A Spatial Analysis of Risks and Resources for Reentry Youth in Los Angeles County

Laura S. Abrams   Bridget Freisthler
University of California, Los Angeles

Most research on youth reentering the community following incarceration has focused on individual-level risks for negative outcomes; in doing so, researchers have largely overlooked the potential importance of the neighborhood contexts to which youth return. To address this research gap, we explore the associations between the level of neighborhood risks and resources and the rates of youth reentering the community following incarceration. Using spatial analysis to examine archival data from 272 postal codes for Los Angeles County, California, we find positive associations between rates of youth reentry and neighborhood characteristics of unemployment, poverty, and racial/ethnic minority concentration. Analysis also shows reentry rates are positively associated with neighborhood risks, including density of off-premise alcohol outlets and level of community violence. Examining resources individually, we show that the density of designated youth services is positively associated with reentry rates, whereas the density of education and mental health and substance abuse services is negatively associated with reentry rates. However, when neighborhood risks and resources are considered simultaneously, none of the resources is significantly associated with rates of youth reentry. The study findings highlight the relevance of neighborhood context in youth reentry research and suggest several directions for future study.

Keywords: offender reentry, juvenile justice, spatial analysis, neighborhood effects, community resources

Annual estimates of the number of youth released from correctional placements in the United States vary considerably. In part, this disparity stems from differences in the age limits of those considered a youth. Although "youth" is usually defined as someone younger than 19 years, the age limit sometimes extends to include individuals up to 24 years. At the lower end of the range, researchers estimate that 100,000 youth offenders reenter their community each year (Griffin, 2005; Snyder, 2004); at the upper end of these yearly estimates, researchers calculate that more than 200,000 youth face the transition from incarceration back to their neighborhoods (Mears & Travis, 2004). Regardless of age, it is well documented that these *reentry youth* face many barriers to successful transitions into mainstream societal institutions and prosocial lifestyles (Osgood, Foster, Flanagan, & Ruth, 2005; Snyder, 2004).

Research on the community reintegration of incarcerated youth has largely attributed these difficult transitions to a nexus of individual risk factors and problem behaviors, including poor school attachments, antisocial attitudes, and negative peer relationships (Anthony et al., 2010). This focus on individual risks has remained the dominant approach to reentry research despite ample theoretical and empirical evidence that neighborhood conditions play a significant role in structuring opportunities for high-risk youth (Duncan & Brooks-Gunn, 1997), and more specifically, in contributing to delinquent behavior (Sampson et al., 2002).

This study draws upon neighborhood effects theory to examine the environmental context of youth offender reentry in a large urban area. Using spatial analysis, we explored associations between neighborhood risks and resources in relation to the rates of youth returning from probation camps in Los Angeles County, California, in 2007. This study was driven by two exploratory questions:

1. What neighborhood risks are associated with rates of reentry youth (per postal code)?

2. What neighborhood or area resources are associated with rates of reentry youth (per postal code)?

By investigating these questions, this study contextualizes the challenges associated with youth

offender reentry beyond the individual, and establishes both a methodological and theoretical groundwork for future neighborhood-level juvenile reentry studies.

Youth Reentry: Individual Barriers to Success

Youth who return to the community following incarceration face significant barriers to reentry success (Osgood et al., 2005). The literature typically defines success in the reentry context as no repeat contact with the criminal justice system, although this criterion is arguably only one of many indicators of reentry success (Anthony et al., 2010; Spencer & Jones-Walker, 2004). Documented rates of repeat contact with the criminal justice system are quite high. In one large juvenile detention system in the U.S. Southwest, Trulson et al. (2005) found rearrest rates as high as 85% at 5 years post release. Similarly, the California Department of Juvenile Justice has estimated that 70% of youth paroled from its state institutions were rearrested within 2 years (California Juvenile Justice Reentry Partnership, 2007).

In addition to high rates of return to the criminal justice system, formerly incarcerated youth face significant barriers to educational attainment. Researchers have not only estimated that fewer than 20% of formerly incarcerated youth earn a high-school diploma or General Educational Development (GED) certificate (Osgood, Foster, & Courtney, 2010) but also found the majority of reentry youth are unable to reenroll in public school (Stephens & Arnette, 2000). Given these low rates of secondary education, it is not surprising that poor employment and earnings are also associated with histories of juvenile incarceration (Uggen, Manza, & Berhens, 2005). For example, Bullis and Yovanoff's (2006) study of youth exiting the Oregon Youth Authority found that just 29% were employed at 6-months post release, and those rates declined over time.

A number of empirical studies have sought to uncover specific individual risk factors for these poor outcomes. For example, researchers have found that factors such as poor school performance, mental illness, substance abuse, learning disabilities, and family dysfunction, (including child maltreatment) to be salient predictors of *transition failure*, defined as recidivism (Bullis et al., 2002; Dembo et al., 1991; Heilbrun et al., 2000; Ryan & Testa, 2004). Other demographic factors, such as being younger and male, also correlate with more negative outcomes (Niarous & Routh, 1992; Heilbrun et al., 2000).

Qualitative research has examined some of the nuances of youth offender reentry. Some studies have found that when youth exit secure confinement, they often find themselves without direction or guidance and, therefore, experience few supports for actualizing their goals for schooling and education (Abrams, Shannon, & Sangalang, 2008). Other research has discovered that although many reentry youth strive to avoid associating with criminally involved friends and family members, these same people also comprise their main sources of social support (Hughes, 1998; Sullivan, 2004). Additional qualitative studies have uncovered that some youth are able to overcome reentry barriers, either by drawing on internal strengths and prosocial social support networks (Todis, Bullis, Waintrup, Schultz, & D'Ambrosio, 2001), or by circumventing potentially high-risk activities through a selective approach to engaging with criminal networks and activities (Abrams, 2007). Although these studies have provided context and dimension to youths' reentry experiences, such research remains on the level of individual study.

Frameworks for Intervention

Increased knowledge of the major challenges and poor outcomes associated with reentry has contributed to a framework for interventions that center on removing individual barriers to transition success. For example, the federal Office of Juvenile Justice and Delinquency Prevention sponsored the Intensive Aftercare Program (IAP; funded from 1987 to 2000), which developed and tested a model of intensive transition case planning. In the IAP model, case planning occurred during the youth's incarceration and continued through aftercare support upon reentry. However, after more than a decade of IAP demonstration and funding, outcome studies that included control or comparison groups showed that even though the IAP program positively affected both program completion and satisfaction among youth offenders, the program did not significantly affect outcomes as measured through recidivism rates (Frederick & Roy, 2003; Wiebush et al., 2005). Subsequent funding for the IAP was not reauthorized. However, similar individually oriented interventions, such as mentoring and case management, remain the dominant approach to juvenile offender reentry (Spencer & Jones-Walker, 2004).

Despite the stronghold of the individual model, a trend toward a neighborhood-focused policy framework for prisoner reentry appears to be emerging. The federal *Second Chance Reentry Initiative* (Pub. L. 110-199)*,* authorized in 2007 at $165 million dollars per year, launched a "comprehensive response" to the problems faced by adult and juvenile offenders returning to communities following incarceration. The initiative gave priority to applicants whose programs focused on particular geographic areas (U.S. Department of Justice, 2009). In fiscal year 2009, the

Department of Justice request for program proposals required that applicants use a Socioeconomic Mapping and Resource Topography (SMART) system to examine the risks and resources of the neighborhoods proposed for reentry intervention. The emphasis on the SMART system in this most recent federal initiative for returning offenders is taken as evidence of a potential policy shift towards an environmental, neighborhood-based framework for reentry interventions. However, a more substantial body of research on neighborhood conditions and youth reentry is needed to develop these macro-level interventions.

Neighborhood Conditions and Reentry Research

Just a handful of studies have sought to understand neighborhood-level factors as they affect the reentry experiences and outcomes of adult offenders, and none have specifically addressed youth reentry. Visher and Farrell (2005) used Chicago census data to map similarities and differences in rates of home ownership, high-school graduation, poverty, and crime in neighborhoods with high densities of returning adult parolees. These researchers concluded that the concentrated risks of these environments created significant obstacles for exoffenders to successfully reintegrate into their communities. Similarly, Kubrin and Stewart (2006) examined the effects of neighborhood and individual factors on recidivism rates of adult offenders in Portland, Oregon. Using hierarchical linear modeling, Kubrin and Stewart found that neighborhood indicators of poverty and disadvantage remained significant predictors of reentry failure (defined as reoffending) beyond the risk characteristics of the individual offenders. Although these studies were confined to adult offenders, the findings have contributed to a general understanding that neighborhood disadvantage may play a greater role in reentry experiences and outcomes than an offender's individual characteristics or known risks for repeat offending. Studies of neighborhood resources and offender reentry are quite limited. In one such study conducted in Newark, New Jersey, the researchers sought to understand the potential "match" or "mismatch" of the location of community services with the residences of adult parolees (Mellow, Schlager, & Caplan, 2008). Using geographic information system (GIS) technology, Mellow and colleagues found that the greatest number of social services were located closer to the parole district office than to the majority of adult parolees' residences. Further, these researchers found that agencies providing similar services (e.g., mental health, addiction, or employment services) were spatially clustered together. From this research, Mellow and colleagues concluded that even though neighborhood resources were present, those resources were not geographically accessible to the majority of

parolees who might need those services. As such, the Mellow et al. study raised a key reentry question: Where are services that might be needed by individuals reentering society located? Despite posing this important question, the Mellow et al. study did not use a multivariate statistical approach to examine the density of services.

Neighborhood-Based Reentry Approach: Theory and Research Support

The past 15 years has witnessed a resurgence in understanding how neighborhood processes affect child and family well-being (see, for example, Burton & Jarrett, 2000; Leventhal & Brooks-Gunn, 2000; Sampson et al., 2002). The overall premise of the neighborhood-based approach holds is that developing a greater understanding of the ways in which environmental characteristics and social interactions affect neighborhoods is a critical step in developing programs that effectively and comprehensively reduce the social problems affecting youth and their families. In reviewing the burgeoning literature on neighborhood effects, Sampson and colleagues (2002) found that such research has focused on four distinct, but related, theoretical frameworks: social ties and interactions, norms and collective efficacy, institutional resources, and routine activities. The first two frameworks (i.e., social ties and interactions, and norms and collective efficacy) seek to understand the ways in which neighbors' interactions and relationships can enhance neighborhood conditions through processes such as frequency of interactions, trust, informal social control, and social cohesion. The latter two frameworks (i.e., institutional resources and routine activities) look specifically at (a) the diversity of youth-focused institutions that are found within neighborhood areas, and (b) how land-use patterns exacerbate or mitigate neighborhood problems. Put another way, the environmental risks (land-use patterns) and resources (services and institutions) available within neighborhood areas may facilitate or reduce social problems pertaining to youth and their families. Extending this theory to youth offender reentry, applying these two frameworks means that the supports or risks within and around the neighborhood to which reentry youth return may be a critical piece of information about the social contexts and structures that can support or deter transition success. This article considers the effects of specific neighborhood risks, including alcohol outlet availability, vacant housing, and community violence; the rationale for focusing on these risks is described below.

Environmental risks. Alcohol outlets are related to a variety of youth problems, including injuries due to assaults, traffic accidents, child abuse, and

accidents (Freisthler et al., 2008; Gruenewald et al., 2010). In particular, *off-premise alcohol outlets* (i.e., establishments where alcohol is purchased but must be consumed elsewhere, such as liquor stores or convenience stores) have been linked to rates of violent crime among youth 15 to 24 years old, accidental injuries, and injuries from assaults (Alaniz et al., 1998; Freisthler et al., 2008; Gruenewald et al., 2010). In addition, access to alcohol through off-premise establishments may expose youth to other harms (e.g., drug dealings and violence) associated with the illegal acquisition of alcoholic beverages. Thus, youth may be exposed to these additional risks if they purchase alcohol in areas prone to other problem behaviors (e.g., drug sales and prostitution; Alaniz et al., 1998). Alternately, as is the case among adults, violence may be directly tied to greater use when alcohol is purchased and consumed by youth (Stockwell & Gruenewald, 2001).

Limited social capital restricts the ability of neighborhoods to respond to social problems, while reduced levels of social control encourages illegal activities, such as drug sales, to take root in neighborhoods. Similarly, vacant housing has not only been associated with increased rates of assaults among youth and adults but vacant units also tend to occur in neighborhood areas with higher levels of disorganization (Freisthler et al., 2008; Gruenewald et al., 2010). Vacant housing is a negative land-use pattern that often signals the presence of fewer guardians who could intervene when neighborhood youth act out, making it easier for these youth to participate in the types of activities that may lead to offending.

Another neighborhood risk associated with juvenile offending is exposure to community violence. As a precursor to recent research on exposure to violence, several studies have established that neighborhood disorganization and disadvantage contribute to deviant and delinquent behavior among youth (cf. Herrenkohl, Hawkings, Chung, Hill, & Battin-Pearson, 2001; Sampson & Groves, 1989; Shaw & McKay, 1969). Subsequent research has attempted to understand the unique contributions of these specific risks as factors operating within disorganized neighborhoods, including exposure to violence. For example, Gorman-Smith and Tolan's (1998) longitudinal study of urban ethnic minority youth in Chicago found that even when their analyses controlled for protective factors such as parenting practices, youths' exposure to community violence was positively associated with aggressive behavior and depression during adolescence. Similarly, Patchin, Huebner, McCluskey, Varano, and Bynum (2006) examined a sample of youth (ages 9 to 15 years) from high-risk neighborhoods, and found that youth who witnessed high levels of violence in their neighborhoods were more likely to self-report carrying weapons and

perpetrating assaults on others. Moreover, these findings remained constant even when Patchin et al. controlled for other risk factors for delinquency. This general finding that youth's aggressive and antisocial behaviors tend to increase according to the level of exposure to community violence has been consistent among samples of young adults as well (Eitle & Turner, 2002).

Environmental resources. The work of Sampson and colleagues (Sampson & Groves, 1989; Sampson, Morenoff, & Gannon-Rowley, 2002) as well as that of Morenoff, Sampson, and Raudenbush (2001) has suggested that the availability of institutional resources can mitigate neighborhood risks by providing services that address the needs of community members. For reentry youth neighborhood resources such as social services, employment programs, and youth-friendly community or recreation centers may provide concrete services, such as school and job assistance. In addition, neighborhood resources can provide reentry youth with intangible benefits such as friendship, prosocial activities, and informal social controls that can mitigate risk of reoffending (Laub, Nagin, & Sampson, 1998; Wright, Cullen, & Miller, 2001).

Nonetheless, the presumed positive benefits of social services use for reentry youth has not been confirmed empirically (Anthony et al., 2010). Some evidence has shown that reentry youths' use of formal neighborhood resources not only positively influences the transition to school and work but also potentially deters recidivism. For example, Bullis and Yovanoff's (2002) longitudinal study of more than 500 released youth in Oregon found that those who had received mental health services were 4.8 times as likely to be engaged in work or school at one-year post release. A separate analysis comparing these "engaged youth" with youth who were not engaged in school or work found that the engaged group were at least twice as likely to avoid repeat contact with the criminal justice system (Bullis, Yovanoff, Mueller, & Havel, 2002). However, a recent, comprehensive study of more than 13,000 released youth offenders in Illinois found that reentry youth who used government resources (i.e., child welfare, public assistance, and Medicaid-related services) had higher rates of return to the criminal justice system than reentry youth who did not use any of those services (Cusick, Goerge, & Bell, 2009). Thus, although ample evidence has suggested that the presence of resources provides opportunities and supports for reentry youth, additional, extensive research is needed.

Significance of Study

In sum, much remains to be discovered about the interactions of neighborhood risks and resources with youth returning to the community following

incarceration. For example, little is known about the neighborhoods where reentry youth reside, how neighborhood conditions facilitate or deter opportunities for reentry youth, or how resources might protect these youth from involvement in risky behaviors and criminal activity. Moreover, conflicting information about the use of resources leaves many unanswered questions about the role that formal supports play relative to neighborhood risks, and raises the potential importance of spatial questions, such as the accessibility of these resources relative to where reentry youth reside. This exploratory study of the associations between rates of juvenile reentry and neighborhood risks and resources in a large urban area is an initial step in addressing these research gaps.

Method

Local risks and resources related to juvenile offender reentry were examined using a cross-sectional ecological design with 272 ZIP (Zone Improvement Plan) codes in Los Angeles County, California. An ecological design is one in which the unit of analysis is at the population level rather than the individual. In the case of the present study, the ecological unit of analysis was the ZIP code. Although Los Angeles County is primarily urban, the county includes several ZIP codes with lower population densities, which increases the variation between areas. Indeed, ZIP codes in Los Angeles County varied considerably on overall rates of juvenile reentry and on measures of racial/ethnic composition, poverty levels, density of resources, and density of alcohol outlets. The 272 ZIP codes represent the universe of ZIP codes that are entirely located within the boundaries of Los Angeles County. Thirteen additional ZIP codes were deemed primarily administrative; these ZIP codes had little geographic extent and population because they referred to the location of universities or federal buildings. Therefore, these ZIP codes were combined with the larger ZIP code that encompassed the administrative area. For example, ZIP code 90095 (University of California-Los Angeles) is located entirely within the boundaries of ZIP code 90024. Therefore, all data associated with 90095 were included with that of 90024. A 14th ZIP code (90704; Catalina Island) was removed from the analysis because it was not able to be modeled using spatial analysis techniques.

Los Angeles County has over 9 million residents, with a diverse population that is about 48% Hispanic, 9% African American, and 13% Asian (U.S. Census Bureau, 2010). Los Angeles County is an ideal place to study juvenile offender reentry and neighborhood effects because of the county's sizable population of incarcerated youth. In 2006, California accounted for 16% of all youth correctional placements in the United States (Sickmund, Sladky, Kang, & Puzzanchera, 2008). Among the youth correctional facilities in California, about 30% of juvenile hall beds and over 50% of camp or "ranch" beds were located in Los Angeles County (Legislative Analyst's Office, 1995).

Dependent Variable

The dependent variable for this study was the rate of juvenile offenders (per 1000 youth aged 10 to 19 years) in each ZIP code ($N = 272$) released back to the community after serving a sentence in one of 18 probation camps in Los Angeles County. The ZIP codes for the residences of all 4,398 juvenile offenders released from Los Angeles probation camps in 2007 was obtained from the Los Angeles County Department of Probation, Data Management Unit. The County Probation Department is the most reliable source for this information; however, we were not able to confirm the accuracy of the data provided. The average rate of reentry per ZIP code was about 2 youth per 1,000 children (see Table 1). On average, these youth served 5 months at the probation camps. A pilot survey of youth transitioning out of the camps showed that 93% of youth surveyed planned to return to their residence-of-origin upon their release (Fields & Abrams, 2010).

Independent Variables

Environmental risks related to juvenile offending included measures of community violence, alcohol outlet density, and vacant housing. Rates of violence per 1,000 individuals were obtained from 2007 records provided by the California Office of Statewide Health Planning and Development. Using data from these records, we established the rate of assault injuries by ZIP codes for the residence of the reentry youth (99% geocoding rate; high geocoding percentages indicate rates of successfully mapping locations with given x and y coordinates. Low geocoding rates indicate locations were not mapped and are considered "missing data."). The state data records provided information on all hospital admissions of least a one-night stay, including *International Classification of Disease, Ninth Revision* (ICD-9) diagnostic codes related to the hospital admission. Assault injuries are those with event codes of E960 to E969, excluding E967.0 to E967.9 (i.e., homicide or injury purposely inflicted on another).

The density of alcohol outlets was measured by the number of off-premise outlets, restaurants that serve alcohol, and bars per area. Data for locations of licensed alcohol establishments were coded as an off-premise outlet if the license type was "Off-Sale Beer & Wine" or "Off-Sale General." Establishments coded as bars included those with license types of "Small Beer

Manufacturing," "On-sale beer," "Beer/Wine Public Premise," "General Public Premise," "Beer Public Premises," or "General Brew-Pub." Alcohol outlets were coded as restaurants if the license types were "Beer/Wine Eating Place" or "General Eating Place." Our study included only those alcohol outlets with licenses that were active January 2007; these establishments had a geocoding rate of 99%.

The percentage of vacant housing units was calculated by dividing the number of vacant housing units by the total number of housing units in each ZIP code. The data were obtained from Geolytics Inc., which collects, maintains, and updates (annually) a range of demographic information for each ZIP code.

The locations of community resources or social services were obtained from the *Rainbow Resources* Directories (of social service agencies) in Los Angeles for 2006 (Rainbow Resource Directories, 2006*)*. This directory contains listings for more than 25,000 social service agencies serving Los Angeles County, categorized in 58 service areas. The location information for these data sources was geocoded using ArcGIS 9.0 (Environmental Services Research Institute, 2004). Density variables (i.e., number of services per area) were created for the following eight service categories; examples of relevant headings of service categories found in the *Rainbow Directory* are given in parentheses.

- housing (e.g., Housing/Low Income/HUD);
- legal or probation services (e.g., Correctional/ Prison/Probation);
- youth services, including programs that serve transition-age youth (e.g., Youth/ Anti-Gang Resources, Youth/ High Risk, Youth/ Recreation/Activities);
- health and health-related services (e.g., AIDS/ Sexually Transmitted Diseases);
- employment or job-training services (e.g., Employment Placement/ Job Training);
- mental health and substance abuse counseling or services (e.g., Counseling/ Mental Health/ Anger Management);
- education (e.g., Children/School Districts); and
- general social services (e.g., Emergency Assistance/ Basic Needs).

The complete list of service categories obtained from the *Rainbow Directory* can be found in Appendix A. Overall, 97% of the social service agencies were successfully geocoded.

Sociodemographic information used as control variables for each of the 272 ZIP codes used in the study was obtained from Geolytics. Demographic variables used in this analysis included the number of youth aged 10 to 19 years per area, the percentage of households with annual income less than $25,000, and the percentage of population comprised of Black, Hispanic, and Asian residents. Table 1 provides the descriptive statistics for the study variables.

Data Analysis

Data were analyzed using spatial regression error models. These procedures were chosen over traditional ordinary least squares (OLS) regression models given the presence of *spatial autocorrelation,* that is, the extent of interdependence among data across space. Spatial autocorrelation occurs because units that are located next to each other may share characteristics (e.g., are correlated), which violates the assumption of unit independence required for OLS procedures (Bailey & Gatrell, 1995). The Moran coefficient provides information on the extent to which spatial autocorrelation is present in the dependent variable, and allows for an assessment of the appropriateness of OLS or spatial regression procedures. These coefficients are similar to correlation coefficients in that they are bounded by 1 and -1 (Cliff & Ord, 1973). A positive value indicates that adjacent ZIP codes have similar reentry rates, which increases the likelihood of committing Type I error. Negative spatial autocorrelation indicates that areas with high reentry rates will be spatially located next to ZIP codes with low reentry rates, which may increase the occurrence of Type II errors (Cliff & Ord, 1973; Freisthler et al., 2006).

To determine the level of spatial autocorrelation using the Moran coefficient, a spatial weights matrix was created that was N x N in dimension (in this case, 272 x 272), and identified which ZIP codes were located next to other. Adjacent ZIP codes were denoted with a "1" and nonadjacent ZIP codes were denoted by a "0." Zip codes were considered adjacent if the two areas shared a boundary, not just a point (also called a *rooks spatial weights matrix*; Freisthler et al., 2006). In this study, the Moran coefficient was positive and statistically significant for juvenile reentry rates (Moran = .48, p = .01).

The multivariate spatial regression error model (also called the *nuisance parameter model*) treats the spatial dependence found in the model as a "nuisance." In other words, this model assumes that the spatial autocorrelation that is present is related only to the correlated error in the model, and is otherwise unrelated to the independent and dependent measures (Bailey & Gatrell, 1995).

Table 1.

Descriptive Statistics for Rates of Reentry, Sociodemographics, Neighborhood Risks, and Institutional Resources by Zip Code in Los Angeles County (N = 272)

Variable Name	Mean	SD	Minimum	Maximum
Rates of Reentry (per 1,000 children)	2.16	2.21	0.00	13.61
Sociodemographic Variables				
Youth per Area	1306.95	1207.51	0.84	7473.33
% Income < $25,000	28.43	14.19	0.00	88.00
% Black	9.17	14.66	0.20	88.30
% Asian	13.40	13.13	0.20	69.50
% Hispanic	37.38	27.67	3.00	98.80
Neighborhood Risks				
Assault Rate	0.50	0.70	0.00	8.55
Density of Off-Premise Outlets	6.34	6.65	0.00	60.00
Density of Restaurants	9.06	18.39	0.00	200.00
Density of Bars	1.40	2.34	0.00	20.00
% Vacant Housing	4.47	3.14	1.30	30.50
Institutional Resources				
Housing Services	1.29	4.52	0.00	40.00
Legal Services	0.72	2.39	0.00	30.00
Youth Services	0.91	1.76	0.00	13.75
Health and Health-Related Services	2.04	4.68	0.00	67.50
Employment Services	0.66	2.43	0.00	30.00
Mental Health and Substance Abuse	0.96	2.53	0.00	32.50
Education and Related Services	0.71	2.53	0.00	40.00
General Social Services	2.24	5.04	0.00	60.00

Four models were developed to determine the associations between area risks and resources and rates of juvenile reentry. Model 1 included only the sociodemographic controls of density of youth, percentage of households with income less than $25,000, and percentage of residents by race/ethnicity (i.e., Black, Asian, or Hispanic). Model 2 examined the five risks related to reentry including violence, density of off-premise alcohol outlets, restaurants that serve alcohol, bars, and the percentage of vacant housing units. In Model 3, the relationship of the eight social service categories was examined with respect to rates of juvenile reentries. The final model, Model 4, incorporated all the variables from the three preceding models.

Results

Results from the four spatial regression models are presented in Table 2. Results for Model 1 showed that the percentage of households with income less than $25,000, percentage of Black residents, and the percentage of Hispanic residents were positively related to rates of reentry in ZIP code areas. The percentage of Asian residents was negatively related to reentry rates, and the density of youth was not related to reentry rates.

In Model 2, levels of community violence as measured by the number of assaults per 1,000 population, density of off-premise alcohol outlets, and percentage of vacant housing units were positively related to rates of juvenile reentry. No statistically significant relationship was found for the density of bars whereas the density of alcohol-serving restaurants was negatively associated with rates of reentry.

With regard to the presence of local resources (Model 3), higher densities of both education services and mental health services (including substance abuse programs) were related to lower rates of reentry. Conversely, the density of youth-specific resources was positively related to rates of reentry. The densities of housing, legal, health, employment, and general social services were not related to reentry rates.

Model 4, which was the full model that incorporated all of the variables from Model 1 through Model 3, showed a significant and positive relationship between the percentage of households with income less than $25,000, percentage of Black residents, percentage of Hispanic residents, rate of assaults, density of off-premise alcohol outlets, and reentry rates. In Model 4, the density of restaurants was negatively related to reentry rates, which was consistent with the previous models. When the sociodemographic and risk variables were included in Model 4, none of the variables related to neighborhood resources was significantly related to reentry rates.

Discussion

As a step toward building an environmentally focused model of youth reentry, this study sought to understand the neighborhood risks and resources associated with rates of returning youth offenders in a large urban county. We found that reentry rates for juvenile offenders were higher in neighborhood areas with higher levels of poverty and a higher percentage of racial/ethnic minority residents. These findings make sense given the disproportionate numbers of poor and racial/ethnic minority youth involved in all aspects of the juvenile justice system (Piquero, 2008). In regard to environmental risks, the ZIP codes with greater densities of off-premise alcohol outlets had higher rates of reentry. This finding was similar to previous studies showing positive relationships between off-premise alcohol outlets and a variety of youth problems as well as rates of adult crime (Alaniz et al., 1998; Freisthler et al., 2008; Gorman et al.,2001; Gruenewald et al., 2010, Lipton & Gruenewald, 2002). ZIP codes with higher per capita level of violence (as measured by assaults) also had higher juvenile reentry rates. This finding is consistent with prior research that has established a positive relationship between exposure to violence and youth antisocial behavior (Patchin et al., 2006).

Examining resources alone, the number of youth-focused services available per ZIP code (including services specifically for transition-age youth) had a positive relationship with reentry rates whereas the number of mental health services (including substance abuse programs) and education services were negatively associated with rates of reentry. Because no study has examined the presence of resources with this level of specificity, we cannot knowwhether these findings are particular to Los Angeles County or if such findings are atypical. However, and more important, when risks were added to the full model (Model 4) along with resources, none of the resources studied were found to be significantly associated, either positively or negatively, with rates of reentry.

These findings can be interpreted within multiple frameworks. Akin to the work of Sampson and colleagues (2002), the study results may suggest that routine activities are more likely to affect juvenile reentry rates than geographic densities of institutional resources. That the geographic density of any type of resources was not significantly related to reentry rates when environmental risks were simultaneously considered may mean that the location of services does not matter if neighborhood risks are not modified. Further, the dominating aspects of environmental risks may create a culture in which young people participate in violence or crime as a means of survival, such as to meet income needs, or to deflect violent victimization directed toward themselves or family members (Anderson, 2000). This way of interpreting the data has implications for prevention efforts that seek to modify the neighborhood conditions in which youth offending (or reoffending) occurs. That is, rather than trying to change the mindset of individual youth—as has been the historical thrust of probation as well as enhanced reentry practices such as the IAP—prevention efforts must also consider the influence of neighborhood context on youth offending.

The second framework that may provide insight into these findings is that of spatial mismatch. Historically, spatial mismatch has been used to describe the difference in location of jobs and the populations employed in those jobs. In this article and in the one similar study on returning adults by Mellow et al. (2008), *spatial mismatch* was used to describe the geographic availability of services and their location to populations of offenders reentering society following incarceration. When resources were considered alone, the negative findings regarding location of education services and mental health/substance use services may mean the density of these services was not adequate to combat the overwhelming risk faced by reentry youth who are returning to troubled neighborhoods. Further, these negative findings may also mean that these high-risk populations have low rates of access to services for education, mental health, and substance abuse. Conversely, an analyst might infer from these findings that the youth-specific services were deliberately placed in these areas to target high densities of reentry youth. Although our cross-sectional design is unable to provide conclusive answers to these questions, these areas present interesting avenues for further inquiry

In essence, as suggested by Sampson and colleagues (2002), the density of resources or lack thereof may further signal society's disinvestment in both the community and the youth living there. The unfortunate outcome of such withdrawal may be unsuccessful reentry transitions that result in juvenile reoffending and subsequent placement in juvenile probation camps or adult facilities, further weakening

Table 2.

Spatial Error Regression Models Examining the Relationship of Neighborhood Risk and Resources on Juvenile Reentry Rates by ZIP Code for Los Angeles County (N = 272)

Variable Name	Base Model (Model 1)			Neighborhood Risks (Model 2)			Institutional Resources (Model 3)			Full Model (Model 4)		
	B	SE		B	SE		B	SE		B	SE	
Constant	-0.645	0.268	*	0.817	0.234	***	2.005	0.289	***	-0.640	0.280	*
Socio-demographic Variables												
Youth per Area	-0.0001	0.0001								-0.0002	0.0001	
% Income < $25,000	0.066	0.010	***							0.053	0.013	***
% Black	0.066	0.008	***							0.045	0.008	***
% Asian	-0.017	0.008	*							-0.004	0.008	
% Hispanic	0.016	0.005	**							0.012	0.005	*
Neighborhood Risks												
Assault Rate				1.422	0.157	***				1.050	0.260	***
Density of Off-Premise Outlets				0.106	0.023	***				0.067	0.028	*
Density of Restaurants				-0.054	0.007	***				-0.038	0.010	**
Density of Bars				0.095	0.067					0.059	0.071	
% Vacant Housing				0.070	0.032	*				0.005	0.030	
Institutional Resources												
Housing Services							0.094	0.056		-0.069	0.055	
Legal Services							-0.174	0.114		0.015	0.093	
Youth Services							0.490	0.112	***	0.060	0.104	
Health and Health-Related Services							0.035	0.061		0.061	0.047	
Employment Services							0.189	0.128		-0.061	0.107	
Mental Health and Substance Abuse							-0.260	0.106	*	0.107	0.089	
Education and Related Services							-0.198	0.092	*	0.022	0.082	
General Social Services							-0.061	0.074		-0.071	0.058	
Spatial Autocorrelation	0.343	0.076	***	0.488	0.067	***	0.652	0.053	***	0.359	0.075	***

*$p < .05$, **$p < .01$, ***$p < .001$

the structure of these neighborhood areas. Moreover, the skills learned in juvenile probation camps or residential treatment centers (e.g., cognitive skills training) tend to focus on strengthening refusal skills and crime temptations with peers. However, such training does not necessarily teach youth in real-world settings how to circumvent the multiple risks of the neighborhood environment (Abrams, 2006). This idea is supported by several ethnographic studies on reentry. These studies have tended to find that in addition to individual struggle to achieve an "exoffender" identity, reentry youth must also contend with the challenges of living in resource-poor, disorganized neighborhoods; the absence of jobs or family support; and the widespread availability of substances (Abrams, 2007; Sullivan, 2004; Visher & Farrell, 2005). All of these environmental challenges can compromise the ability of reentry youth to abide by their probation orders. In sum, as much as individuals may be assisted in various ways through connections to neighborhood resources, the overarching risks of the environment may override any potential benefit of these resources. Thus, these findings lead us to hypothesize that until environmental risks are addressed,

those risks will continue to pose challenges for reentry youth. Intervention approaches that seek to modify high-risk environments may assist reentry youth in their transition from incarceration. For example, interventions designed to reduce or limit the number of off-premise alcohol outlets in an area, particularly in lower income, ethnic minority neighborhoods, might reduce opportunities for youth to participate in criminal activities and, thereby, lower rates of reentry and recidivism (Alaniz et al., 1998). Similarly, creating safe environments for youth, and coupling those environments with tangible and accessible services, may provide protective resources for returning youth offenders; however, further study of service utilization patterns and outcomes is needed to confirm this hypothesis.

Limitations

Despite the potential importance of this study's findings, several limitations exist. First, the study has a relatively limited geographic focus. With a primarily urban population that is both ethnically and racially diverse, the findings cannot be generalized to areas with dissimilar racial/ethnic compositions. Further, as a unit of analysis, ZIP codes might not correspond with what other researchers consider their immediate neighborhood. Moreover, ZIP code areas are defined by permeable boundaries; that is, people can move short distances within the county, easily crossing the ZIP boundaries without realizing they have moved to another ZIP code area. Future studies could introduce the use of spatial lags (i.e., characteristics of adjacent ZIP code areas) to assess the association of spatial lags with reentry rates. A further limitation of this study may be that we under counted the number of available resources because we relied on one directory of social services, albeit a directory that is a major resource for the study area.

Moreover, this study was limited by its cross-sectional design. Reflected in the discussion, this limitation necessitated providing multiple interpretations, the "correctness" of which is dependent on understanding the timing of events related to when services become available and changing patterns of youth incarceration and reentry. In other words, we know little about how reentry rates affect service availability, or vice-versa. The cross-sectional design also precluded our ability to fully understand how services influence rates of reoffending, an outcome that is heavily weighted in the literature. Given these limitations and findings, we hypothesize that the presence of resources in neighborhoods with high levels of risk may not provide ample environmental opportunity for youth to engage in prosocial activities or to avoid criminal activity. A further limitation posed by the cross-sectional nature of this study is that we do not have information on whether families with at-risk or offending youth choose to live in higher risk neighborhoods, and whether the cumulative amount of risk influences the youths' offending behaviors (Tienda, 1991).

By building on these ideas, future longitudinal research will be able to more fully confirm or deny these hypotheses.

This study examined the population-level characteristics related to youth reentry. As a population-level study, the data did not include characteristics of the particular youth who were involved in the juvenile probation camps. Therefore, we do not have any information on the length of time each youth spent in the camp, when each youth entered the camp, his or her race or age, or the youth's committing offenses. In our future research, we plan to use a multilevel statistical design to analyze data on both the youth and the neighborhoods to which they return after incarceration.

Finally, this study does not include information on the utilization of the resources studied, the size of the agencies that provided services, and whether the services could be used by the reentry youth. Our use of administrative data precluded our assessing whether reentry youth had any inclination to use the available services. Given the stigma and low rates of utilization associated with services for youth, and ethnic minority youth in particular (Harrison, McCay, & Bannum, 2004), an analyst might suspect that the density of services does not matter as much as youths' willingness to use these resources. To address this limitation, we suggest that case study research involving neighborhoods with varying levels of risks, resources, and reentry rates would provide greater insight into these important questions.

Conclusion

The purpose of this exploratory study was to identify environmental conditions that may inhibit or exacerbate successful facility-to-community transitions for incarcerated youth. Many important questions exist regarding the optimal investment in services for the greatest yield in positive transition outcomes for reentry youth. This study begins to address this knowledge gap, finding that ZIP codes with high densities of returning youth offenders have higher levels of environmental risks (i.e., alcohol availability and violence) as well as higher amounts of certain types of resources (i.e., youth services) but not others (i.e., mental health, substance abuse, and education services). Moreover, and perhaps most important, the potential impact of these resources is eclipsed when resources are considered simultaneously with environmental risks. Further, the use of spatial regression procedures to analyze these data allows us to explicitly control for the correlations that exist between ZIP code areas and to provide unbiased estimates of the effects of the relationship between the risks and resources for reentry (Freisthler et al., 2006). This type of analysis has not been previously applied to this problem or population.

In conclusion, youth offender reentry is a social problem with long-lasting social and economic consequences. After decades of research and practice focusing on individually oriented solutions, government attention has recently turned to   interventions for reentry

youth that seek to alter the neighborhood structure in which reentry occurs. However, research about the benefits of this environmental approach is sparse, especially research with juvenile offenders. This study underscores the importance of developing specific knowledge about neighborhood resources and risks related to youth reentry. We anticipate that the trajectory of this research will inform the design and delivery of neighborhood interventions for this particularly vulnerable population.

References

Abrams, L. S. (2007). From corrections to community: Youth offenders' perceptions of the challenges of transition. *Journal of Offender Rehabilitation, 44*(2/3), 31-53. doi:10.1300/J076v44n02_02

Abrams, L. S. (2006). Listening to juvenile offenders: Can residential treatment prevent recidivism? *Child and Adolescent Social Work Journal, 23*(1), 61-85. doi:10.1007/s10560-005-0029-2

Abrams, L. S., Shannon, S. K., & Sangalang, C. (2008). Transition services for incarcerated youth: A mixed methods evaluation study. *Children and Youth Services Review, 30,* 522-535. doi:10.1016/j.childyouth.2007.11.003

Alaniz, M. L., Cartmill, R. S., & Parker, R. N. (1998). Immigrants & violence: The importance of neighborhood context. *Hispanic Journal of Behavioral Sciences, 20*, 155-174. doi:10.1177/07399863980202002

Anthony, E. K., Samples, M. D., de Kervor, D. N., Ituarte, S., Lee, C., & Austin, M. J. (2010). Coming back home: The reintegration of formerly incarcerated youth with service implications. *Children and Youth Services Review*.Advanced online publication. Retrieved July 2010. doi:10.1016/j.childyouth.2010.04.018

Anderson, E. (2000). *Code of the street: Decency, violence, and the moral life of the inner-city*. New York, NY: W.W. Norton & Co.

Bailey, T. C., & Gatrell, A. C. (1995). *Interactive spatial data analysis*. Essex, UK: Addison-Wesley Longman.

Brent, B. B., & Tollett, C. L. (1999). A study of recidivism of serious and persistent offenders among adolescents. *Journal of Criminal Justice, 27*, 111-126. doi:10.1016/S0047-2352(98)00051-8

Burton, L. M., & R. L. Jarrett (2000). In the mix, yet on the margins: The place of families in urban neighborhood and child development research. *Journal of Marriage and the Family, 62*, 444-465. doi:10.1111/j.1741-3737.2000.01114.x

Bullis, M., & Yovanoff, P. (2002). Those who do not return: Correlates of the work and school engagement of formerly incarcerated youth who remain in the community. *Journal of Emotional and Behavioral Disorders, 10*, 66-79. doi:10.1177/10634266020100020101

Bullis, M., & Yovanoff, P. (2006). Idle hands: Community employment experiences of formerly incarcerated youth. *Journal of Emotional and Behavioral Disorders, 14*, 71-85. doi:10.1177/10634266060140020401

Bullis, M., Yovanoff, P., Mueller, G., & Havel, E. (2002). Life on the "outs": Examination of the facility-to-community transition of incarcerated youth. *Exceptional Children, 69*(1), 7-22. Retrieved from http://www.questia.com/googleScholar.qst?docId=5000601027

California Juvenile Justice Reentry Partnership. (2007). *California juvenile justice reentry partnership (CJJRP) aims to improve outcomes for youth*. Retrieved from http://www.cjcj.org/juvenilejusticereentry.html

Chung, H. L., Schubert, C. A., & Mulvey, E. P. (2007). An empirical portrait of community reentry among serious juvenile offenders in two metropolitan cities. *Criminal Justice and Behavior, 34*, 1402-1426. doi:10.1177/0093854807307170

Cliff, A. D., & Ord, J. K. (1973). *Spatial autocorrelation* (Monographs in spatial environmental systems analysis series). London, UK: Pion Limited.

Cusick, G. R., Goerge, R. M., & Bell, K. C. (2009). *From corrections to community: The juvenile reentry experience as characterized by multiple systems involvement*. Chicago, IL: Chapin Hall at the University of Chicago. Retrieved from http://www.chapinhall.org/research/report/corrections-community

Dembo, R., Williams, L., Schmeidler, J., Getreu, A., & Berry, E. (1991). Recidivism among high risk youths: A 2½-year follow-up of a cohort of juvenile detainees. *International Journal of the Addictions, 26*, 1197-1221.

Duncan, G. J., & Brooks-Gunn, J. (Eds.). (1997). The consequences of growing up poor. New York, NY: Russell Sage Foundation.

Eitle, D., & Turner, R. J. (2002). Exposure to community violence and young adult crime: The effects of witnessing violence, traumatic victimization, and other stressful life events. *Journal of Research in Crime and Delinquency, 39,* 214-237. doi:10.1177/002242780203900204

Environmental Systems Research Institute, Inc. (2004). *ArcGIS 9.0*. Redlands, CA: ESRI, Inc.

Frederick, B., & Roy, D. (2003). *Recidivism among youth released from the youth leadership academy to the city*

challenge intensive aftercare program. (Research report from the Office of Justice Systems Analysis). Albany, NY: New York State Division of Criminal Justice Services. Retrieved from http://criminaljustice.state.ny.us/crimnet/ojsa/yla/yla_report.pdf

Fields, D., & Abrams, L. S. (2010). Gender differences in the perceived needs and barriers of youth offenders preparing for community reentry. Advanced online publication. *Child and Youth Care Forum*. Retrieved June 20, 2010 doi:10.1007/s10566-010-9102-x

Freisthler, B., Gruenewald, P. J., Ring, L., & LaScala, E. A. (2008). An ecological assessment of the population and environmental correlates of childhood accident, assault and child abuse injuries. *Alcoholism: Clinical and Experimental Research, 32*, 1969-1975. doi:10.1111/j.1530-0277.2008.00785.x

Freisthler, B., Lery, B., Gruenewald, P. J., & Chow, J. (2006). Methods and challenges of analyzing spatial data for social work problems: The case of examining child maltreatment geographically. *Social Work Research*, *30*, 198-210. Retrieved from http://www.naswpress.org/publications/journals/swr.html

Gorman-Smith, D., & Tolman, P. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology 10*, 101-116. doi:10.1017/S0954579498001539

Gorman, D. M., Speer, P. W., Gruenewald, P. J., & Labouvie, E. W. (2001). Spatial dynamics of alcohol availability, neighborhood structure and violent crime. *Journal of Studies on Alcohol, 62*, 628-636. Retrieved from http://www.jsad.com/jsad/article/Spatial_Dynamics_of_Alcohol_Availability_Neighborhood_Structure_and_Violen/1364.html

Griffin, P. (2005). *Juvenile court-controlled reentry: Three practice models* (NCJ 210009). T Pittsburgh, PA: US Department of Justice, National Center for Juvenile Justice. Retrieved from http://www.ncjjservehttp.org/NCJJWebsite/pdf/court-controlledreentry.pdf

Gruenewald, P. J., Freisthler, B., Remer, L., LaScala, E. A., Treno, A. J., & Ponicki, W. R. (2010). Ecological associations of alcohol outlets with young adult injuries. *Alcoholism: Clinical and Experimental Research*, *34*, 519-527. doi:10.1111/j.1530-277.2009.01117.x

Habermann, M., & Quinn, L. M. (1986). The high school reentry myth: A follow-up study of juveniles released from two correctional high schools in Wisconsin (ERIC document number EJ339651). *Journal of Correctional Education, 37,* 114-117. Retrieved from

http://eric.ed.gov/ERICWebPortal/custom/portlets/record Details/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=EJ339651&ERICExtSearch_SearchType_0=no&accno=EJ339651

Harrison, M. E., McKay, M. M., & Bannon Jr., W. M. (2004). Inner-city child mental health service use: The real question is why youth and families don't use services. *Community Mental Health Journal, 40*, 119-131. doi:10.1023/B:COMH.0000022732.80714.8b

Heilbrun, K., Brock, W., Waite, D., Lanier, A., Schmid, M., Witte, G. … Shumate, M. (2000). Risk factors for juvenile criminal recidivism: The post-release community adjustment of juvenile offenders. *Criminal Justice and Behavior, 27*, 275-291. doi:10.1177/0093854800027003001

Herronkohl, T. I., Hawkings, J. D., Chung, I. J., Hill, K. G., & Battin-Pearson, S. R. (2001). School and community risk factors and intervention. In R. Loeber & D. P. Farrington (Eds.), Child delinquents: Development, intervention, and service needs (pp. 211-246). Thousand Oaks, CA: Sage.

Holzer, H. J., Raphael, S., & Stoll, M. A. (2003). *Employment barriers facing ex-offenders*. Urban Institute Reentry Roundtable: New York University Law School. Retrieved from http://www.urban.org/uploadedPDF/410855_holzer.pdf

Krivo, L. N., & Peterson, R. (1996). Extremely disadvantaged neighborhoods and urban crime. *Social Forces, 75*(2), 619-650. doi:10.2307/2580416

Kubrin, C. E., & Stewart, E. A. (2006). Predicting who reoffends: The neglected role of neighborhood context in recidivism studies. *Criminology, 44*(2), 165-197. doi:10.1111/j.1745-9125.2006.00046.x

Laub, J. H., Nagin, D. S., & Sampson, R. J. (1998). Trajectories of change in criminal offending: Good marriages and the desistance process. *American Sociological Review, 63*, 225-238. doi:10.2307/2657324

Leventhal, T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence upon child and adolescent outcomes. *Psychological Bulletin, 126*, 309-337. doi:10.1037/0033-2909.126.2.309

Lipton, R., & Gruenewald, P. (2002). The spatial dynamics of violence and alcohol outlets. *Journal of Studies on Alcohol, 63*, 187-195. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12033695

Mears, D. P., & Travis, J. (2004). Youth development and reentry. *Youth Violence and Juvenile Justice, 2*, 3-20. doi:10.1177/1541204003260044

Mellow, J., Schlager, M. D., & Caplan, J. M. (2008). Using GIS to evaluate post-release prisoner services in Newark, New Jersey. *Journal of Criminal Justice, 36*, 416-425. doi:10.1016/j.jcrimjus.2008.07.010

Morenoff, J. D., Sampson, R. J., & Raudenbush, S. W. (2001). Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. *Criminology, 39*, 517-560. doi:10.1111/j.1745-9125.2001.tb00932.x

Myner, J., Santman, J., Cappelletty, G. G., & Perlmutter, B. F. (1998). Variables related to recidivism among juvenile offenders. *International Journal of Offender Therapy, 42*, 65-80. doi:10.1177/0306624X98421006

Niarhos, F. J., & Routh, D. K. (1992). The role of clinical assessment in the juvenile court: Predictors of juvenile dispositions and recidivism. *Journal of Clinical Child Psychology, 21,* 151-159. doi:10.1207/s15374424jccp2102_7

Legislative Analyst's Office. (1995, May). *Juvenile crime— Outlook for California*. Retrieved from http://www.lao.ca.gov/1995/050195_juv_crime/kkpart5.aspx

Osgood, D. W., Foster, E. M., Flanagan, C., & Ruth, G. R. (Eds.). (2005). *On your own without a net: The transition to adulthood for vulnerable populations*. Chicago, IL: University of Chicago Press.

Patchin, J. W., Huebner, B. M., McCluskey, J. D., Varano, S. P., & Bynum, T. S. (2006). Exposure to community violence and childhood delinquency. *Crime & Delinquency, 52*, 307-332. doi:10.1177/0011128704267476

Pew Center on the States. (2008). *One in 100: Behind bars in America 2008*. Washington, DC: Pew Charitable Trusts. Retrieved from http://www.pewcenteronthestates.org/uploadedFiles/8015PCTS_Prison08_FINAL_2-1-1_FORWEB.pdf

Piquero, A. (2008). Disproportionate minority contact. *Future of Children, 18(*2), 59-79. doi:10.1353/foc.0.0013

Rainbow Resource Directories. (2006). *Los Angeles and Ventura County Rainbow Resource Directory*. Costa Mesa, CA: James Publishing. http://www.resourcedirectory.com/index.htm

Ryan, J. P., & Testa, M. F. (2004). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review, 27*, 227-249. doi:10.1016/j.childyouth.2004.05.007

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology, 94*, 774-802. doi:10.1086/229068

Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). Assessing neighborhood effects: Social processes and new directions in research. *Annual Review of Sociology, 28*, 443-478. doi:10.1146/annurev.soc.28.110601.141114

Shaw, C. R., & McKay, H. D. (1969). *Juvenile delinquency and urban areas*. Chicago, IL: University of Chicago Press.

Sickmund, M., Sladky, T. J., Kang, W., & Puzzanchera, C. (2008). *Easy access to the census of juveniles in residential placement*. Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention. Retrieved from http://ojjdp.ncjrs.gov/ojstatbb/ezacjrp/asp/selection.asp

Snyder, H. N. (2004). An empirical portrait of the youth reentry population. *Youth Violence and Juvenile Justice, 2*, 39-55. doi:10.1177/1541204003260046

Stephens, R. D., & Arnette, J. L. (2000). From the courthouse to the schoolhouse: Making successful transitions (NCJ 178900). *Juvenile Justice Bulletin.* Washington, DC: Office of Juvenile Justice and Delinquency Prevention. Retrieved from http://www.ncjrs.gov/pdffiles1/ojjdp/178900.pdf

Stockwell, T., & Gruenewald, P. (2001). Controls on the physical availability of alcohol. In N. Heather, T. J. Peters, & T. Stockwell, (Eds.), *International handbook of alcohol dependence and problems* (pp. 699-720). New York, NY: John Wiley & Sons.

Sullivan, M. L. (2004). Youth perspectives on the experience of reentry. *Youth Violence and Juvenile Justice, 2*, 56-71. doi:10.1177/1541204003260047

Sweeten, G. (2006). Who will graduate? Disruption of high school education by arrest and court involvement. *Justice Quarterly, 23*(4), 462-480. Retrieved from http://www.masslegalservices.org/system/files/H.S.ed_and_arrest_-_ct_involvement_study_by_Sweeten.pdf

Tienda, M. (1991). Poor people and poor places: Deciphering neighborhood effects on poverty outcomes. In J. Huber (Ed.), *Macro-micro linkages in sociology*. Newbury Park, CA: Sage.

Todis B., Bullis, M., Waintrup, M., Schultz, R., & D'Ambrosio, R. (2001). Overcoming the odds: Qualitative examination of resilience among formerly incarcerated youth. *Journal of Exceptional Children*, *68*(1), 119-139. Retrieved from http://www.sbac.edu/~werned/DATA/RESEARCH/journals/Excep%20Children/incarcerated%20adolesents.pdf

Trulson, C. R., Marquart, J. W., Mullings, J. L., & Caeti, T. J. (2005). In between adolescence and adulthood: Recidivism outcomes of a cohort of state delinquents.

Youth Violence and Juvenile Justice 3, 355-387. doi:10.1177/1541204005278802

Uggen, C., Manza, J., & Behrens, A. (2004). Less than the average citizen: Stigma, role transition, and the civic reintegration of convicted felons. In S. Maruna & R. Immarigeon (Eds.), *After crime and punishment: Pathways to offender reintegration*, (pp. 258-290). Devon, UK: Willan.

U. S. Department of Justice (2009, February 27). *Second Chance Act Prisoner Reentry Initiative: FY 2009 competitive grant announcement*. Retrieved from http://www.ojp.usdoj.gov/BJA/grant/09SecondChanceReentrySol.pdf

Visher, C., & Farrell, J. (2005). *Chicago communities and prisoner reentry*. Washington, DC: Urban Institute. Retrieved from http://www.urban.org/UploadedPDF/311225_chicago_communities.pdfWiebush, R. G., Wagner, D., McNulty, B., Wang, Y. (2005, March). *Implementation and outcome evaluation of the intensive aftercare program. Final report*. Washington, DC: National Council on Crime and Delinquency. Retrieved from http://www.ncjrs.gov/pdffiles1/ojjdp/206177.pdf

Wright, J. P., Francis T., Cullen, & Miller, J. T. (2001). Family social capital and delinquent behavior. *Journal of Criminal Justice, 29*, 1-9. doi:10.1016/S0047-2352(00)00071-4

Note: A revised pdf was posted on 9-20-2010 to correct page numbers.

Appendix

Specific Service Categories in Rainbow Resource Directory for Each Service Category

Service Category	No.	Service Category Title
Housing	27	Homeless Resources and Programs
	30	Housing Assistance – Tenant Rights
	31	Housing – Low Income – HUD
Legal/Probation	9	Correctional-Prison-Probation
	34	Law Enforcement
	35	Legal Assistance
Youth, including those that serve transition age youth	54	Youth-Anti-Gang Resources
	55	Youth-High Risk
	56	Youth-Recreation Activities
	57	Youth-Shelters
	58	Youth-Transition-Emancipation
Health Services	2	AIDS-Sexually Transmitted Diseases
	13	Dental Care
	14	Disabled – Special Education, Rehabilitation
	17	Eating Disorders and Food Addictions
	24	Family Planning-Pregnancy-Child Birth
	26	Health Care-Medical
	28	Hospitals
Employment	22	Employment Placement-Job Training
Mental Health & Substance Abuse	3	Battered Persons
	10	Counseling, Mental Health, Emotions
	12	Death-Hospice-Grief Support
	45	Self help, support groups
Education	18	Education – Children, School Districts
	19	Education – Colleges, Universities
	36	Libraries
	37	Literacy, ESL Programs
General Social Services	1	Adoption, Foster Care
	6	Child Abuse Prevention and Treatment
	7	Child Care
	20	Emergency Assistance, Basic Need
	21	Emergency Assistance-Soup Kitchens
	32	Human Service Administrative Offices
	33	Immigration, Refugee Programs
	41	Optical Services, Visually Impaired
	42	Parenting Resources, Education
	44	Pregnant and parenting teens
	45	Transportation