



The spiritual way to desistance?

Recidivism among former participants in religiously based retreat activities in Swedish prisons

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Abstract

In the years 2001-2019, the Swedish Prison and Probation Service operated religious retreat activities at the high-security prison in Kumla, to which prisoners serving long-term sentences could apply. While the activities were not specifically implemented to reduce recidivism, a process evaluation conducted in 2014-2016 showed that the participants expressed great hope that these experiences would help them desist from crime. The current study examines actual rates of desistance and recidivism among former participants in the religious activities.

The study uses data from the Swedish Prison and Probation Service covering inmates released between 2013 and 2019. Propensity score matching is applied.

Prior to matching, former inmates who participated in the religious activities were considerably less likely to be reconvicted within three years of release (37 percent) compared to those who did not participate (59 percent). After matching, however, while estimates were still indicative of a recidivistic effect, they no longer reached statistical significance. One interpretation is that given, e.g., their age and type of sentence, the participants already had such a low risk of recidivism as to make further reduction difficult to achieve.

Under åren 2001-2019 bedrev Kriminalvården i Sverige en kristen retreatverksamhet på anstalten Kumla, dit långtidsdömda fångar kunde söka sig. Det övergripande syftet med aktiviteterna var inte att minska återfall. En tidigare processutvärdering har dock visat att deltagarna var hoppfulla att deras erfarenheter från retreaterna skulle hjälpa dem att minska återfallsrisken. Syftet med den här studien är därför att analysera upphörande av brott och återfall för tidigare deltagare i klosterverksamheten.

I studien används svenska kriminalvårdsdata för alla intagna under åren 2013-2019. Analysmetoden som nyttjas är Propensity score matching.

Innan matchning visar resultatet att det var mindre vanligt att de



som hade deltagit i retreatverksamheten återföll (37 procent) i jämförelse med de som inte hade deltagit (59 procent). Efter matchning gick resultatet i samma riktning, dock kunde inga signifikanta skillnader konstateras mellan grupperna. En tolkning är att deltagarna i klosterverksamheten, på grund av t ex ålder och typ av straff, redan har en låg risk för återfall, vilket gör det svårt att uppnå signifikanta skillnader.

Keywords

Imprisonment, treatment, recidivism, desistance, religious beliefs, spirituality.

Introduction

In the years 2001-2019, the Swedish Prison and Probation Service operated the so-called Monastery Route, to which prisoners serving long-term sentences, and expressing a strong motivation to leave criminality behind, could apply. In all, the Monastery Route consisted of three parts: 1) Religiously based retreat activities at the high-security prison in Kumla, 2) A monastery building with a capacity for 16 inmates at the medium-security prison in Skänninge, and 3) a halfway house in Vadstena, open for prisoners serving the final part of their sentences. Normally, two long retreats per year were held, allowing eight participants per occasion to participate. The Monastery at Skänninge was in operation in 2008-2019 and the Prison and Probation Service's cooperation with the halfway house in Vadstena lasted from 2008-2015. (Roxell, Alm & DeMarinis 2016; Alm & Roxell 2018; Pedrosa et al. 2023).

The main aim of the Monastery Route was never to decrease the risk of recidivism among the participants, but to offer some kind of meaningful activity for prisoners serving long-term sentences and lacking a right to prison furlough. By the initiative of the Prison and Probation Service, in 2014-2016 a process evaluation of the Monastery Route was carried out (Roxell, Alm & DeMarinis, 2016). The principal goals of the activities were mapped out along with the working methods in order to achieve those goals. Interviews were made, both with participants at different steps along the Monastery Route, as well as with prison staff and religious leaders of the activities. The evaluation showed that a large majority of the participants as well as of the staff were very content with the activities along the Monastery Route. Despite the positive result of the evaluation, in 2019 the Prison and Probation Service chose to terminate the Monastery Route. The official reason stated was lack of space, and that the area used for retreat activities at the high-security prison in Kumla was to be transformed back into an ordinary department. Full and overcrowded prisons are one of the consequences of several punitive political reforms distinguishing Swedish criminal policy in recent years (Alm 2024; Alm & Estrada 2024; Al Weswasi & Bäckman 2024).



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In a previous study (Alm & Roxell 2018), we analyzed the extent to which inmates participating in the Monastery Route believed that these experiences could help them to better handle the incarceration, but also to improve their life chances, and decrease the risk for recidivism after the release from prison. Above all, the participants expressed that the activities had helped them to find a sense of inner calm and had made them able to control their anger. No longer being a victim of ones' aggressive impulses was by many of the participants a revolutionary experience, and resulted in a new type of positive self-esteem. The capacity to keep calm in stressful situations was emphasized as a key factor also when it came to factors that could increase the chance of staying away from criminality after release.

Even though the main aim of the Monastery Route thus was not to decrease the risk of recidivism, the retreat activities at the Kumla prison sorted under the same organizational umbrella as the regular treatment programs at the prison, for which the aim is precisely that (e.g. Lardén 2023). The information given in the interviews about how participation in the activities along the Monastery Route had changed the participant's way of thinking and their self-perception and had given them hope about their chances to live a life without criminality, also made us curious to find out how things developed for those individuals after release. Data on participation in the retreat activities at the Kumla prison is now available, and hence, this study aims to analyze desistance and recidivism among former participants in the first stage of the Monastery Route in Swedish prisons.

Originally, the retreat activities were only to be open to inmates sentenced to at least four years. In practice though, it happened that also those serving somewhat shorter sentences were allowed. However, considering that for the last decade, only around 30 percent of prison sentences in Sweden are longer than one year (Kriminalvården 2023), it is evident that the retreat activities were only available to a selected part of the prison population. In addition, only those with a good behavioral record from their ordinary prison unit, and who stated a strong motivation to leave criminality behind, were allowed to join the retreat activities. From this, it is evident that an estimation of the effect of participation in the retreat activities on the risk of recidivism is a challenging task. A key challenge arises from the fact that a large proportion of participants were convicted of very serious offenses, which are typically associated with a low risk of recidivism. For example, roughly one-third of the participants in our sample were sentenced for deadly violence. Methodologically, a matching technique is used, matching together individuals who have participated in the activities along the Monastery Route, with social twins with whom they share relevant characteristics, but who have not participated in the activities. Propensity score matching is designed to estimate the effects of treatment, provided that all important factors influencing the outcome are included in the model. While the data used in this study incorporates factors previous studies have identified as relevant, we are cautious about making

causal claims. Instead, we view this study as an exploration of how recidivism unfolded for those who participated in the program, with the results then compared to the post-release outcomes of a matched non-treated group.

Next follows a short introduction to the study of recidivism after release from prison, followed by a presentation of the Monastery Route and the results from the above-mentioned evaluation. Similar initiatives at prisons in other Nordic countries are then highlighted, after which previous research on spirituality/religious beliefs is discussed, from a theoretical as well as from an empirical perspective. After this follows a presentation of available data and the methodological design of the study. The results of the empirical analysis are then presented, after which a discussion closes the study.

Background to the study

The study of recidivism after release from prison

Recidivism after release from prison can be studied either as new convictions overall (*reconviction*) or as new prison sentences (*reincarceration*). In Sweden, Information regarding reconviction rates is provided by the Swedish National Council for Crime Prevention and shows that as of 2020, the 1-year reconviction rate was 44 percent for individuals released from prison (BRÅ 2023). Reincarceration rates on the other hand are in Sweden provided by the Prison and Probation Services and measured 3 years from release. In recent years, the 3-year reincarceration rate has been around 40 percent (Kriminalvården 2023). This means that four out of ten former inmates are sent back to prison within three years after release from prison. The highest risk of recidivism is found among individuals who have been sentenced to between two and six months in prison, those under age 30, individuals convicted for drug-related offenses, and individuals with many previous prison sentences. The recidivism risk is higher for men than for women. (Kriminalvården 2023; BRÅ 2023).

One of the main purposes of prison sentences is to *deter* from continued criminality (e.g. Nagin 1978). Overall, however, the results from studies comparing the effects of prison and non-custodial sentences, such as e.g. electronic monitoring (henceforth E.M.), are not convincing. A recent review of research on imprisonment and recidivism is made by Loeffler and Nagin (2022). The authors conclude that when comparing imprisonment to other forms of punishment, such as probation or E.M., a majority of the studies included in the review show a null effect on the risk of recidivism after release. Some studies, however, do find either preventative or criminogenic effects of prison and according to Loeffler and Nagin (2022), the variation is associated with the extent to which rehabilitative elements are offered during imprisonment – the more rehabilitation, the lower the risk for recidivism. Similar conclusions have been reached in other studies as well (e.g. MacKenzie 2006. See also Lardén 2023). Alm (2024) has recently reviewed studies of the consequences



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of incarceration in the Nordic countries. This review too gives little support for a deterrent effect of imprisonment. On the contrary, a majority of the studies comparing imprisonment to E.M., indicate a lower risk of recidivism for those serving their sentence with E.M (see also Al Weswasi & Bäckman 2024).

As touched upon above, in addition to deterrence, another way through which imprisonment may reduce the risk of recidivism is *rehabilitation*. By way of treatment, care, work training, and education, the inmates are to be better prepared for life after release, and thereby, less likely to recidivate. As regards the content of programs, previous research has shown treatment programs aiming to improve mental well-being and stimulate new ways of acting and thinking (such as, e.g., psychotherapy) to be more efficient than programs offering the development of practical skills (such as, e.g., carpentry) (Visher, Lattimore, Barrick and Tueller 2017). Connected to this, since it is more difficult to erase or suppress unwanted behavior than to develop new, and more constructive, ways of acting and thinking, focusing on mental skills that may function as protective factors from recidivism is a fruitful strategy (Lardén, 2023). At the same time, the most important lesson from treatment evaluations in recent decades is not to expect miracles – effects are often moderate or even small (Lardén 2023; Kriminalvården 2014). In addition, the same type of treatment is not suitable for all individuals. We also know, perhaps not surprisingly, that interruption of a treatment program is significantly linked to later recidivism (Lardén 2023).

As noted above, the activities along the Monastery Route did include several elements that may be associated with a lower risk of recidivism, for example, meditation and contemplation that for many resulted in anger management skills. Participation in the Monastery Route was voluntary, and in our evaluation, participants described a warm and positive climate at all stages of the Route. This makes it interesting to investigate to what extent participants along the Monastery Route managed to desist from crime after release from prison.

The Monastery Route – a brief description¹

Retreats come in many forms, religiously based as well as profane. To retreat means to take a step back, and the smallest common denominator for retreats is likely to be that the participants retreat from everyday life, to instead approach their inner selves. Considering that Sweden is usually regarded one of the most secularized countries in the world, it was probably a surprise to some that the retreat form chosen when the Kumla Monastery was founded was the Ignatian, i.e. one based on Catholicism. The reason for this was that one of the founders had personal experience of this retreat form and believed it would fit in prison too.

1. This section, and the coming two (“Who took the Monastery Route?” and “Theoretical framework: Spirituality/religious faith as a turning point out of criminality”) build on Alm & Roxell 2018.



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The Ignatian retreat form aims to find out who one is and to understand God's will in one's life. An Ignatian long retreat is 30 days long, and the participants get to examine their consciences, meditate, contemplate, and pray. Except for daily meetings with a priest, the 30 days are spent in silence, and no TV or phone calls are allowed. Before engaging in a long retreat, the inmates were first to participate in two shorter ones, lasting six days each. After having participated in the long retreat, they could also apply for short follow-up retreats. Inmates who had fulfilled the long retreat and who were allowed to move from a high- to a lower-security prison, could apply to serve their time in the monastery at the Skänninge prison. At the Skänninge Monastery, the inmates stayed permanently and had the opportunity to build a daily life in which spirituality constituted an integral part. However, unlike at the long-term retreat, at the monastery in Skänninge spiritual growth was not a full-time activity, but the inmates also worked or studied for 30 hours a week. For example, some worked in the monastery garden, and others at the prison laundry.

Thirdly, inmates who had fulfilled the first two steps of the Monastery Route, and who had about a year left of their sentence to serve, could apply to the Mariagården halfway house, situated in Vadstena. At Mariagården, inmates were given an opportunity for continued spiritual growth, but they also received support in their preparations for life after release from long-term imprisonment. As noted above, available data only covers participation in the retreat activities at the Kumla prison.

Who took the Monastery Route?

As discussed above, the retreat activities were based on Christianity – the Bible was used in the activities and the participants, both at Kumla and at Skänninge, had regular conversations with a priest. However, those in charge of the activities emphasized that the activities by no means were a course in Christianity, but that the main aim was instead personal growth. There were no demands for previous involvement in any religious activity, and one needed not to express a faith in Christianity. However, it was requested that one had an open mind to a spiritual dimension of life, i.e. to something outside of and above what we can see, hear, and perceive. One of the participants we interviewed was a practicing Muslim, and he did not find the Christian content of the monastery activities disturbing. When his fellow inmates were contemplating over a Bible phrase, he was given an alternative task, and he emphasized that he did not in any way feel discriminated against by the religious leaders of the activities.

According to those in charge of the monastery unit at Kumla, the number of applicants to the retreats widely exceeded the number of available places. After an initial selection on good behavior, applicants were invited to an interview. In addition to a strong motivation to leave criminal life behind, as stated above, one also had to be prepared to explore a spiritual dimension



of life. Applicants who made it through this selection process were invited to a test retreat lasting six days, and if this worked out well, they were offered to join a long retreat. The strong selection into the retreat activities is likely to be the most important explanation for the fact that – even though an Ignatian long retreat is quite demanding – on only one occasion an invited participant did not fulfill the four weeks of retreat. Inmates who had fulfilled a long retreat could apply to a follow-up retreat, comprising around six days, to help them preserve the skills they had acquired at the long retreat.

Theoretical framework: Spirituality/religious faith as a turning point out of criminality

One of the first scholars to discuss religious beliefs as one of a set of possible coping strategies for dealing with the stressful and health-damaging conditions of imprisonment was Erving Goffman (1963). Since then, followers have developed the study of the role of religiousness/spirituality during incarceration (e.g. Koenig 1995; Mandhouj et al. 2014; see also Clear et al. 2000), and in recent decades, prominent life course scholars have integrated religiousness/spirituality into their criminological life course models (Maruna et al. 2006; Giordano et al. 2008; Schroeder and Frana 2009). The logic behind this focus is that individuals are likely to be more receptive to religiousness/spirituality in times of crisis when their self-identity is being subjected to stress. As has been noted by both and by Giordano et al. (2008) and Schroeder and Frana (2009), many of the classical criminological theories can be applied to understand the role of religion in desistance from criminality. From a social control perspective, social bonds to religious beliefs and institutions can prevent individuals from recidivating. From a perspective based on differential association theory, religious contexts can foster prosocial contacts. And from a perspective of general strain theory, religion can be understood as a resource for emotional coping, and hence, as a means for handling stress.

Transcendental beliefs come in many forms and an important distinction is that between (doctrinal) religiousness and (personal) spirituality (e.g. Giordano et al. 2008; Mandhouj et al. 2014). Typically, studies from the US have shown an inclination among inmates toward doctrinal beliefs, and most of the theoretical connections mentioned above concern doctrinal religiousness rather than personal spirituality. The preference for doctrinal faith has been interpreted as manifesting a need for a clear blueprint regarding how to start over and form a new, non-criminal life. Religiousness offers “a straight path” i.e. “a new, fully developed way of living” and thus provides certainty in a way spirituality cannot. According to Clear et al. (2000), this inclination toward religiousness manifests itself in, e.g., literal interpretations and the direct citation of holy scripts.



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It is well known that institutionalized religion (Christianity), plays a substantially more important role in the US than in Sweden. In the words of Stark et al. (1980), the US represents a more *moral* community, as opposed to the Swedish, more *secular* community. Because of this, and since those in charge of the Monastery Route emphasized that it by no means was a course in Christian faith, but that the main aim was personal growth, in a previous study using the interview data collected for our process evaluation of the Monastery Route, we set out to investigate the inclination towards doctrinal beliefs or personal spirituality among the participating inmates (Alm & Roxell 2018).

The results of the study showed that a large majority of the inmates participating in the Monastery Route had an inclination toward personal spirituality rather than doctrinal (Christian or Muslim) faith. In the interviews, many talked about meditation, contemplation, and discussions with a spiritual leader as ways to get into contact with a spiritual dimension of reality. To find inner calm and take control of one's own life were other experiences that many mentioned in relation to the retreat activities, whereas doctrinal faith as guidance in life or an inclination toward an institutionalized practice of faith, were absent. Out of the 14 inmates we interviewed, only one (1) claimed to have developed a more traditional, Christian faith and planned to become a deacon. Above all, the interviewees emphasized how the experiences from the Monastery Route had made them more capable of handling the situation as incarcerated, but also that they believed the same experiences could be of importance for their life chances when released and for their possibilities to avoid recidivism.

This study

Overview

The goal of the current study is to measure post-release recidivism for those who enrolled in the Monastery Route. In order to contextualize the measured recidivism levels, a comparison will be made to a group of inmates who did not attend the Monastery Route. Because those who participated in the monastery activities differ in various ways from those who did not enroll, a direct comparison in recidivism rates between these two groups would be misleading. To increase the comparability of those who participated and those who did not, a matching approach is adopted. This approach does not provide us with the causal effect of the Monastery Route on recidivism, but rather an exploratory understanding concerning differences in recidivism among those who participated in the program and a comparison group. The non-treated group is determined after matching on a set of relevant observables that has the ability to reduce confounding. Propensity score matching has been widely used to reduce methodological bias in criminal



justice research and criminology in general (for an overview, see for instance Apel and Sweeten 2010).

Constructing the dataset

Our main dataset comes from the Swedish Prison and Probation Services and comprises all inmates released during 2013-2019 from either a security class 1 or 2 prison (N = 31 849). Since the monastery activities were aimed at individuals with long-term sentences, those inmates with sentences shorter than 1 year were removed (N = 20 876). All individuals in the non-treated group who were not sentenced for a crime that could also be found among those who participated in the monastery retreat program were removed (N = 1 613). Finally, individuals aged 70 and older were removed (N = 87). The final dataset contains 9 273 individuals, of which 304 were enrolled in the monastery activities and 8 969 were not.

Dependent variable: Recidivism

We measure recidivism in terms of reconviction and reincarceration. Both these measures were acquired by linking our main dataset with the convictions register maintained by the Swedish National Council for Crime Prevention. Reconviction is a dichotomous variable that captures convictions that contain a principal crime that was committed during the follow-up period. Reincarceration is also a dichotomous variable but that captures convictions that led to a new prison sentence. The follow-up time for both our dependent variables starts when the individual is released from prison and we measure the outcomes 1, 2, and 3 years from prison release.

Independent variables

The independent variable of interest is participation in the monastery activities at the Kumla prison. This variable is dichotomous with the value of 0 representing those who did not attend the treatment and the value of 1 representing those who participated in the monastery retreat program. As described in the backgrounds section, participation in the monastery activities varies in length but we are because of data limitations unable to include a more granular description of participation in the activities. As such, value 1 includes both those who participated in the shorter monastery retreat and those in the long-term retreat.

The covariates that we include in our matching procedure and in the regression models can be divided into four categories. The first category is characteristics of the index prison sentence and consists of the length of the prison sentence (1-2 years = 0, 3-4 years = 1, 5-6 years = 2, 7-8 years = 3, 9-13 years = 4, and 14 or more years = 5), what type of crime the individual is incarcerated for (narcotics crime = 0, property crime = 1, sex crime = 2, violent crime = 3, and other crime = 5), and if the prison that the individual was released from was a security class 1 or 2 prisons (security class 2 = 0, security class 1 = 1).

The second category of covariates is participation in treatment programs and in education or work-related programs. Participation in education consists of either vocational training, higher education, or adult education. Each of these programs is measured in days and then categorized into quantiles (no participation = 0, education days quantile 1 = 1, education days quantile 2 = 2, education days quantile 3 = 3). The covariate for treatment programs is an index variable that describes how many weeks the individual has attended various rehabilitation for substance abuse and addiction, violence in general and specific types of violence such as domestic violence, and general interventions to counter criminal lifestyles (measured continuously as number of completed programs up until the value of 6 representing 6 or more completed treatment programs). The third category consists of criminal history prior to the index prison sentence. The first criminal history covariates indicate the number of convictions prior to the index prison sentence (no prior convictions = 0, 1-4 prior convictions = 1, 5-10 prior convictions = 2, 11-19 prior convictions = 3, and 20 or more prior convictions = 4). The second criminal history covariates indicate the number of prison sentences prior to the index prison sentence (no prior prison sentence = 0, 1-2 prior prison sentences = 1, 3-6 prior prison sentences = 2, 7-12 prior prison sentences = 3, and 13 or more prior prison sentences = 4). The last category of covariates is demographic characteristics which includes information on sex (female = 0, male = 1), born in Sweden (born abroad = 0, born in Sweden = 1), and age at release (years).

Analytic approach and matching procedure

The first step in the matching procedure is to estimate the probability of participation in the treatment conditional on the observables. In practice, this means that we specify a logit model that for each individual predicts the probability of being in the monastery retreat program among individuals who were released from prison in 2013-2019. Appendix Table A1 shows the outcome of the probit model. It shows that the longer an individual's prison sentence is, the larger is the probability that they enroll in the monastery activities with those serving 14 years or more having the largest probability to enroll in the program. The table also shows that the predicted probability of enrollment in the monastery retreat program increases with age.

The next step is to then match each individual who attended the monastery retreat program to an individual who did not. The algorithm we use to do so is *optimal pair matching* with one-to-one pair matching and without replacement. Optimal pair matching is similar to nearest neighbor matching which is a more traditional algorithm (Austin 2011a) the propensity score is the probability of assignment to one treatment conditional on a subject's measured baseline covariates. Propensity-score matching is increasingly being used to estimate the effects of exposures using observational data. In the most common implementation of propensity-score matching, pairs of treated and untreated subjects are formed whose propensity scores differ by at most

a pre-specified amount (the caliper width). Both optimal pair matching and nearest neighbor matching goes through the list of treated observations and picks the most similar non-treated individual (based on the outcome from the model in the first step) to be paired with. The difference between the algorithms is that when pairing occurs in nearest-neighbor matching it does so without taking into account how other individuals have been or will be matched, and therefore does not aim to optimize the efficacy of the overall matching procedure. Optimal pair matching, on the other hand, attempts to pick matches that collectively optimize the efficacy of the overall matching. Optimal pair matching and nearest neighbor matching are, however, often equally good at achieving good balance (Austin 2014) and the decision to use optimal pair matching was because it was best at producing adequate balance without needing to discard individuals who attended the monastery retreat program.

Optimal pair matching and pair matching, in general, does, however, discard a sizable amount of non-treated individuals and has been criticized for potentially introducing bias (Austin and Stuart 2015). We therefore also do an inverse probability weighting as a robustness check. This approach also relies on building a logit model to estimate the probability of being enrolled in the monastery retreat program but then uses the predicted probability as a weight in the subsequent analyses – without discarding any individual.

In order to verify that we have covariate balance, standardized mean differences (SMD) will be presented for each of the covariates utilized (Rosenbaum and Rubin 1985). The SMD is calculated for each covariate and is obtained by taking the difference in the mean in each specific covariate, for the treated and non-treated samples, standardized by the pooled standard deviation across both samples. SMD is calculated both prior to and after matching in order to see to what extent balance is improved after matching. SMD close to zero indicates good balance and the typical threshold for when there is an imbalance is when an SMD is over 0.1 or under -0.1 (Austin 2011b).

Results

The results from the matching procedure and balance diagnostics are presented in Appendix B, demonstrating that the matching process was successful in minimizing covariate imbalances in the observables. This suggests that any differences in the outcomes are unlikely to be attributable to differences in observable characteristics between individuals in the monastery retreat sample and those in the non-treated sample.

Post-release recidivism rates

To illustrate the difference in recidivism between those who participated in the monastery retreat program and those who did not, Figure 1 presents



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cumulative reconviction probabilities (Panel A) and cumulative reincarceration probabilities (Panel B), stratified by treatment status. Follow-up starts the day an individual is released from prison, and we observe each individual up until 3 years from prison release. In terms of reconviction, 19 % of individuals who attended the monastery retreat program were reconvicted during the first year after prison release. Reconviction rates then increased to 37 % when observed 3 years from prison release. Among those who did not participate in the monastery retreat program, the 3-year reconviction rate was 59 %. As outlined in Table B2 in Appendix B, this group is incomparable due to several confounding factors that affect both enrollment into treatment but also post-release recidivism. When focusing on the matched non-treated sample, the 3-year reconviction rate decreased to 38 % which is a probability closer to those who are in the treatment group. Reincarceration rates in Figure 1 Panel B show a similar pattern with the monastery retreat sample displaying the lowest reincarceration rates. 1-year reincarceration rate was 7 % among those who attended the monastery retreat program, and this rate grew to 15 % when observed 3 years after prison release. For the matched non-treated individuals, the 3-year reincarceration rate was 17 %.

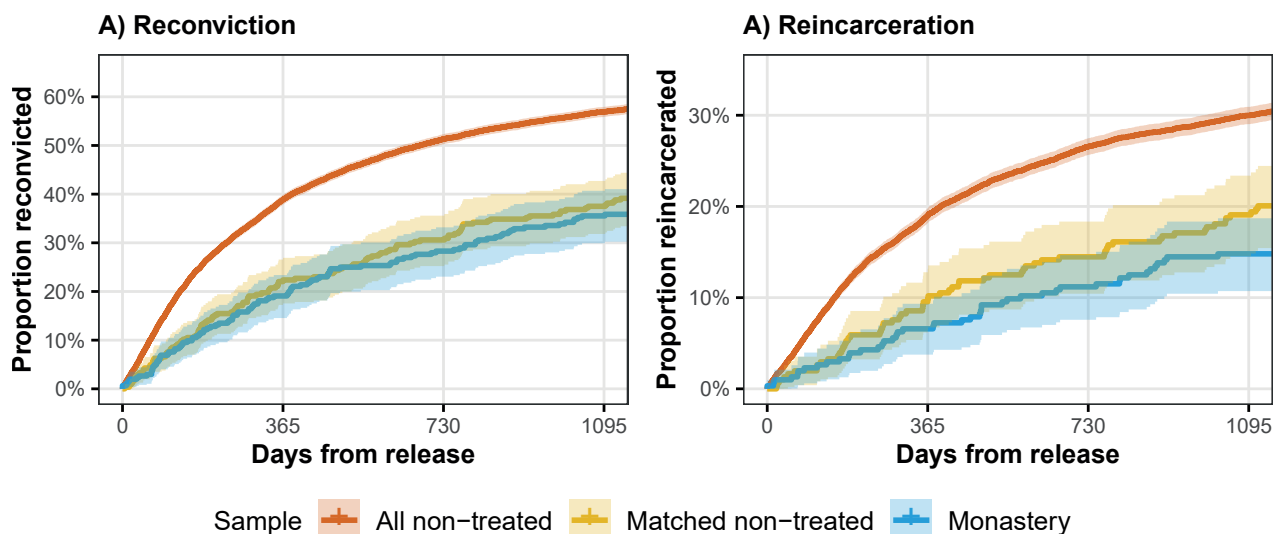


Figure 1: Cumulative reconviction probabilities (a) and reincarceration probabilities (b) stratified by treatment status.

We now move on to Table 1 and the linear probability regression models predicting reconviction (Panel A) and reincarceration (Panel B) in the matched samples. Across the board, we see that participation in the monastery retreat program decreases the probability of reconviction and reincarceration, irrespective of follow-up time. For example, 1-year reconviction is 2.3 percentage points lower among individuals in the monastery retreat program compared to the non-treated matched group. In terms of reincarceration, the 1-year estimate is 2.9 percentage points lower for individuals in the monastery retreat program. However, confidence intervals



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for all estimates overlap zero, which means that we do not observe any significant effects and we can therefore not confidently say that there is any difference in recidivism between those who participated in the monastery retreat program and those who did not, and this is true irrespective of recidivism measure and follow-up time.

Table 1: Linear probability models predicting recidivism.

| | A) Reconviction | | | B) Reincarceration | | |
|---------|-------------------|---------------|---------|--------------------|---------------|---------|
| | Adjusted <i>b</i> | 95% CI | P-value | Adjusted <i>b</i> | 95% CI | P-value |
| 1 year | -0.023 | -0.082, 0.037 | 0.5 | -0.029 | -0.072, 0.015 | 0.2 |
| 2 years | -0.012 | -0.077, 0.054 | 0.7 | -0.027 | -0.080, 0.025 | 0.3 |
| 3 years | -0.007 | -0.075, 0.060 | 0.8 | -0.033 | -0.091, 0.024 | 0.3 |

Notes: Each estimate represents the results from a separate regression analysis after propensity score matching. All models include covariates adjusting for index prison length and crime type, prior number of convictions and prison sentences, age at release, sex, Swedish-born, and covariates on participation in treatment programs.

As a robustness check, we redo the analysis with an inverse probability weighted regression adjustment (IPWRA) that has the benefit of not discarding any observations, but instead provides all individuals a weight based on the predicted probability of participation in the monastery retreat program. Appendix Table A2 shows the results of the IPWRA model. Overall, the estimates from the PSM model are within the confidence intervals of the IPWRA model. None of the estimates from the IPWRA model switches sign or are noticeably different from the PSM model. All coefficients are negative, indicating a lower probability of reconviction and reincarceration among those who participated in the monastery retreat program. With the exception of the 1-year reincarceration rate, all confidence intervals overlap zero. This does place some uncertainty on the statistical significance of the short-term reincarceration rate but we can confidently say that overall, the estimates are not sensitive to the chosen covariate balancing approach.

Discussion

In the years 2001-2019, the Swedish Prison and Probation Service operated monastery activities, based on Christianity, within Swedish prisons. The main aim of the monastery activities was never to reduce the risk of recidivism after release from prison, but started out as an attempt to offer inmates sentenced to long prison sentences some kind of meaningful activity. A process evaluation of the activities carried out in 2014-15 showed great content with the activities, both among participating inmates and among the staff involved. Many of the participants expressed a belief that they – as a consequence of their participation in the monastery activities – were better equipped to be able to desist from crime after release from prison. The same belief was



expressed by the staff. In support of these beliefs, there are also results from studies from, e.g., the US, indicating that religious beliefs/spirituality can be a turning point out of criminality.

The results from the evaluation awakened our curiosity to, despite it not being the main aim of the activities, analyze desistance and recidivism among former participants in the first stage of the Monastery Route in Swedish prisons. In order to understand the influence that participation in the monastery activities may have, propensity score matching was used, and individuals were matched with respect to sex, age, immigration status, education, type of offense committed, number of previous convictions, number of previous prison sentences, the security level of the prison where the current sentence was served, and participation in rehabilitation programs and job training programs within prison. Recidivism was defined as reconviction and reincarceration within three years following release.

Prior to matching, estimates showed that former inmates who had participated in the monastery activities were considerably less likely to have a reconviction three years following release (37 percent), compared to former inmates who did not participate in the monastery activities (59 percent). However, after matching, the difference no longer reached statistical significance. There was still a tendency for the former participants in the monastery activities to recidivate to a lesser extent than the other group of former inmates, but we are unable to dismiss the possibility that this difference is due to random variation. The pattern was similar when measuring recidivism in terms of reincarceration, with lower levels for those who participated in the monastery activities prior to matching but with no statistically significant differences in reincarceration rates after matching.

How should the results be understood? A first possible explanation relates to the profile of the group of monastery participants in terms of, e.g., age and length of prison sentence. The monastery participants were older and served longer sentences than the average inmate, factors that are connected to a lower risk for recidivism. When the risk for recidivism is low to start with, additional effects are more difficult to obtain, compared to a situation in which some sort of treatment is introduced to a group of high-risk recidivists. It is also worth noting that the Monastery Route was not an extensive program in terms of treatment length. Despite the fact that the program was appreciated by those who attended it, the length of the program may be too short to expect recidivism-reducing effects.

In the introduction to this study, we mentioned a strong tendency for a large majority of the participants in the monastery activities to pick up on freer forms of spirituality, rather than on doctrinal (Christian) beliefs. This contrasts our study to studies of transcendental beliefs and desistance in, e.g., the U.S., showing a relationship between doctrinal beliefs and the practice of institutionalized religion (typically Christianity or Islam) on the one hand, and desistance from crime on the other (e.g. Clear et al., 2000).



Thus, a second possible explanation for the non-significant results could be that the spiritual dimensions picked up by a large majority of the Swedish participants in the monastery activities indeed contributed to better coping strategies in prison, and a brighter future orientation while still incarcerated, but were less efficient when it came to decrease the risk of recidivism after release from prison.

The study has some limitations that need to be highlighted. Available data does not allow us to identify individuals who have participated in all three steps of the Monastery Route, but only those who have taken part in the retreat activities at the Kumla prison. In addition, since the activities along the Monastery Route were only for individuals serving longer sentences, some of them are still in prison or have only recently been released, which means that the number of observations is limited.

Even though the study failed to find a smaller risk of recidivism among former inmates who had participated in the activities along the Monastery Route, we want to conclude by emphasizing that this by no means disqualifies the activities as such. First of all, as has been mentioned throughout this study, reducing recidivism was not the main purpose of the monastery activities, and a failure to do so therefore by no means can be held against the initiative. Our process evaluation clearly also showed that the activities were highly appreciated by the participants, and had given them tools to better handle the situation as incarcerated, as well as a brighter outlook on the future. Due to their age, the length of their prison sentences, and perhaps, also their motivation to desist from crime, a majority of those involved in the monastery activities would perhaps have managed to desist from crime even if they had not taken part in the activities. On the other hand, these individuals, as well as those who did not manage to desist from crime after release, may still have benefited in a number of other ways from their participation in the monastery activities. When in prison for many years, it is central to have something meaningful to do, and there is a need for activities that may not suit every incarcerated individual, but which are of great importance to some.

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Appendix A

Table A1: Determinants of being enrolled into the monastery retreat program ($n = 9\,273$ of which 8 969 coded non-treated and 304 monastery retreat program participants)

| | Exp(b) | 95% CI | P-value |
|--|-------------|-------------|---------|
| <i>Sentence length (years)</i> | | | |
| 1-2 | – | – | |
| 3-4 | 3.85 | 2.27 – 6.64 | <0.001 |
| 5-6 | 7.09 | 3.92 – 13.1 | <0.001 |
| 7-8 | 10.4 | 5.40 – 20.3 | <0.001 |
| 9-13 | 8.26 | 4.29 – 16.1 | <0.001 |
| 14+ | 21.3 | 9.04 – 50.3 | <0.001 |
| <i>Index prison sentence crime</i> | | | |
| Narcotics | – | – | |
| Other | 1.23 | 0.70 – 2.08 | 0.5 |
| Property | 0.50 | 0.08 – 1.67 | 0.3 |
| Sex | 2.11 | 1.30 – 3.38 | 0.002 |
| Violence | 1.25 | 0.91 – 1.72 | 0.2 |
| <i>Prior number of convictions</i> | | | |
| 0 | – | – | |
| 1-4 | 0.65 | 0.43 – 0.99 | 0.044 |
| 5-10 | 0.73 | 0.44 – 1.20 | 0.2 |
| 11-19 | 0.54 | 0.28 – 1.02 | 0.061 |
| 20+ | 1.23 | 0.57 – 2.63 | 0.6 |
| <i>Prior number of prison sentences</i> | | | |
| 0 | – | – | |
| 1-2 | 1.09 | 0.74 – 1.60 | 0.7 |
| 3-6 | 1.20 | 0.70 – 2.06 | 0.5 |
| 7-12 | 0.95 | 0.44 – 2.02 | 0.9 |
| 13+ | 0.39 | 0.14 – 1.05 | 0.068 |
| <i>Age at release</i> | | | |
| Male | 1.04 | 1.02 – 1.05 | <0.001 |
| Born in Sweden | 0.17 | 0.10 – 0.31 | <0.001 |
| Security class 1 | 1.85 | 1.41 – 2.45 | <0.001 |
| <i>Security class 1</i> | | | |
| 2.84 | 1.73 – 4.79 | <0.001 | |
| <i>Time spent in adult education</i> | | | |
| No education | – | – | |
| Quantile 1 | 1.47 | 0.89 – 2.41 | 0.13 |
| Quantile 2 | 1.58 | 0.97 – 2.57 | 0.065 |
| Quantile 3 | 2.95 | 1.98 – 4.46 | <0.001 |
| <i>Time spent in university studies</i> | | | |
| No education | – | – | |
| Quantile 1 | 3.14 | 1.57 – 6.14 | <0.001 |
| Quantile 2 | 4.09 | 1.97 – 8.29 | <0.001 |
| Quantile 3 | 3.93 | 1.99 – 7.63 | <0.001 |
| <i>Time spent in vocational training</i> | | | |
| No education | – | – | |
| Quantile 1 | 1.15 | 0.71 – 1.79 | 0.6 |
| Quantile 2 | 1.48 | 0.96 – 2.23 | 0.071 |
| Quantile 3 | 0.85 | 0.57 – 1.25 | 0.4 |

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Table A1: Determinants of being enrolled into the monastery retreat program ($n = 9\,273$ of which 8 969 coded non-treated and 304 monastery retreat program participants)

| | Exp(<i>b</i>) | 95% CI | P-value |
|-------------------------------------|-----------------|-------------|---------|
| <i>Number of completed programs</i> | | | |
| 0 | – | – | |
| 1 | 2.53 | 1.58 – 4.15 | <0.001 |
| 2 | 2.45 | 1.48 – 4.12 | <0.001 |
| 3 | 3.13 | 1.85 – 5.37 | <0.001 |
| 4 | 4.70 | 2.73 – 8.24 | <0.001 |
| 5 | 4.22 | 2.18 – 8.15 | <0.001 |
| 6+ | 6.16 | 3.11 – 12.2 | <0.001 |
| <i>Time spent in prison work</i> | | | |
| No work | – | – | |
| Quantile 1 | 1.43 | 0.81 – 2.63 | 0.2 |
| Quantile 2 | 1.15 | 0.65 – 2.11 | 0.6 |
| Quantile 3 | 1.41 | 0.84 – 2.49 | 0.2 |

Notes: Logistic regression with participation in monastery retreat program as dependent variable

Table A2: Linear probability models with inverse probability weighted regression adjustment

| | A) Reconviction | | | B) Reincarceration | | |
|---------|-------------------|---------------|---------|--------------------|---------------|---------|
| | Adjusted <i>b</i> | 95% CI | P-value | Adjusted <i>b</i> | 95% CI | P-value |
| 1 year | -0.032 | -0.078, 0.014 | 0.2 | -0.032 | -0.062, 0.002 | 0.036 |
| 2 years | -0.033 | -0.085, 0.018 | 0.2 | -0.029 | -0.068, 0.009 | 0.14 |
| 3 years | -0.023 | -0.076, 0.030 | 0.4 | -0.026 | -0.070, 0.018 | 0.2 |

Notes: Each estimate represents the results from a separate regression analysis after propensity score matching. All models include covariates adjusting for index prison length and crime type, prior number of convictions and prison sentences, age at release, sex, Swedish-born, and covariates on participation in treatment programs.



Appendix B

Matching results and balancing diagnostics

Appendix Table B1 shows that all the 304 individuals who participated in the monastery retreat program found a suitable match. Furthermore, out of 8 969 non-treated individuals 96.6 % were discarded and 304 were matched to a treated individual. One way to decrease the number of discarded individuals would be to do a one-to-many matching and this was tried but it degraded the balance and one-to-one was therefore instead used.

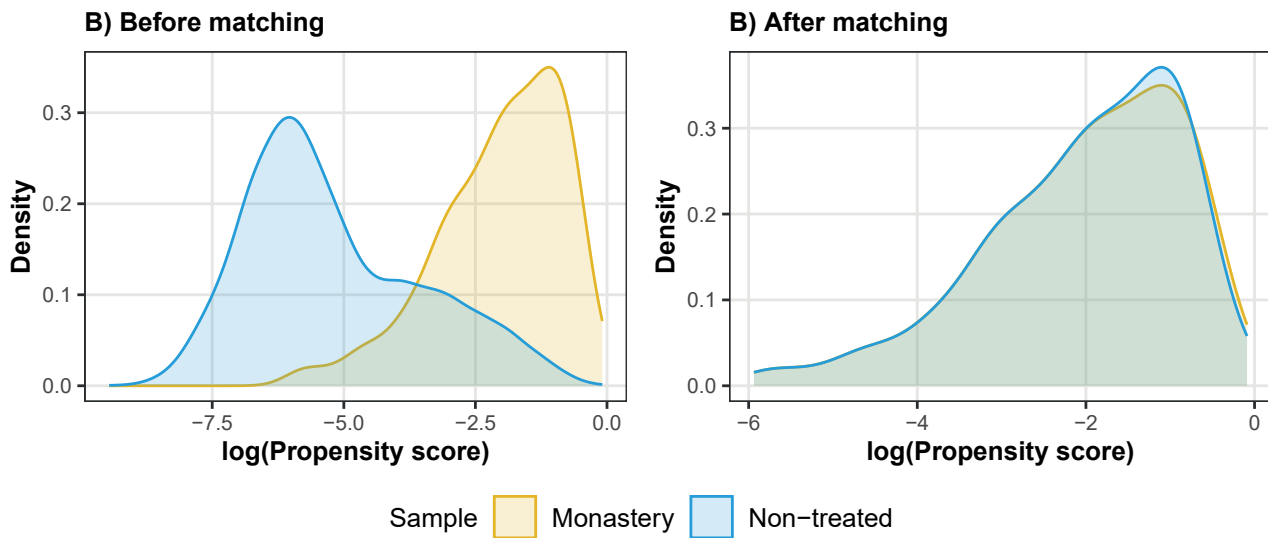
Appendix Table B1 *Sample sizes before and after matching.*

| | Non-treated | Monastery retreat |
|--------------|-------------|-------------------|
| <i>Group</i> | | |
| All | 8,969 | 304 |
| Matched | 304 | 304 |
| Unmatched | 8,665 | 0 |

Notes: The table shows the number of matched and unmatched individuals in the monastery retreat and non-treated sample after matching.

Appendix Figure B1 presents the distribution of the log of the propensity scores stratified by treatment status. Appendix Figure B1 Panel A shows that prior to matching, propensity scores among non-treated individuals were predominantly clustered at the lowest end of the tail while treated individuals had on average higher propensity scores. More importantly, there is sufficient overlap in the propensity score distribution between the treated and non-treated sample which gives support for the common support condition. Appendix Figure B1 Panel B shows how the propensity score distribution in both samples for most parts overlaps after matching, indicating that the overall balance is good after matching.

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Appendix Figure B1 Propensity distribution prior to and after matching among individuals in the monastery retreat program and the non-treated.

Appendix Table B2 outlines the balance of individual covariates included in the matching model, before and after matching. Along with information on SMD, the table also presents the mean values, stratified by treatment group and both pre- and post-matching. Appendix Table B2 Panel A shows that most standardized mean differences showed evidence of imbalance prior to matching. For example, among those who participated in the monastery retreat program 8.9 % had a sentence that was 1-2 years long. The corresponding number among the non-treated was 70 %, yielding an SMD of -2.155 which is well under the acceptable threshold. The average age at release was 43 for those in the monastery retreat program and 35 among the non-treated which results in a SMD of 0.669. Furthermore, those in the monastery treatment also show higher means in all covariates that describe participation in education, prison programs, or work programs. Appendix Table B2 Panel A also shows that 47% of the participants in the monastery treatment program were sentenced for some type of violent crime (with deadly violence being the largest category), and that 26% were sentenced for narcotics-related crimes. Appendix Table B2 Panel B shows that after matching, all covariates present good balance.

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Appendix Table B2 Means and standardized mean differences for offenders who enrolled in the monastery retreat program and non-treated offenders, prior to and after matching. SMDs above 0.1 or below -0.1 presented in bold type.

| | (a) Summary of balance for all data | | | (b) Summary of balance for matched data | | |
|---|--|-------------------------------------|----------------|--|-----------------------------------|---------|
| | Means monastery (n = 340) | Means non-treated (n = 8 665) | SMD | Means monastery (n = 340) | Means non-treated (n = 340) | SMD |
| <i>Sentence length (years)</i> | | | | | | |
| 1-2 | 0.0888 | 0.7020 | -2.1555 | 0.0888 | 0.0691 | 0.0694 |
| 3-4 | 0.2401 | 0.1854 | 0.1281 | 0.2401 | 0.2664 | -0.0616 |
| 5-6 | 0.2500 | 0.0580 | 0.4435 | 0.2500 | 0.2763 | -0.0608 |
| 7-8 | 0.1645 | 0.0231 | 0.3814 | 0.1645 | 0.1513 | 0.0355 |
| 9-13 | 0.1842 | 0.0270 | 0.4056 | 0.1842 | 0.1678 | 0.0424 |
| 14+ | 0.0724 | 0.0046 | 0.2617 | 0.0724 | 0.0691 | 0.0127 |
| <i>Index prison sentence crime</i> | | | | | | |
| Narcotics | 0.3355 | 0.2639 | 0.1517 | 0.3355 | 0.3520 | -0.0348 |
| Other | 0.0691 | 0.0847 | -0.0617 | 0.0691 | 0.0658 | 0.0130 |
| Property | 0.0066 | 0.0699 | -0.7833 | 0.0066 | 0.0066 | 0.0000 |
| Sex | 0.1217 | 0.1157 | 0.0183 | 0.1217 | 0.1349 | -0.0402 |
| Violence | 0.4671 | 0.4658 | 0.0027 | 0.4671 | 0.4408 | 0.0527 |
| <i>Prior number of convictions</i> | | | | | | |
| 0 | 0.1809 | 0.1207 | 0.1563 | 0.1809 | 0.1711 | 0.0256 |
| 1-4 | 0.2796 | 0.2909 | -0.0251 | 0.2796 | 0.2664 | 0.0293 |
| 5-10 | 0.2336 | 0.2569 | -0.0551 | 0.2336 | 0.2500 | -0.0389 |
| 11-19 | 0.1283 | 0.1758 | -0.1421 | 0.1283 | 0.1250 | 0.0098 |
| 20+ | 0.1776 | 0.1557 | 0.0573 | 0.1776 | 0.1875 | -0.0258 |
| <i>Prior number of prison sentences</i> | | | | | | |
| 0 | 0.4507 | 0.4360 | 0.0294 | 0.4507 | 0.4145 | 0.0727 |
| 1-2 | 0.2434 | 0.2819 | -0.0898 | 0.2434 | 0.2730 | -0.0690 |
| 3-6 | 0.1678 | 0.1600 | 0.0208 | 0.1678 | 0.1612 | 0.0176 |
| 7-12 | 0.1053 | 0.0744 | 0.1007 | 0.1053 | 0.1053 | 0.0000 |
| 13+ | 0.0329 | 0.0477 | -0.0831 | 0.0329 | 0.0461 | -0.0738 |
| Age at release | 43.1513 | 35.1311 | 0.6688 | 43.1513 | 43.2336 | -0.0069 |
| Male | 0.8849 | 0.9469 | -0.1945 | 0.8849 | 0.8882 | -0.0103 |
| Born in Sweden | 0.6184 | 0.4998 | 0.2442 | 0.6184 | 0.6283 | -0.0203 |
| Security class 1 | 0.7961 | 0.2960 | 1.2411 | 0.7961 | 0.8289 | -0.0816 |
| <i>Time spent in adult education</i> | | | | | | |
| No education | 0.1316 | 0.3934 | -0.7746 | 0.1316 | 0.1579 | -0.0778 |
| Quantile 1 | 0.1151 | 0.2045 | -0.2799 | 0.1151 | 0.1053 | 0.0309 |
| Quantile 2 | 0.1316 | 0.2016 | -0.2070 | 0.1316 | 0.1217 | 0.0292 |
| Quantile 3 | 0.6217 | 0.2006 | 0.8684 | 0.6217 | 0.6151 | 0.0136 |

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Appendix Table B2 Means and standardized mean differences for offenders who enrolled in the monastery retreat program and non-treated offenders, prior to and after matching. SMDs above 0.1 or below -0.1 presented in bold type.

| | (a) Summary of balance for all data | | | (b) Summary of balance for matched data | | |
|--|--|-------------------------------------|----------------|--|-----------------------------------|---------|
| | Means monastery (n = 340) | Means non-treated (n = 8 665) | SMD | Means monastery (n = 340) | Means non-treated (n = 340) | SMD |
| <i>Time spent in university studies</i> | | | | | | |
| No education | 0.8257 | 0.9893 | -0.4313 | 0.8257 | 0.8388 | -0.0347 |
| Quantile 1 | 0.0559 | 0.0037 | 0.2274 | 0.0559 | 0.0526 | 0.0143 |
| Quantile 2 | 0.0526 | 0.0037 | 0.2192 | 0.0526 | 0.0526 | 0.0000 |
| Quantile 3 | 0.0658 | 0.0033 | 0.2519 | 0.0658 | 0.0559 | 0.0398 |
| <i>Time spent in vocational training</i> | | | | | | |
| No education | 0.6447 | 0.7522 | -0.2245 | 0.6447 | 0.6447 | 0.0000 |
| Quantile 1 | 0.0954 | 0.0822 | 0.0450 | 0.0954 | 0.0822 | 0.0341 |
| Quantile 2 | 0.1151 | 0.0809 | 0.1071 | 0.1151 | 0.1250 | -0.0204 |
| Quantile 3 | 0.1447 | 0.0847 | 0.1706 | 0.1447 | 0.1480 | -0.0093 |
| <i>Number of completed programs</i> | | | | | | |
| 0 | 0.0888 | 0.2800 | -0.6722 | 0.0888 | 0.0855 | 0.0116 |
| 1 | 0.2204 | 0.3104 | -0.2171 | 0.2204 | 0.2434 | -0.0556 |
| 2 | 0.1809 | 0.2162 | -0.0916 | 0.1809 | 0.2072 | -0.0684 |
| 3 | 0.1776 | 0.1148 | 0.1643 | 0.1776 | 0.1842 | -0.0172 |
| 4 | 0.1743 | 0.0508 | 0.3255 | 0.1743 | 0.1447 | 0.0780 |
| 5 | 0.0757 | 0.0183 | 0.2170 | 0.0757 | 0.0724 | 0.0124 |
| 6+ | 0.0822 | 0.0095 | 0.2648 | 0.0822 | 0.0625 | 0.0718 |
| <i>Time spent in prison work</i> | | | | | | |
| No work | 0.0625 | 0.1347 | -0.2982 | 0.0625 | 0.0658 | -0.0136 |
| Quantile 1 | 0.1842 | 0.2806 | -0.2487 | 0.1842 | 0.1776 | 0.0170 |
| Quantile 2 | 0.1908 | 0.2853 | -0.2405 | 0.1908 | 0.1842 | 0.0167 |
| Quantile 3 | 0.5625 | 0.2994 | 0.5303 | 0.5625 | 0.5724 | -0.0199 |

Notes: SMD above .1 or below -.1 presented in bold type.