and the outcome variable. For example, given that InnerChange is a voluntary program, PSM would be unable to control for unobserved covariates arising from self-selection bias that have significant effects on both selection to the program and recidivism. Second, there must be substantial overlap

among propensity scores between the two groups in order for PSM to be effective (Shadish, Cook & Campbell, 2002); otherwise, the matching process will yield incomplete or inexact matches. Finally, as Rubin (1997) points out, PSM tends to work best with large samples.

Although somewhat limited by the data available, an attempt was made to address potential concerns over unobserved bias by including as many theoretically-relevant covariates (27) as possible in the propensity score model. In addition, this study later demonstrates there was substantial overlap in propensity scores between the treated and untreated offenders. Further, the sample size limitation was addressed by assembling a large number of cases (N = 13,484) on which to conduct the propensity score analyses.

Matching InnerChange Participants and Non-Participants

Propensity scores were calculated for the 366 InnerChange participants and the 13,188 non-participants in the comparison group pool by estimating a logistic regression model in which the dependent variable was participation in InnerChange. The predictors were the 27 control variables used in the statistical analyses (see Table 1). The results show there are a number of factors that predicted whether offenders entered InnerChange. White offenders, younger offenders, inmates who reported a Christian affiliation (e.g., Catholic, Baptist, Lutheran, and Other Christian), drug offenders, and those with longer lengths of stay in prison had significantly greater odds of entering InnerChange. Conversely, offenders admitted to prison as probation violators, sex offenders, and offenders with more discipline convictions were significantly less likely to enter InnerChange. Further, InnerChange participants were, at the time of release, significantly more likely to be placed on work release and significantly less likely to participate in

CIP. Lastly, release year was positively associated with entering InnerChange, which reflects the fact that program enrollment has increased over time.

Table 1. Logistic Regression Model for InnerChange Selection

Predictors	*Predictor Description*	*Coefficient*	*Standard Error*
Minority	Minority = 1; White = 0	-0.277*	0.134
Age at Release (years)	Offender age in years at time of release from prison	-0.016*	0.007
Prior Supervision Failures	Number of prior revocations while under correctional supervision	0.084	0.057
Prior Convictions	Number of prior felony convictions, excluding index conviction(s)	0.030	0.017
LSI-R Score	Most recent Level of Service Inventory-Revised (LSI-R) score prior to release	-0.010	0.008
Religious Affiliation	No religious preference serves as the reference		
Catholic	Catholic = 1; not Catholic = 0	0.447*	0.188
Baptist	Baptist = 1; not Baptist = 0	0.581*	0.237
Lutheran	Lutheran = 1; not Lutheran = 0	0.526*	0.218
Other Christian	Other Christian = 1; not Other Christian = 0	1.113**	0.148
Non-Christian	Non-Christian = 1; Christian or no preference = 0	-0.362	0.313
Metro Commit	Twin Cities metropolitan area = 1; Greater Minnesota = 0	0.168	0.124
Admission Type	New commitment serves as the reference		
Probation Violator	Probation violator = 1; new commitment or release violator = 0	-0.782**	0.164
Release Violator	Release violator = 1; new commitment or probation violator = 0	0.303	0.405
Offense Type	Person offense serves as the reference		
Property	Property offense = 1; non-property offense = 0	-0.128	0.210
Drugs	Drug offense = 1; non-drug offense = 0	0.528**	0.172
Criminal Sexual Conduct	Sex offense = 1; non-sex offense = 0	-1.072**	0.331
Felony DWI	Felony DWI offense = 1; non-Felony DWI offense = 0	-0.669	0.350
Other	Other offense = 1; non-other offense = 0	0.252	0.198
Length of Stay (months)	Number of months between prison admission and release dates	0.024**	0.002
Institutional Discipline	Number of discipline convictions received during imprisonment prior to release	-0.095**	0.021
Drug Treatment	Entered chemical dependency treatment during current prison sentence	-0.149	0.142
Sex Offender Treatment	Entered sex offender treatment during current prison sentence	-0.399	0.450
Supervision Type	Supervised release serves as the reference		
ISR	Intensive supervised release (ISR) = 1; non-ISR = 0	-0.144	0.174
Work Release	Work Release = 1; non-Work Release = 0	0.597**	0.136
CIP	Challenge Incarceration Program (CIP) = 1; non-CIP = 0	-1.716**	0.439
Discharge	Discharge = 1; released to correctional supervision = 0	-1.849	1.168
Release Year	Year in which first released from prison for instant or current offense	0.223**	0.038
Constant		-451.727**	75.866
N		13,484	
Log-likelihood		2802.324	
Nagelkerke R^2		0.184	

** $p < .01$
* $p < .05$

Table 2. PSM and Covariate Balance for InnerChange (IFI) Participation

Variable	*Sample*	*IFI Mean*	*Non-IFI Mean*	*Bias (%)*	*Bias Reduction*	*t test p Value*
Propensity Score	Total	9.69%	2.52%	60.60		0.00
	Matched	9.69%	9.74%	0.34	-99.44%	0.96
Minority	Total	42.08%	47.29%	8.58		0.05
	Matched	42.08%	43.44%	2.24	-73.84%	0.71
Age at Release (Years)	Total	36.09	34.26	16.16		0.00
	Matched	36.09	35.57	4.57	-71.70%	0.46
Prior Supervision Failures	Total	0.70	0.84	10.33		0.02
	Matched	0.70	0.68	0.93	-91.00%	0.88
Prior Convictions	Total	5.08	4.86	4.36		0.27
	Matched	5.08	5.19	2.01	-53.92%	0.74
LSI-R Score	Total	26.01	28.18	22.39		0.00
	Matched	26.01	26.27	2.70	-87.96%	0.65
Catholic	Total	14.75%	14.60%	0.35		0.93
	Matched	14.75%	16.39%	3.72	976.34%	0.54
Baptist	Total	8.20%	7.60%	1.81		0.67
	Matched	8.20%	10.11%	5.50	204.15%	0.37
Lutheran	Total	10.66%	9.94%	1.92		0.65
	Matched	10.66%	7.92%	7.56	292.66%	0.20
Other Christian	Total	40.44%	23.16%	30.04		0.00
	Matched	40.44%	41.80%	2.25	-92.49%	0.71
Non-Christian	Total	3.55%	9.70%	22.02		0.00
	Matched	3.55%	3.28%	1.21	-94.52%	0.84
Metro	Total	57.92%	51.98%	9.78		0.03
	Matched	57.92%	56.83%	1.80	-81.60%	0.77
Probation Violator	Total	15.03%	34.31%	39.31		0.00
	Matched	15.03%	12.02%	7.08	-82.00%	0.24
Release Violator	Total	2.19%	1.46%	4.36		0.25
	Matched	2.19%	0.82%	8.66	98.61%	0.13
Property Offender	Total	13.39%	19.82%	14.54		0.00
	Matched	13.39%	14.21%	1.95	-86.60%	0.75
Drug Offender	Total	36.89%	27.34%	16.56		0.00
	Matched	36.89%	39.89%	5.05	-69.51%	0.40
Sex Offender (Crim. Sex. Conduct)	Total	4.37%	10.11%	19.40		0.00
	Matched	4.37%	5.46%	4.18	-78.46%	0.50
Felony DWI Offender	Total	3.01%	7.01%	16.13		0.00
	Matched	3.01%	2.19%	4.13	-74.42%	0.49
Other Offender	Total	14.21%	13.74%	1.10		0.80
	Matched	14.21%	13.39%	1.93	75.19%	0.75
Length of Stay (months)	Total	52.18	23.33	69.77		0.00
	Matched	52.18	48.25	7.33	-89.50%	0.26
Discipline	Total	2.72	2.52	4.70		0.26
	Matched	2.72	2.86	3.11	-33.92%	0.61
Drug Treatment	Total	25.14%	26.00%	1.61		0.71
	Matched	25.14%	21.86%	6.26	288.62%	0.30
Sex Offender Treatment	Total	2.46%	3.02%	2.85		0.54
	Matched	2.46%	1.09%	7.98	179.48%	0.16
Intensive Supervised Release	Total	19.40%	22.60%	6.47		0.15
	Matched	19.40%	18.58%	1.70	-73.75%	0.78
Work Release	Total	32.79%	14.19%	35.03		0.00
	Matched	32.79%	32.79%	0.00	-100.00%	1.00
CIP	Total	1.64%	7.51%	26.12		0.00
	Matched	1.64%	0.82%	5.80	-77.80%	0.32
Discharge	Total	0.00%	1.03%	11.49		0.15
	Matched	0.00%	0.55%	7.38	-35.75%	0.56
Release Year	Total	2007.27	2006.69	31.25		0.00
	Matched	2007.27	2007.47	11.31	-63.81%	0.06

Total IFI N = 366; Total Non-IFI N = 13,188; Matched IFI N = 366; Matched Comparison N = 366

As shown in Table 2, the difference in mean propensity score between InnerChange participants and non-participants was statistically significant at the .01 level. Still, there was substantial overlap in propensity scores. Indeed, the vast majority of offenders in both groups (92 percent for InnerChange and 99 percent for non-participants) had propensity scores less than 0.25.

After obtaining propensity scores for the 13,484 offenders, a "greedy" matching procedure that utilized a without replacement method was used to match the InnerChange offenders with the non-participants. InnerChange offenders were matched to non-participants who had the closest propensity score (i.e., "nearest neighbor") within a caliper (i.e., range of propensity scores) of 0.10. Matches were found for all 366 InnerChange participants. Table 2 presents the covariate and propensity score means for both groups prior to matching ("total") and after matching ("matched"). In addition to tests of statistical significance ("t test p value"), Table 2 provides a measure ("Bias") developed by Rosenbaum and Rubin (1985) that quantifies the amount of bias between the treatment and comparison samples

$$\text{Bias} = \frac{100(\overline{X}_t - \overline{X}_c)}{\sqrt{\frac{(S_t^2 + S_c^2)}{2}}}$$

(i.e., standardized mean difference between samples), where $\overline{X}_t$ and S_t^2 represent the sample mean and variance for the treated offenders and $\overline{X}_c$ and S_c^2 represent the sample mean and variance for the untreated offenders. If the value of this statistic exceeds 20, the covariate is considered to be unbalanced (Rosenbaum & Rubin, 1985). As shown in Table 2, the matching procedure reduced the bias in propensity scores between the InnerChange and non-InnerChange offenders by 99 percent. Whereas the p value was

0.00 in the unmatched sample, it was 0.96 in the matched sample. In the unmatched sample, there were eight covariates that were significantly imbalanced (i.e., the bias values exceeded 20). But in the matched sample, covariate balance was achieved given that no covariates had bias values greater than 20.

Analysis

In analyzing recidivism, survival analysis models are preferable in that they utilize time-dependent data, which are important in determining not only whether offenders recidivate but also when they recidivate. As a result, this study uses a Cox regression model, which uses both "time" and "status" variables in estimating the impact of the independent variables on recidivism. For the analyses presented here, the "time" variable measures the amount of time from the date of release until the date of first rearrest, reconviction, reincarceration, technical violation revocation, or December 31, 2010, for those who did not recidivate. The "status" variable, meanwhile, measures whether an offender recidivated (rearrest, reconviction, reincarceration for a new crime, and technical violation revocation) during the period in which he was at risk to recidivate. In the analyses presented below, Cox regression models were estimated for each of the four recidivism measures. In addition, to determine whether the effectiveness of InnerChange varied across characteristics such as religious affiliation or offender race, interaction models were estimated for each measure of recidivism.

As shown later, the statistical models contain a relatively large number of predictors, which raises concerns about multicollinearity. To address this issue, a correlation matrix was estimated for all of the covariates used in the statistical models presented later. The results from the correlation matrix, which are not shown here,

indicate that none of the correlations were above 0.50. In addition, ordinary least squares (OLS) regression models with all four outcome measures were estimated, and none of the covariates had tolerance values below .05 or variance inflation factor (VIF) values that exceeded 20.

Results

Of the 366 InnerChange participants, 212 (58 percent) completed the in-prison portion of the program and the other 154 (42 percent) dropped out. Compared to the non-participants, offenders who entered InnerChange had lower rates of recidivism for all four measures. As shown in Table 3, which breaks out the recidivism data by InnerChange outcome (completed or dropped out), offenders who completed

Table 3. Recidivism Rates by InnerChange (IFI) Participation, Mentoring and Outcome

	Rearrest	*Reconviction*	*Reincarceration*	*Revocation*	*N*
Comparison Pool	59.2%	43.8%	22.1%	40.1%	13,188
Comparison Group	51.1%	34.2%	13.1%	36.3%	366
IFI	42.1%	25.4%	8.7%	33.1%	366
Completers	33.0%	17.9%	2.4%	23.6%	212
Dropouts	54.5%	35.7%	17.5%	46.1%	154
IFI Mentoring					
No Mentor	48.7%	30.1%	14.5%	42.5%	193
Prison Only Mentor	50.0%	38.1%	7.1%	33.3%	42
Mentor Continuum	29.8%	14.5%	0.8%	19.1%	131

InnerChange had the lowest recidivism rates. In contrast, recidivism rates were highest for the InnerChange offenders who dropped out. Among InnerChange participants, the results show that offenders who met with mentors both in prison and in the community after their release from prison ("mentor continuum") had much lower recidivism rates for all four measures in comparison to offenders who did not meet with a mentor or only met with a mentor in prison.

These findings suggest that participation in InnerChange, particularly those that complete the in-prison part of the program, may have an impact on recidivism. It is possible, however, that the observed recidivism differences between the InnerChange and comparison group offenders are due to other factors such as time at risk, prior criminal history, LSI-R score, or post-release supervision. To statistically control for the impact of these other factors on reoffending, Cox regression models were estimated for each of the four recidivism measures.

The Impact of InnerChange on Recidivism

The results in Table 4 indicate that, controlling for the effects of the other independent variables in the statistical model, participation in InnerChange significantly reduced the hazard ratio for the three recidivism measures that strictly measured new criminal offenses (rearrest, reconviction, and reincarceration for a new offense). InnerChange did not have a significant effect, however, on technical violation revocations. Because InnerChange participants reoffended less often and more slowly than the offenders in the comparison group, they survived longer in the community without committing a new offense. In particular, participation in InnerChange decreased the hazard by 26 percent for rearrest, 35 percent for reconvictions, and 40 percent for reincarcerations for a new crime.

The results also showed the hazard ratio was significantly greater for prior convictions (all four measures), supervision failures (two measures), younger offenders (two measures), minority inmates (technical violation revocations), Baptist offenders (new offense reincarceration), non-Christian inmates (reconviction), offenders committed from the Metro area (rearrest), shorter lengths of stay in prison (all four measures), discipline convictions (two measures), inmates who were released to no supervision (two

Table 4. Cox Regression Models: Impact of InnerChange on Time to First Recidivism Event

	Rearrest		*Reconviction*		*Reincarceration*		*Revocation*	
	Hazard Ratio	SE	Hazard Ratio	SE	Hazard Ratio	SE	Hazard Ratio	SE
InnerChange	0.739**	0.113	0.655**	0.145	0.603*	0.244	0.886	0.130
Minority	0.949	0.136	0.864	0.173	1.096	0.290	1.389*	0.151
Age at Release (years)	0.977**	0.007	0.983	0.009	0.969	0.016	0.983*	0.008
Prior Supervision Failures	1.117*	0.048	1.118	0.057	1.167	0.081	1.148*	0.055
Prior Convictions	1.070**	0.012	1.079**	0.015	1.093**	0.023	1.049*	0.015
LSI-R Score	1.006	0.008	1.015	0.010	1.015	0.017	1.009	0.010
Religious Affiliation								
Catholic	0.785	0.196	0.779	0.250	2.406	0.460	0.575*	0.222
Baptist	1.070	0.217	1.269	0.272	2.885*	0.481	0.578*	0.247
Lutheran	0.764	0.238	0.781	0.292	1.834	0.540	0.493*	0.289
Other Christian	0.800	0.147	0.874	0.187	1.942	0.382	0.608*	0.164
Non-Christian	1.399	0.307	2.702**	0.335	2.172	0.683	0.647	0.354
Metro Commit	1.324*	0.131	1.030	0.159	1.516	0.272	1.143	0.149
Admission Type								
Probation Violator	1.265	0.159	1.321	0.190	0.963	0.344	1.206	0.179
Release Violator	1.137	0.400	0.915	0.525	1.027	0.754	0.343	0.726
Offense Type								
Property	1.324	0.195	1.128	0.241	1.387	0.384	1.198	0.228
Drugs	1.088	0.172	0.964	0.219	0.878	0.380	0.870	0.196
Criminal Sexual Conduct	0.873	0.445	0.911	0.610	1.625	1.092	1.691	0.413
Felony DWI	1.354	0.333	0.748	0.457	1.713	0.611	1.132	0.399
Other	1.140	0.193	1.106	0.244	0.975	0.438	0.987	0.222
Length of Stay (months)	0.990**	0.002	0.991**	0.003	0.989*	0.005	0.991**	0.003
Institutional Discipline	1.089**	0.020	1.042	0.026	1.047	0.045	1.108**	0.023
Drug Treatment	1.122	0.147	1.294	0.180	1.226	0.303	0.962	0.172
Sex Offender Treatment	0.000	144.320	0.000	119.924	0.000	291.298	0.353	1.080
Supervision Type								
ISR	1.135	0.170	0.973	0.216	0.773	0.370	1.535*	0.194
Work Release	1.123	0.141	0.915	0.179	0.604	0.306	1.916**	0.164
CIP	1.543	0.440	1.108	0.542	0.553	1.062	1.566	0.540
Discharge	28.378**	0.879	4.574	1.060	20.947*	1.203	0.000	117.267
Release Year	1.006	0.042	0.972	0.055	0.862	0.094	0.944	0.046
Supervised Release Revocations	0.870	0.099	0.952	0.101	1.066	0.143		
N	732		732		732		732	

** $p < .01$
* $p < .05$

measures), offenders placed on work release (technical violation revocations), and those released to ISR (technical violation revocations). The risk (hazard) of revocation for a technical violation was significantly less, however, for Christian offenders (Catholic, Baptist, Lutheran, and other Christian) in comparison to those without a stated religious preference.

Table 5. Interaction Models: Impact of InnerChange on Time to First Recidivism Event

	Reconviction		*Reincarceration*		*Revocation*	
	Hazard Ratio	SE	Hazard Ratio	SE	Hazard Ratio	SE
InnerChange	0.379	0.585	0.471*	0.380	1.393	0.214
Minority	0.889	0.175	0.669	0.351	1.387	0.151
Age at Release (years)	0.983	0.009	0.966*	0.017	0.979*	0.009
Prior Supervision Failures	1.102	0.056	1.162	0.080	1.162**	0.055
Prior Convictions	1.087**	0.015	1.099**	0.024	1.086**	0.017
LSI-R Score	0.994	0.014	1.010	0.017	1.008	0.009
Religious Affiliation						
Catholic	0.708	0.253	2.263	0.462	0.591*	0.225
Baptist	1.343	0.271	3.257*	0.478	0.602*	0.248
Lutheran	0.728	0.292	1.950	0.540	0.529*	0.291
Other Christian	1.165	0.221	1.877	0.382	0.638**	0.165
Non-Christian	2.943**	0.339	2.673	0.691	0.709	0.356
Metro Commit	0.969	0.161	1.503	0.275	1.122	0.148
Admission Type						
Probation Violator	1.378	0.190	0.898	0.345	1.248	0.179
Release Violator	1.086	0.531	1.147	0.769	0.329	0.726
Offense Type						
Property	1.151	0.238	1.468	0.376	0.792	0.303
Drugs	1.365	0.243	1.400	0.415	0.835	0.196
Criminal Sexual Conduct	0.909	0.610	1.648	1.155	1.743	0.414
Felony DWI	0.670	0.459	1.840	0.606	1.103	0.399
Other	1.080	0.244	1.049	0.439	0.949	0.222
Length of Stay (months)	0.991**	0.003	0.988*	0.005	0.990**	0.003
Institutional Discipline	1.034	0.026	1.048	0.045	1.111**	0.023
Drug Treatment	1.343	0.180	1.219	0.303	0.959	0.173
Sex Offender Treatment	0.000	120.457	0.000	290.213	0.379	1.082
Supervision Type						
ISR	0.945	0.215	0.732	0.372	1.995**	0.242
Work Release	0.845	0.179	0.581	0.305	2.014**	0.164
CIP	1.173	0.542	0.790	1.073	1.584	0.541
Discharge	7.354	1.083	57.693**	1.311	0.000	112.459
Release Year	0.968	0.055	0.860	0.096	0.943	0.046
Supervised Release Revocations	0.961	0.100	1.039	0.142		
InnerChange X Drugs	0.423**	0.308	0.214*	0.659		
InnerChange X Other Christian	0.534*	0.297				
InnerChange X LSI-R Score	1.039*	0.019				
InnerChange X Minority			3.599**	0.489		
InnerChange X Prior Conviction					0.924**	0.026
InnerChange X Property					2.547**	0.353
InnerChange X ISR					0.525*	0.320
N	732		732		732	

** $p < .01$
* $p < .05$

In Table 5, the results from the interaction models are presented. Because the rearrest model did not produce any statistically significant interactions, only the findings

for the other three recidivism measures are shown. The results suggest that InnerChange was more effective for drug offenders (reconviction and new offense reincarceration), inmates who identified as other Christian (reconviction), offenders with more prior convictions (technical violation revocation) and those placed on ISR (technical violation revocation). The findings also suggest, however, that InnerChange was significantly less effective for offenders with higher LSI-R scores (reconviction), minority offenders (new offense reincarceration), and property offenders (technical violation revocation). Overall, however, the results from the interaction models did not yield consistent findings. With the exception of the drug offender-InnerChange interaction, which was statistically significant in the reconviction and new offense reincarceration models, the other interaction terms were significant for only one measure of recidivism.

InnerChange, Mentoring, and Recidivism

In an effort to better understand why InnerChange significantly reduced reoffending, mentoring data collected by program staff were examined. Because these data were not available for the comparison group, analyses were restricted to the 366 InnerChange participants. As such, the mentoring analyses will not definitively explain the significant recidivism differences observed here between the InnerChange and comparison groups. Moreover, the mentoring data may simply reflect that InnerChange participants who had mentors were more motivated than those who did not meet with a mentor. Still, examining these data may shed light on whether meeting with mentors in prison and/or the community was associated with reduced recidivism for InnerChange participants.

Table 6. Cox Regression Models: Impact of Mentoring on Time to First Recidivism Event

	Rearrest		*Reconviction*		*Reincarceration*		*Revocation*	
	Hazard Ratio	SE	Hazard Ratio	SE	Hazard Ratio	SE	Hazard Ratio	SE
Mentor								
Prison Only	1.100	0.287	1.146	0.346	0.408	0.703	0.674	0.328
Prison and Community	0.557**	0.224	0.480*	0.307	0.049**	1.073	0.381**	0.259
Minority	0.780	0.222	0.879	0.286	3.762*	0.566	1.630*	0.237
Age at Release (years)	0.970**	0.012	0.967*	0.016	0.942	0.033	0.980	0.014
Prior Supervision Failures	1.310**	0.067	1.120	0.087	1.140	0.132	1.046	0.088
Prior Convictions	1.056**	0.016	1.066**	0.024	1.101*	0.044	1.013	0.024
LSI-R Score	1.020	0.012	1.036*	0.015	1.024	0.027	1.017	0.013
Religious Affiliation								
Catholic	0.606	0.306	0.548	0.398	5.439	0.894	0.779	0.327
Baptist	0.796	0.333	1.174	0.422	5.354	0.952	0.928	0.352
Lutheran	0.672	0.365	0.846	0.451	8.435*	1.006	0.841	0.428
Other Christian	0.552*	0.241	0.577	0.315	4.060	0.811	0.706	0.253
Non-Christian	1.296	0.447	2.437	0.509	4.427	1.073	1.394	0.472
Metro Commit	1.545*	0.217	0.890	0.279	0.690	0.547	1.373	0.243
Admission Type								
Probation Violator	1.160	0.239	1.597	0.3	1.614	0.554	1.500	0.262
Release Violator	1.121	0.548	0.533	0.798	0.632	1.257	1.135	0.758
Offense Type					1.262	0.628		
Property	1.834*	0.288	0.869	0.371	0.325	0.772	2.202*	0.322
Drugs	0.979	0.279	0.606	0.35	0.000	702.294	0.564	0.304
Criminal Sexual Conduct	0.824	0.742	0.000	299.106	2.044	0.94	1.934	0.776
Felony DWI	1.273	0.489	0.937	0.581	0.904	0.716	1.304	0.558
Other	1.302	0.307	1.105	0.371	0.994	0.013	0.850	0.325
Length of Stay (months)	0.996	0.004	0.990	0.007	0.992	0.077	0.993	0.005
Institutional Discipline	1.077*	0.031	1.037	0.041	1.666	0.534	1.079*	0.034
Drug Treatment	1.072	0.23	1.538	0.294	0.001	760.313	0.887	0.255
Sex Offender Treatment	1.053	1.044	0.000	362.926			0.841	1.262
Supervision Type					1.202	0.599		
ISR	1.165	0.264	1.177	0.337	0.636	0.65	0.917	0.316
Work Release	0.993	0.24	0.860	0.314	0.626	1.303	3.085**	0.254
CIP	4.066**	0.478	1.103	0.703	0.000	12895.71	2.638	0.602
Discharge	0.000	1095.42	0.000	2215.07	1.091	0.198	0.000	193.18
Release Year	1.030	0.073	1.005	0.098	0.950	0.234	0.925	0.07
Supervised Release Revocations	0.829	0.144	0.948	0.157	0.408	0.703		
N	366		366		366		366	

** $p < .01$
* $p < .05$

The mentoring data indicate whether participants had mentors and, if so, whether they met with their mentors in prison, in the community, or both. As a result, four dummy variables were initially created to measure the impact of mentoring on recidivism: No Mentor (1 = No mentor in prison or the community, 0 = Mentor), Prison Mentor Only (1

= Prison Mentor Only, 0 = Other), Community Mentor Only (1 = Community Mentor Only, 0 = Other) and Mentor Continuum (1 = Mentor in prison and the community, 0 = Other). However, because none of the 366 participants only met with mentors in the community, the mentoring measure contained three dummy variables (No Mentor, Prison Mentor Only, and Mentor Continuum) in which No Mentor served as the reference in the Cox regression analyses.

The mentoring data reveal that 173 (47 percent) of the 366 InnerChange participants met with a mentor in prison and/or the community, whereas the remaining 193 (53 percent) did not. Of the 173 who met with a mentor, 131 (76 percent; 36 percent of all InnerChange participants) had a mentoring continuum insofar as they met with their mentors both in prison and in the community. In Table 6, the results from Cox regression models are presented that estimated the effects of mentoring on recidivism among the 366 participants. The findings show that, holding the other factors constant, a continuum of mentoring significantly reduced all four measures of recidivism, decreasing the risk by 44 percent for rearrest, 52 percent for reconviction, 95 percent for new offense reincarceration, and 62 percent for technical violation revocations. Compared to InnerChange participants who did not have a mentor, those who met with mentors only in prison did not have a significantly reduced risk of recidivism. Although the caveats noted above limit the confidence that can be placed in these results, it is nevertheless reasonable to tentatively conclude that the positive recidivism outcomes for InnerChange participants may be partly associated with the continuum of mentoring available.

Table 7. Logistic Regression Models: Predictors of Mentoring Participation

	Prison Mentor Only		*Mentor Continuum*	
Predictors	Coefficient	SE	Coefficient	SE
Minority	0.685	0.447	-1.073**	0.312
Age at Release (years)	-0.022	0.024	-0.016	0.016
Prior Supervision Failures	-0.018	0.225	0.133	0.134
Prior Convictions	0.015	0.060	-0.016	0.036
LSI-R Score	0.001	0.027	0.005	0.017
Religious Affiliation				
Catholic	-0.254	0.660	-0.233	0.441
Baptist	0.046	0.792	0.277	0.530
Lutheran	-1.150	1.165	0.827	0.471
Other Christian	0.141	0.506	0.302	0.337
Non-Christian	3.321**	0.905	-0.319	0.898
Metro Commit	-1.567**	0.482	0.243	0.285
Admission Type				
Probation Violator	-0.357	0.574	0.611	0.372
Release Violator	-20.063	12728.740	0.034	0.858
Offense Type				
Property	-0.630	0.655	-0.353	0.468
Drugs	-0.800	0.503	0.083	0.375
Criminal Sexual Conduct	-18.201	8453.887	1.414	0.825
Felony DWI	-21.502	10142.209	-0.033	0.849
Other	-0.543	0.611	0.073	0.448
Length of Stay (months)	0.002	0.008	0.022**	0.006
Institutional Discipline	-0.186*	0.086	-0.206**	0.056
Entered Drug Treatment	-0.809	0.492	0.047	0.300
Entered Sex Offender Treatment	-15.849	10327.586	-0.087	1.097
Supervision Type				
ISR	-0.923	0.669	-0.548	0.430
Work Release	0.326	0.459	0.565	0.303
CIP	0.332	1.431	-0.659	1.173
Release Year	-0.432**	0.131	-0.023	0.090
Constant	866.234	262.700	44.806	180.820
N	366		366	
Log-likelihood	206.892		393.715	
Nagelkerke R^2	0.269		0.281	

** $p < .01$
* $p < .05$

Further analyses of the mentoring data may also elucidate some of the findings observed earlier regarding minority participants. As shown in Table 7, two logistic

regression models were estimated in which the outcome measures were 1) Prison Mentor Only and 2) Mentor Continuum. When the predictors of participation in mentoring were examined, it was found that although minority participants had a positive, but non-significant, relationship with having only a mentor in prison, they were significantly less likely than white participants to have a continuum of mentoring support.

Conclusion

The findings reported here suggest the InnerChange program for male offenders in Minnesota is effective in reducing reoffending. Indeed, participation in InnerChange reduced the risk of reoffending by 26 percent for rearrest, 35 percent for reconviction, and 40 percent for new offense reincarceration. It was also found that InnerChange was, with one exception (other Christians in the reconviction model in Table 5), not significantly more or less effective for offenders from different religions (Christian and non-Christian) or even different denominations within the Christian faith. That non-Christian offenders did not do significantly worse is worth noting given that InnerChange is an explicitly Christian faith-based program. Still, the results showed that minority offenders were significantly less likely to enter InnerChange and did significantly worse for at least one measure of recidivism (new offense reincarceration). Analyses of the mentoring data suggest that one reason why minority participants may have fared worse is that they were significantly less likely to have a continuum of mentoring support, which was, in turn, significantly associated with a reduced risk of recidivism.

In their evaluation of the InnerChange program in Texas, Johnson and Larson (2003) found that, despite the relatively low rates of recidivism among program completers, it did not significantly reduce recidivism overall. Although this study also

found that program completers had relatively low recidivism rates, the findings suggest the program significantly decreased reoffending overall. The different results obtained, however, do not appear to be due to improved completion rates among participants in the Minnesota program. Consistent with the definition of program completion used by InnerChange, Johnson and Larson (2003) reported program completion rates only for those who successfully finished all three phases of the program. Of the 177 InnerChange participants Johnson and Larson (2003) studied, 42 percent (75 of 177) completed all three phases of the program. When the same definition was used, it was found that 39 percent (143 of 366) completed the two in-prison phases of the program as well as the community phase.

Notwithstanding similar program completion rates, it is reasonable to suspect there may be a few reasons why the InnerChange program in Minnesota was more effective in reducing reoffending. First, Johnson and Larson (2003) evaluated the performance of the InnerChange program in Texas during its first two years of operation (April 1997-January 1999). As opposed to evaluating a nascent, immature correctional program, this study examined one that had, by the end of 2009, been running for more than six years. Prior research suggests that more mature correctional programs may yield more favorable outcome findings because program staff have an opportunity to work out the kinks that frequently accompany the implementation of a new program (Duwe and Kerschner, 2008). Second, related to this point, changes were made to the InnerChange model in response to the findings from the Johnson and Larson (2003) evaluation. Most notably, by incorporating recommendations from the "what works" literature, the

evidence suggests the InnerChange program examined here was more successful in reducing the recidivism risk of those who participated.

The findings indicate, on the whole, that faith-based correctional programs can work, but only if they apply what is known about effective correctional programming. In other words, to be successful, faith-based programs should, like any other correctional program, focus on high-risk offenders (or at least not exclude them), address the criminogenic needs of participants, and provide a behavioral intervention within a therapeutic community that delivers a continuum of care from the institution to the community. The findings from this evaluation thus underscore, once again, the importance of using evidence-based practices.

But does the need to apply proven and, more specifically, secular strategies diminish the value of religious faith in correctional programming? As noted earlier, existing research has found that religiosity is negatively associated with crime. Still, much of the evidence in support of this effect has come from populations that are not incarcerated. For those enmeshed in a criminal lifestyle, it may take more than Bible study or religious instruction to desist from crime. Indeed, offenders admitted to prison often have multiple barriers to overcome, including a lengthy history of chemical abuse and dependence as well as a lack of education, vocational skills, and legitimate work history. Moreover, because a criminal record presents a major obstacle in finding a job and a place to live, released offenders often experience a great deal of difficulty in securing steady employment and suitable housing (Bushway and Reuter, 2002; Pager, 2003). Therefore, while participating in faith-based programming can engender spiritual transformation, provide inmates with a positive outlook, and give them a newfound sense

of purpose and meaning in their lives (Johnson and Larson, 2003), the programming must also address their criminogenic needs in order to help provide them with the skills and tools they need to stop committing crime.

It is also worth emphasizing, however, that all of the programming InnerChange provides, including that which addresses criminogenic needs, is delivered through the lens of a Christian perspective. Religiosity is associated with increased levels of well-being, purpose, and hope, which are powerful agents for change. Moreover, consistent with existing research on the connection between religious involvement and social ties (Ellison and Levin, 1998; Kerley and Copes, 2009; Smith, 2003), the findings reported here suggest that providing a continuum of social support and, more narrowly, mentoring may be one of the main reasons why InnerChange decreases reoffending. That InnerChange is a faith-based program likely bolsters its efforts to provide this continuum of social support, for the program relies heavily on volunteers from local faith communities to serve as mentors and help deliver evening programming (e.g., Bible study, discussion of life skills, etc.) to participants. Research has shown, for example, that religiosity is positively associated with volunteerism (Wilson and Janoski, 1995). In light of the above, it is difficult to disentangle the secular from the spiritual in determining why InnerChange decreases reoffending.

Regardless of the uncertainty regarding the causal processes by which InnerChange reduces reoffending, the evidence presented here offers several implications for InnerChange and faith-based correctional programs in general. First, given the standardized InnerChange curriculum, the findings imply that other InnerChange programs may also be effective in reducing recidivism. However, because this evaluation

focused on male offenders, it is unclear whether the results are generalizable to the three InnerChange programs that serve female offenders. Second, due to the association between mentoring and decreased reoffending found here, the results suggest that InnerChange may be able to further improve recidivism outcomes by ensuring that more participants, especially minority offenders, receive a continuum of mentoring support. Moreover, to better understand the impact of mentoring, future research should collect mentoring data not only on the offenders who participate in the program, but also on the non-participants in the comparison group. Third, although this evaluation did not include a cost-benefit analysis, it is worth emphasizing that InnerChange relies heavily on volunteers and program costs are privately funded. From a cost-benefit perspective, the program is appealing because it exacts little cost to the state while providing a tangible benefit in the form of reduced recidivism, which includes fewer incarceration and victimization costs. Finally, the evidence suggests that if other faith-based correctional programs adhere to evidence-based practices, they might also be effective in reducing recidivism. If future evaluations of faith-based correctional programs yield similarly positive results, then this type of programming may provide a cost-effective alternative that more states should consider implementing.

References

Akers, R.L. (1998). *Deviant Behavior: A Social Learning Approach*. Belmont, CA: Wadsworth.

Baier, C. J., and Wright, B. R. E. (2001). "If you love me, keep my commandments:" A meta-analysis of the effect of religion on crime. *Journal of Research in Crime and Delinquency*, 38: 3-21.

Bales, W.D. and Mears, D.P. (2008). Inmate social ties and the transition to society: Does visitation reduce recidivism? *Journal of Research in Crime and Delinquency* 45: 287-321.

Berg, M., and Huebner, B.M. (2010). Reentry and the Ties that Bind: An Examination of Social Ties, Employment, and Recidivism. *Justice Quarterly.*

Burkett, S. R., and White, M. (1974). Hellfire and delinquency: Another look. *Journal for the Scientific Study of Religion,* 13: 455-462.

Bushway, S. & Reuter, P. (2002). Labor markets and crime risk factors. In Sherman, L., Farrington, D., Welsh, B., & MacKenzie, D., *Evidence-Based Crime Prevention*. Rutledge Press: NY.

Chatters, L.M. (2000). Religion and health: Health research and practice. *Annual Review of Public Health* 21: 335-367.

Chu, D.C. (2007). Religiosity and desistance from drug use. *Criminal Justice and Behavior* 34: 661-679.

Chu, D.C. and Sung, H.E. (2008). Racial differences in desistance from substance abuse. *International Journal of Offender Therapy and Comparative Criminology* 53: 696-716.

Clark, T.A. (2001). The Relationship Between Inmate Visitation and Behavior: Implications for African American Families. *Journal of African American Men* 6(1):43-58.

Cochran, J. K., and Akers, R. L. (1989). Beyond Hellfire: An exploration of the variable effects of religiosity on adolescent marijuana and alcohol use. *Journal of Research in Crime and Delinquency,* 26: 198-225.

Cochran, J. K., Wood, P. B., and Arneklev, B. J. (1994). Is the religiosity-delinquency

relationship spurious? A test of arousal and social theories. *Journal of Research in Crime and Delinquency*, 31: 92-123.

Cullen, F. T., and Gendreau, P. (2000). Assessing correctional rehabilitation: Policy, practice, and prospects. In J. Horney, J. Martin, D. L. MacKenzie, R. D. Peterson, and D. Rosenbaum (Eds.), *Policies, Processes, and Decisions of the Criminal Justice System*. (Vol. 3, pp. 109-175). Washington, D.C.: National Institute of Justice.

Daggett, D. M., Camp, S. D., Kwon, O., Rosenmerkel, S. P., and Klein-Saffran, J. (2008). Faith-based correctional programming in federal prisons: Factors affecting program completion. *Criminal Justice and Behavior*, 35: 848-862.

Derkzen, D., Gobeil, R., and Gileno, J. (2009). *Visitation and Post-Release Outcomes Among Federally-Sentenced Offenders. Research Report.* Ottawa, Ontario: Correctional Service of Canada.

Dowden, C., Antonowicz, D., and Andrews, D.A. (2003). The effectiveness of relapse prevention with offenders: A meta-analysis. *International Journal of Offender Therapy and Comparative Criminology* 47: 516-528.

Duwe, G. (2011). Evaluating the Minnesota Comprehensive Offender Reentry Plan (MCORP): Results from a randomized experiment. *Justice Quarterly* doi 10.1080/07418825.2011.555414

Duwe, G. and Clark, V. (2011). Blessed be the social tie that binds: The effects of prison visitation on offender recidivism. *Criminal Justice Policy Review* doi 10.1177/0887403411429724

Duwe, G. and Kerschner, D. (2008). Removing a nail from the boot camp coffin: An outcome evaluation of Minnesota's Challenge Incarceration Program. *Crime & Delinquency* 54: 614-643.

Elifson, K.W., Petersen, D.M., and Hadaway, C.K. (1983). Religiosity and delinquency: A contextual analysis. *Criminology* 21: 505-527.

Ellis, L., and Thompson, R. (1989). Relating religion, crime, and arousal and boredom. *Sociology and Social Research*, 73: 132-139.

Ellison, C.G. and Levin, J.S. (1998). The religion-health connection: Evidence, theory, and future directions. *Health Education & Behavior*, 25, 700-720.

Ellison, C.G., Trinitapoli, J.A., Anderson, K.L. and Johnson, B.R. (2007). Race/ethnicity, religious involvement, and domestic violence. *Violence Against Women* 13: 1,094-1,112.

Entner Wright, B.R. and Younts, C.W. (2009). Reconsidering the relationship between race and crime: Positive and negative predictors of crime among African-American youth. *Journal of Research in Crime and Delinquency* 46: 327-352.

Evans, T.D., Cullen, F.T., Dunaway, R.G., and Burton, V.S. (1995). Religion and crime reexamined: The impact of religion, secular controls, and social ecology on adult criminality. *Criminology* 33: 195-224.

Evans, T. D., Cullen, F. T., Burton, V. S., Dunaway, R. G., Payne, G. L., and Kethineni, S. R. (1996). Religion, social bonds, and delinquency. *Deviant Behavior*, 17: 43-70.

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology* 34: 575-607.

George, L.K., Larson, D.B., Koenig, H.G., and McCullough, M.E. (2000). Spirituality and health: What we know, what we need to know. *Journal of Social and Clinical Psychology* 19: 102-116.

Giordano, P.C., Longmore, M.A., Schroeder, R.D., and Seffrin, P.M. (2008). A life-course perspective on spirituality and desistance from crime. *Criminology* 46: 99-132.

Grasmick, H., Bursik, R., and Cochran, J. (1991). Render unto Caesar what is Caesar's: Religiosity and taxpayers' inclination to cheat. *Sociological Quarterly* 32: 251-266.

Hirschi, T., and Stark, R. (1969). Hellfire and delinquency. *Social Problems*, 17: 202-213.

Jang, S.J. and Johnson, B.R. (2001). Neighborhood disorder, individual religiosity, and adolescent use of illicit drugs: A test of multilevel hypotheses. *Criminology* 39: 109-144.

Johnson, B. R. (2004). Religious program and recidivism among former inmates in prison fellowship programs: A long-term follow-up study. *Justice Quarterly*, 21: 329-354.

Johnson, B. R., and Larson, D. B. (2003). *The InnerChange Freedom Initiative: A preliminary evaluation of a faith-based prison program.* Philadelphia, PA: Center for Research on Religion and Urban Civil Society.

Johnson, B. R., Larson, D. B., and Pitts, T. (1997). Religious programming, institutional adjustment, and recidivism among former inmates in prison fellowship programs. *Justice Quarterly*, 14: 145-166.

Johnson, B. R., Tompkins, R. B., and Webb, D. (2002). *Assessing the effectiveness of faith-based organizations: A review of the literature.* Philadelphia, PA: Center for Research on Religion and Urban Civil Society.

Johnson, B. R., De Li, S., Larson, D. B., and McCullough, M. E. (2000). Religion and delinquency: A systematic review of the literature. *Journal of Contemporary Criminal Justice*, 16, 32-52.

Johnson, B. R., Jang, S. J., Larson, D. B., and De Li, S. (2001). Does adolescent religious commitment matter? A reexamination of the effects of religiosity on delinquency. *Journal of Research in Crime and Delinquency*, 38, 22-44.

Kerley, K.R., Allison, M.C., & Graham, R.D. (2006). Investigating the impact of religiosity on emotional and behavioral coping in prison. *Journal of Crime and Justice*, 29, 71-96.

Kerley, K.R. and Copes, H. (2009). "Keeping' my mind right": Identity maintenance and religious social support in the prison context. *International Journal of Offender Therapy and Comparative Criminology*, 53, 228-244.

Kerley, K.R., Mathews, T.L., and Blanchard, T.C. (2005). Religiosity, religious participation, and negative prison behaviors. *Journal for the Scientific Study of Religion*, 44, 443-457.

Lim, C. and Putnam, R.D. (2010). Religion, social networks, and life satisfaction. *American Sociological Review* 75: 914-933.

Lipton, D.S., Pearson, F.S., Cleland, C.M., and Yee, D.S. (2008). The effects of therapeutic communities and milieu therapy on recidivism: Meta-analytic findings from the Correctional Drug Abuse Treatment Effectiveness (CDATE) study. In J. McGuire (Ed.), *Offender Rehabilitation and Treatment: Effective Programmes and Policies to Reduce Re-offending*. Chichester, UK: John Wiley & Sons.

Lowenkamp, C.T., Latessa, E.J., and Holsinger, A.M. (2006). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime & Delinquency* 52: 77-93.

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

McCullough, M.E. and Willoughby, B.L.B. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications. *Psychological Bulletin* 135: 69-93.

Martinson, R. (1974). What works? Questions and answers about prison reform. *Public Interest* 35: 22-35.

Mitchell, O., Wilson, D.B., & MacKenzie, D.L. (2007). Does incarceration-based drug treatment reduce recidivism? A meta-analytic synthesis of the literature. *The Journal of Experimental Criminology* 3: 353-375.

O'Connor, T. P. (2003). A sociological and hermeneutical study of the influence of religion on the rehabilitation of inmates. Ph.D. dissertation. Washington, D.C.: Catholic University of America.

Pager, D. (2003). The mark of a criminal record. *The American Journal of Sociology* 108: 937-975.

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

Roman, C. G., Wolff, A., Correa, C., and Buck, J. (2007). Assessing intermediate outcomes of a faith-based residential prisoner reentry program. *Research on Social Work Practice*, 10: 1-17.

Rocque, M., Bierie, D.M., and MacKenzie, D.L. (2010). Social Bonds and Change During Incarceration: Testing a Missing Link in the Reentry Research. *International Journal of Offender Therapy and Comparative Criminology.*

Rosenbaum, P.R., & Rubin, D.B. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *The American Statistician*, 39, 33-38.

Rubin, D.B. (1997). Estimating causal effects from large data sets using propensity scores. *Annals of Internal Medicine*, 127, 757-763.

Shadish, W.R., Cook, T.D., & Campbell, D.T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton Mifflin.

Sherkat, D.E., and Ellison, C.G. (1999). Recent developments and current controversies in the sociology of religion. *Annual Review of Sociology*, 25, 363-394.

Smith, C. (2003). Theorizing religious effects among American adolescents. *Journal for the Scientific Study of Religion*, 42, 17-30.

Stark, R. (1996). Religion as context: Hellfire and delinquency one more time. *Sociology of Religion* 57: 163-173.

Stark, R., Kent, L., and Doyle, D. P. (1982). Religion and delinquency: The ecology of a "lost" relationship. Journal of Research in Crime and Delinquency 18: 4-24.

Sumter, M. T. (1999). *Religiousness and post-release community adjustment*. Tallahassee: Florida State University.

Sutherland, E.H. (1947). *Principles of Criminology*. Philadelphia, PA: J.B. Lippincott.

Tittle, C. and Welch, M. (1983). Religiosity and deviance: Toward a contingency theory of constraining effects. *Social Forces* 61: 653-682.

Visher, C.A., La Vigne, N., and Travis, J. (2004). *Returning Home: Understanding the Challenges of Prisoner Reentry. Maryland Pilot Study: Findings from Baltimore.* Washington, D.C.: Urban Institute, Justice Policy Center.

Willison, J. B., Roman, C. G., Wolff, A., Correa, V., and Knight, C. R. (2010). Evaluation of the Ridge House Residential Program: Final report. Washington, D.C.: National Institute of Justice.

Wilson, D.B., Gallagher, C.A., & MacKenzie, D.L. (2000). A meta-analysis of corrections-based education, vocation, and work programs for adult offenders. *Journal of Research in Crime and Delinquency* 37: 347-368.

Wilson, J. and Janoski, T. (1995). The contribution of religion to volunteer work. *Sociology of Religion* 56: 137-152.

Wilson, R.J., Cortoni, F., and McWhinnie, A.W. (2009). Circles of Support &

Accountability: A Canadian national replication of outcome findings. *Sexual Abuse: A Journal of Research and Treatment* 21: 412-430.

Young, M. C., Gartner, J., O'Connor, T., Larson, D. B., and Wright, K. (1995). Long-term recidivism among federal inmates trained as volunteer prison ministers. *Journal of Offender Rehabilitation*, 22: 97-118.