Desistance from Crime over the Life Course

Final Summary Report

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Abstract

PURPOSE: The Desistance from Crime over the Life Course study focused on 479 men and women from South Carolina who were enrolled as participants in a multi-site reentry program evaluation shortly before prison release in 2004-2005. The study goals were to (1) update information on current status across multiple domains, including housing, employment, and substance use; (2) collect additional recidivism data to examine long-term offending patterns; and (3) acquire information about factors individuals associated with decisions to desist from further criminal activity.

RESEARCH SUBJECTS: Between 2004 and 2005, 345 men, 79 boys, and 55 women incarcerated in South Carolina were interviewed about 30 days before release from prison/juvenile detention for inclusion in the multi-site evaluation of the Serious and Violent Offender Reentry Initiative (SVORI). The male subjects (men and boys) were about 27 years and the female subjects were about 30 years of age at the time of release. The men were most likely to be black (63%) while the women were equally likely to be black or white (46%). The women were less likely than the men to report having been employed during the 6 months prior to their original incarceration but were more likely to report having a high school diploma or equivalent. Overall, the participants had extensive criminal histories and about 33% reported having received drug treatment prior to the interview.

METHODS: Arrest records through December 31, 2015 were obtained from the South Carolina Law Enforcement Division for all 479 subjects. The interview instrument included modules from the original SVORI interviews, new modules focused on factors linked to emerging theories of desisting behavior, and a life event calendar captured details of their experiences between their original release from prison and the interview. Interviews were conducted between 9/10/2016 and 3/3/2017 with 208 individuals (174 men and 34 women). Quantitative analyses included (1) descriptive analyses of interview data to identify the current status of individuals; (2) lognormal survival, negative binomial, and logistic recidivism analyses; and (3) qualitative analyses of responses related to the factors associated with criminal persistence and desistance.

RESULTS: Recidivism, measured as at least one new arrest, was experienced by 90% of the sample. On average, individuals had about 7 arrests (with an average of 11 charges) after their SVORI incarceration. Majorities of the sample had at least one post-SVORI charge for a person, property, and public order/order offense, while 49% had at least one new drug charge. Results from sequential lognormal survival models predicting time to first arrest, second arrest, and so forth following the original release show those older at release had, on average, longer times to rearrest following the first arrest, while property priors were associated with shorter times. Consistent with previous findings, those with more prior arrests had shorter times to subsequent arrests and those who were older at first arrest had longer times to subsequent arrests. Negative binomial model results show that having completed high

school at the time of the SVORI-related release predicted fewer post-SVORI arrests, while being younger at first arrest and having more priors predicted more post-SVORI arrests. Interview results suggest that individuals were somewhat less likely to be working in 2016-2017 than they were immediately following their SVORI release 10 years or so prior. They were also more likely to report drug use and having engaged in criminal behavior over this much more extensive period than during the 3-15 months following the original release. A similar percentage (18%) was incarcerated at the time of the 2016-2017 interview as was incarcerated during original follow-up interviews. Qualitative findings were consistent with other recent research on desistance. Common reasons stated for not committing crimes included incarceration having a deterrent effect, consideration for children and family, changes in the way individuals think about and perceive crime, a change in lifestyle, employment, religion, and sobriety. Conversely, events that were more likely to encourage criminal involvement included financial or employment issues, drugs and alcohol use, stressful events including the death of a family member, and antisocial peers.

CONCLUSIONS: Most of the 479 subjects had been arrested at least once following their participation in the SVORI evaluation, with little variation in arrest patterns between the male and female participants. Criminal history indicators were the strongest predictors of recidivism, while completing 12th grade was the only non-criminal factor consistently significant in the analyses with those with more education doing better. The qualitative analyses provide support for recent work examining the factors associated with desistance that suggests identity transformation may be necessary (if not sufficient) to facilitate movement away from criminal behavior. The quantitative findings with respect to education also provide support for this work as education is a traditional pathway to new opportunities.The findings point to the need for additional work to identify interventions that may facilitate desisting behavior through individual transformation as opposed to interventions that address specific needs.

The research is limited by several factors. First, the subjects were individuals recruited for a prisoner reentry program evaluation in 2004-2005 in South Carolina; results may not be generalizable to other populations (or even to a more general South Carolina prisoner population). The interview findings are further limited to the roughly 50% of the original sample who were located and interviewed. Although analyses comparing these respondents to non-respondents using the original SVORI data revealed no significant differences between the two groups, there is always a possibility that those who were located and consented to a new interview differ from those who were not on unobservable measures.

Problem and Purpose

Given that most prisoners return to society and soon re-engage in criminal activity, research on the dynamic process of desistance from criminal activity among released prisoners is important to policy makers and criminal justice practitioners. A better understanding of these processes could help to identify more effective strategies to reintegrate offenders into the community while reducing the likelihood that they return to criminal activity. Yet, the understanding of the process of desistance from crime is underdeveloped.

Much of the focus of criminal interventions has been to address needs and deficits correlated with criminal activity (e.g., Lattimore and Visher, 2014, MacKenzie, 2006; Visher, Lattimore, Barrick, & Tueller, 2017). These deficits include drug use, mental health issues, and limited education and job skills. Wraparound services, including transportation and housing, and help obtaining identification and licenses, have also been included in the bundles of services provided by reentry programs hoping to prevent returning prisoners from re-engaging in criminal conduct. Research suggests cognitive-behavioral approaches and programs that target criminogenic factors and individual needs and focus on individual-level change may be most effective at reducing recidivism among adults and juveniles (Andrews & Bonta, 2003; Andrews et al., 1990; Aos et al., 2006; Fonagy & Kurtz, 2002; Lipsey, 1995; Lipsey & Cullen, 2007; MacKenzie, 2006). In line with this research, Visher et al. (2017) show services associated with individual needs (mental health and substance use treatment, assistance working on personal relationships, training on changing criminal attitudes, anger management, and education) were more likely to be associated with reduced recidivism than more practical services (case management, needs assessment, reentry planning and programming, life skills, and employment services) (also see Lattimore, Barrick, Cowell, Dawes, Steffey & Tueller, 2012).

Criminologists have proposed that the factors associated with desistance from criminal activity may differ from factors associated with ongoing engagement. For example, identity transformation (from the criminal to the noncriminal) has been suggested as a necessary first step away from criminality (e.g., Giordano, Cernkovich, & Rudolph, 2002; Paternoster & Bushway, 2009). Absent this transformation, programming that focuses on structural or instrumental factors like employment skills and assistance finding housing or transportation may be of limited use in reducing recidivism.

For example, Giordano and colleagues place an emphasis on human agency and stress the importance of individual identity and cognition in explaining desistance, proposing a theory of cognitive transformation grounded in symbolic interactionism (Giordano, et al., 2002, 2007). Paternoster and Bushway (2009) build on this and other early work with a theory of multifaceted identity that includes a "working self" and "possible self." Individuals commit to the working (criminal) self until its costs outweigh its benefits—gradual change in identity occurs as failure and dissatisfaction are linked to the

working self. Once the criminal identity is weakened, identity change is possible. As described by Paternoster and Bushway (2009, p. 1105), the "perceived sense of a future or possible self as a non-offender coupled with the fear that without change one faces a bleak and highly undesirable future provides the initial motivation to break from crime." After the criminal identity is weakened and a non-offender possible self is considered, then the individual might move toward conventional institutions such as employment and marriage.

Some evidence in support of the identity theory of desistance (ITD) emerged from a study examining the long-term recidivism of drug-using offenders (Bachman, Kerrison, Paternoster, O'Connell & Smith, 2016; also see Na, Paternoster, & Bachman, 2015; Paternoster, Bachman, Kerrison, O'Connell, & Smith, 2016). Interviews were conducted with 304 individuals who participated in drug treatment demonstration projects in 1989 and 1990 approximately 20 years after the original studies. The interview data were qualitatively analyzed and the results suggest that offenders who desisted from crime and substance use underwent an identity transformation that was motivated by the realization that they needed to change to avoid an undesirable future, such as dying in prison.

Na, Paternoster, and Bachman (2015) used longitudinal data from the same cohorts of individuals followed by Bachman and colleagues to examine the role of self image and efforts to improve self (as measured by treatment seeking). They found support in the results of their growth-curve models for these factors to be associated with long-term desistance from substance use and crime (measured by arrest). Using different analytic approaches to examine ITD with the same data, Paternoster and colleagues (2016) subsequently found that postitive identity and treatment-seeking was positively and significantly related to longer time to rearrest.

Additional evidence is suggested in interview data collected for the Multi-site Evaluation of the Serious and Violent Offender Initiative (SVORI)[1] (see, e.g., Lattimore and Visher, 2009). During follow-up interviews (3, 9, and 15 months post release from incarceration associated with study enrollment), respondents were asked to identify reasons why they were newly incarcerated—if they were incarcerated—and why they were no longer engaging in criminal behavior—if they were not incarcerated. The responses suggested clear differences between the two groups with many of the incarcerated respondents 'blaming' others for their continued engagement in crime and subsequent incarceration and those who were not incarcerated pointing to changes in themselves. For example, the most common

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[1] The Multi-site Evaluation of the Serious and Violent Offender Reentry Initiative was supported by NIJ grants 2003-RE-CX-K101 and 2004-RE-CX-002; see, e.g., *The Multi-site Evaluation of SVORI: Summary and Synthesis* (December 2009) by P.K. Lattimore and C.A. Visher available from the National Criminal Justice Reference Service https://www.ncjrs.gov/pdffiles1/nij/grants/230421.pdf. Prisoner Reentry Services: What Worked for SVORI Evaluation Participants was funded by NIJ grant 2009-IJ-CX-0010; see, e.g., Lattimore, P.K., Barrick, K., Cowell, A., Dawes, D., Steffey, D., & Tueller, S. (April 2012). *Prisoner Reentry Services: What Worked for SVORI Evaluation Participants* (https://www.ncjrs.gov/pdffiles1/nij/grants/238214.pdf).

reasons given for returning to prison were using drugs/alcohol, feeling their parole officer wasn't helpful, and the influence of friends. The most common reasons given for not returning to prison were supportive family and being "committed to not going back to prison." These findings support Paternoster et al.'s (2016, p. 1206) hypothesis that "Offenders can, then, operate with a self-serving bias (Miller & Ross, 1975) whereby they attribute their success at crime to their own wit and skills, and their failures to chance or someone else. The process of identity change occurs when, after repeated failures, the illusion of the self-serving bias begins to be questioned, and failures get connected and projected into the future."

The current study focuses on the 479 men, women and boys who were the South Carolina participants in the original SVORI evaluation and who were enrolled and released from prison in 2004 and 2005. The original SVORI data suggest that these respondents were similar to the multi-site sample—with "committed to not going back to prison" the most common reason for desisting and using drugs or alcohol as the most common reason for persisting (see ***Exhibit A-1*** in Appendix A).

The goals of the current study were to (1) update information on the current status of these individuals across multiple domains (e.g., housing and employment); (2) acquire information about the factors individuals associated with their decisions to desist from criminal activity, as well as circumstances associated with renewed criminal activity or desistance; and (3) gather additional administrative recidivism data to examine long-term offending patterns. Interviews were conducted with those who were located and additional administrative arrest data were acquired for the full sample, providing recidivism followup over at least a 10 year period.

Research Design

Between 2004 and 2005, 479 individuals (345 men, 79 boys, and 55 women) were enrolled and interviewed as South Carolina participants in the Multi-site Evaluation of the Serious and Violent Offender Reentry Initiative (SVORI)[2]. All initial, Wave 1, interviews were conducted in prison or juvenile detention facilities about 30 days prior to release[3]. Subsequently, three follow-up waves of interviews were conducted at 3, 9, and 15 months following the original release in the community or, for those reincarcerated, in prison or jail. These interview data were supplemented with arrest and prison incarceration data collected from state agencies (e.g., Lattimore and Visher, 2009; Visher et al., 2017).

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[2]Determination of where to conduct this extended follow-up was constrained by considerations of costs (i.e., budget ceilings limited the number of places where interviews could be conducted). The SVORI evaluation included 2,391 participants in 12 adult and 4 juvenile sites (1,697 adult males, 357 adult females, and 337 juvenile males). South Carolina had 21% of all adult males, 15% of all adult females, and 23% of juvenile males, offering the largest number of subjects in a single site.

[3] The initial SVORI interviews were conducted about 30 days prior to release between July 31, 2004 and November 30, 2005.

For the current study, a new interview instrument was developed that included modules from the original evaluation, new modules that focused on factors linked to emerging theories of desisting behavior, and a life event calendar to capture details of their experiences between their original release from prison (2004 or 2005) and the date of the interview. The instrument covered a number of domains over the life-event calendar period, including basic demographic information, education, attitudes (e.g., legal cynicism), receipt of programs and services, family (marriage, children, and intimate relationships), physical and mental health, criminal identity, peers, social support, location and living arrangements, employment and income, leisure activities, stressful life events, substance use, and avoided and committed criminal behavior. Although most items had closed responses, several were open-ended.

Extensive tracing efforts were used to locate individuals for interviews that were conducted between September 10, 2016 and March 3, 2017. Of the original 479 study participants, 29 were confirmed to have died[4]; 24 had moved from South Carolina[5]; and 34 were unavailable during the interview period[6]. We were unable to contact (locate) 149 individuals. There were 30 refusals by respondents and 3 refusals by others for potential respondents. Two interviews were terminated by the respondent before completion (consent withdrawn) and were lost. Thus, 208 individuals were successfully located and completed the interview (171 in the community and 37 in prison)[7]. Of the 208, 174 were male (24 of whom were juvenile males at the time of their original release) and 34 were female. Interviews were conducted by experienced and trained field interviewers using laptop computers. The field interviewer read a series of questions from the laptop screen and entered the respondent's answers. For some questions, individual responses were audio recorded for subsequent transcription.

Administrative arrest data through December 31, 2015 were obtained from the South Carolina Law Enforcement Division (SLED). Analyses comparing characteristics at the time of the original study release showed no significant differences between those who responded to the new interview and those who did not respond.

Quantitative analyses included (1) descriptive analyses of interview data to identify the current status of individuals; (2) recidivism analyses; and (3) qualitative analyses of responses related to the factors associated with criminal persistence and desistance. Recidivism analyses included negative binomial

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[4] Deaths were confirmed for 2 boys (at initial SVORI release), 24 men, and 3 women.

[5] The structure of the interview required that it be administered in person so individuals out of state were not contacted for a potential telephone interview.

[6] Of those unavailable to be interviewed, eight were incarcerated out of state (or in one case, in Federal custody), one was in segregation in a SC prison, and two were in jail.

[7] The overall response rate was 46.2% (208 interviews of 450 eligible—nondeceased—respondents). There was variability in response rates across the demographic groups—the response rate was 43.7% for the male participants (150 of 321 or 46.7% for men at SVORI release; 24 of 77 or 31.1% for juvenile males at SVORI release) and 65.4% for females (34 of 52 female subjects).

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models examining the number of arrests following the original release (with offset for prison incarceration and time at risk), lognormal survival models examining the factors associated with the time to rearrest for each new arrest following the original release up to 10 new arrests ("gap analyses"); and graphical analyses that plotted number of arrests each year following the original release and accompanying logistic regression models that examined factors associated with rearrest in each of 10 years following the original release.

The qualitative analyses were based on the short-answer items that were either manually entered into the computer by the interviewer or audio-recorded and then transcribed. The open-ended questions covered: (1) reasons for avoiding criminal behavior in at least the past 6 months; (2) reasons for avoiding criminal behavior in periods in which they were tempted to commit crime; (3) life events that occurred during periods when they were less likely to engage in criminal behavior; and (4) life events that occurred during periods when they were more likely to engage in criminal behavior. Audio recordings of interviews were transcribed and merged with those that were manually typed. Qualitative content analysis was used to examine themes in the short response items. An initial set of codes was developed and additional codes were added after iteratively reading the transcripts. (See Appendix B.)

Findings

Characteristics of the subjects at the time of their original SVORI interview are shown in *Exhibit 1*. The original sample of 479 included 424 men and boys and 55 women. For this study, the two male samples were combined so the men were somewhat younger then the women at release because of the inclusion of the boys with the adult men. The men were most likely to be black (63%) while the women were equally likely to be black or white (46%). The women were less likely than the men to have reported being employed during the 6 months prior to their original incarceration (53% v. 65%), but were more likely to have reported having a high school diploma or equivalent (66% v. 39%). Overall, the sample had an extensive criminal history and 36% were classified as high risk; 33% reported having had drug treatment prior to the original interview.

Exhibit 1. Subject characteristics at Wave 1 SVORI interview (approx. 30 days prior to release, 2004-2005)

Variable	All (N = 479)		Males (N 424)		Females (N = 55)	
	Mean	SD	Mean	SD	Mean	SD
Age at release	27.4	7.655	27.1	7.950	30.2	3.854
Male=1	0.885	0.319	1.00		0.00	
Race=black=1	0.614	0.487	0.634	0.482	0.455	0.503
Race=Hispanic=1	0.013	0.111	0.012	0.108	0.018	0.135
Race=white=1	0.330	0.471	0.314	0.465	0.455	0.503
Race=other=1	0.044	0.205	0.040	0.196	0.073	0.262
Employed 6 months prior to incarceration	0.637	0.481	0.651	0.477	0.527	0.504
Completed 12th grade or equivalent	0.418	0.494	0.388	0.488	0.655	0.480
Currently married or in steady relationship	0.404	0.491	0.381	0.486	0.582	0.498
Age at first arrest (minimum of 7)	17.1	5.766	16.8	5.857	19.4	4.406
Total prior arrests	7.6	6.694	7.0	6.239	12.3	8.114
Times convicted (max 30; 98th percentile)	4.5	5.344	4.2	5.017	7.0	6.962
Times juvenile lockup	0.797	1.502	0.807	1.367	0.7	2.310
Conviction Offense=Drug	0.256	0.437	0.254	0.436	0.273	0.449
Conviction Offense=Person/Violent	0.391	0.489	0.428	0.495	0.109	0.315
Conviction Offense=Property	0.334	0.472	0.301	0.459	0.582	0.498
Conviction Offense=Public Order/Other	0.228	0.420	0.222	0.416	0.273	0.449
In for probation or parole violation=1	0.305	0.461	0.303	0.460	0.327	0.474
LSI-R:SV risk classification=maximum	0.363	0.481	0.382	0.486	0.218	0.417
Prior AOD treatment=none=1	0.669	0.471	0.697	0.460	0.455	0.503
Prior AOD treatment=once=1	0.142	0.350	0.137	0.344	0.182	0.389
Prior AOD treatment=2 or more=1	0.188	0.391	0.165	0.372	0.364	0.485

Recidivism was measured as one or more new arrests following the original SVORI release. Data were obtained from South Carolina Law Enforcement Division for arrests through December 31, 2015. *Exhibit 2* shows the frequency distribution of lifetime arrests and the frequency distribution of arrests post release from the original SVORI study (since 2004-2005). (Two of the juvenile male participants had zero arrests, reflecting original confinement on a juvenile detainer and no subsequent recidivism arrests.) The maximum number of lifetime arrests was 60 and post-SVORI arrests was 33. Lifetime median number of arrests was 12 and median number of post-SVORI arrests was 4.

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Exhibit 2. Distributions of lifetime and post-SVORI arrests for the SC sample through December 2015.
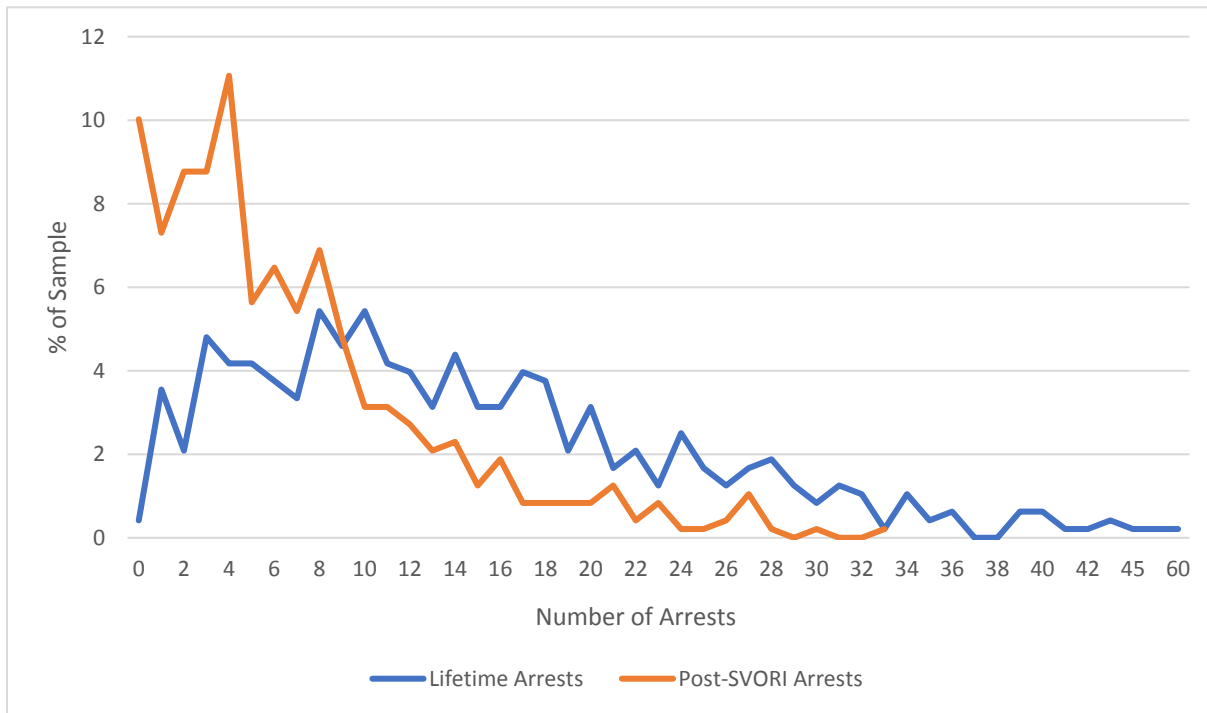
Note: Two juvenile males had zero arrests, reflecting original confinement on a juvenile detainer and no subsequent recidivism arrests.

Exhibit 3 shows additional information about arrest history prior to the SVORI incarceration. On average, individuals had experienced nearly 8 arrests (14 charges) prior to their SVORI incarceration. Most had at least one prior charge for each of a person, property, drug, and public order/order offense.

Exhibit 3. Arrest history (prior to SVORI incarceration) for the SC sample (N = 479)

Variable	Mean	SD
Number arrest events	7.570	6.694
Has a prior person charge=1	0.653	0.476
Has a prior property charge=1	0.666	0.472
Has a prior drug charge=1	0.557	0.497
Has a prior public order/other charge=1	0.704	0.457
Number prior charges	13.818	12.849
Number prior person charges	2.144	2.841
Number prior property charges	5.557	8.618
Number prior drug charges	2.159	3.129
Number prior public order/other charges	3.958	4.833

Exhibit 4 shows information about arrests following the SVORI incarceration. Ninety percent had been arrested at least once. On average, individuals had nearly 7 arrests (with an average of 11 charges)

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after their SVORI incarceration. Most had at least one post-SVORI charge for each of a person, property, and public order/order offense, while 49% had at least one new drug charge.

Exhibit 4. Post-SVORI arrests for the SC sample (N = 479)

Variable	Mean	SD
Number arrest events	6.900	6.229
Has an arrest=1	0.900	0.301
Days to first arrest	531.622	596.532
Has a person charge=1	0.520	0.500
Has a property charge=1	0.601	0.490
Has a drug charge=1	0.491	0.500
Has a public order/other charge=1	0.810	0.393
Number of charges	10.923	9.644
Number of person charges	1.382	2.042
Number of property charges	3.271	5.316
Number of drug charges	1.390	2.076
Number of public order/other charges	4.879	5.064

Differences between Recidivists and Desisters

Ninety percent of our sample experienced at least one arrest following their SVORI release in 2004-2005. There are substantial differences between those with no new arrests (desisters) and those with one or more (recidivists). *Exhibit 5* presents results on several key measures. The desisters were older at release, more likely to be white (less likely to be black), and more likely to have completed high school (or equivalent). About 88% of both the desisters and the recidivists were male.

A criminal past was definitely a prologue for these subjects. Desisters were considerably older at first arrest (24 on average versus 16) and had fewer prior arrests (5 versus 8), arrest charges (9 versus 14) and convictions (2.7 versus 4.7)[8]. Desisters had fewer juvenile detentions and were less likely to have been serving time for a probation/parole violation. There were also significant differences in conviction offenses—desisters were much more likely to have been serving time for a person/violent offense and much less likely to have been serving time for a property offense. Fewer desister were classified as high risk on the LSI-R (12.5% versus 39%). The desisters were also less likely to have reported receiving substance abuse treatment (21% versus 34%).

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[8] Desisters were also less likely to have any prior charges for property, drug, and public order/other offenses and to have fewer of these charges on average. While they were more likely to have a prior person/violent offense, the mean number of person/violent charges was less for the desisters than the recidivists. (Data not shown.)

Exhibit 5. Comparison of baseline characteristics of those who desisted and those who recidivated

Variable	Desisters (N 48)		Recidivists (N = 431)		t statistic
	Mean	SD	Mean	SD	
Age at release*	**33.854**	10.443	**26.717**	6.935	4.623
Male=1	0.875	0.334	0.886	0.318	-0.233
Race=black=1*	**0.375**	0.489	**0.640**	0.480	-3.623
Race=Hispanic=1	0.021	0.144	0.012	0.107	0.430
Race=other=1	0.104	0.309	0.037	0.189	1.474
Race=white=1*	**0.500**	0.505	**0.311**	0.463	2.657
Employed 6 months prior to incarceration	0.729	0.449	0.626	0.484	1.404
Completed 12th grade or equivalent*	**0.625**	0.489	**0.395**	0.489	3.083
Currently married or in steady relationship	0.354	0.483	0.409	0.492	-0.737
Age at first arrest (minimum of 7)*	**24.255**	11.158	**16.301**	4.154	4.851
Total prior arrests*	**4.917**	5.971	**7.865**	6.711	-2.918
Total prior arrest charges*	**8.958**	11.329	**14.360**	12.906	-2.782
Times convicted (max 30; 98th percentile)*	**2.729**	3.874	**4.719**	5.452	-3.215
Times juvenile lockup*	**0.065**	0.250	**0.876**	1.558	-9.661
Conviction Offense=Drug	0.156	0.367	0.266	0.443	-1.622
Conviction Offense=Person/Violent*	**0.644**	0.484	**0.364**	0.482	3.706
Conviction Offense=Property*	**0.178**	0.387	**0.350**	0.478	-2.345
Conviction Offense=Public Order/Other	0.133	0.344	0.238	0.427	-1.597
In for probation or parole violation=1*	**0.167**	0.377	**0.321**	0.467	-2.207
LSI-R:SV risk classification=maximum*	**0.125**	0.334	**0.390**	0.488	-4.934
Prior AOD treatment=none=1	0.792	0.410	0.656	0.476	1.901
Prior AOD treatment=once=1	0.104	0.309	0.147	0.354	-0.795
Prior AOD treatment=2 or more=1	0.104	0.309	0.198	0.399	-1.927

*Note: *** p < .001, ** p < .01, * p < .05*

Recidivism Gap Analyses

Results from the sequential lognormal survival models predicting time to first arrest, second arrest, and so forth following the original release from prison are included in ***Exhibit A-2. Exhibit 6*** shows the results for the first three models—i.e., time to first arrest following release, time to second arrest following first arrest, and time to third arrest following second arrest (predictors are from the original SVORI pre-release interview). Those older at release had, on average, longer times to rearrest following the first arrest, while property priors were associated with shorter times. Consistent with most findings in the literature, those with more prior arrests had shorter times to subsequent arrests and those who were older at first arrest had longer times to subsequent arrests.

Exhibit 6. Lognormal survival results for time to first, second, and third post-SVORI arrests

Variable	First Arrest		Second Arrest		Third Arrest	
	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err
(Intercept)	**4.84***	0.484	**4.854***	0.708	**4.401***	0.744
Race=white	0.222	0.16	-0.03	0.214	0.044	0.221
Employed 6M prior to incarceration	0.104	0.154	-0.093	0.203	0.247	0.209
Completed 12th grade or equivalent	0.235	0.154	0.033	0.205	0.138	0.213
Age at release	0.008	0.014	**0.059***	0.019	0.027	0.02
Conviction offense=Person/Violent	0.334	0.2	-0.059	0.263	-0.009	0.265
Conviction offense=Property	**-0.575***	0.195	-0.077	0.255	-0.209	0.256
Conviction offense=Drug	0.094	0.207	0.094	0.272	0.037	0.277
Conviction offense=Public Order/Other	-0.1	0.19	-0.15	0.248	-0.209	0.247
In for probation/ parole violation	-0.033	0.159	-0.02	0.21	0.02	0.214
Times juvenile lockup	-0.086	0.053	-0.06	0.069	0.019	0.068
Total prior arrests	**-0.026***	0.007	**-0.033***	0.009	**-0.04***	0.01
Male=1	-0.206	0.235	-0.449	0.318	-0.207	0.333
Age at first arrest	**0.077***	0.018	0.012	0.028	0.056	0.03
Log(scale)	**0.379***	0.035	**0.612***	0.038	**0.57***	0.04
N	460		417		373	

Note: *** p < .001, ** p < .01, * p < .05

Negative Binomial Recidivism Model Results

Results from the negative binomial model are shown in ***Exhibit 7.*** The dependent variable is the number of arrests (0 to 33) following the SVORI-related release and predictor values are from the SVORI pre-release interview. Completing high school (or the equivalent) predicts fewer post-SVORI arrests, while being younger at first arrest and having more priors predict more post-SVORI arrests.

Exhibit 7. Negative binomial results for number of post-SVORI arrests

Variable	Incident Rate	Estimate	Std. Error	z value
(Intercept)	**0.004***	-5.497	0.318	-17.2863
Race=white	1.026	0.026	0.103	0.2510
Male=1	0.932	-0.070	0.151	-0.4665
Age at release	0.986	-0.014	0.009	-1.5532
Completed 12th grade or equivalent	**0.698***	-0.359	0.100	-3.6011
Employed 6M prior to incarceration	1.132	0.124	0.098	1.2670
Age at first arrest	**0.945***	-0.057	0.012	-4.5464
Times juvenile lockup	1.033	0.032	0.033	0.9771
Total prior arrests	**1.027***	0.027	0.004	6.5164
Conviction offense(s)=Person/Violent	0.837	-0.178	0.127	-1.4055
Conviction offense(s)=Property	1.147	0.137	0.124	1.1059
Conviction offense(s)=Drug	0.96	-0.041	0.132	-0.3135
Conviction offense(s)=Public Order/Other	1.137	0.129	0.120	1.0743
In for probation/ parole violation	1.037	0.037	0.101	0.3640

Note: *** p < .001, ** p < .01, * p < .05

Patterns of Rearrest

The patterns of rearrest were also examined using an innovative method for visualizing event patterns and more traditional logistic regression. ***Exhibit 8*** shows the number of arrests each year following the SVORI release for each individual in the sample. (The graph is composed of stacked horizontal lines with each line corresponding to one individual. Each line shows the number of arrests each year following release with a gradient of color—darker segments representing more arrests during the year; see Tueller, Van Dorn, & Bobashev, 2016.) Death events are indicated by an "o" and the lines for the individuals who died during follow-up are at the bottom of the chart.

The dark orange lines at the top of the chart for the initial 1-year period indicate that some individuals had many arrests (up to 9) in the year following release. About half of the sample had no arrests during that first year as is indicated by the large number of lines that are light yellow during the initial 1-year period. The 10% who experienced no new arrests for the full 10-year period following their SVORI release are the group of lines at the bottom of the chart (above the 29 who died during the follow-up period). The overall graphic suggests that the pattern of arrest events varies considerably across these individuals—e.g., ranging from the desisters (no arrests in any year) to those with many arrests early on to those with high frequencies of arrests throughout the 10-year period.

To examine arrest patterns more closely, a series of logistic models were estimated to examine the factors predicting any arrest each year. ***Exhibit 9*** shows the first three years' results. (Results for all 10 years are in ***Exhibit A-3***.) Age and criminal history were most often predictive of an arrest, consistent with expectations.

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Exhibit 8. Distribution of post-SVORI arrests over 10 years' follow-up following SVORI release
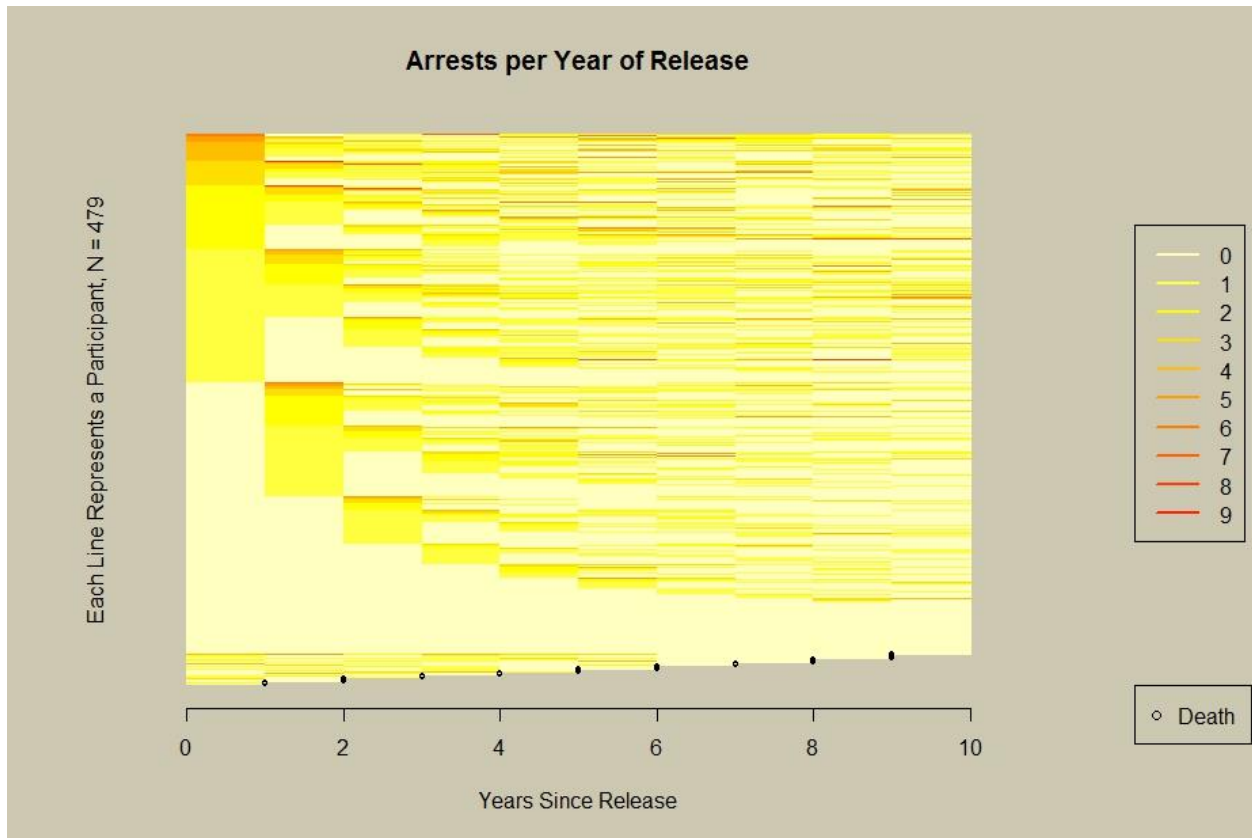
Note:This graphic is composed of a stacked set of lines with one for each of the 479 individuals in the analyses. The x-axis is the years, up to 10, following release. The color of the line segments indicates the number of arrests that was experienced by an individual during the first, second, …, 10th year following release, with darker segments indicating more arrests during the period.. The lines for the 29 individuals who died during follow-up are at the bottom of the chart with their deaths indicated by a circle. Above these, are the lines for the individuals who experienced no arrests during the 10 years.

Exhibit 9. Logistic model results for any arrest in years 1, 2 and 3 following SVORI release

Variable	Year 1			Year 2			Year 3		
	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err
(Intercept)	0***	-7.989***	1.451	0.002***	-6.256***	1.279	0.001***	-7.558***	1.441
Race=white	1.42	0.351	0.522	2.539*	0.932*	0.406	0.893	-0.113	0.385
Employed 6M prior to incarceration	0.585	-0.535	0.53	1.416	0.348	0.454	0.488	-0.718	0.382
Completed 12th grade or equivalent	0.837	-0.178	0.596	0.805	-0.216	0.429	3.093**	1.129**	0.372
Age at release	0.934	-0.068	0.053	1.079*	0.076*	0.034	1.054	0.053	0.033
Conviction offense= Person/Violent	2.392	0.872	0.618	2.068	0.727	0.536	1.349	0.299	0.478
Conviction offense= Property	0.966	-0.035	0.569	1.203	0.185	0.467	1.15	0.14	0.447
Conviction offense= Drug	1.327	0.283	0.564	3.171*	1.154*	0.539	1.838	0.609	0.478
Conviction offense= Public Order/Other	1.11	0.104	0.553	0.521	-0.652	0.646	0.699	-0.359	0.421
In for probation/ parole violation	1.292	0.256	0.421	1.146	0.136	0.44	0.801	-0.221	0.369
Times juvenile lockup	0.86	-0.151	0.14	0.981	-0.019	0.129	0.8	-0.223	0.236
Total prior arrests	1.017	0.017	0.019	0.957*	-0.044*	0.022	0.973	-0.027	0.015
Male=1	0.837	-0.178	0.621	0.103***	-2.278***	0.605	0.643	-0.441	0.567
Age at first arrest	1.197**	0.18**	0.064	0.965	-0.036	0.049	1.054	0.052	0.05
N with no arrests	234			227			257		
N with any arrest	198			205			175		

*Note: *** p < .001, ** p < .01, * p < .05*

Self-Reported Employment, Drug Use, Violence, and Crime

The in-person interviews conducted in 2015-2016 (N = 208) covered a variety of domains. Results are reported here for key domains—employment, self-reported drug use, and self-reported violence and crime (**Exhibit 10**). Results from this interview are compared to results for the same sample from the original SVORI follow-up interviews. (Results comparing the full SC sample to the 2016 sample are in **Exhibit A-4**.)

Individuals were somewhat less likely to be working in 2015-2016 than they were immediately following their SVORI release—about two-thirds reported currently working in the 2015-2016 interview compared to about 80% who reported working in 2005-2007. In reports on their behavior since their SVORI release in 2004-2005, respondents were more likely to report drug use and having engaged in criminal behavior over this much more extensive period than during the 3-15 months since their SVORI release. Only 38% reported no illegal drug use post-SVORI, although nearly two-thirds (66%) said they

had used no illegal drugs other than marijuana. In contrast, most respondents in the earlier interviews reported no illegal drug use of any kind. Although fully 90% had experienced at least one post-SVORI arrest, most (59%) said that they had not engaged in any criminal behavior since that release. A similar percentage (18%) was incarcerated at the time of the 2016 interview as the Wave 3 and 4 interviews.

Exhibit 10. Self-reported housing, employment, drug use, and violence at Waves 2, 3, and 4 SVORI interviews and 2015-2016 interview, desistance sample only

	Wave 2 (2004 2006) (N = 151)	Wave 3 (2005 2006) (N = 151)	Wave 4 (2005 2007) (N = 174)	2016 Interview (2015 2016) (N = 208)
	Mean (Standard Deviation)			
Currently employed in legal job	0.702 (0.459)	0.810 (0.394)	0.803 (0.400)	0.678 (0.469)
No self-reported drug use	0.768 (0.423)	0.589 (0.494)	0.579 (0.495)	0.380 (0.487)
No self-reported drug use other than marijuana or steroids	0.907 (0.291)	0.795 (0.405)	0.789 (0.409)	0.663 (0.474)
No perpetration of violence	0.735 (0.443)	0.576 (0.496)	0.644 (0.480)	0.745 (0.437)
No criminal behavior	0.907 (0.292)	0.850 (0.358)	0.738 (0.442)	0.587 (0.494)
No violent or weapons crimes	0.834 (0.373)	0.675 (0.470)	0.684 (0.466)	0.716 (0.452)
Not reincarcerated at follow-up	0.914 (0.281)	0.821 (0.384)	0.822 (0.384)	0.822 (0.383)

Qualitative Findings

Embedded within the interview were opportunities to elicit open-ended responses to provide insight into respondents' perceptions concerning factors associated with engaging in or desisting from criminal behavior. Qualitative content analysis was used to evaluate these responses in an effort to understand motivations related to desistance and continued criminal activities. Of particular interest were responses related to identity and identity transformation.

To probe why individuals avoided criminal behavior, interviewees were asked whether they had engaged in robbery, property crimes, prostitution, drug dealing, intimate partner violence, and other violence during the approximately 10 years following their SVORI incarceration release. When individuals responded 'yes,' they were asked a series of follow-up questions, including the timing and frequency of involvement in these activities.

The 112 interviewees who indicated that they had not engaged in any of these criminal behaviors during at least the past 6 months were asked to tell the interviewer why they had not committed a crime recently. One of the most common reasons cited involved incarceration having a deterrent effect. About one-third of the respondents indicated that they had been deterred from committing more crimes. For example, one respondent indicated that, "I learned my lesson." while another said, "… if you commit crimes you will go to jail, you will pay the price, it is wrong."

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Another common reason involved changes in the way individuals think about and perceive crime, which could also be a reflection of an identity shifting away from a criminal self. For example, one respondent reported that "…my life has changed and I don't think the way I used to think anymore." Another stated, "I don't want to commit any crimes at all." A third said, "I've matured a lot. It is just common sense—doing crimes ain't right." About one-third of respondents reported changes in the way they think or in how they perceive themselves as reasons for not engaging in crime. One respondent, for example, volunteered that "I'm not a criminal." While another said, "I'm a law-abiding citizen." Five respondents specifically reported a change in lifestyle, including one who said, "Because my life has changed." and another who stated, "I changed my way of life and there's no need to commit a crime.".

Similar to changes in cognitive thinking, a number of respondents said they were ready for change. For example, one said "I want to do right. I want to do better." Another stated, "Because I'm trying to do right and keep my head above water so I don't go back to prison." While a third indicated, "I've been trying to change my life around." Informal social control including the impact of employment, children, partners, and other family were also mentioned. About one in six respondents mentioned having a job or having a good job as a reason for their desistance while about one in five mentioned children or family.

Respondents were also asked whether there was a time when things were happening in their life that made them less likely to get involved in crime, and if so, what happened. The most common responses were related to employment and family. For example, one respondent said, "Having a family, being a father." While another said, "Working a lot, couldn't get into any trouble." A few respondents mentioned sobriety, while a few also mentioned religion and church life. For example, "When I got off the drugs June 27th, I started rebuilding my relationship with my family. Until this day, my sister has two nephews, and she told me if you're going to be part of their lives, then you have to be clean and you have to be everyday clean and you can't walk in and out of their lives or you can't be a part of it. So that was a big motivation and then as time has gone on, my family has really supported me and got behind me being clean." A few others acknowledged that they were ready to change or thought about crime differently. For example, one respondent indicated that "I was just trying to stay out of trouble and do the right thing" and another noted that he "Came back to my senses. Realized what was right and wrong—what really mattered in life."

Another way to assess attitudes towards criminal activity is to determine why individuals did not engage in a crime when they were considering doing so. Therefore, respondents were asked whether they had been tempted to commit a crime during the follow-up period but decided not to do it. If they responded "yes," they were asked why they decided not to commit the crime. Twelve of the 31 respondents who responded "yes" indicated that there was some situational characteristic that led them to not commit the crime, such as fear of retribution and potential risk. For example, "So I thought if I take

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the money, they'll find out who took the money and kill me. That's the real reason I didn't take it."
Thinking of family—partners or children—was also a common reason. Twenty-five percent cited family,
including, for example, one respondent who said, "You're always telling your kids, I'm ain't going back
and ain't going to lose them no more, not going to deal, not going to do that." Six individuals implied
deterrence, such as, "I wasn't willing to take the risk and I didn't want to go to jail for it." Only four
participants mentioned their job, such as, "So luckily a job came through or I don't know what would
happened." Readiness for change and discontent with the criminal lifestyle were also mentioned by two
respondents. They responded, "I just didn't want to live that life anymore. I didn't want to go back to it,"
and "I thought about all the times that my lawyer and bondsman helped me through the years between my
incarceration and my kids and myself and thought better of it. I was trying to do better for myself and my
kids."

Respondents were also asked whether there was a time during the calendar period when things were
happening in their life that made them more likely to get involved in crime, and if so, what happened. The
most common reason provided was financial, as 31 of 62 respondents pointed to a need for money. For
example, one respondent said, "No money coming in and everything just falling apart." Lack of
employment or a job was mentioned by about 25% of respondents, including one who said simply, "I was
out of work." Drug and alcohol use was mentioned by 10 respondents, such as, "Started the drinking that
led to out of control behavior," and "Suffering from the disease of addiction. That's just it addiction."
Stressful events, including the death of a family member, was mentioned by multiple interviewees. One
respondent indicated that, "My brother was given some drugs and overdosed and it pushed me over the
edge, it led to a bad place." Another mentioned that a "Family member passed away, which caused me to
struggle emotionally." Spending time with antisocial peers and being content with the criminal lifestyle
were also mentioned by several participants. One said, "The streets were still in me. I still… I craved that
lifestyle." and another said, "When I went to prison it kinda consumed my life so when I got out, I wanted
to be the big dog I guess. And I went and pursued it."

Overall, the findings sugggest some support for identity transformation, particularly cognitive
change as well as readiness for change. The results, however, also provide support for the deterrent
effects of prison/jail which were commonly cited as reasons for desisting from new criminal behavior.
Financial needs, not having a job, and substance use were the most widely cited reasons for continuing
engagement in crime. Family, including children, were sources of positive support for desistance, while
stress associated with, e.g., death or injury of a family member was associated with criminal activity.

Conclusions and Implications for Policy and Practice

Most of the 479 subjects were rearrested at least once during the follow-up period which extended at
least 10 years following their release from prison/juvenile detention in 2004-2005. Recidivism analyses

suggested criminal history was the best predictor of the time to rearrest. There was little variation in rearrest between men and women and between black and white participants. Comparing the 10% of the sample who had desisted to the 90% with at least one arrest again revealed that criminal history—age at first arrest, numbers of priors, etc.—clearly distinguished the desisters from the recidivists. In these analyses, there was a racial difference with a greater percentage of the desisting group being white. Completing 12th grade was the only non-criminal factor that consistently was significant in the analyses— with those with more education doing better on the various arrest measures.

The qualitative analyses provided support for the emerging views on criminality and desistance. Desisters, or those individuals who self-reported no engagement in criminal activities for at least 6 months, emphasized deterrence, cognitive changes, readiness for change, and employment. These findings are consistent with several theoretical frameworks for recidivism and desistance, including deterrence and theories focused on cognitive behavioral change and individual agency (e.g., Giordano and colleagues). Moreover, while only a few respondents explicitly invoked "identity" as described by Paternoster & Bushway (2009), there was no explicit probe about identity. Because these were short response items, rather than detailed qualitative interviews, the fact that identity rose to the surface suggests the salience of the issue for some respondents.

In contrast to past 6-month desistance, periods of committing less crime were explained through conventional ties (e.g., family, employment, religion, prosocial peers) and sobriety. These findings are consistent with Sampson and Laub's age-graded theory of informal social control. Interestingly, the issues of cognitive change, readiness for change, lifestyle and identity that were mentioned by desisters were not mentioned when describing periods where one was less likely to commit crime. This may suggest that while informal social control helps in the desistance process, it is not sufficient to sustain desistance.

Periods of more crime were not simply the converse of periods of less crime. Rather than the absence of conventional ties, these criminogenic periods were explained through financial and employment issues and stress. These pushes toward crime are more consistent with strain theories. Overall, these results may suggest that informal social control is important in periods of desistance, but more "upfront work" such as cognitive changes and being ready to change are needed to solidify desistance. Furthermore, the pushes into and pulls out of crime do not appear to be the opposite side of the same coin—i.e., there is a lack of symmetry between recidivism and desistance. Cognitive changes and informal social control may help push people toward desistance but stress and financial issues appear to pull them back in. However, employment and sobriety appear to be important on both sides.

Additional work is needed to determine what types of interventions may facilitate desisting behavior among serious offenders. The focus of past work to identify successful interventions that tackle known risk factors, including our own, suggests that we need to develop a better understanding of readiness for

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change and how to help individuals achieve this. Absent this readiness, providing specific services that address practical needs may be insufficient to help individuals turn away from crime. The exceptions, for this South Carolina sample, may be assuring employment that is sufficient to meet needs.

The research is limited by several factors. First, the subjects were individuals recruited for a prisoner reentry program evaluation in 2004-2005 in South Carolina; results may not be generalizable to other populations (or even to a more general South Carolina prisoner population). The interview findings are further limited to the roughly 50% of the original sample who were located and interviewed. Although analyses comparing these respondents to non-respondents using the original SVORI data revealed no significant differences between the two groups, there is always a possibility that those who were located and consented to a new interview differ from those who were not on unobservable measures.

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Appendix A: Additional Exhibits

Exhibit A-1. Endorsed reasons for returning to prison and for not committing crimes for South Carolina respondents (original SVORI follow-up interviews, 2005-2007)

Recidivists				Desisters			
Variable	Wave 2 (N = 16)	Wave 3 (N = 64)	Wave 4 (N = 104)	Variable	Wave 2 (N = 307)	Wave 3 (N = 254)	Wave 4 (N = 246)
Using drugs or alcohol	0.25	0.4219	0.4904	Committed not going to prison	0.9349	0.9409	0.9187
Not have enough money	0.4375	0.2656	0.4615	Family is supportive	0.9121	0.8976	0.8862
Associated with friends	0.3125	0.3438	0.3942	Found stable place to live	0.8013	0.8346	0.8008
Too much stress	0.1875	0.3281	0.3654	Learned deal with stress	0.7655	0.7992	0.7927
Other reason	0.5	0.2969	0.3462	Stopped associating with troubled friends	0.7850	0.7441	0.7846
Neighborhood made it easy	0.25	0.2656	0.3365	Adequate transportation	0.5505	0.6260	0.6789
P.O. not helpful	0.25	0.2031	0.3269	Safe neighborhood	0.6482	0.7047	0.6748
Problems with family	0.0625	0.2188	0.3269	Religion/spirituality	0.5635	0.6142	0.6667
Could not get services	0.1875	0.1406	0.2596	Found good job	0.5537	0.5866	0.6098
No transportation	0.125	0.2188	0.2596	Wanted change for children	0.4984	0.5315	0.5691
Could not find good job	0.1875	0.2344	0.2500	Got needed services	0.4235	0.4331	0.5407
Could not find place to live	0.125	0.0781	0.1442	Stopped drugs or alcohol	0.6189	0.5433	0.5285
Didn't care if back to prison	0.125	0.0781	0.0673	Helpful probation/parole officer	0.5668	0.5551	0.4878
Crimes exciting & challenging	0	0.0938	0.0673	Specific reentry programs helped	0.3192	0.3465	0.3577
Receive more services in prison	0.125	0.0156	0.0385	Reentry case manager helpful	0.3355	0.3346	0.3374
Safer in facility than street	0	0.0156	0.0385	Other reason	0.0684	0.0827	0.1341

Exhibit A-2. Gap analyses: lognormal survival results for the first 10 arrests following SVORI release

Variable	Arrest 1		Arrest 2		Arrest 3		Arrest 4		Arrest 5	
	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err
(Intercept)	**4.84***	0.4837	**4.854***	0.708	**4.401***	0.7439	**5.325***	0.8265	**4.62***	0.9994
Race=white	0.222	0.16	-0.03	0.2138	0.044	0.2211	-0.344	0.2346	-0.023	0.2771
Employed 6M prior to incarceration	0.104	0.1537	-0.093	0.2032	0.247	0.2089	-0.195	0.22	0.036	0.2626
Completed 12th grade or equivalent	0.235	0.1543	0.033	0.2046	0.138	0.2134	0.108	0.2289	0.14	0.2756
Age at release	0.008	0.0138	**0.059****	0.0192	0.027	0.0204	0.04	0.0226	0.021	0.0274
Conviction offense=Person/Violent	0.334	0.1999	-0.059	0.2626	-0.009	0.2649	**0.609***	0.272	0.1	0.3242
Conviction offense=Property	**-0.575****	0.1953	-0.077	0.2554	-0.209	0.2559	0.092	0.2627	0.035	0.3126
Conviction offense=Drug	0.094	0.2074	0.094	0.2717	0.037	0.277	-0.154	0.2806	-0.019	0.3262
Conviction offense=Public Order/Other	-0.1	0.1897	-0.15	0.2479	-0.209	0.247	0.321	0.2543	0.279	0.3039
In for probation/parole violation	-0.033	0.1594	-0.02	0.2098	0.02	0.2144	-0.16	0.224	0.315	0.2689
Times juvenile lockup	-0.086	0.0528	-0.06	0.0689	0.019	0.0684	-0.094	0.0696	-0.021	0.0785
Total prior arrests	**-0.026***	0.0066	**-0.033***	0.009	**-0.04***	0.0096	**-0.026***	0.0102	-0.012	0.0123
Male=1	-0.206	0.2352	-0.449	0.3182	-0.207	0.3326	0.24	0.3538	0.14	0.437
Age at first arrest	**0.077***	0.0184	0.012	0.0283	0.056	0.0303	-0.04	0.0363	-0.001	0.0436
Log(scale)	**0.379***	0.0353	**0.612***	0.0375	**0.57***	0.0402	**0.548***	0.0439	**0.633***	0.0483
N	460		417		373		326		276	
Missing due to covariates	19		13		12		7		4	
Total N for model	479		430		385		333		280	

(continued)

Exhibit A-2. Gap analyses: Lognormal survival results for the first 10 arrests following SVORI release (continued)

Variable	Arrest 6		Arrest 7		Arrest 8		Arrest 9		Arrest 10	
	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err
(Intercept)	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err	Estimate	St. Err
Race=white	**2.645***	1.0318	**5.468***	1.0921	**4.176****	1.3764	**4.605***	1.346	**5.622***	1.5176
Employed 6M prior to incarceration	-0.338	0.2905	0.098	0.3094	-0.285	0.3992	-0.365	0.4117	0.091	0.4511
Completed 12th grade or equivalent	0.278	0.2702	0.073	0.288	0.283	0.3726	0.499	0.3731	0.207	0.4204
Age at release	0.291	0.2909	0.054	0.3141	0.052	0.4026	0.017	0.4119	0.019	0.5011
Conviction offense=Person/ Violent	0.029	0.0277	0.004	0.029	-0.017	0.0366	-0.004	0.0366	0.039	0.0409
Conviction offense=Property	-0.005	0.3361	-0.258	0.3599	0.142	0.4457	0.091	0.4589	-0.111	0.5417
Conviction offense=Drug	0.265	0.3249	**-0.808***	0.3523	-0.498	0.4406	-0.344	0.4373	**-1.082***	0.4793
Conviction offense=Public Order/Other	0.03	0.3448	-0.423	0.3646	-0.163	0.4605	-0.62	0.4682	-0.08	0.5319
In for probation/parole violation	-0.071	0.3088	-0.303	0.3242	-0.521	0.4238	**-0.899***	0.4272	-0.182	0.4735
Times juvenile lockup	0.029	0.2721	-0.229	0.2954	0.618	0.3757	-0.011	0.3777	-0.522	0.4221
Total prior arrests	0.111	0.0768	0.021	0.0779	-0.029	0.0936	0.129	0.0896	-0.055	0.0991
Male=1	-0.013	0.0131	0.013	0.0139	-0.001	0.018	-0.03	0.0185	-0.006	0.0221
Age at first arrest	0.614	0.4655	0.507	0.5024	0.484	0.6395	0.279	0.6527	-0.023	0.7489
Log(scale)	0.064	0.0455	-0.035	0.0521	0.06	0.0678	0.076	0.0671	-0.045	0.0744
N	228		199		161		138		106	
Missing due to covariates	3		3		3		3		2	
Total N for model	231		202		164		141		108	

Note: *** p < .001, ** p < .01, * p < .05

Exhibit A-3. Logistic model results for any arrest in years following SVORI release

Variable	Year 1			Year 2			Year 3			Year 4		
	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err
(Intercept)	0***	-8.312***	1.439	0.002***	-6.386***	1.216	0***	-7.686***	1.436	0.002***	-6.171***	1.013
Race=white	1.221	0.2	0.513	2.267*	0.818*	0.392	0.876	-0.132	0.37	1.325	0.281	0.358
Employed 6M prior to incarceration	0.631	-0.461	0.438	1.289	0.254	0.436	0.451	-0.796	0.378	0.857	-0.154	0.343
Completed 12th grade or equivalent	0.7	-0.357	0.518	0.784	-0.244	0.432	2.486**	0.911**	0.361	1.634	0.491	0.321
Age at release	0.94	-0.062	0.048	1.085*	0.081*	0.033	1.059	0.058	0.033	1.043	0.043	0.027
Conviction offense=Person/ Violent	2.065	0.725	0.523	1.913	0.649	0.514	1.385	0.326	0.471	0.768	-0.264	0.432
Conviction offense=Property	0.822	-0.196	0.526	1.143	0.133	0.451	1.206	0.188	0.441	0.986	-0.014	0.411
Conviction offense=Drug	1.371	0.315	0.535	2.955*	1.084*	0.514	1.94	0.663	0.462	1.019	0.019	0.442
Conviction offense=Public Order/Other	1.228	0.206	0.475	0.611	-0.493	0.575	0.715	-0.336	0.422	0.804	-0.218	0.461
In for probation/parole violation	1.605	0.473	0.415	1.069	0.067	0.433	0.903	-0.102	0.368	1.402	0.338	0.383
Times juvenile lockup	0.858	-0.153	0.135	1.003	0.003	0.122	0.768	-0.264	0.258	0.599*	-0.513*	0.258
Total prior arrests	1.021	0.021	0.018	0.95*	-0.051*	0.022	0.973	-0.028	0.014	0.966	-0.035	0.018
Male=1	0.822	-0.196	0.637	0.108***	-2.221***	0.598	0.76	-0.275	0.546	0.676	-0.391	0.478
Age at first arrest	1.211**	0.191**	0.064	0.977	-0.024	0.045	1.048	0.047	0.049	1.008	0.008	0.04
N with no arrests	238			234			258			252		
N with any arrest	222			223			196			199		
Not available (death)	0			3			6			9		

Notes: 19 cases were excluded from model because of missing values on one or more covariates. *** $p < .001$, ** $p < .01$, * $p < .0$. (continued)

Exhibit A-3. Logistic model results for any arrest in years following SVORI release (cont.)

Variable	Year 5			Year 6			Year 7			Year 8		
	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err
(Intercept)	**0.001*****	**-7.042*****	1.217	**0.001*****	**-7.336*****	1.024	**0.002*****	**-6.065*****	1.095	**0*****	**-8.194*****	1.281
Race=white	0.901	-0.104	0.336	0.798	-0.226	0.319	1.133	0.125	0.354	1.154	0.143	0.376
Employed 6M prior to incarceration	1.032	0.031	0.347	0.658	-0.418	0.313	**0.429****	**-0.846****	0.325	0.692	-0.368	0.351
Completed 12th grade or equivalent	1.547	0.437	0.337	1.897	0.64	0.317	0.939	-0.063	0.39	1.021	0.021	0.36
Age at release	**1.096****	**0.092****	0.033	**1.07***	**0.067***	0.029	**1.073***	**0.07***	0.031	1.071	0.068	0.036
Conviction offense=Person/Violent	1.069	0.067	0.453	0.834	-0.181	0.383	0.573	-0.557	0.443	0.87	-0.14	0.45
Conviction offense=Property	1.548	0.437	0.44	1.251	0.224	0.372	1.416	0.347	0.385	0.74	-0.301	0.413
Conviction offense=Drug	0.805	-0.217	0.504	0.999	-0.001	0.389	0.725	-0.322	0.412	1.103	0.098	0.431
Conviction offense=Public Order/Other	0.543	-0.611	0.483	1.197	0.18	0.378	1.235	0.211	0.391	1.835	0.607	0.412
In for probation/parole violation	1.579	0.457	0.339	**1.978***	**0.682***	0.311	0.582	-0.542	0.329	0.691	-0.369	0.329
Times juvenile lockup	1.035	0.034	0.101	0.833	-0.183	0.118	**0.726***	**-0.321***	0.132	0.962	-0.039	0.17
Total prior arrests	**0.943***	**-0.059***	0.022	**0.963***	**-0.038***	0.015	1.004	0.004	0.014	0.961	-0.04	0.023
Male=1	0.917	-0.087	0.568	1.302	0.264	0.479	2.084	0.734	0.488	2.482	0.909	0.696
Age at first arrest	0.957	-0.044	0.057	1.013	0.013	0.041	0.941	-0.061	0.045	1.063	0.061	0.047
N with no arrests	271			283			298			306		
N with any arrest	179			164			146			139		
Not available (death)	11			14			17			19		

Notes: 19 cases were excluded from model because of missing values on one or more covariates. *** p < .001, ** p < .01, * p < .0. (continued)

Exhibit A-3. Logistic model results for any arrest Years 1,2 and 3 following SVORI release (cont.)

Variable	Year 9			Year 10		
	Odds Ratio	Estimate	St. Err	Odds Ratio	Estimate	St. Err
(Intercept)	**0***	**-8.906***	1.26	**0.009***	**-4.704***	1.391
Race=white	0.698	-0.359	0.371	1.162	0.15	0.38
Employed 6M prior to incarceration	**0.499***	**-0.695***	0.345	1.623	0.484	0.335
Completed 12th grade or equivalent	1.45	0.372	0.351	1.149	0.139	0.368
Age at release	**1.123***	**0.116***	0.034	1.014	0.014	0.03
Conviction offense=Person/ Violent	1.139	0.13	0.415	0.63	-0.462	0.495
Conviction offense=Property	1.706	0.534	0.404	0.655	-0.424	0.438
Conviction offense=Drug	1.71	0.537	0.418	0.913	-0.091	0.45
Conviction offense=Public Order/Other	1.901	0.642	0.411	1.215	0.195	0.433
In for probation/parole violation	0.759	-0.276	0.327	0.643	-0.441	0.361
Times juvenile lockup	0.928	-0.075	0.105	**0.804***	**-0.218***	0.11
Total prior arrests	0.975	-0.025	0.015	1.001	0.001	0.014
Male=1	2.751	1.012	0.57	1.927	0.656	0.589
Age at first arrest	1.006	0.006	0.049	0.924	-0.079	0.073
N with no arrests	314			317		
N with any arrest	124			111		
Not available (death)	23			27		

Notes: 19 cases were excluded from model because of missing values on one or more covariates. *** p < .001, ** p < .01, * p < .0. (continued)

Exhibit A-4. Self-Reported housing, employment, drug use, and violence at SVORI interviews waves 2, 3, and 4 and 2016-2017 interview (all subjects)

	Wave 2 (2004 2006) (N = 323)	Wave 3 (2005 2006) (N = 319)	Wave 4 (2005 2007) (N = 351)	2016 Interview (2016) (N = 208)
	Mean (standard deviation)			
Employed in legal job	0.674 (0.469)	0.745 (0.436)	0.729 (0.445)	0.678 (0.468)
No self-reported drug use	0.922 (0.267)	0.785 (0.410)	0.782 (0.413)	0.379 (0.486)
No self-reported drug use other than marijuana or steroids	0.832 (0.373)	0.678 (0.467)	0.663 (0.473)	0.663 (0.473)
No perpetration of violence	0.711 (0.453)	0.589 (0.492)	0.641 (0.480)	0.745 (0.436)
No criminal behavior	0.845 (0.362)	0.667 (0.471)	0.666 (0.472)	0.586 (0.493)
No violent or weapons crimes	0.916 (0.277)	0.833 (0.373)	0.811 (0.391)	0.716 (0.451)
Not reincarcerated at follow-up	0.885 (0.318)	0.711 (0.453)	0.564 (0.496)	0.822 (0.383)

Appendix B: Qualitative Analysis and Codes

The responses were reviewed manually and coded using the following categories for specific items.

Avoidance: "Please briefly tell me about what happened when you decided not to commit this crime."

- Situational (riskiness, difficulty in pulling it off)
- Decision

Engagement in Crime: "Please briefly describe what was happening in your life that made you more likely to get involved in crime."

- Alcohol or other drug use
- Antisocial peers (negative influences)
- Children
- Content (with criminal lifestyle), not ready for change
- Death (of family or other)
- Employment problems
- Family problems/trouble (not including illness in family—those were coded as 'stress')
- Financial trouble
- Housing (instability, homelessness)
- Lack of education
- Loss of partner
- Stress (nonfinancial, not death)

Desistance from Crime: "Please briefly tell me about what happened when you decided not to commit this crime." and "You reported that you have not been involved in crime recently. Can you tell us why you have not committed a crime recently?" and "Please briefly describe what was happening that made you less likely to get involved in crime." and "

- Readiness for change (planning, goals, trying to stay out of trouble)
- Discontent (with criminal lifestyle)
- Identity change (feared self, future self)
- Cognitive (think differently now, don't want/need to commit crime, it's wrong)
- Services (in-prison, probation, etc.)
- Partner (marriage or other relationship)
- Other family
- Employment
- Education
- Children
- Religion
- Housing (place to live, not homeless, stable)
- Sobriety
- Prosocial peers (positive influences)
- Deterrence (did not want to go back to jail/prison, like freedom)

- Future/hope
- Physically incapable