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Recidivism outcomes of Illinois prison work release program participants

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ABSTRACT

Reentry into the workforce for formerly incarcerated individuals is fraught with challenges, including limited education and employer stigma. However, employment post-release has been found to reduce recidivism. Prison work release programs, such as Illinois' Adult Transition Centers (ATCs), may effectively facilitate employment and reduce recidivism for reentering individuals. This study evaluated the impact of ATC participation on recidivism outcomes. We used propensity score matching to create a comparison group of non-ATC participants with characteristics similar to the participants. The sample consisted of individuals released in 2016 or 2017, with rearrest and reincarceration tracked through 2021. Survival analysis revealed that ATC participation was associated with a 15.5% lower probability of rearrest and a 36.9% lower probability of reincarceration; the ATC participants experienced significantly more extended periods until their first post-release rearrest and reincarceration compared to non-participants. The findings suggest that work release programs can play a crucial role in reducing recidivism and promoting successful reentry for formerly incarcerated individuals.

KEYWORDS

prison; corrections; work release; employment; reentry; recidivism

Introduction

Reentry following prison is often not a singular, one-time event; rather, this process is cyclical and reoccurring (Silver et al., 2021). This is evident from the landscape of recidivism in the U.S. as people exiting prisons are rearrested and reincarcerated at very high rates. For example, as many as 83% of those released across 30 states were rearrested 9 years following release (Alper et al., 2018), and 61% of those released across 34 states either returned to prison or received a prison sentence 10 years following release (Durose & Antenangeli, 2021).

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Those in reentry routinely position stable employment as a pivotal factor in their ability to reintegrate socially and support themselves financially (Buck et al., 2022; Davis et al., 2013; Opsal, 2012). Other research affirms these views and has shown that employment for the formerly incarcerated is associated with reduced recidivism (Berg & Huebner, 2011; Flatt & Jacobs, 2018; Lockwood et al., 2015; 2016; Nally et al., 2014; Yang, 2017). For various reasons, joining the workforce and remaining employed promotes desistance from criminal behavior and can serve as a defining moment for those returning from periods of incarceration (Elder, 1998; Uggen, 2000). For instance, individuals leaving prison who return to families and children value employment as a means to approach community living more conventionally and reconstruct their social ties (Rhodes, 2008). Obtaining legitimate employment also aids the psychological distress commonly experienced during reentry that hinders reintegration (Liker, 1982; Western et al., 2015).

Employment can also provide legitimate means for individuals to achieve their goals (Merton, 1938). Moreover, employment and socioeconomic status are associated at the most basic level with quality of life (e.g., food, shelter, clothing), so improvements in that area serve as a pragmatic element of effective reentry into the community. Thus, addressing unemployment and underemployment of the formerly incarcerated aligns with the risk and need principles (targeting needs related to criminal behaviors or risks that may lead to them) of the widely used and supported risk-need-responsivity (RNR) model (Bonta & Andrews, 2024; Pettus-Davis et al., 2019). Another rehabilitation model, the Good Lives Model (Ward et al., 2007), is similar to RNR but has a more positive and strength-based approach (Andrews et al., 2011). It acknowledges that employment is a protective factor that can improve the well-being and autonomy of people in reentry, thereby reducing their risk of future offenses (Willis & Ward, 2024).

However, after release from prison, many individuals struggle to find employment (Bushway & Apel, 2012; Moses, 2014; Visher et al., 2005). These individuals may experience inadequate housing, poor mental or physical health, and relatively low educational attainment, complicating their job search (Page et al., 2007; Solomon et al., 2004). Employers may hold stigmatizing attitudes toward the formerly incarcerated (Feingold, 2021; Schmitt & Warner, 2011) and refrain from hiring those with criminal records (Holzer et al., 2007). Further, some states deny licenses for certain professions due to a criminal record (Institute for Justice n.d.). As a result, post-release individuals experience significantly more unemployment than the general population (Nally et al., 2014).

Looney and Turner (2018) found that 45% of post-release individuals nationwide did not report any earnings their first full year following

release. In Illinois, the location of our study, the three-year post-release unemployment rate was 46% (Reichert et al., 2023b). For those who do obtain employment, their work is often temporary or seasonal, lacks benefits (e.g., medical insurance, paid leave, retirement) or stability, and low wages may necessitate them to work more than one job (Ramakers et al., 2017; Rose & Clear, 2001; Schnepel, 2018). Commonly, the formerly incarcerated secure employment in food and waste services, administrative work, and other service jobs (Lichtenberger, 2006; Schnepel, 2018). Additionally, average annual incomes are often below the poverty level and under minimum wage, with Black and Latino people and women fairing worse (Looney & Turner, 2018; Reichert et al., 2023b; Visher et al., 2008; Western & Sirois, 2019).

It is known that individuals returning to less advantaged communities recidivate at higher rates (Kubrin & Stewart, 2006), and holding weaker existing ties to the economy and community diminish prospects of successful reentry (Harding et al., 2014). At the community level, patterns of reentry and recidivism occur disproportionately. Therefore, prolonged unemployment and poor employment options among the formerly incarcerated further contribute to a segmented economy that perpetuates racial and economic marginalization. These conditions also heighten the risks of recidivism and violent crime (Kirk, 2022; Peck & Theodore, 2008). To this end, prerelease employment-focused programs like prison work release may offer promise in addressing high recidivism rates, poor employment outcomes, and the harmful cycle of reentry and reincarceration for those exiting prisons (Apel, 2011; Silver et al., 2021).

Work release programs

Prison work release programs are designed to reduce recidivism and improve reentry outcomes by allowing participants to obtain employment and complete the remainder of their sentence. These prerelease employment programs generally allow participants to live in separate but secure facilities and work in private businesses in their community. They also may allow free movement before returning to a correctional facility for housing at night. As such, these in-custody programs offer aspects of independent living (e.g., self-managed transportation to work, unmonitored community recreational activities, and overnight visits with families) and employment while maintaining correctional supervision (Apel, 2011; Jung, 2014; Maranville et al., 2025; Routh & Hamilton, 2015). Work-release programs can provide income (at the industry standard), which can help with fines, restitution, and personal savings (Drake et al., 2009; Duwe, 2015; Northcutt Bohmert & Duwe, 2012). All 50 states in the U.S. permit prison work release facilities (Daly et al., 2009); however, relatively limited research

has focused specifically on prison work release programs and their outcomes. These outcomes include recidivism (e.g., rearrest, reincarceration, reconviction, or supervised release violations), employment (e.g., employment rates, hours worked, total wages earned, or hourly wage), and fiscal cost-benefit analyses.

Prior studies have found that work-release programs can increase rates of post-release employment, total wages earned, and total hours worked but may not help grow hourly wages (Duwe, 2015; Jung, 2014; Northcutt Bohmert & Duwe, 2012). For example, one study found that work-release participants were five times more likely to gain employment post-release than non-participants (Bales et al., 2016). Another study found that work release participants worked more than double the number of hours and earned nearly double the wages compared to their comparison group (Duwe, 2015).

Additionally, cost-benefit analyses suggest work release programs can save millions of dollars due to reduced incarceration costs or cost-avoidance from reductions in reincarceration (Drake et al., 2009; Duwe, 2015; Northcutt Bohmert & Duwe, 2012). For example, research into Kansas' and Minnesota's work release programs found a $5,922,000 net benefit over five years and around $1.25 million in savings over three years, respectively (Duwe, 2015; Kansas Department of Corrections, 2009). Generally, findings regarding employment and cost-benefit analyses have been consistent. However, results are mixed regarding work release programs' impact on recidivism.

We found six recent studies or evaluations of U.S. prison work release programs that reported on recidivism outcomes for participants. Research published in 1973, 1974, 1977, and 1996 were not included due to the dated nature of their content (Jeffery & Woolpert, 1974; Rudoff & Esselstyn, 1973; Turner & Petersilia, 1996; Waldo & Chiricos, 1977; Witte, 1977). Of the six, none have utilized randomized control trials (RCTs) to estimate program impact and therefore relied on quasi-experimental research designs to mimic random assignment. Two of the six used propensity score matching (PSM), a sophisticated method used to create a synthetic control group based on matched characteristics, and the technique used in this study (Duwe, 2015; Routh & Hamilton, 2015). Three bodies of work, Bales et al. (2016), Drake (2007), and Drake et al. (2009) used a combination of methods such as metanalytic procedures to calculate estimated effect sizes or employed methods such as Cox Regression Proportional Hazards Model (i.e., survival analysis) and logistic regression models to create estimates and construct their control or comparison groups. Lastly, the Kansas Department of Corrections (2009) employed the least sophisticated technique to estimate program impact. They compared recidivism outcomes to those who had enrolled but did not complete, as well as those with

no program exposure at all. Below, we summarize their findings in more detail.

Duwe (2015) looked at three recidivism measures: rearrest, reconviction, and new offense reincarceration to measure outcomes for work-release participants in Minnesota. They found program participation significantly reduced the likelihood of rearrest by 16%, reconviction by 14%, and new offense reincarceration by 17%. However, they also found that technical violations under supervised release were increased among work program participants. Almost at odds with findings from Duwe (2015), Routh and Hamilton (2015) found that participation in New Jersey's Halfway House work release program significantly reduced the odds of parole revocations for participants and returns to prison for any reason. However, they found no significant differences among groups for rearrests, reconvictions, and reincarcerations. They explained that their findings suggest in terms of recidivism, work release participation can help with post-release supervision requirements and reduce the propensity for revocation due to technical violation by 41.5% and a return to prison for any reason by 29.9% for their sample.

Bales et al. (2016) examined the impact of Florida's work release program. They found that those who completed work release programs had 4% to 10% lower odds of recidivism, depending on the manner and measure of recidivism (e.g., rearrest, conviction for felony offense, follow-up period examined). Lower estimates (−1.3%, −2.8%) were projected for Washington's work release program percentage change on crime outcomes (Drake et al., 2009; Washington State Institute for Public Policy, 2007). Finally, 18.1% of those who successfully completed work release in Kansas returned to the Kansas Department of Corrections after one year, 24.9% returned after two years, and 30.4% returned after three years, whereas 25.5% of those with no program exposure returned after one year, 31.5% returned after two years, and 36.2% returned after three years following release (Kansas Department of Corrections, 2009). Mixed results regarding recidivism outcomes for work release participants may be due in part to differences in program models, including support services offered, as well as participant characteristics (Berk, 2008; Listwan et al., 2006). Some research has suggested programs should be more individually tailored to better meet participant needs to improve reentry outcomes, and those with higher recidivism risks may benefit the most from participation (Northcutt Bohmert & Duwe, 2012; Routh & Hamilton, 2015; Zweig et al., 2011).

Illinois work release programs

The Illinois Department of Corrections (IDOC) oversees four prison work release centers called Adult Transition Centers (ATCs). IDOC directly

operates two facilities—Fox Valley ATC, located in Aurora, Illinois, for women and the Peoria ATC, located in Peoria, IL, for men. The Safer Foundation, a Chicago-based nonprofit organization, operates two additional sites for men in Chicago under contract with IDOC. Safer-operated ATC facilities are located just a few city blocks from one another on the city's West Side near the North Lawndale neighborhood. All ATCs are in urban cities in the Northern part of the state. Individuals who meet eligibility requirements can apply or be transferred to ATCs if they have no more than 30 months left of their prison sentence. According to IDOC, eligibility requirements for acceptance into ATC programming include, but are not limited to, being designated a minimum security classification, having no acute medical problems, and having no violation of prerelease status. Individuals with higher sentence classifications (Class X) may also be permitted. These programs are designed to enable individuals to obtain employment while serving the relatively short remainder of their prison sentence, support positive vocational, educational, and health outcomes, and reintroduce them to independent living within the community. While employment characteristics may vary across ATC sites (e.g., industry type, compensation), participants save their earned money and are provided those savings once program participation ends. In addition to employment, ATC participants may work or engage in different programming during their stays (e.g., general education development (GED), college courses, substance use disorder treatment). Additional participation in programs offered through ATCs can help participants in other aspects of their well-being (e.g., education, mental health, vocational skills) related to successful reentry (Illinois Department of Corrections, n.d.-a).

There is some prior but limited research examining the outcomes of Illinois ATCs. Jung (2014) found that ATC participation modestly improved employment and earnings and earned more the longer they participated in ATCs. In addition, Jung and LaLonde (2019) examined employment outcomes for women and found that more time spent in ATCs increased total earnings and the probability of gaining employment post-release. A limitation of both studies was that they lacked a matched comparison group and compared ATC participants with eligible non-ATC participants from minimum-security prisons, and both only examined post-release employment, excluding recidivism outcomes. In addition, an Illinois study examined all prison releases in one year and found that Illinois ATC participants were more likely to have longer employment and higher wages after release than non-ATC participants (Reichert et al., 2023b). Another study by the same authors examined differences in ATC participant characteristics associated with recidivism (Reichert et al., 2023a). The authors found the ATC participants who were males, younger than age 30 at the time of release, and those who participated in contractually operated ATC

facilities were more likely to be rearrested and reincarcerated than participants who were females, older than 30, and participating in ATCs. In addition, the ATC participants more likely to be rearrested were those with moderate to high recidivism risk, a violent offense conviction, more than 10 prior arrests, one or more prior incarcerations, and less than one year of ATC participation.

This research contributes to the limited and dated prior research on work release programs and their recidivism outcomes. It also fills a gap in the literature for recidivism outcomes for work release program participants. This is the first known study to utilize a matched comparison group and analyze Illinois' work release programs' impact on recidivism and the third to use the PSM technique in the broader literature. The research study attempted to answer the following main research questions:

- What are ATC participants' arrest and reincarceration outcomes compared to a matched comparison group?
- What is the time to recidivism following ATC participation and release from prison compared to the matched control group?

Methodology

Data sources

State corrections data

The IDOC provided exit and admission records for analysis. Data on our sample included name, demographics, primary offense associated with incarceration, dates of entry and exit from IDOC custody, and ATC participation. The total sample included 47,346 individuals released from IDOC facilities from January 1, 2016, to December 31, 2017. We used IDOC admissions data (Illinois Department of Corrections n.d.-b) to examine the recidivism of the treatment and control groups.

State arrest data

We examined Illinois State Criminal History Record Information (CHRI) repository data. The CHRI repository contains information required by statute (Illinois Uniform Conviction Information Act, 2022) to be submitted on each arrested person by arresting agencies, state's attorney's offices, circuit courts, and state and county correctional institutions to create a criminal history.

Sample

There were 1,579 in the ATC participant group and 1,579 in the matched control group, for a total sample size of 3,158 (Table 1). Most persons in

Table 1. Demographics of sample.

	ATC participants		Non-ATC participants	
	n	%	*n*	%
Gender				
Female	283	18	262	17
Male	1,296	82	1,317	83
Race/ethnicity				
Asian	15	1	12	1
Black	703	44	708	45
Hispanic	122	8	119	8
White	739	47	740	47
Age at release				
Mean	37.9		38.3	
Min, max	19.2, 76.3		19.0, 83.0	
18–25	261	17	260	16
26–35	511	32	516	33
36–45	401	25	332	21
46–65	397	25	435	28
66–85	8	1	35	2
86 and over	1	0.1	1	0.1

Note. The sample size was 1,579 in the ATC participant group and 1,579 in the non-ATC participant group. Percentages may not equal 100% due to rounding.

both sample groups were males, Black or White, with an average age of about 38. ATC participants had a mean age of 37.9, ranging from 19.2 to 76.3 years old, and non-participants had a mean age of 38.3, ranging from 19.0 to 83.0 years old. Several steps were taken to create this sample, as detailed in the following sections. These included matching original records of participants and non-participants with state correction data (IDOC) and arrest data (CHRI), as well as using propensity score matching (PSM) to establish well-balanced participant and non-participant groups for comparison.

Procedure

Matching samples to post-release arrest and IDOC records

The full sample of 3,158 participants was found in the CHRI database and matched to arrest records on first name, last name, and date of birth. Arrest data was pulled in February 2023. Each incarcerated individual was assigned a unique IDOC number upon initial admission to an IDOC facility, which was used for subsequent IDOC incarcerations.[1] The IDOC number of our sample was matched to the IDOC admission file dataset.

Propensity score matching to generate a control group sample

From the full IDOC exit dataset, 1,579 persons were in the treatment group who participated in an ATC, and 45,766 individuals had not participated in an ATC. We used Propensity Score Matching (PSM) to select a matched control group from those individuals. PSM was used to reduce the effects of confounding variables when estimating the treatment effect of the ATC program (Peikes et al., 2008). We used logistic regression to

estimate the probability (propensity score) of receiving the treatment (participation in ATCs) based on covariates.

Considering the eligibility requirements for Illinois ATCs and prior studies of prison work release programs that used PSM (Duwe, 2015; Jung, 2014; Routh & Hamilton, 2015; Zweig et al., 2011), we included eight factors that could affect the probability of participating in an ATC: age at release, gender, race, prior arrests, prior prison admissions, duration of prison stay, holding offense type, and holding offense class. We shared all eight factors with at least one of the four prior studies. Among these, age at release, prior arrests, prior prison admissions, and duration of prison stay were numeric, while gender, race, holding offense type, and holding offense class were categorical. We were able to match 1,579 persons to comprise our control group.

To assess the quality of the propensity score matching, we examined standardized mean differences (SMDs) of each covariate between the treatment group and the control group. As the standard for assessing balance, SMDs are recommended in propensity score analysis literature. SMDs reflect the practical relevance of differences, helping ensure covariates are similar enough between groups for causal inference (Lee & Acharya, 2022; Zhang et al., 2019). A difference of less than 0.1 is often considered an acceptable balance (Austin & Stuart, 2015; Stuart, 2010). Our analysis reveals that all standardized mean differences for covariates related to age at release, gender, race, prior arrest history, duration of prison stay, prior number of incarcerations, last offense type, and last offense class are below the 0.1 threshold (see Table 2). Furthermore, an examination of the demographics of the treatment and control groups, as presented in Table 1, suggests a high degree of similarity in demographic characteristics between the two groups. The results indicate a successful propensity score matching process that effectively reduced bias and achieved quality matching.

Analysis

We conducted survival analyses using the Weibull model to measure recidivism outcomes. We used the Weibull model to examine the relationship between one or more predictor variables and the time until arrest or reincarceration (Carroll, 2003; Musa et al., 2023). Our follow-up time was from the prison release date in 2016 or 2017 to December 31, 2021, with a minimum of 1,463 days and a maximum of 2,188 days.

In the Weibull model, the hazard function represents the probability of an event occurring at a specific time, given that the individual has survived up to that time. Instead of assuming a constant hazard ratio, the Weibull model allows the hazard function to follow a Weibull distribution,

Table 2. Standardized mean differences (SMDs) of covariates between the ATC participant group and the non-ATC participant group.

Covariates	Type	SMDs *before* matching	SMDs *after* matching
Age at release	Continuous	0.195	−0.038
Gender (1 = Male)	Binary	−0.094	−0.013
Prior arrests	Continuous	−0.354	−0.002
Duration of prison stay	Continuous	0.103	0.059
Prior prison admissions	Continuous	−0.235	−0.018
Race			
Black	Binary	−0.130	−0.003
White	Binary	0.161	−0.001
Asian	Binary	0.007	0.002
Hispanic	Binary	−0.035	0.002
Holding offense type			
Violent	Binary	−0.212	−0.004
Property	Binary	0.049	−0.019
Drug	Binary	0.134	−0.004
Motor Vehicle or DUI	Binary	−0.014	0.008
Holding Offense Class	Continuous	−0.285	−0.011

providing flexibility in capturing time-dependent risk patterns. The key independent variable in this analysis is the treatment group (1 = ATC participation; 0 = no ATC participation). We also included several other covariates in the model: the number of prior arrests, the number of prior prison admissions, dummy variables for gender (Male), and race/ethnicity (Black, Asian, and Hispanic). Additionally, we incorporated dummy variables to account for variations across different centers where participants were enrolled (Fox Valley, Peoria, and North Lawndale), with the fourth center serving as the reference group.

Besides the Weibull model, we also used the Kaplan-Meier method to estimate the survival probability nonparametrically for both censored and uncensored data (Kaplan & Meier, 1958). Kaplan-Meier survival curves were used to visually represent and compare the probabilities of survival over time for both treatment and control groups, adjusting for censored data. In addition, we conducted a descriptive analysis of the treatment group and the control group. We used R statistical software (version R 4.1.2) and packages MatchIt, survival, SurvRegCensCov, ggplot2, and ggfortify to perform these analyses.

Findings

Arrest outcomes

In the treatment group (ATC participants), 49.0% of individuals were rearrested, and 54.7% of those in the control group (non-ATC participants) were rearrested during the time period examined. ATC participants had a mean of 1.34 rearrests ($SD = 2.19$), a median of 0, and non-participants a mean of 1.55 ($SD = 2.33$) and a median of 1.0. Table 3 presents rearrest data by sample group.

Table 3. Rearrests by sample group.

	ATC participants		Non-ATC participants	
Arrests	*n*	%	*n*	%
Number of rearrests				
0	818	51.0	716	45.3
1	290	18.3	328	20.8
2	176	11.1	202	12.8
3+	295	18.6	333	21.1
First post-arrest class				
Felony	353	46.4	360	41.7
Non-felony	323	42.4	341	39.5
Unknown	85	11.2	162	18.8
First post-arrest type				
Violent	71	9.3	128	14.8
Property	157	20.6	194	22.5
Drug	222	29.2	167	19.4
Weapons	20	2.6	37	4.3
Sex	2	0.3	6	0.7
Other	289	38.0	331	38.3

Note. The sample size was 3,158, with 1,579 in the ATC participant group and 1,579 in the non-ATC participant group.

Figure 1 displays Kaplan-Meier survival curves for the treatment and control groups. According to the curves, ATC participants had a better chance of survival (not being rearrested) post-release. The disparity between the treatment group and the control group increased over time.

Table 4 shows the results of the multivariate survival analysis model with Weibull distribution for post-release arrests. The estimated results of hazard rate (HR) and event time ratio (ETR) indicate that the risk of rearrest was lower, and the survival time was longer for the individuals who participated in ATCs. More specifically, the HR of 0.845 indicates that individuals who participated in ATCs were 15.5% less likely to be rearrested during the follow-up period of this study; participating in ATCs significantly increased the survival time (days from release to their first post-release arrest) by approximately 22.1% as indicated by the ETR of 1.221. The results were consistent across the models with or without the covariates. Additionally, the results indicate significant associations between post-release arrest and factors such as prior arrests, prior prison admissions, race and ethnicity, and the specific center where individuals were enrolled.

Incarceration outcomes

In the treatment group, 20.0% of individuals were readmitted to state corrections, and approximately 30.0% of those in the control group were readmitted during the period examined. Table 5 shares reincarceration data by sample group.

Figure 2 shows the survival curves of reincarceration by treatment and control groups. The curves show that the ATC participants had a better

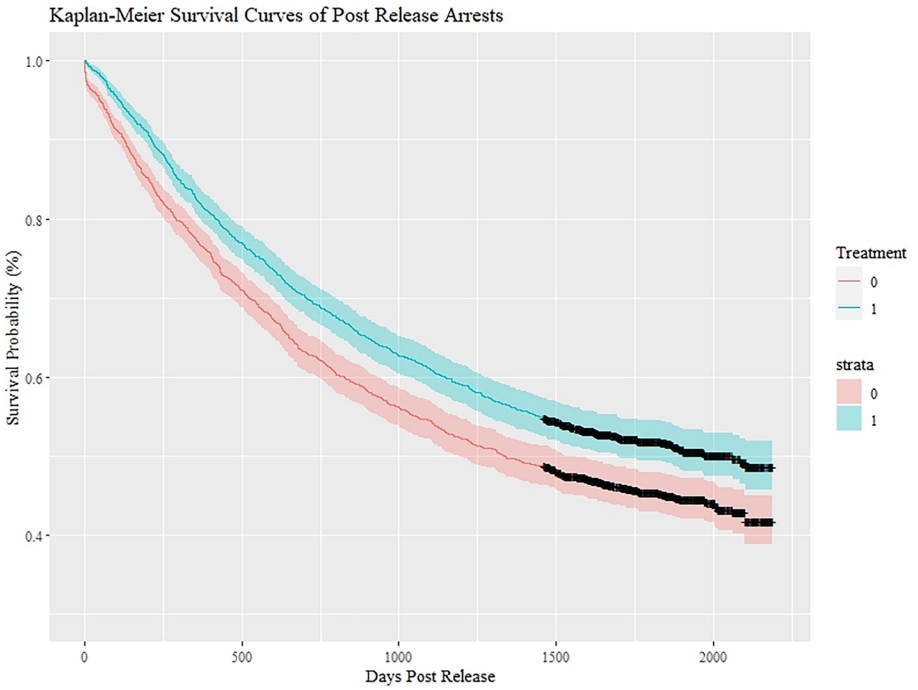

Figure 1. Kaplan-Meier survival curves of post-release arrests.
Note. The sample size was 3,158, with 1,579 in the ATC participant group and 1,579 in the non-ATC participant group. Days post-release is the date from prison release in 2016 or 2017 through December 31, 2021. Treatment 1 = ATC participation, and Treatment 0 = no ATC participation. The dark, thick line at the tail represents censored data points (+) where the individuals have not experienced the event (being rearrested in this case) by the end of the study period.

Table 4. Results of multivariate Weibull model of survival analysis for post-release rearrests.

Covariate	Coefficient	Hazard ratio (HR) (95% CI)	Event time ratio (ETR) (95% CI)	Standard error	*p*
Treatment group	−0.168	0.845 (0.740–0.964)	1.221(1.043–1.429)	0.067	0.013**
Prior arrests	0.212	1.235 (1.223–1.250)	0.776 (0.764–0.788)	0.005	0.000***
Prior prison admissions	0.052	1.053 (1.029–1.078)	0.939 (0.914–0.965)	0.011	0.000***
Male	0.049	1.051 (0.866–1.274)	0.942 (0.749–1.185)	0.098	0.613
Black	0.200	1.221 (1.094–1.363)	0.788 (0.691–0.898)	0.055	0.000***
Asian	−1.131	0.322 (0.120–0.862)	3.838 (1.190–12.381)	0.502	0.024**
Hispanic	−0.230	0.794 (0.637–0.989)	1.314 (1.643–1.148)	0.112	0.040**
Fox Valley ATC	−0.417	0.658 (0.487–0.890)	1.643 (1.148–2.351)	0.153	0.006***
Peoria ATC	0.180	1.198 (1.003–1.431)	0.806 (0.652–0.996)	0.090	0.046**
North Lawndale ATC	0.108	1.114 (0.910–1.365)	0.878 (0.690–1.118)	0.103	0.293

Note: The sample size was 3,158, with 1,579 in the ATC participant group and 1,579 in the non-ATC participant group.
**$p < 0.05$.
***$p < 0.01$.

chance of not being reincarcerated after release. The gap between the treatment group and the control group widened over time until it began to narrow toward the end of the observation period. This suggests that the beneficial effects of participating in ATC may diminish over time.

Similar to the post-release rearrest analysis, we conducted the Weibull model on post-release reincarceration (Table 6). The estimated results of

Table 5. Reincarceration by sample group.

	ATC participants		Non-ATC participants	
	n	%	*n*	%
Reincarceration(s)				
0	1,262	79.9	1,107	70.2
1	222	14.1	272	17.2
2	68	4.3	127	8.0
3+	27	1.7	73	4.6
Prison admission type				
New sentence	208	65.6	293	62.1
Technical violator	109	34.4	179	37.9
New sentence offense Type				
Violent	22	10.6	58	19.8
Property	39	18.8	54	18.4
Drug	89	43.0	96	32.8
Weapons	23	11.1	28	9.6
Sex	0	0.0	7	2.4
Motor vehicle/DUI	22	10.6	21	7.2
Other	13	5.8	29	9.9

Note. The sample size was 3,158, with 1,579 in the ATC participant group and 1,579 in the non-ATC participant group.

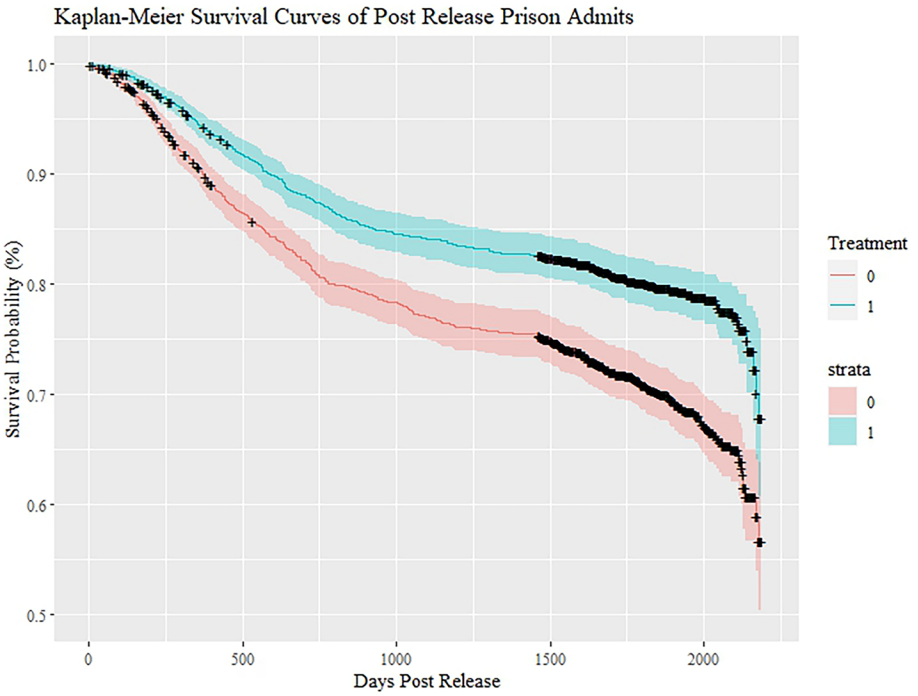

Figure 2. Kaplan-Meier survival curves of post-release incarcerations.
Note: The sample size was 3,158, with 1,579 in the ATC participant group and 1,579 in the non-ATC participant group. Days post-release is the date from prison release in 2016 or 2017 through December 31, 2021. Treatment 1 = ATC participation, and Treatment 0 = no ATC participation. The "+" represents censored data points where the individuals have not experienced the event (being reincarcerated in this case) by the end of the study period.

hazard rate (HR) and event time ratio (ETR) indicated that the risk of reincarceration was lower, and the survival time was longer for the individuals who participated in ATCs. More specifically, with an HR of 0.631, individuals who participated in ATCs were 36.9% less likely to be

Table 6. Results of multivariate Weibull model of survival analysis for post-release reincarceration.

Covariate	Coefficient	Hazard ratio (HR) (95% CI)	Event time ratio (ETR) (95% CI)	Standard error	*p*
Treatment Group	−0.460	0.631 (0.520, 0.766)	1.635 (1.327, 2.014)	0.098	0.000***
Prior Arrests	0.154	1.166 (1.143, 1.188)	0.848 (0.829, 0.867)	0.009	0.000***
Prior Prison Admissions	0.074	1.077 (1.046, 1.109)	0.923 (0.894, 0.953)	0.014	0.000***
Male	0.608	1.836 (1.346, 2.506)	0.522 (0.373, 0.729)	0.158	0.000***
Black	−0.019	0.980 (0.839, 1.145)	1.021 (0.864, 1.206)	0.079	0.804
Asian	−1.799	0.165 (0.023, 1.178)	6.845 (0.836, 56.045)	1.002	0.072
Hispanic	−0.394	0.673 (0.485, 0.934)	1.525 (1.073, 2.166)	0.167	0.018**
Fox Valley	−0.230	0.794 (0.469, 1.344)	1.279 (0.728, 2.246)	0.268	0.391
Peoria	0.232	1.262 (0.970, 1.640)	0.779 (0.588, 1.032)	0.133	0.082
North Lawndale	−0.050	0.950 (0.691, 1.306)	1.055 (0.751, 1.484)	0.162	0.754

Note: The sample size was 3,158, with 1,579 in the ATC participant group (Treatment Group) and 1,579 in the non-ATC participant group.
*$p < 0.05$.
**$p < 0.01$.
***$p < 0.001$.

reincarcerated during the follow-up period of this study; participating in ATCs significantly increased the survival time (days from release to their first post-release incarcerations) by approximately 63.5% as indicated by the ETR of 1.635. The results were consistent across the models with or without the covariates. In addition, the results show significant associations between post-release incarceration and factors such as prior arrests, prior prison admissions, gender, and race and ethnicity.

Discussion

Evidence for ATC as a promising program

We wanted to examine how if at all, Illinois' prison work release program influences recidivism among its participants. What we found was promising: ATC participation was associated with a lower probability of rearrest and reincarceration. In addition, ATC participants had a significantly longer time until their first post-release rearrest and reincarceration than non-participants. Our findings are consistent with other studies that found reduced recidivism for work release participants (Duwe, 2015; Routh & Hamilton, 2015; WSIPP, 2007).

Presumably, the individuals in our sample who did not participate in an Illinois ATC exited the state prison system traditionally (i.e., "gate money" and a bus ticket) (Peck & Theodore, 2008). Further, their patterns of rearrest and reincarceration are similar to recently calculated Illinois reincarceration rates (37.9% of men and 22.5% of women released in fiscal year 2019 returned by 2022) (Illinois Department of Corrections n.d.-c), indicating that traditional prison environments and exits produce expected results. This study presents not only important findings for IDOC's prison work release program but also contributes to the argument for the need for meaningful intervention during the prerelease period.

Interventions that improve recidivism outcomes have the potential to help reduce the estimated $1 trillion annual cost of incarceration in the United States (McLaughlin et al., 2016). In addition, programs can limit the cycle of reentry and reincarceration that impacts a significant number of individuals and their families each year (Silver et al., 2021). Our finding of reduced recidivism outcomes coupled with positive employment outcomes for ATC participants (Reichert et al., 2023b) is hopeful. We believe these findings warrant attention from officials in Illinois regarding corrections and alternative prerelease experiences or interventions such as prison work release programs. Doing so can assist with the stubbornly high rates of recidivism, unemployment, and underemployment of those released from IDOC. Other studies examining work release programs in states such as Florida, Minnesota, and Washington have supported expansion based on fiscal savings, public health improvements, and reduced recidivism compared to traditional incarceration outcomes (Bales et al., 2016; Drake et al., 2009; Northcutt Bohmert & Duwe, 2012).

Post-release services and addressing reentry barriers

Although our study results are promising, we found that the program benefits of reduced rearrest diminished over time, consistent with a prior study, albeit somewhat dated (WSIPP, 2007). In addition, nearly half of the ATC participants were rearrested, and 20% were readmitted to state corrections during our observed time period. The reality is that upon release, many will struggle with houselessness and housing insecurity (Augustine & Kushel, 2022; Herbert et al., 2015; Jacobs & Gottlieb, 2020), treating substance use and successful recovery (Moore et al., 2020), or procuring community mental health treatment and services (Lovell et al., 2002; Thomas et al., 2016); all of which increase the risk of rearrest and reincarceration. Addressing pertinent barriers to reentry can begin with employment assistance through in-custody prerelease programming like work release. However, reentry planning and community support are necessary to help people meet their basic needs upon release (Luther et al., 2011).

To bolster the positive results from ATC participation, we suggest that IDOC implement stringent planning and develop comprehensive pathways with community partners to ensure additional post-release services and support for individuals after release are available and procured in the community. Post-release Individualized Placement and Support (ISP) focused on employment can help with housing insecurity among those with histories of incarceration and co-occurring mental health issues and/or substance use disorder (LePage et al., 2022).

While ATC participants may be well-suited for in-custody programming, post-release services may be particularly pertinent for individuals who

return to disadvantaged communities where resources or employment opportunities may be scarce, a phenomenon ever present in Illinois and Chicago, where large proportions of those released return to only a few, predominately lower-income and segregated neighborhoods, within the city (Imeokparia, 2020; Visher & Farrell, 2005). Services that assist with reentry barriers are shown to increase criminal desistance over time and can improve outcomes for work-release participants (Olson & Lurigio, 2014; Peled-Laskov et al., 2019; Wang, 2022).

Study implications and directions for future research

Simply put, limited data prevent a broader understanding of why Illinois ATC programs reduce recidivism, a pitfall of all recidivism, and outcome research of prison work release programs. Did participants keep their jobs or find new ones to help with reentry barriers? Were they able to use their savings from an ATC to pay mandated fines, restitution, or costs of post-release supervision? Maybe they made vital connections during permitted family visits, which secured future housing. Possibly, substance use disorder treatment or access to community health services during their ATC stay contributed to their reentry success. According to ATC staff and IDOC administration, these are just a few of the therapeutic, familial, health, and financial benefits of ATC that differentiate them from traditional prison environments and ultimately contribute to the success of ATC participants (Maranville et al., 2025).

Future research should address this study's limitations by matching on additional variables such as education levels, mental health status, and criminogenic risk scores from a validated assessment tool to understand recidivism outcomes better. In addition, future research should investigate outcomes beyond recidivism, such as housing stability, increased social capital, or gains in employment and financial capital related to participation in prison work release programs and other prerelease services that engage in similar programming. Finally, it would be valuable to investigate how other experiences during ATC participation (e.g., engagement in skill-building programs, access to community health services) and post-release experiences (e.g., housing, social supports, and stigma) impact outcomes for the unique and relatively small population of Illinois prison work release participants. Doing so will provide meaningful insight into beneficial supports during and post-prison release for participants and the field of reentry as a whole.

Limitations

Several limitations warrant consideration. First, data constraints precluded the inclusion of variables such as education, serious mental illness, income

or employment, conditions or characteristics of the communities they return to, criminogenic risk, and prison disciplinary records, potentially affecting propensity score matching and recidivism analysis, as well as mortality rates. Second, COVID-19-related reductions in arrest and reincarceration rates during 2020–2021 may have impacted recidivism rates, though effects likely affected both groups equally (Sawyer, 2022). Finally, outcome variables were limited to arrest and correction data from Illinois, excluding out-of-state and federal data and additional measures like post-release employment.

Conclusion

There have been limited prior studies on the recidivism of participants of work release centers following prison release in Illinois. This study addresses this gap by leveraging current datasets and employing comprehensive analytical methods to evaluate the recidivism outcomes of these programs. Our findings demonstrated the potential effectiveness of ATCs in reducing recidivism, showing a significantly lower risk of rearrest (15.5% reduction) and reincarceration (36.9% reduction) compared to a matched control group of non-participants. ATC participants also experienced more extended time periods before their first post-release arrest and reincarceration than non-participants. Also, we observed some reduction in effectiveness over time, particularly for reincarceration, which is supported by previous research on work release programs.

Our results support the argument that prerelease employment programming like prison work release is a viable alternative to traditional incarceration environments and exits. We suggest facilitating comprehensive and individualized prerelease planning to ensure awareness and access to available post-release services. Doing so can address reentry barriers outside of employment to improve ATC participant outcomes. We also suggest more data to understand ATCs and their impact. Despite some limitations, our findings have important implications for criminal justice policy and practice, suggesting that ATCs could yield significant benefits for individuals, communities, and society.

Note

1. Under certain circumstances such as re-admission after serving parole out of state, individuals may receive a new IDOC number. Where applicable, researchers matched records to ensure the validity of analyses.

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