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Is Employment Associated with Reduced Recidivism?: The Complex Relationship between Employment and Crime

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The Complex Relationship between Employment and Crime

Abstract

This article explores the association between employment and recidivism for parolees released from Texas prisons. Along with determining whether obtaining employment upon release from prison is associated with decreased odds of re-incarceration, this article analyzes whether obtaining employment is associated with increased time to re-incarceration. Proportional hazard models were used to examine the effect of employment on re-incarceration over time. This analysis allowed a unique view of desistance from crime as a process of behavioral change with multiple stages. Results generally support this perspective, finding that while obtaining employment was not associated with a significant decrease in likelihood of re-incarceration, it was associated with significantly greater time to re-incarceration. Thus, among parolees who are re-incarcerated, those who obtain employment spend more time crime-free in the community before returning to prison. This article argues that increased time crime-free is an indicator of positive behavior change that should be supplemented with clinical interventions to help formerly incarcerated persons maintain the initial motivation associated with employment.

Key Words: employment, prisoners, recidivism, desistance from crime, cox proportional hazard modeling

The dramatic increase in conviction and incarceration rates over the past 30 years has made the United States the global leader in imprisoning its citizens. After remaining relatively stable for several decades, a trend of mass incarceration began in the U.S. in the 1970s (Travis, 2005). Prison populations grew from slightly more than 200,000 in 1973 to over 2.3 million at the beginning of 2008. In fact, at the start of 2008, one out of every 100 American adults was incarcerated in prison or jail, the highest rate in American history (The Pew Center on the States, 2008). This influx of offenders to federal and state prisons is due, in part, to total population increases as well as to general increases in crime. However, the dramatic spike in incarceration rates far exceeds population growth and has continued during periods when crime rates were down (Cullen & Sundt, 2000), suggesting that state and federal "get tough on crime" policies contribute greatly to the elevated number of prisoners in the U.S.

Increased incarceration rates have resulted in prison overcrowding, and, as a result, more inmates than ever are being released from prison. In 2004, there were approximately 630,000 inmates released from prison, equating to more than 1,700 per day (Austin & Hardyman, 2004; Petersilia, 2005). High re-arrest and re-incarceration rates indicate that prison release is a very difficult transition for most people. The most recent national recidivism study found that 68 percent of ex-prisoners were re-arrested within three years of release from prison, 47 percent were re-convicted, and almost 52 percent were re-incarcerated within three years of release when including parole revocation (Langan & Levin, 2002). With the ultimate goal of reducing high recidivism rates, the purpose of this study is to analyze the association of employment and re-incarceration for a sample of released prisoners in Texas. This article goes beyond

assessing whether obtaining employment is related to decreased odds of recidivism by analyzing whether obtaining employment is associated with greater time to re-incarceration, examining initial behavioral changes as a process of desisting from criminal activity.

<div align="center">Literature Review</div>

With an investment in decreasing recidivism and reducing prison overcrowding, researchers have studied released prisoners to identify factors that differentiate recidivists from those who desist from further criminal activity (O'Connell, 2003; Petersilia, 2005; Uggen, 2000). Obtaining employment is one factor thought to impact offenders' ability to desist from criminal activity upon release (National Research Council, 2007). Most criminological research indicates a strong inverse relationship between employment and crime, suggesting that ex-prisoners who obtain employment are at significantly reduced risk for reoffending (Laub & Sampson, 2003; Sampson & Laub, 1993). In fact, a recent study found full-time employment to be the second strongest discriminator between recidivists and non-recidivists for boot-camp graduates, second only to marital status (Benda, Harm, & Toombs, 2005; Benda, Toombs, & Peacock, 2003). In addition, Uggen (2000) found that prisoners, particularly those 26 years of age and older, who participate in work release programs upon release from prison are better able to desist from crime, suggesting that work appears to be a positive transition in the life-course for ex-prisoners.

While released offenders are usually required to obtain employment as a condition of their parole, finding and maintaining employment is challenging for this population. The majority of prisoners experience employment difficulties before their arrest, are unemployed at the time of their arrest, and report difficulties gaining

employment upon release (Henderson, 2001; Watson et al., 2004). With long prison sentences, prisoners often lose their opportunity to gain work experience, and connections to potential employers or job networks are severed.

Because many criminologists consider the relationship between crime and employment to be strong and inverse, many states have allocated funds to vocational training programs. As such, several studies have assessed the effectiveness of in-prison vocational training programs and work-release programs for their ability to reduce recidivism rates for ex-prisoners. Harrison and Schehr (2004) analyzed four vocational training programs and found they reduced recidivism between 10 and 50 percent for the first five years after release from prison. Turner and Petersilia (1996) conducted an experimental study to examine the influence of a work release project on recidivism in Washington State. Fewer ex-prisoners from the work release program were re-incarcerated for committing a new crime, but the differences were not statistically significant.

While existing research appears to suggest that employment and job stability are associated with a desistance from crime, the research is primarily limited to studies assessing whether employment decreases the *odds of* recidivism. Few studies have examined the influence of employment on the *process* of desisting from criminal activity by examining whether employment increases time to re-incarceration. One existing study of offenders who graduated from an adult boot camp used Cox's proportional hazard modeling to examine the relationship between employment and time until first felony or parole violation (Benda et al., 2005). This study found that obtaining full-time employment was associated with increased time until re-offense, yet it examined one

distinct group of boot camp offenders and has not been generalized to mainstream prisoner populations. Further examination of the effect of employment on time to re-incarceration is valuable as delayed recidivism may be a more sensitive measure of offenders' behavioral change process.

The National Research Council (2007) perceives desistance from criminal behavior as a process instead of an outcome. This process includes the following three stages of behavior change: 1) motivation and commitment, 2) initial behavior change, and 3) maintenance of change (Brownell, Marlatt, Lichenstein, & Wilson, 1986). In accordance with this framework, offenders who delay their time to re-incarceration have progressed from the *motivation stage* to the *initial behavior change* stage before regressing and being re-incarcerated. Subsequently, if obtaining employment upon release from prison increases offenders' time crime-free in the community, then obtaining employment upon release from prison may be beneficial in positively affecting the *process* of desisting from criminal activity.

To further understand the impact of employment on the process of desisting from crime, this current study examines the influence of obtaining employment upon release from prison on re-incarceration and time crime-free in the community for a random sample of Texas state prisoners. The following hypotheses were tested:

1. Released prisoners who obtain employment have a lower likelihood of being re-incarcerated than released prisoners who do not obtain employment.

2. Of prisoners who recidivate, those who obtain employment upon release will have longer periods crime-free in the community than those who do not obtain employment.

Method

Sample and Sampling Procedures

This study analyzes administrative data from a random sample (N=250) of Texas male parolees released from prison between 2001 and 2005. Approval was obtained from the University's Institutional Review Board (IRB) at the University of Texas at Austin and the Texas Department of Criminal Justice (TDCJ) Research, Evaluation, and Development unit. Pre-prison and in-prison data were originally collected by the Executive Service Department of TDCJ from their statewide database, and the post-prison data was collected by the Parole Services Department of TDCJ from parolees' case files. Staff at TDCJ's Research and Development Office combined data from the Executive Service Department and the Parole Services Department into one database for the researchers to analyze. The final database contained pre-prison, in-prison, and post-prison data for a random sample of 250 Texas male parolees.

Variables

The independent variable, employment, was measured dichotomously according to whether or not the released parolee obtained employment immediately upon release from prison (1=employed, 0=unemployed). Parolees were considered employed, according to TDCJ, if they officially obtained employment upon release from prison and received compensation for their services. Two forms of recidivism were analyzed as dependent variables. First, a dichotomous form of recidivism determined whether the released prisoner had been re-incarcerated to a TDCJ correctional facility between time of release and time of data collection (2006) (1=yes, 0=no). Second, a continuous form of recidivism measured the number of months between release from prison and re-

incarceration for all parolees who were re-incarcerated. The researchers statistically

controlled for the following variables known to be associated with employment and

recidivism: race (1=African American, 2=other), age, length of incarceration in months,

number of prior offenses, and severity of prior offenses (violent crime, property crime, or

drug crime). African American was chosen as a reference category for the race variable

due to the fact that African Americans have both higher crime rates and recidivism rates

than Caucasians and Hispanics (Marbly & Ferguson, 2005).

Data Analytic Strategy

Because the parolees in the sample were released from prison at different times

over a four year period (those that have been out of prison longer have had more

opportunities to recidivate), Cox proportional hazard modeling was selected as an

appropriate analytic strategy. Cox proportional hazard modeling is a method for modeling

time-to-event data in the presence of censored cases, appropriate for the current study

where a proportion of the sample did not recidivate before the end of data collection,

censoring the data (Hosmer & Lemeshow, 1999; Pugh & Jones, 2004). Time-to-event

data is the number of months between the parolees' release and re-incarceration. The

survival analyses include the cumulative proportion surviving at the end of a specified

time interval, and the hazard rate, or the probability that a parolee not re-incarcerated at

the beginning of a specified time interval (month) will be re-incarcerated during that

interval (Ekland-Olson & Kelly, 1993).

Cox regression modeling allows for the inclusion of predictor variables and is

useful for modeling the time to a specified event based on the value of the covariates.

Additionally, Cox regression provides a hazard function, which is the measure of the

potential for the event to occur at a specific time, given that the event has not yet occurred (Hosmer & Lemeshow, 1999). The value of the hazard function is equal to the product of the baseline hazard and the covariate effect (Norusis, 2004). One Cox proportional hazard model was utilized to test each of the two hypotheses, the first model with the entire sample and the second model solely with the recidivists. Survival function graphs with cumulative survival as the Y-axis and months crime free as the X-axis are reported.

<div align="center">Results</div>

Sample Demographics

The average age for the parolees in the sample was 36.1 (10.90). Forty-three percent of the sample was African American, 32 percent White, and 24 percent Hispanic. The ex-prisoners averaged ten years of education and two prior offenses. Drug crimes were the most common type of crime committed (46%), followed by property crimes (25%), violent crimes (23%), and other crimes (6%). The re-incarceration rate for this sample was 24 percent, 4 percentage points lower than the most recent recidivism study for Texas offenders (Watson et al, 2004). Table 1 provides sample characteristics.

<div align="center">***Insert Table 1 Here***</div>

Relationship between Employment and Re-Incarceration for Entire Sample

The first Cox regression model examined the influence of employment on re-incarceration while accounting for time since offenders were released from prison. Censored cases were included in the analysis with one case omitted for having missing values, leaving 249 valid cases. Approximately 24 percent of the sample (59 cases) was

re-incarcerated and 76 percent (190 cases) were not re-incarcerated at the time of data

collection (i.e. censored).

All of the control variables – race, age, length of sentence, number of prior

offense, and offense type – were entered in the first block of the hazard model in a

stepwise manner. The ex-prisoners' ages when released from prison and their number of

previous felonies were kept in the model as influential control variables. A one-unit

increase in age was associated with a 4.5 percent decrease in the hazard ratio (HR=.955),

and a one-unit increase in the number of previous offenses was associated with a 23

percent increase in the hazard ratio (HR=1.234), indicating that older ex-prisoners and

those with fewer felonies were at reduced risk for re-incarceration.

Insert Table 2 Here

Although not reaching statistically significant levels, obtaining employment upon

release from prison was associated with a 17 percent reduction in the hazard ratio

(HR=.828, p=.510) compared to ex-prisoners who did not obtain employment when

released from prison. This finding indicates that employed ex-prisoners were at reduced

risk for re-incarceration although not at a statistically significant level. Figure 1 shows

the survival curve for both employed and unemployed ex-prisoners. Note that although

not statistically significant, starting at approximately one year after release, unemployed

parolees have lower survival rates than employed parolees, meaning they are more likely

to be re-incarcerated during that particularly time interval.

Insert Figure 1 Here

Relationship between Employment and Time to Re-Incarceration for Re-Offenders

The second Cox proportional hazard model was conducted to test the hypothesis that recidivists who obtain employment upon release from prison will have longer periods crime-free in the community before re-offending than recidivists who do not obtain employment. The same control variables were entered in this Cox proportional hazard model as they were in the first model. Again using a stepwise approach, race was the only control variable included in the model. The hazard ratio for African Americans was 2.2 times that of non African Americans (HR=2.21). Censored cases were omitted from this model.

Insert Table 3 Here

As hypothesized, recidivists who obtained employment were out of prison significantly longer before recidivating than recidivists who did not obtain employment ($p<.001$). Recidivists who obtained employment when released from prison had their monthly hazard ratio reduced by 68.5 percent (HR=.315) and averaged 31.4 months before being re-incarcerated (SD=14.76) with a range of 9-60 months. Recidivists who did not obtain employment when released from prison averaged 17.3 months before being re-incarcerated (SD=8.91) with a range of 4-47 months. Since this model includes only recidivists, this result indicates that employed ex-prisoners took longer to recidivate than unemployed ex-prisoners, an important finding when considering desistance from crime a process as opposed to an outcome. Figure 2 shows survival curves for both employed and unemployed ex-prisoners who recidivated. As shown in Figure 2, unemployed ex-prisoners demonstrate a steeper curve toward re-incarceration, indicating higher likelihood of re-incarceration at each time interval starting at approximately five

months after release from prison and lasting until all recidivists are re-incarcerated. Employed ex-prisoners remain crime-free for significantly more months before being re-incarcerated.

Insert Figure 2 Here

Discussion

The current study found that obtaining employment upon release from prison did not significantly decrease the likelihood of re-incarceration over time. It should be noted that employment did decrease the hazard rate by approximately 17 percent. Although this relationship was not statistically significant, this effect may indicate clinical significance. While the lack of a significant relationship between employment and re-incarceration is surprising at first glance, this is not the first study to find a non-significant relationship; the finding is consistent with past work by Turner and Petersilia (1996), whose evaluation of a work release program found employed offenders were not significantly less likely to recidivate than unemployed offenders.

The explanation for this insignificant finding, however, requires a shift in perspective from a "black and white" view of parolees as either recidivists or non-recidivists. This traditional view of parolees leaves little middle ground for ex-prisoners who are in the process of changing. Instead, a more complex view of parolees is required to recognize that parolees may fall on a spectrum of behavior change that consists of various stages. The National Research Council (2007) suggests that parolees, rather than simply deciding not to commit crimes, instead work through multiple stages in sustaining the decision to change. Therefore, parolees at the final stage make the decision to completely terminate criminal behavior, yet many parolees may not be at this final stage

at the time of release. From this perspective, the process of desisting from crime involves 1) developing motivation and a commitment for making change, 2) demonstrating initial behavior change by reducing criminal behavior, and 3) maintenance of change by completely desisting from crime. Considering this pattern of behavioral change, a realistic goal for offenders released from prison should not necessarily be the complete cessation of crime, but perhaps a more realistic goal—when considering desistance as a behavioral change process—is reduced offending and increased lengths of non-offending periods (National Research Council, 2007).

To examine this process of desistance, a second Cox proportional hazard model was analyzed to determine whether employment increased time to re-incarceration for those parolees who were re-incarcerated. This was indeed the case, as those who were employed had non-offending periods almost twice as long as those who were unemployed. This finding seems to indicate that offenders are more motivated when initially released from prison, to a point where they advance to the second step of the behavioral change process – *initial behavioral change*. Because of the association between obtaining employment and the initial behavioral change, it is possible that obtaining employment when released from prison seems to engender and prolong this motivation and initial behavioral change. However, as indicated by the finding that employment did not significantly reduce odds of recidivism overall, parolees' motivation appears to deteriorate over time.

Because of the apparent reduction over time in motivation to remain crime-free, continually monitoring ex-prisoners' motivation levels and providing interventions to increase motivation levels appear warranted. Tonry (2004) similarly recommends that

corrections systems should develop the capacity for ongoing integrated oversight of services and programs for individual offenders post release. Becoming employed after incarceration, while apparently providing initial motivation to desist from crime, does not seem to be, on its own, sufficient to prevent recidivism for many parolees. This finding suggests that parolees should be provided with programs and interventions to enhance and sustain the motivation gained through employment.

Two interventions may be particularly promising for enhancing motivation and goal achievement among parolees. Motivational Interviewing (MI) is an intervention designed to help clients overcome ambivalence about making behavioral changes in their lives (Rollnick & Miller, 1995). During MI sessions, it is recognized that people's motivation and readiness to make real change fluctuate over time and the goal is to develop internal motivations for change rather than imposing external pressures. This approach may be especially well-suited for parolees who demonstrate fluctuating motivation and who may be resistant to more authoritative approaches "forcing" them to desist from crime. A key aspect of MI is to build the client's confidence in their ability to make behavioral change (Chanut, Brown, & Dongier, 2005). MI used in conjunction with steady employment may offer ex-offenders a concrete outlet in which to build confidence and belief that a crime-free lifestyle is feasible.

Originally developed for addictions treatment, Motivational Interviewing has been modified for use in correctional settings. Usually used as a brief intervention and frequently as a prelude to ongoing services, MI has recently been integrated into probation settings (Clark, Walters, Gingerich, & Meltzer, 2006). Using MI in correctional settings requires a shift from focusing solely on outcomes (reduced recidivism) to

focusing on process (developing a readiness to change behaviors) and further requires

correctional staff to discard an "us vs. them" mentality to view offenders from a strengths

perspective (Clark, 2005). Because MI has been especially effective with clients who are

oppositional or less motivated to change (Hettema, Steele, & Miller, 2005), it may offer

promise for parolees re-entering a world filled with ambivalence and difficult life

decisions. Further research is needed to examine the effectiveness of MI with parolees

and to test its utility in combination with steady employment.

A second clinical therapy model, solution-focused brief therapy (SFBT) (Berg,

1994; de Shazer, 1985), could help increase ex-prisoners' motivation to work toward

their goals, whether those goals are obtaining gainful employment or avoiding re-

incarceration (Lindforss & Magnusson, 1997). SFBT is a strength-based intervention that

has recently been included in the Office of Juvenile Justice and Delinquency Prevention

Model Program Guide. In SFBT, the practitioner uses language and Socratic questioning

to co-construct goals with the client and works collaboratively to resolve the problem by

utilizing the client's strengths. According to Lindforss and Magnusson (1997) individuals

recently released from prison often feel hopeless and they have limited belief they will be

able to desist from criminal behavior and remain out of prison. SFBT appears to be a

beneficial approach for practitioners to use when encountering this problem because it

allows ex-prisoners to visualize success and desistance from criminal behavior by

creating a narrative in which they remain crime-free.

Two SFBT techniques that appear particularly beneficial for ex-prisoners are the

miracle question and scaling (Berg & De Jong, 2008). The miracle question—asking the

client to provide a narrative regarding what the circumstances would look like if the

problem was solved—allows ex-prisoners to visualize a successful future without crime. The miracle question further enables ex-prisoners to develop concrete steps and goals to attain in order to achieve the goal indicated in the narrative, which could include retaining employment along with abstaining from criminal behavior. Having the ex-prisoner rate from 1-10 where they currently are in achieving their goals – often termed scaling – allows them to become cognizant of where they stand in relation to their goals, to remain in the here and now and avoid dwelling on past failures, and to take control of what shall happen in the future. Finally, SFBT enables the ex-prisoners to become aware of their own strengths and resources useful for goal achievement. For example, SFBT helps the ex-prisoner identify times in the past in which they remained out of prison for an extended time and then encourages them to recreate the supports necessary to reach this goal again (Lindforss & Magnusson, 1997).

A few study limitations should be considered when interpreting the findings of the current study. The primary limitation is the lack of information regarding the ex-prisoners' substance use and mental illness. Several studies have found substance abuse to be a significant predictor of criminality, arrests, convictions, imprisonment, and recidivism (Dowden & Brown, 2002). Moreover, substance abusing prisoners that do not participate in substance abuse treatment—whether in prison or upon release—are more likely to be re-incarcerated, usually within the first year of release (McCollister, French, Prendergast, Wexler, Sacks, & Hall, 2003). This is also the case for offenders with a mental illness or co-occurring disorders (White, Goldcamp, & Campbell, 2006). Data on substance abuse and psychological disorders were not available due to strict TDCJ's guidelines regarding data accessible to researchers.

The second limitation is that the sample size of 250 ex-prisoners is quite small compared to the population of Texas offenders released from prison between 2001 and 2005. Approximately 55,000 Texas prisoners were released from prison in 2001 alone. Small sample size may have contributed to the non-significant relationship between employment and odds of re-incarceration. Further, the smaller sample brings into question the ability of the sample to represent the larger population. The researchers were limited to selecting 250 offenders due to the financial costs associated with retrieving each file from the TDCJ databases. Future research should attempt to replicate the finding with larger samples.

Finally, the parole services department of TDCJ measured employment at only one measurement point – operationalized as whether the offender obtained a job when released from prison. A more sensitive measure of employment at monthly intervals would have been preferable to accurately detect the effects of work on recidivism. Due to this measurement limitation, we do not know whether employed ex-prisoners retained their jobs, or whether unemployed ex-prisoners eventually found a job. This limits findings to understanding the influence of obtaining employment upon release from prison, and does not allow investigation into how changing employment patterns affect recidivism.

Conclusion

The state of Texas—where this study sample was drawn—provides a clear example of a growing prison population with high rates of recidivism. The ratio of Texas adults who are incarcerated in prison is approximately 730:100,000, an increase of 248 percent since 1980 (Watson, Soloman, LaVigne, Travis, Funches, & Parthasarathy,

2002). State-level recidivism rates mirror elevated national rates, with 31.2 percent of Texas prisoners released in 2000 re-incarcerated within three years (Watson et al., 2002). The need to reduce recidivism and re-incarceration in Texas and across the nation is an essential step in improving the well-being of the offender, their family, and society as a whole. Efforts to reduce re-incarceration are likely to reduce prison overcrowding, save tax-payer money, and improve community safety.

The current study indicates that parolees' employment upon release from prison helps to extend their time crime-free in the community. The correctional community and the general public are challenged to recognize desistance from crime as a process and to value interventions that prolong offenders' motivation to remain crime-free. Because most criminologists' consider ex-prisoners to be most at-risk for re-incarceration their first year out of prison, existing post-prison services generally target offenders within their first year of release but are virtually non-existent for ex-prisoners who have been out of prison for more than one year (Travis, 2005). This study indicates that long-term support should be offered to ex-offenders when they are released from prison.

Criminal justice professionals providing services to ex-prisoners should be aware that the influence of employment on re-incarceration appears to diminish over time, and should continually assess ex-prisoners' motivation level and incorporate therapy models such as motivational interviewing and solution-focused brief therapy to enhance motivation and goal setting. Furthermore, states, counties, and Departments of Corrections need to allocate funding to post-release services, including not only employment services, but also substance abuse counseling, psychological counseling, family counseling, and/or case management services that could enhance desistance from

crime. Although employment alone enables the ex-prisoner to advance to the second stage of the behavioral change process, it apparently may not be enough to engender a permanent change in criminal behavior.

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Table 1: Characteristics of the Sample

Characteristics of the Sample		
	Mean	SD
Age at incarceration (N=249)	31.0	9.59
Age at release (N=250)	36.1	10.90
# of previous offenses (N=250)	2.07	1.37
Education (N=198)	10.0	2.97
	Frequency	Percent
Race		
African American	108	43.2
Caucasian	80	32.0
Hispanic	60	24.0
Marital Status		
Married	42	16.8
Common Law	4	1.6
Widowed	4	1.6
Separated	9	3.6
Divorced	48	19.2
Never Married	140	56.0
Re-Incarcerated	59	23.6
New Crime	42	16.8
Technical Violation	17	6.8
*Race is missing on two offenders in the dataset		

Table 2: Cox Proportional Hazard Model: Including Censored Cases

Variables	B	SE.	Wald	df	Sig.	Exp(B)
Age	- .046	.015	9.428	1	.002	.955
# of prior felonies	.211	.100	4.479	1	.034	1.234
Employment	-.188	.286	.433	1	.510	.828

Table 3: Cox Proportional Hazard Model: Excluding Censored Cases

Variables	B	SE	Wald	df	Sig.	Exp(B)
Race	.789	.308	6.547	1	.011	2.201
Employment	-1.156	.315	13.487	1	.000	.315

**Figure 1: Survival Curves for Employed Offenders and Unemployed
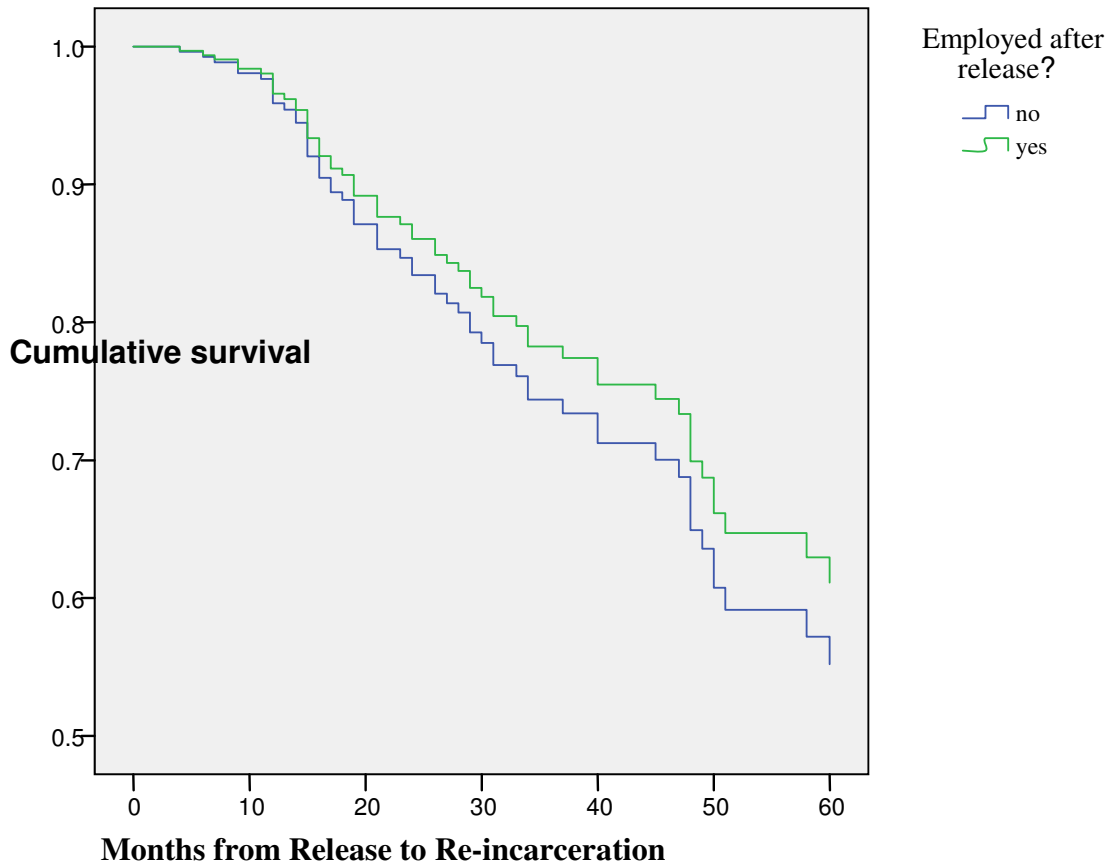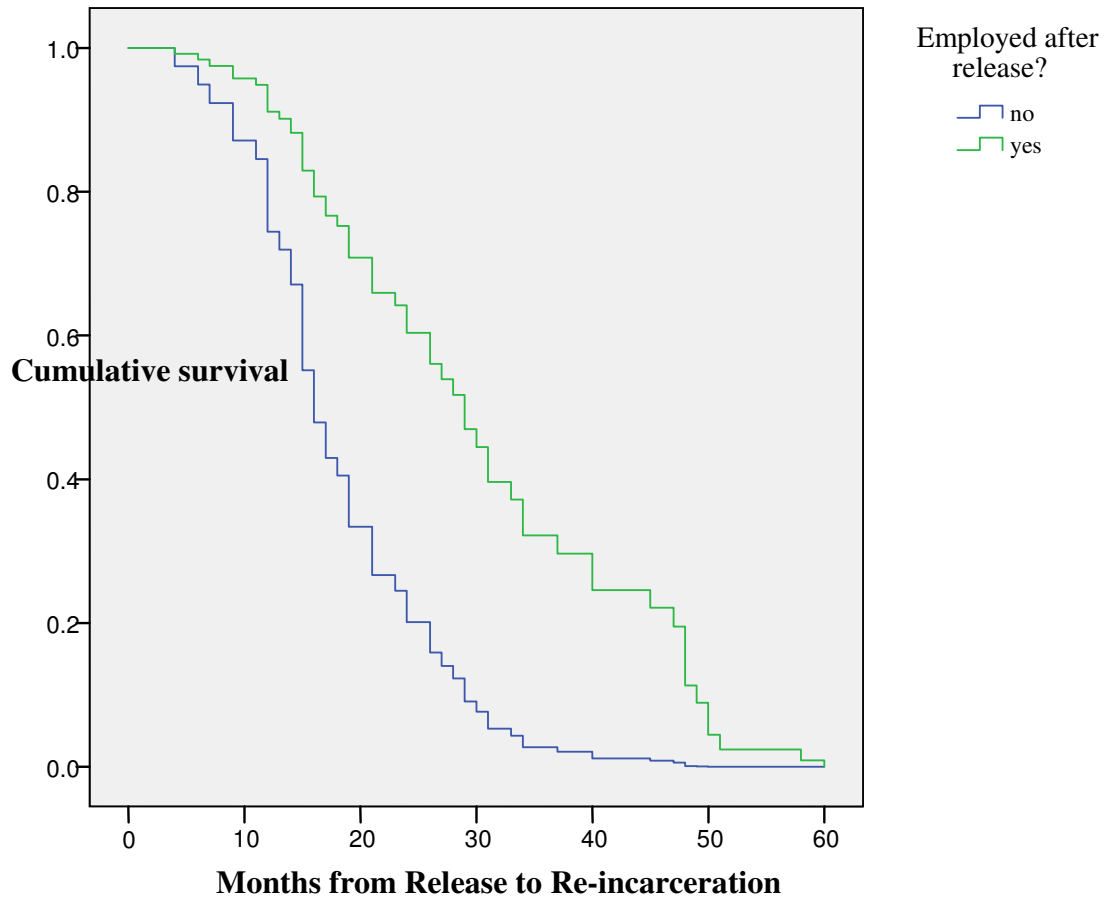Offenders: Including Censored Cases**

Figure 2: Survival Curves for Employed and Unemployed Recidivists: Excluding Censored Cases

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