

Community-Based Juvenile Reentry Services: The Effects of Service Dosage on Juvenile and Adult Recidivism

LAURA S. ABRAMS, DIANE TERRY, and TODD M. FRANKE

Luskin School of Public Affairs, Department of Social Welfare, University of California—Los Angeles, Los Angeles, California, USA

In this study the authors examined the influence of length of participation in a community-based reentry program on the odds of reconviction in the juvenile and adult criminal justice systems. A structured telephone survey of reentry program alumni was conducted with 75 transition-age (18–25 year-old) young men. Binary logistic regression analysis revealed that increased length of participation in reentry services decreased the likelihood of new convictions in the juvenile system, but not in the adult system. Lower education attainment, unemployment and older age were all associated with the odds of new convictions in the adult criminal justice system. Implications for reentry services include extended service length and a focus on educational and vocational opportunities.

KEYWORDS *juvenile offenders, recidivism, reentry, rehabilitation, risk factors*

Over 2.1 million juveniles in the United States were arrested in 2008 (Puzzanchera, 2009) and over 80,000 were housed in juvenile detention or correctional facilities on any given day (Sickmund, 2008). Incarcerated youth, who are disproportionately young men of color (Piquero, 2008), are highly likely to experience repeat contact with the juvenile and adult criminal justice systems. Recidivism estimates for detained juveniles are varied in regard to method and definition, but best available evidence suggests that at least

Address correspondence to Laura S. Abrams, PhD, Luskin School of Public Affairs, Department of Social Welfare, University of California—Los Angeles, 3250 Public Affairs Building, Box 951656, Los Angeles, CA 90095-1656, USA. E-mail: abrams@publicaffairs.ucla.edu

50% of incarcerated youth will have repeat contact with the juvenile justice system (Lipsey, 1999). The few studies that have tracked longer-term recidivism outcomes have reported that between 75%–90% of incarcerated juveniles are subsequently arrested as adults (Hamparian, Davis, Jacobson, & McGraw, 1985; Minnesota Office of the Legislative Auditor, 1995; Sampson & Laub, 1993).

In response to mounting concerns about high recidivism rates, federal and state governments have initiated an array of transition and reentry programs geared toward incarcerated youth. However, empirical investigations of these programs have by and large found little or no reductions in recidivism when comparing program participants with their control or comparison group counterparts (Frederick & Roy, 2003; Wiebush, Wagner, McNulty, & Wang, 2005). Other longitudinal studies have discovered that participation in community-based reentry services such as mental health and mentoring may reduce recidivism (Bullis & Yovanoff, 2002; Aftercare for Indiana Through Mentoring, 2004), but that these effects diminish over time (Bouffard & Bergseth, 2008; Drake & Barnoski, 2006). Given this evidence of fading effects, it is surprising that very few published studies have examined the independent influence of service dosage, or length of participation in a reentry intervention, on recidivism outcomes.

Moreover, research on juvenile reentry programs has not adequately disentangled outcomes related to juvenile versus adult recidivism. Although arguably risk factors for juvenile and adult recidivism are interrelated, the consequences of each type of incarceration are different. For example, adult incarceration often incurs significant psychological trauma (Haney, 2001) that may not be associated with some juvenile programs, particularly those that are more oriented toward rehabilitation. Adult incarceration is also associated with more severe consequences in regards to citizenship rights, employment prospects, and opportunities to seal or expunge criminal records (Uggen & Wakefield, 2005). Although from a policy and human interest standpoint the stakes involved in adult incarceration are much higher, it is unclear whether reentry programs can continue to provide a protective influence for incarcerated youth as they transition into adulthood.

This study contributes to the literature on youth reentry programs by investigating the influence of length of program service on the likelihood of recidivism in the juvenile and adult criminal justice systems. Using self-reported data collected with a sample of transition-age (18–25 years old), urban male alumni of a community-based youth reentry program, we address the following two research questions:

1. Does extended service dosage protect against juvenile recidivism, controlling for other known risks for repeat offending?
2. Does extended service dosage protect against adult recidivism, controlling for other known risks for repeat offending?

LITERATURE REVIEW

In the last two decades, a number of empirical studies have addressed the question, “what characteristics of incarcerated youth predict the likelihood of reoffending?” Known risks for juvenile recidivism encompass such factors as offense history, demographics, and additional social factors. In a meta-analysis of over 20 studies investigating recidivism among incarcerated youth, Cottle, Lee, and Heilbrun (2001) found that age at first contact with the law and age at first commitment were the strongest predictors of future reoffending. Other studies have confirmed the major influence of these two variables (Benda, Corwyn, & Toombs, 2001; McMackin, Tansi, & Lafratta, 2004). Scholars have also identified links between specific demographic and social factors and recidivism. In particular, young men of color are at risk for repeat offending, as are youth offenders with social characteristics related to antisocial peer networks such as gangs, weak attachments to school, and substance abuse (Abram, Choe, Washburn, Romero, & Teplin, 2009; Bullis et al., 2002; Minor, Wells, & Angel, 2008).

A few longitudinal studies have examined the longer-term recidivism patterns of formerly incarcerated youth. These studies have found recidivism rates as high as 85%–90%, as measured by adult system arrests (Hamparian et al., 1985; Minnesota Office of the Legislative Auditor, 1995, Trulson, Marquart, Mullings, & Caeti, 2005). The factors leading to adult recidivism among formerly incarcerated youth tend to be contextual and dynamic. For example, in their longitudinal study of the criminal persistence and desistance patterns of young delinquent males over the life course, Sampson and Laub (1990) found that absence of strong social ties, such as employment, marriage, and parenthood were associated with higher rates of reoffending in adulthood. This “social bonds” perspective suggests that the positive ties of family and employment can contribute to pivotal “turning points” that lead young adults toward a more prosocial trajectory.

Other researchers have challenged the idea that social bonds necessarily facilitate desistance from crime. Massoglia and Uggen’s (2007) research on long-term desistance outcomes among a sample of males with arrest histories found that having a child actually *decreased* the likelihood of desistance by more than 70%. Moreover, a separate study by Uggen (2000) revealed that while employment reduced recidivism rates among offenders over age 26, it did not reduce criminal activity among younger offenders. These studies have raised questions about Laub and Sampson’s social bonds hypothesis. However, both points of view suggest that a dynamic blend of social and contextual factors contribute to desistance from crime as young people make the journey into adulthood. The extent to which participation in a community-based reentry program can buffer the odds of adult recidivism has yet to be established.

Reentry Program Research

In 2009, the John D. and Catherine T. MacCarthur foundation released initial findings from the Pathways to Desistance longitudinal study of over 25,000 juvenile offenders. In the largest study of its kind, the researchers found that longer stays in juvenile facilities do not contribute to criminal desistance, but that ongoing support upon release to the community significantly decreases risk for recidivism (Models for Change, 2009). Interventions that are intended to disrupt the cycle of reoffending are numerous. These can include individual therapeutic interventions, family interventions, and mentoring programs, all of which are designed to address barriers to successful reentry (Spencer & Jones-Walker, 2004). Most of these programs are individually focused, in that they seek to reduce the young person's risk factors and build upon protective factors to prevent reoffending (Abrams & Snyder, 2010).

Early experimental research on the general "aftercare" program model showed significant reductions in frequency of new arrests and increases in time to rearrest for high risk incarcerated youth (Fagan, 1990). Subsequent to the promise of these findings, in 1995 the Office of Juvenile Justice and Delinquency Prevention (OJJDP) introduced the Intensive Aftercare Program (IAP) model in five U.S. states. This model included probation-delivered individualized assessment and treatment services during incarceration, a structured transition phase, linkages to supportive community resources during aftercare, and varying degrees of probation surveillance following incarceration (Altschuler & Armstrong, 2002). Studies conducted on the IAP found that this program did not significantly impact recidivism outcomes after 6 months postrelease or at the 12- and 18-month follow-up points (Frederick & Roy, 2003; Wiebush et al., 2005). These IAP-specific findings are consistent with other evaluations of probation-run aftercare programs that show modest to no reductions in recidivism, particularly after 6 months of release (Abrams, Shannon, & Sangalang, 2007; Wells, Minor, Angel, & Stearmen, 2006). In the IAP evaluation and related studies, significant predictors for recidivism included known risk factors for repeat offending such as age of first arrest, gang membership, race, and older age at release (Abrams et al., 2007; Wiebush et al., 2005; Wells et al., 2006). None of these studies considered length of participation in reentry services. The dependent variables in the IAP studies included an indicator of juvenile recidivism (Frederick & Roy, 2003), as well as a measure that combined juvenile and adult recidivism into one variable (Wiebush et al., 2005).

Other reentry programs are delivered by community-based, rather than probation-based providers. The most comprehensively studied community-based reentry intervention is mentoring, a program that typically matches returning youth with an adult in the community to provide support, guidance, and prosocial role modeling. Many of these programs also provide additional services, such as referrals, groups, and general transition support

through case management. For example, research on the well-established Aftercare for Indiana through Mentoring (AIM) program found recidivism rates among treatment youth (24%) remained much lower than a matched control group (60%), even after 36 months of release (AIM, 2004). Yet other studies of mentoring programs have not replicated these findings. Bouffard and Bergseth's (2008) survival analysis related to a mentoring/case management program found that treatment ($n = 63$) and control ($n = 49$) youths differed only slightly in the amount of time that preceded reoffending following their participation in a mentoring program. Other noted influences on recidivism included offense type history and geographic location (Bouffard & Bergseth, 2008). Similarly, Drake and Barnoski's (2006) study concluded that although a mentoring intervention reduced recidivism rates after one year, these differences were not significant in years two and three. Two of these studies (AIM, 2004; Bouffard & Bergseth, 2008) did not specify the source of their recidivism measure (i.e., juvenile vs. adult records) whereas Drake and Barnoski's article (2006) directly stated that they combined juvenile and adult recidivism into one variable.

In considering the published research literature on youth reentry programs, several gaps can be noted. First, few published studies have examined length of involvement in these aftercare and reentry programs as an independent variable. Meta-analyses have suggested that a longer period of incarceration in facilities that use empirically driven practices produce better overall results (Lipsey, 1999), yet this information does not pertain directly to length of service in a community-based aftercare program. Given that the effects of community-based reentry program appear to diminish over time (Bouffard & Bergseth, 2008; Drake & Barnoski, 2006; Wells et al., 2006), one might reasonably hypothesize that length of exposure to an intervention could potentially influence longer-term outcomes. Next, it is unclear how long the effects of reentry programs are sustained. Are programs that help youth to successfully avoid repeat juvenile incarceration also capable of equipping young people to avoid adult incarceration? This study addresses both of these gaps. Using a sample of transition age young male alumni of a community-based reentry program, this study examines the influence of length of service receipt on the odds of juvenile and adult recidivism in relation to other known risks for reoffending.

METHOD

This study poses two major research questions: (a) Does extended service dosage in a community-based reentry program protect against juvenile recidivism, controlling for other known risks for repeat offending? (b) Does extended service dosage protect against adult recidivism, controlling for other known risks for repeat offending? To answer these questions, a

cross-sectional telephone survey was conducted with a sample of young adult men who participated in a community-based reentry program between the years of 2002 and 2009. The reentry program exclusively served young men who were placed at a 4–8 month County administered juvenile probation camp program for felony level offenders. All of the young men were from a large urban area in the Western U.S. and the vast majority (i.e., over 95%) were from ethnic minority backgrounds. The researchers did not have access to official information concerning the youths' committing offenses or criminal history.

Related to the reentry models mentioned in the literature review, the reentry program was a hybrid of the IAP and mentoring models. Like the IAP, it offered a phased transition that began during incarceration and continued upon release. Yet more similar to mentoring, the program was delivered by community-based (rather than probation) providers and as such, did not include punitive supervision. Akin to both interventions, the program offered an array of services tailored to the assessed needs of the individual. The first segment (during placement) provided young men with supportive counseling, courses to prepare for reentry, and transition planning during their 4- to 8-month sentence. The second component of the program provided youth with post-release reentry case management services for up to 1 year following their release. These services, delivered by bachelor's level staff, included counseling and crisis support, referrals and assistance with vocational and educational placements.

Recruitment and Sampling

The researchers began with a database of alumni contact information that included names, dates of birth, dates of service, race, and last known contact information. The initial data base contained 797 records of program participants served from 2002–2009. To construct the sampling frame, three eligibility criteria were used: (a) over 18 at time of survey administration (per the requirements of the approved human subjects' protocol); (b) at least 6 months since exit from the facility; and (c) did not "drop out" of the reentry program (i.e., participated in services for more than two months without being transferred from facility or voluntarily withdrawing). Examining the database according to these criteria, a pool of 491 potentially eligible participants was constructed. The agency director then mailed letters to all eligible participants providing (a) information about the survey; (b) an opportunity to opt out of the study; and (c) a contact information update form along with a stamped and addressed return envelope. These letters were sent to the last known address in the database as well as addresses retrievable through public information databases. No one removed himself from the list, and 10 young men returned updated contact information. Returned mail was tracked and noted as an incorrect address.

ATTEMPTS TO REACH PARTICIPANTS

The researchers called all phone numbers, including disconnected ones, a minimum of ten times over a 4-month period. When appropriate, the researchers left messages with a call-back number or asked household residents for updated contact information. At the conclusion of the survey, a second letter requesting individuals to contact the researchers by phone was mailed to all unreached participants whose initial mailings were not returned by the U.S. Postal Service. The follow up letter yielded no responses.

SAMPLING BIAS

Of the 491 young men in the sampling frame, 331 were coded as unreachable for the following reasons: nine had no contact information; 288 had a disconnected or wrong phone number; 27 were incarcerated; and seven were deceased. This left 160 participants who were potentially reachable by phone (defined as a working phone number and no returned mail), of which 76 were surveyed, 74 were not reached, and 10 declined participation. (One individual was not included in the sample due to an incomplete survey, making the total sample size for the study 75.) To assess for known sampling biases, the researchers broke down the initial pool into three groups:

1. Reached/surveyed: Individuals who participated in the survey ($n=76$).
2. Not reached/declined: Individuals who were potentially reachable, but who did not answer the phone or return messages, or those who declined participation ($n=84$).
3. Unreachable: Individuals with no contact information, disconnected and wrong numbers, and those who were deceased or incarcerated ($n=331$).

Using chi-square and ANOVA tests, known characteristics (from program records) of the reached/surveyed group were compared with those of the other two groups. No significant differences were detected with regard to race, average age at service start date, or average length of service receipt. However, as Table 1 displays, statistically significant differences were detected between the reached/surveyed group and the unreachable group on two variables: time since release and current age. On average, the reached/surveyed group had been out of juvenile placement for 3.2 years, versus 4.5 years for the unreachable group ($p < .001$). Current age for the reached/surveyed group was about 1 year younger on average than the unreachable group (21.2 vs. 22.2 years; $p < .001$). The reached/surveyed group was nearly equivalent to the not reached/declined group on all of the indicators examined (see Table 1).

TABLE 1 ANOVA Analysis of Differences Between Sampling Groups

Demographics	Reached (n = 76 ^a)	Not reached/declined (n = 84)	Unreachable (n = 331)	df	F
	M	M	M		
Age at service start (years)	17.6	17.4	17.4	2	2.82
Length of services received (months)	8.3	7.4	7.0	2	2.90
Time since exited camp (years)	3.2***	3.8	4.5***	2	17.55
Current age (years)	21.2***	21.5	22.2***	2	12.63

^a76 were reached, but only 75 completed all parts of the survey.

*** $p < .001$.

Instrumentation

All of the information was collected through a telephone survey, with the exception of a few background variables retrieved from the reentry program database. The first and second author of this article constructed the survey instrument using a combination of original questions and previously validated scales. The instrument consisted of eight major sections, including: background, education, employment, housing, criminal desistance, substance abuse, and mental health. The main variables of interest for this analysis are defined next.

DEPENDENT VARIABLES

The two dependent variables are juvenile and adult recidivism. Both are operationalized as binary (yes/no) reports of one or more new convictions occurring in either (a) the juvenile system or (b) the adult system since the time of exit from the juvenile correctional placement associated with their participation in the reentry program. New convictions is a more conservative measure of recidivism than new arrests or new spells of incarceration. However, several studies concerning juvenile recidivism have relied on this indicator (c.f. Drake & Barnoski, 2006; Myner, Santman, Cappelletty, & Perlmuter, 1998), as new arrests or time spent in jail can be more arbitrary and often do not result in new substantiated charges (National Institute of Justice, 2008).

INDEPENDENT VARIABLES

The main independent variable in this study is length of participation in the community-based reentry program, measured in months and retrieved from the organization's records. This variable was constructed by subtracting the recorded intake date from the termination date for each youth who

participated in the study and rounding to the nearest whole month. According to program staff, variations in length of service provision were related to either a youth initiating a termination from the program or a staff member deciding that the young person was ready to terminate. The additional independent and control variables used in the analysis vary according to the two dependent variables studied and are explained next.

Educational attainment. Educational attainment was operationalized as the highest level of education reached by the participants at two time points. For the juvenile model, educational attainment was ascertained at the time point of camp exit and was divided into two groups: (a) no high school diploma or GED and (b) attained high diploma or GED. For the adult model, the education variable was operationalized as current educational attainment status and was divided into three groups: (a) has not attained a high school diploma or GED; (b) attained high school diploma or GED; or (c) current enrollment in or completion of a 2-year or 4-year college-degree program.

Employment. The adult model included a measure of current employment. Both part-time and full-time current employment was coded as “employed” and unemployment was coded at “not employed.” An employment variable was not included in the juvenile model because we were not able to ascertain from the data at what point the young men obtained employment (i.e., as juveniles or as adults).

Fatherhood. In the adult model, participants were coded as fathers if they reported having one or more children at the time they took the survey. Too few participants reported fatherhood status prior to their release from the youth correctional program ($n=8$) to include this variable in the juvenile model.

Heavy substance use. A measure of heavy substance use was used to capture past year alcohol and/or drug dependence. Alcohol dependence was measured by the brief Michigan Alcoholism Screening Test (MAST), a 10-item self-report scale that is commonly used to identify problematic alcohol use occurring in the past year. The total scale ranges from 0–29, with scores >5 indicating the presence of alcoholism (Pokorny, Miller, & Kaplan, 1972). Drug use was measured by The TCU Drug Screen II, a 13-item scale that detects severe drug dependency based on self-reported drug-related habits over the past year. Scores range from 0 to 9, and scores of 3 or greater indicating a drug-related problem (Institute of Behavioral Research, 2006). Due to low sample size, these items were combined to create a single variable of heavy substance use that included any individual with scores above

the threshold on either scale. This variable was used in the adult model only because it pertained to recent substance use patterns.

Control Variables

Age at service start date. Age at service start date was measured in months and extracted from program records. In the juvenile model, this variable was used to control for age influences on the likelihood of recidivism into the juvenile system. For example, youth who were close to or who had reached age 18 at their service start date would have a decreased likelihood of recidivating into the juvenile system than those who left at age 15 or 16. However, in the County system where the young men were incarcerated, an 18-year-old can, in some circumstances, fall under the jurisdiction of the juvenile system if they are arrested or their case is refiled while they on juvenile probation.

Current age. Current age was measured in months from date of birth as recorded in program files and confirmed during the survey to a common end point of April 1, 2010. In the adult model, this variable was used to control for age effects on the likelihood of adult recidivism, as individuals who have spent more years as legal adults are logically more likely to have received adult convictions. Current age was also highly correlated with time since release from camp.

It is important to note two variables that were not included in the analyses for different reasons. First, as mentioned previously, time since release was very highly correlated with current age ($r=.89$) and when it was included in the models (adult, juvenile) as a control variable it was not a significant predictor. Second, race/ethnicity was not included in these models as a control variable. This is because the sample was heavily

TABLE 2 Juvenile Reconviction: Frequencies and Means for Major Study Variables

Major study variables	Not reconvicted (<i>n</i> = 57)		Reconvicted (<i>n</i> = 18)		Full sample (<i>n</i> = 75)	
	<i>N</i>	(%)	<i>N</i>	(%)	<i>N</i>	(%)
GED/High school diploma before exit						
No diploma/GED	31	(72.1)	12	(27.9)	43	(57.3)
High school diploma/GED	26	(81.2)	6	(18.8)	32	(42.7)
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Service length (months)*	8.87	(3.42)	6.61	(2.76)	8.83	(3.4)
Age at start of service (years)	17.2	(.85)	16.8	(.92)	17.1	(.87)

* $p < .05$.

TABLE 3 Juvenile Reconviction: Adjusted and Unadjusted Odds Ratios

Variable	Unadjusted		Adjusted	
	OR	95% CI	OR	95% CI
Service length in months	0.81*	[0.69, 0.96]	0.78*	[0.66, 0.94]
Age at start of service	0.63	[0.34, 1.20]	0.47	[0.21, 1.06]
Education level before exit				
No High school diploma/GED	1.00		1.00	
High school diploma/GED	0.60	[0.20, 1.80]	1.27	[0.32, 5.11]

* $p < .05$.

weighted toward one specific group (68% of the sample was Hispanic, and the remainder was African American 18%, White 5%, Asian 5%, and other, 3%), and bivariate analyses did not reveal any significant associations between race and new juvenile or adult convictions.

Data Analysis

Data analysis was conducted in three phases. First, frequencies and descriptive statistics were calculated for all dependent, independent, and control variables of interest for both the juvenile and adult analyses (See Tables 2 and 4). Models were constructed for the juvenile and adult analyses including the relevant predictors. In the second phase, unadjusted odds ratios were

TABLE 4 Adult Reconviction: Frequencies and Means for Major Study Variables

Major study variables	Not reconvicted (n = 44)	Reconvicted (n = 31)	Overall (n = 75)
	N (%)	N (%)	N (%)
Current education level*			
No high school diploma/GED	11 (39.3)	17 (60.7)	28 (37.3)
Completed high school/GED	19 (70.4)	8 (29.6)	27 (36.0)
In/completed 2- or 4-year college	14 (70.0)	6 (30.0)	20 (26.7)
Current employment*			
Not currently working	16 (44.4)	20 (55.6)	36 (48.0)
Currently working	28 (71.8)	11 (28.2)	39 (52.0)
Fatherhood			
No	28 (56.0)	22 (44.0)	50 (66.7)
Yes	22 (64.0)	9 (36.0)	25 (33.3)
Drug dependency			
Not a heavy user	32 (65.3)	17 (34.7)	43 (58.9)
Heavy user	11 (45.8)	13 (54.2)	30 (41.1)
	M (SD)	M (SD)	M (SD)
Service length (months)	9.0 (3.1)	7.4 (3.7)	8.3 (3.4)
Current age (years)*	21.0 (1.5)	20.1 (1.8)	20.5 (1.8)

* $p < .05$.

TABLE 5 Adult Reconviction: Adjusted and Unadjusted Odds Ratios

Variable	Unadjusted		Adjusted	
	OR	95% CI	OR	95% CI
Current age (years)	1.36*	[1.03, 1.79]	2.40*	[1.38, 4.17]
Service length (months)	0.87	[0.75, 1.00]	0.93	[0.78, 1.11]
Current education level				
No HS/GED	1.00		1.00	
Completed HS/GED	0.27*	[0.09, 0.84]	0.15*	[0.03, 0.68]
In/completed 2 or 4 year college	0.28*	[0.08, 0.94]	0.17*	[0.03, 0.89]
Employment status				
Not currently working	1.00		1.00	
Currently working	0.31*	[0.12, 0.82]	0.15*	[0.03, 0.66]
Fatherhood				
No	1.00		1.00	
Yes	0.72	[0.27, 1.93]	0.26	[0.05, 1.19]
Heavy drug use				
No	1.00		1.00	
Yes	2.22	[0.82, 6.02]	2.88	[0.79, 10.6]

* $p < .05$.

calculated for the variables in each binary logistic regression model. For all logistic models odds ratios and 95% confidence intervals were calculated. Finally adjusted models for juvenile and adult recidivism were run using all of the relevant independent and control variables simultaneously (See Tables 3 and 5).

RESULTS

Among the 75 young men, the average age (at time of survey) was 20.5 years (range 18–26, $SD = 1.8$). The average length of reentry program service was 8.3 months (range 1–15, $SD = 3.4$). For the main dependent variables, 24.0% of the sample reported at least one new conviction in the juvenile system, and 41.3% reported at least one new conviction in the adult system. The average number of months of reentry program participation was 2.3 months higher for those who did not receive new juvenile convictions compared to those who did (6.6 vs. 8.9), and was similarly 2.4 months higher for the group reporting no new adult reconvictions compared to those who reported at least one new adult conviction (7.4 vs. 9.0).

Juvenile Reconviction Model

As stated, 24% of the sample reported at least one new conviction in the juvenile system. Table 2 displays the means and frequencies for the variables included in the juvenile model. As shown, bivariate tests revealed a statistically significant difference ($p < .05$) in length of service between groups.

Specifically, those who reported new convictions in the juvenile system received services for approximately 2.3 months less than those who did not report new juvenile convictions. Other variables examined in relation to juvenile reconviction were educational attainment at the time of camp exit and age at service start date. In the aggregate, fewer than 50% had obtained a high school diploma or GED at the time that they left the probation camp. Among those who had obtained a high school diploma/GED, 18.8% recidivated in the juvenile system, compared to 27.9% of those who left camp without a high school diploma or GED. This bivariate relationship was not significant. The average age of service start date was approximately 17, with those who did not recidivate being slightly, but not significantly older when they began their participation in the reentry program (17.2 vs. 16.8).

Table 3 presents the unadjusted and adjusted logistic regression results. The unadjusted results are the simple bivariate logistic results (e.g., service length predicting recidivism). Of the three variables included in the model(s) service length (in months) was statistically significant in both the unadjusted and adjusted models. For every month of service, participants were significantly less likely to recidivate. This finding for length of service ($OR = .78$) remained consistent even after age and education were incorporated into the adjusted model. If the odds ratio is calculated for an increase in service of 3 months, the odds ratio becomes $.48$, 95% CI [.28, .82]. This indicates that for an additional 3 months of service provision the odds of recidivating as a juvenile is reduced by half.

Adult Reconviction Model

In the adult analysis, 41.3% ($n = 31$) of the participants reported at least one new conviction in the adult system. This included 11 young men who reported at least one new conviction in the juvenile system and 20 new individuals. As Table 4 displays, bivariate tests revealed statistically significant associations between adult recidivism and educational attainment, current employment status, and current age. Of those who had completed a high school diploma or GED or went on to a 2-year or 4-year college, approximately 30% reported at least one new conviction in the adult system compared to 60% of those who had not earned a high school diploma or GED at the time that the survey was administered. Moreover, over 55% of those not currently working reported at least one new conviction in the adult system compared to 28.2% of those who reported current part-time or full-time employment. Those in the adult reconviction group were on about 1 year older on average than those who did not report new convictions in the adult system (mean age of 21.0 vs. 20.1).

Table 5 presents the unadjusted and adjusted logistic regression results. Based on the unadjusted results, education, current employment status and age were significantly associated with new convictions in the adult system.

These same three variables retain their significance in the full model. Participants are significantly less likely to recidivate if they have a high school diploma or GED or better and they are currently working. Specifically, those who had completed a high school diploma or GED or were enrolled in or had completed a college program had only a 15%–17% chance of recidivating compared to those who had not achieved high school diploma or GED. Those who were currently employed also had a very small chance of recidivating (15%) compared to those reporting current unemployment. Participants were also significantly more likely (2.4 times) to report a new conviction in the adult system for every year older they were at the time of survey administration. As in the bivariate tests, length of participation in the reentry program did not have a significant effect on adult system recidivism. In addition, being a father or a heavy substance abuser played no significant role in the adult model.

DISCUSSION

This study examined two previously underexplored angles of community-based juvenile reentry services: (a) the influence of length of service on recidivism outcomes; and, (b) the effects of program participation on juvenile and adult recidivism as separate outcome variables. It appears from these findings that length of participation in a supportive reentry program may protect against recidivism, but only in a time-limited fashion. For both juvenile and adult new convictions, the average length of service receipt was higher among those young men who didn't report new convictions compared to those who did. However, service length was only significant in the juvenile model and was not significantly associated with reduced odds of new convictions in the adult model.

The finding that service length may protect against repeat convictions in the juvenile system is not trivial. Although the program literature on high risk youth offenders has shown null or inconsistent effects of transition and after-care programs on recidivism rates (Abrams et al., 2007; Frederick & Roy, 2003; Wiebush et al., 2005), these studies did not model length of program participation as an independent variable. In this study, the young men who participated in the program for longer periods of time (average of 8.9 months vs. 6.6 months) fared better in regard to repeat juvenile convictions. Due to limited data access and the homogeneity of the sample (i.e., all male, 95% from ethnic minority groups), we were unable to model the service length variable in relation to other known predictors of juvenile recidivism (i.e., gender, criminal history, race). However, the evidence presented suggests that among this high-risk group of young men, service dosage did protect against juvenile recidivism in relation to both education attainment and age controls. While much of the prior literature on IAP and other formal

transition programs did not find significant recidivism reductions in the juvenile system (Frederick & Roy, 2003; Wiebush et al., 2005), this study uniquely suggests that program dosage may be an important dimension to consider.

The finding of “diminishing effects” of the reentry program in regard to adult recidivism is congruent with the literature on reentry services and studies on mentoring studies programs in particular (Bouffard & Bergseth, 2008; Drake & Barnoski, 2006). Although these two studies did not distinguish between types of recidivism (i.e., juvenile or adult), they both uncovered diminishing protective effects of reentry services over time. It also makes sense that the longer amount of time youth have spent away from the program, the more likely they are to fall back into patterns of criminal activity. This concept was evidenced in this data by the magnitude of the odds ratio (2.4) for the current age variable in the adult recidivism model, showing that those who were older, and subsequently “out” longer were much more likely to pick up new adult convictions. Overall, although prior studies on community-based transition and reentry programs did not examine juvenile versus adult recidivism separately (AIM, 2004; Bouffard & Bergseth, 2008; Drake & Barnoski, 2006) the current study supports the overall trend of these studies revealing diminishing effects over time.

Of additional interest is that the major contextual variables that strongly predicted new adult convictions were education and employment, rather than fatherhood or heavy substance use. Both education and employment were strongly associated with lower odds of recidivism in the adult system, suggesting that engagement in prosocial institutions may be critical to interrupting the cycle of offending for formerly incarcerated youth who are in the transition to adulthood phase. Although the sample is small, the findings resonate with Sampson and Laub's (1993) social bonds theory and conflict with Uggen's research suggesting that employment does not matter as much for younger men. Here employment and education mattered greatly. While the current findings are by no means conclusive based on sample size and absence of criminal history controls, it is important to consider that in the period that Arnett (2004) has coined “emerging adulthood” (18–25 years old), engagement in employment or educational institutions can potentially protect against adult criminal system involvement among young men who were incarcerated as juveniles.

These findings also provide some important directions for reentry program practitioners. If one is concerned with longer-term movement away from crime and the criminal justice system, it appears that ensuring that a young person is securely engaged in employment or an educational institution is an important component of supportive community-based reentry services. Adding these concrete goals into traditional case management, counseling, or mentoring programs may increase the likelihood of sustaining recidivism reductions among formerly incarcerated youth.

Limitations

A few study limitations warrant further discussion. First, we acknowledge that reaching a sample of formerly incarcerated transition age young men was a very difficult task, resulting in a smaller than desired sample size. There are also major limitations in regard to the generalizability of the results to other populations (i.e., young women) and other areas of the United States (i.e., non urban, non ethnic minority youth). Even with the young men who were surveyed, significant biases may limit its representativeness to the sampling frame of all program alumni. For example, the individuals who were surveyed were, on average, a younger group than those who were unreachable, hence biasing the study toward those who simply had less time to reoffend, particularly in adulthood. Additional unknown biases may exist, in that those who were surveyed were also more likely to be currently out of jail, likely resulting in a lower recidivism rate than was potentially representative of the entire pool of program alumni.

Another significant limitation of this study is the use of self-report, which contributes to the reliability threats of recall and social desirability biases. In particular, the outcome data was derived from self-report and was not matched with official probation records due to lack of access to official records. Access to official reports would have allowed us to examine more closely the timing and type of new convictions that occurred and would have also provided important background information, such as youths' arrest histories and placement records. As we could not verify the self-reported conviction history, it is possible that the survey participants underreported (or perhaps overreported) their involvement with the criminal justice system. In addition, due to recall bias, we were not able to ascertain the precise temporal sequence of the new convictions. Yet despite the reliance on of self-reports of offending and crime patterns in this article, recent evidence has demonstrated uniformity between self-reports and official verification of offending among serious, violent, and chronic juvenile offenders (Brame, Fagan, Piquero, Schubert, & Steinberg, 2004). This means that even with a limited sample of difficult to reach individuals (i.e., transition age, formerly incarcerated young men) we likely uncovered patterns of new convictions that would likely not vary greatly from official reports.

CONCLUSION

Juvenile incarceration is all too often a gateway to long-term involvement in the adult criminal justice system. The goal of reentry interventions for incarcerated youth is to help steer these young people toward sustainable, prosocial pathways. Unfortunately, much empirical research has shown that reentry programs are either ineffective in reducing recidivism (Weibush et al., 2005), or that the effects of these services tend to diminish over time

(Bouffard & Bergseth, 2008; Drake & Barnoski, 2006). The major risk factors for juvenile recidivism, such as criminal history and social factors continue in a sense to overpower program effects when they are examined over time.

While this study has several limitations, it does offer suggestions for reentry interventions and for future research. Specifically, the study found that length of service has the potential to reduce recidivism for high-risk male offenders, at least in the juvenile system. This means that community-based reentry programs may wish to assist offenders for longer than a 6-month transition period in order to establish a greater impact. In the long term, supporting the social bonds hypothesis (Sampson & Laub, 1993), contextual variables such as engagement in school and work may reduce the odds of adult convictions. As such, transition and reentry services should incorporate educational and employment placement services into their service plans. Future research can build on this study by examining a variety of reentry service variables (such as length of participation, dosage, program satisfaction) in longitudinal recidivism rates. In addition, continuing to disentangle the risks of juvenile versus adult recidivism contributes to a greater understanding of how contextual factors shape pathways to desistance for incarcerated youth.

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