Published in final edited form as:

Child Youth Serv Rev. 2011 January 1; 33(1): 51–58. doi:10.1016/j.chilgyouth.2010.08.011.

Are Nonprofit Density and Nonprofit Expenditures Related to Youth Deviance?

Susan M. Snyder and Bridget Freisthler

Department of Social Welfare, UCLA School of Public Affairs, 3250 Public Policy Building, Box 951656, Los Angeles, CA 90095-1656, United States

Abstract

This study explores whether neighborhoods with greater nonprofit density (nonprofits per mile) and/or larger nonprofit expenditures (nonprofit expenditures per 10,000 people) interact with social control to experience lower levels of adolescent deviancy. Data include cross-sectional surveys of 1,541 youth. The data are analyzed using Hierarchical Linear Modeling (HLM). The dependent variable is a measure of deviance that is the sum of ten items, which assess deviant behaviors. For analysis the square root of this measure is used to adjust for negatively skewed data. The sample was drawn through a two stage-geostatistical sampling procedure, with the final sample including 50 zip codes throughout California. The study finds that adolescents' deviance is not associated with an interaction between social control and either nonprofit density or nonprofit expenditures. However, the analysis found strong positive associations between being male, being older, having higher levels of mean social control and the square root of deviance.

Keywords

ADOLESCENT; DEVIANCE; NONPROFIT

1. Introduction

Numerous studies have found correlations between the absence of social connections within a neighborhood and increased adolescent deviance (Elliott et al., 1996; Sampson & Groves, 1989; Shaw & McKay, 1969; Strom & MacDonald, 2007). Social disorganization theories contend that neighborhoods with fewer community institutions are less socially connected (Small & Stark, 2005; Wilson, 1987). According to Kasarda and Janowitz (1974), participation in community organizations serves as an institutional dimension of social connectedness. Likewise, Anheier (2009) explained that nonprofits "create, as well as facilitate, a sense of trust and social inclusion" (p. 1086). In fact, neighborhood institutions work as social groups that address social problems (Park & Burgess, 1921; Sampson, 2004a; Wells, Schafer, Varano, & Bynum, 2006). Increasingly nonprofits, serve a primary institutional role within neighborhoods as responsibilities are devolved from government agencies to nonprofits. Nonprofits also provide significant financial investments in communities including employment opportunities (Anheier, 2005; Rathgeb Smith, 2006). Sampson and Groves (1989) noted a direct link between nonprofits and social connections, finding a correlation between high rates of participation in local institutions and reduced robbery and stranger violence. For the purpose of this study nonprofits are defined as tax-exempt, self-governing, public service organizations that do not distribute profits to those

who control them (Anheier, 2005; Boris, 2006; Salamon, 2002). Because not all nonprofits yield the same opportunities to develop the social connections that could prevent youth deviance, the present study focuses its analysis on nonprofit agencies that have been theoretically linked to fostering positive forms of social capital. For the sake of simplicity, hereafter, these types of nonprofit organizations will be referred to as nonprofits.

Because of nonprofits' ability to develop social connections, collective efficacy rises and falls based on the density of nonprofits in a neighborhood (Morenoff, Sampson, & Raudenbush, 2001; Sampson, 2004b, 2006a). Collective efficacy can be thought of as a task-specific construct, in which residents exercise social control through their shared expectations and mutual engagement (Sampson, 2004a). Under this construct, child-centered social control describes instances when adults in a neighborhood communicate to youth that they can be trusted, and that they are willing to get involved to discourage deviant behaviors (such as graffiti, property damage, truancy, or public drinking) (Sampson, 2000, 2006a; Sampson, Morenoff, & Felton, 1999; Sampson, Raudenbush, & Earls, 1997). In fact, studies by Sampson and his colleagues have found that after controlling for poverty and ethnic composition, a higher density of nonprofit organizations predict elevated levels of collective efficacy (Sampson, 2004b, 2006a).

Not all scholars agree that nonprofits consistently facilitate social connections or social control. Putnam (2000) indicates that although a greater number of nonprofits exist, fewer people are involved in today's nonprofits (see p. 48–64). He contends that nonprofits are no longer able to facilitate the social connections that they used to provide (Putnam, 2000, 1995). He further indicates that social connectedness among people in the United States has been steeply declining since the 1970s.

Other scholars attribute nonprofits' failure to establish social control to a lack of institutional resources. For instance, without any confirmatory evidence, Kornhauser (1978) and Wilson (1987) suggested that impoverished communities lack adequate institutional resources. By extension, nonprofits cannot ameliorate conditions of adolescent deviance because they lack adequate resources. In response to these perspectives, this study will test whether the differential investments nonprofits make in communities indirectly affect adolescent deviance, using expenditures as a proxy for institutional resources.

1.1. Literature Review

Nonprofit density and expenditures may affect juvenile deviant behavior by generating the following conditions: social connections, social control and financial investments in youth. A Los Angeles study measuring nonprofit density found that communities with greater nonprofit density were more socially connected, as evidenced by greater levels of social capital (Anheier, 2005). Similarly, nonprofit organizations can serve as institutional sources of child-centered social control because they facilitate community involvement, the establishment of positive social ties (Morenoff, et al., 2001; Sampson, 2006b; Sampson, Morenoff, & Gannon-Rowley, 2002) and the development of trust (Anheier, 2005). Finally, nonprofits' expenditures signify community investments because much of these expenditures are spent within the communities that nonprofits inhabit (Bielefeld & Linders, 2004).

To date no study has explored how nonprofit density and/or expenditures interact with social control to affect adolescent deviance. The closest studies employ what is referred to as the "institutional resource" model (Leventhal & Brooks-Gunn, 2000, 2003, 2004; Sampson, et al., 2002). This model hypothesizes that neighborhoods affect youths' behaviors through the "learning, recreational, social, educational, health, and employment resources in the community" (Leventhal & Brooks-Gunn, 2003, p. 29). However, this model does not

explicitly state that the institutions studied were nonprofits. Although this review employs studies that use the institutional resource model, we suggest that the growing role of the nonprofit sector in society (e.g. the escalating devolution of responsibilities to nonprofits, the significant contribution the nonprofit sector makes in the provision of jobs and its financial investment in society) (Anheier, 2005; Rathgeb Smith, 2006) justifies an exclusive focus on nonprofits. Under the institutional resource model, four key studies have explored how neighborhood institutions mediate deviant behaviors. These studies also have some significant limitations in data source, design and analysis.

A cross-sectional study of existing data by Peterson and colleagues (2000) used ordinary least squares (OLS) regression to explore whether the density of recreation centers, libraries, employment institutions and bars mediated violent crime (an average rate of crime per 1,000 population from 1989 to 1991 was provided by the Columbus Police department) rates among economically deprived communities in Columbus, Ohio using 177 of the 215 1990 Census tracts, which housed approximately 700 residents. Peterson and colleagues found that the recreation centers, libraries, and bars were positively correlated to crime ($r = 0.46$, $r = 0.38$, and $r = 0.56$ respectively). Conversely employment institutions had a very weak negative relationship to crime ($r = -0.009$).

Another study by Sampson and colleagues (1997) used a hierarchical linear model (HLM) with survey data drawn from 8,872 Chicago residents across 343 neighborhood clusters to study the relationship between violence and social control. To measure collective efficacy Sampson and colleagues used five Likert-style questions (answers ranged from very likely to very unlikely) to ask respondents whether their neighbors would intervene if: (1) "children were skipping school and hanging out on a street corner," (2) "children were spray-painting graffiti on a local building," (3) "children were showing disrespect to an adult," (4) "a fight broke out in front of their house", and (5) "the fire station closest to their home was threatened with budget cuts" (pp. 919–920). Sampson and colleagues found that social cohesion and informal social control were strongly correlated across neighborhoods ($r = 0.80$, $p < .001$), which indicates that the two measures represent elements of the same latent construct. They found that collective efficacy decreased victimization ($b = -1.90$, $SE = 0.240$, $t = -4.96$), and reduced the rates of homicide ($b = -1.02$, $SE = .015$, $t = -6.95$), even when they controlled for prior homicide ($b = -0.594$, $SE = 0.108$, $t = -5.53$). They did not find associations between gender or ethnicity and collective efficacy, nor were there associations between homicides and respondents' reports of either organizational participation or neighborhood services.

Elliott and colleagues (1996) used HLM on 1,707 youths' survey responses to test the hypothesis that neighborhood cultural and organizational characteristics mediate the effects of neighborhood disadvantage on youth development and behavior. Rather than providing data regarding the effects of neighborhood institutions alone, the study combined the support provided by social organizations and activities, families friends, and neighbors, with the counts of children the respondent knows by name to develop the construct "social integration." To assess deviance they used a measure comprised of 15 questions regarding delinquent behaviors (e.g., minor theft, rape, prostitution, drug dealing, weapon possession, and gang fights), 7 questions regarding drug use ranging from marijuana use to "hard drugs" (p. 402) and one question that counted arrests. They found in Chicago that social integration increases deviant behaviors ($b = 0.07$, $SE = 0.07$, $t = 0.93$), while in Denver social integration decreases deviant behaviors ($b = -0.04$, $SE = 0.17$, $t = -0.22$). They also found that social control decreases problem behavior in both Chicago ($b = -0.15$, $SE = 0.04$, $t = -3.54$) and Denver ($b = -0.07$, $SE = 0.09$, $t = -0.79$).

Furstenberg and colleagues (1999) conducted a mixed methods longitudinal study of 482 parents and their adolescent children within five neighborhoods (65 Census tracts) of Philadelphia's inner city. One aspect of this study used HLM to consider "activity involvement," which consists of a single indicator that combines parent and adolescent self-reports of the youth's involvement in after-school activities (i.e., athletics, extracurricular activities at school, church-related activities, and summer recreational programs). The authors found that boys were more likely to participate in community activities than girls. Despite boys' participation in activities, boys were also one and a half times more likely than girls to engage in problem behavior. Additionally, both activities and social connections were geographically concentrated in predominantly White neighborhoods and less present in African American communities (Furstenberg, 2001; Furstenberg, et al., 1999). They also found that deviant behaviors increase dramatically as youths age, with the risk of scoring in the top quartile of the scale for behavioral problems increasing from 5% at age 12 to 52% at age 15 (Furstenberg, et al., 1999).

The studies by Sampson and colleagues (1997), Elliott and colleagues (1996) and Furstenberg and colleagues (1999) relied solely on respondents' reports of institutional participation for their analyses. In doing so, these studies could have excluded organizations that indirectly affected the respondents through other community members' utilization of the organizations. According to Putnam (2000), the conditions and decisions of one neighbor can influence other neighbors' behaviors. Thus, we wonder whether one youth's participation in a nonprofit's prosocial activities could influence the behavior of his or her peer who does not participate in the nonprofit's activities.

The present study is needed because very few studies have examined how institutions in a community can foster social connections that would diminish adolescent deviance (Peterson, et al., 2000; Sampson, et al., 1999). This study also addresses an area that has yet to be studied because we have not found a single study that has specifically explored whether the expenditures and/or density of nonprofit agencies within a neighborhood interact with social control to generate varying levels of adolescent deviance. We find our study to be especially timely because nonprofits are increasingly providing community services as the result of government contracting (Rathgeb Smith, 2006).

1.2. Purpose of Study

This study's research question is: Do non-profit organizations moderate the relationship between child-centered social control and youth deviance across neighborhoods? Based on the results found in most of the existing literature, we expect that the results of this study will show that neighborhoods with high nonprofit density and/or high nonprofit expenditures will diminish adolescent deviancy. Consequently, we have the following two hypotheses:

- Hypothesis 1: Neighborhoods with more nonprofits will be more likely experience higher levels of social control and lower levels of youth deviance (or steeper negative slope)
- Hypothesis 2: Neighborhoods with greater nonprofit expenditures will be more likely experience higher levels of social control and lower levels of youth deviance (or steeper negative slope)

This study builds on the strengths of the existing literature, and simultaneously, overcomes some key weaknesses. As one example, this study uses HLM for statistical analysis so that variances and standard errors are appropriately estimated. Additionally, the study includes a range of deviant behaviors in order to generate a broader understanding of adolescent deviance. Similarly, the study includes non-profits exclusively in order to better understand how they moderate the effect of neighborhoods' social control on adolescent deviance. The

study also extends the geographic analysis beyond one city or region by using 50 zip codes throughout California.

2. Method

2.1. Study Design and Sample

The study utilizes existing data from Wave I of the Youth Access Survey conducted in 2003 combined with contextual data from the 2000 Census. The Youth Access Survey included a statewide telephone survey of 1,541 individual youth in 50 zip codes to assess adolescents in California. The Youth Access Survey used a cross-sectional design and two-stage geostatistical sampling procedure. For the first stage, zip codes were stratified based on median household income and the density of alcohol outlets per roadway mile. The stratified groups included low-income low-alcohol density, low-income high-alcohol density, medium-income medium-alcohol density, high-income low alcohol density, and high-income high-alcohol density. From each of the five stratified groups 10 zip codes were selected ($n_{zip} = 50$). During the second stage, a list-assisted sample aided the process of contacting potential respondents between the ages of 14 and 16. Both a parent or guardian and the adolescent respondent provided consent for participation. Respondents received \$20 for their participation. Based on standards the Council of American Survey Research Organizations (CASRO) developed, the response rate was 43.2%. The reasons for refusal include: 30.4% of parents refused the survey, 5.9% of the adolescents refused and 17.5% could not be reached when called at another time.

2.2. Individual Level Measures

Deviance—The deviance measures consisted of ten items that assess deviant or problematic behaviors. Nine of the questions were extracted from Grube and colleague's (August, 2002) Module 7 (p. A-25) of the "*Guide to Conducting Youth Surveys Updated Edition*." Project staff from the Pacific Institute for Research & Evaluation wrote the tenth question concerning illicit drug use. The survey asked youth to select how many times in the past 12 months they had done the following: *given a false excuse for missing work or class; lied to cover up something you did; purposely damaged other people's property; taken things from a store or shop without paying for them; been in a fight where you hit or shoved someone; skipped work or school without permission; sold illegal drugs; taken money that did not belong to you; threatened someone with a gun, knife or other weapon; and taken illegal drugs*. The scale for answers ranged from (0) *never*, (1) *1–2 times*, (2) *3–5 times*, (3) *6–10 times*, and (4) *more than 10 times*. The Chronbach's α for the ten-items is 0.75. The square root of deviance was used as a transformation to adjust for the negative skew of the deviance data, which exists because most respondents engaged in only limited amounts of deviant behaviors.

Demographics—The demographic measures asked the respondent whether he or she was male or female. For data analysis gender was dummy coded so that female was equal to zero and male was equal to 1. Race/Ethnicity was also dummy coded to include the following categories: African American/Black, Caucasian/White, Hispanic, or other race. During the analysis the gender and race/ethnicity were group mean centered so that the results provide the proportions of the variables in a zip code (e.g., the proportion of males in a community). Youths also provided their age, which were group mean centered by subtracting each individual's age from the mean age of the zip code.

Social Control/Collective Efficacy—The social control measures were taken from Sampson (2004b, 2006a) and colleagues (1999a) and colleagues (1997). The social control measures consisted of three questions that use a five-point likert like scale (ranging from

“*very likely*” to “*very unlikely*”) to assess whether neighbors intervene to deter deviant behavior among youth in the neighborhood. The first asks whether neighbors would do something if “*children were skipping school and hanging out on a street corner.*” The second asks whether neighbors would do something if “*children were spray-painting graffiti on a local building.*” The third asks the likelihood that a neighbor would scold “*a child was showing disrespect to an adult.*” The Chronbach’s α for the three-items is .59. An average was taken of the social control measures for each individual. This mean was then group mean centered by subtracting each individual’s mean social control score from the group mean value for the mean of social control.

Grade Point Average (GPA)—Respondents did not directly provide their grade point average (GPA). Instead they reported for the past year the number of classes in which they received each of the following: A, B, C, D, F. GPA was calculated using the following scale: A=4, B=3, C=2, D=1, F=0 for students who had between 5 and 8 classes. The mean GPA = 3.13. Data were recoded as missing when respondents reported less than five classes or more than eight classes.

Although we had planned to include a variable to account for whether respondents live in a single-parent/caregiver or two-parent/caregiver home, 90.3% (n=1,392) of respondents reported that they reside in a two-parent home. Therefore, there was insufficient variance to justify analysis of this variable.

2.3. Zip Code Level (Neighborhood) Measures

Although no central U.S. government agency oversees nonprofits, the federal tax code provides the definition and regulation of nonprofits. As a result, the Internal Revenue Service (IRS) primarily legitimizes and regulates nonprofits. With the exception of religious groups, any nonprofit with a minimum of \$5,000 in annual gross receipts must register with the IRS. Nonprofits that provide a public benefit can obtain a 501(c)(3) or charitable status, which allows them to receive tax-deductible donations (Salamon, 2002) as long as they do not endorse any candidate running for office and do not spend more than 20 percent of annual expenditures on third parties’ lobbying activities (Anheier, 2005). Because many different types of nonprofit agencies exist the National Center for Charitable Statistics developed the National Taxonomy of Exempt Entities, which groups nonprofits into 9 major groups, with 26 categories and more than 400 subcategories (Boris, 2006; Salamon, 2002). The focus of this study will be nonprofits with a 501(c)(3) designation that provide the services to families and youths that have been delineated by the institutional resource model (Leventhal & Brooks-Gunn, 2000, 2003, 2004; Sampson, Morenoff, & Gannon-Rowley, 2002).

Nonprofit Expenditures—We used the 2003 IRS Core Files from the Urban Institute’s National Center for Charitable Statistics (NCCS) to calculate the expenditures of nonprofits that would have the most direct impact on youths (Urban Institute, 2003a). Core Files are constructed each year by joining information from charities’ IRS forms (i.e., Form 990, 990-EZ, or 990-PF). Organizations that either do not report gross receipts of at least \$25,000, or that do not file taxes are excluded from these files (Kil, Howard, Garrow, & Lam, 2008). To ensure that we considered only the money that was spent by these nonprofits to provide services in the community during 2003 we subtracted any money that the organizations reported spending on solicitation from the expenditures. Thus, our analysis considers only expenditures not related to solicitation.

Although the National Center for Charitable Statistics provides data for numerous types of nonprofits, the present study focuses its analysis on nonprofit agencies that fall within the

following categories: Community Improvement or Capacity Building, Education, Employment or Job Related, Health, Human Services, Mental Health Crisis Intervention, Public, Society Benefit, Recreation, Sports, Leisure, Athletics, and Youth Development organizations (Urban Institute, n.d.). These categories were chosen because they are most similar to the categories used by Sampson and colleagues (1997) in their seminal study of social control. In addition, these categories capture the types of institutions represented by the institutional resource model (Leventhal & Brooks-Gunn, 2000, 2003, 2004; Sampson, Morenoff, & Gannon-Rowley, 2002). Furthermore, health, education, human service and public benefit nonprofits reflect the nonprofits with the largest percentage of expenditures (60%, 16%, 13%, and 8% respectively) (Anheier, 2005). The analysis includes a total of 665 nonprofits,¹ with a total of \$1,587,045,276 in expenditures. We divided nonprofit expenditures by the population per zip code and then we divided it by 10,000 to yield nonprofit expenditures per 10,000 people.

Nonprofit Density—We used the November 2003 IRS Business Master Files (BMF)² from the Urban Institute's National Center for Charitable Statistics (Urban Institute, 2003b) to calculate the density of the following types of nonprofits: Community Improvement or Capacity Building, Education, Employment or Job Related, Health, Human Services, Mental Health Crisis Intervention, Public, Society Benefit, Recreation, Sports, Leisure, Athletics, and Youth Development organizations. BMF are created bi-annually from IRS data. All IRS-registered nonprofit organizations (i.e., public charities, private foundations, or other exempt organizations) are included in BMF along with gross receipts (INCOME), total assets (ASSETS), and the most recent tax period (TAXPER) of those organizations that file with the IRS. An estimated one-third of registered organizations file tax forms (e.g., 990, 990-EZ, or 990-PF). However, religious congregations are not required to register with the IRS (Urban Institute, August, 2006). We divided the counts of BMF nonprofits by roadway miles to yield nonprofit density. Roadway miles were selected as the metric for density because individuals encounter nonprofits and each other as they travel via roadway networks (Gruenewald, Freisthler, Remer, LaScala, & Treno, 2006). This metric also allows us to track the geographic distribution of nonprofits across neighborhoods (Lipton & Gruenewald, March, 2002). Using a density measure per population would not convey how accessible nonprofits are, nor would it convey how many nonprofits existed within a geographic area.

2.4. Statistical Analysis

There are two reasons we performed hierarchical linear modeling (HLM) with HLM 6.02 statistical software (Raudenbush, Bryk, and Congdon 2004): First, the study's theoretical framework requires us to analyze the data within the context of the neighborhood where it was gathered. Luke (2004) considers theory to be the most important justification for using HLM. Second, and related, the respondents are nested within neighborhoods, which makes them more similar than respondents from entirely different communities. Consequently, HLM reduces the likelihood of type I errors and generates the most accurate analysis for the clustering that occurs in neighborhoods (Luke, 2004; Raudenbush, Bryk, Cheong, & Congdon, 2004; Raudenbush & Bryk, 2002).

¹43 Community Improvement or Capacity Building nonprofits, 254 Education nonprofits, 12 Employment or Job Related nonprofits, 45 Health nonprofits, 136 Human Services nonprofits, 53 Mental Health or Crisis Intervention nonprofits, 3 Public, Society Benefit nonprofits, 76 Recreation, Sports, Leisure, or Athletics nonprofits, and 43 Youth Development nonprofits.

²Using the November 2003 BMF may undercount nonprofits that were registered late in the year because processing entries of new nonprofits can take up to two months. However, using the April 2004 BMF could over count nonprofits by including some that did not exist during the time of the survey. (<http://nccsdataweb.urban.org/knowledgebase/detail.php?linkID=566&category=83&xrefID=2733&close=1>)

The analysis included 1,541 adolescent respondents at level-1 and 50 zip codes at level-2. The results we provide use final estimation with robust standard errors. We include two models with an individual level and a neighborhood level in our analysis. For both models the level-1 equation remains the same. Therefore, we will provide only one equation for level-1 and two sets of equations to reflect the two models on level-2. Both of the resulting models control for individual characteristics that could affect the deviance measures.

Level 1

$$y = a + Xb + e \quad (1)$$

The **y** represents the square root of the total deviance score. The **a** is a vector of unit effects, **X** represents a matrix of individual characteristics, and **b** refers to a vector of coefficients for those characteristics. The **e** is the error term for the Level 1 model. Gender and race were dummy coded for this analysis. Age and the mean social control variables in Level 1 were not dummy coded. All level 1 variables were group mean centered.

Level 2

$$a = \alpha_0 + W\beta + \varepsilon_0 \quad (2)$$

$$b_{sc} = \alpha_1 + W\beta + \varepsilon_1 \quad (3)$$

The **a** is the intercept for Level 2. The **W** refers to a matrix of neighborhood characteristics. **β** represents a vector of coefficients for nonprofit expenditures per 10,000 people and for nonprofits per mile, and **ε** is the error term for the intercept.

The following is the reduced form model:

$$y = (\alpha + \alpha_1) + Xb + Xb_{sc}(W\beta) + (W\beta) + (e + \varepsilon_0 + \varepsilon_1) \quad (4)$$

The above formula includes Level 1 variables' main effects and interactions with social control variables ($Xb_{sc}(W\beta)$) and the Level 2 main effects variables ($W\beta$). The results use final estimation with robust standard errors.

2.5. Missing Data

Most variables either did not have any missing data or were missing only negligible amounts of data. However, the GPA variable was missing for 14.6% of respondents. In order to have unbiased parameter estimations HLM used listwise deletion to reduce the number of level-1 records to 1410.

3. Results

3.1. Demographics

The study was split nearly evenly between males and females, and equally divided among the three age groups, see Table 1. The ethnic/racial composition of the sample is as follows: 3% African American or Black, 22.1% Caucasian or White, and 35.6% other race. Three respondents were missing data for their ethnicity/racial identities. The vast majority of youth who responded to the survey lived in a home with both male and female parents/guardians ($n = 1,392, 90.3\%$).

3.2. HLM Analyses

This study examined whether or not the density of nonprofits or the amount of nonprofit expenditures moderated levels of child-centered social control, which in turn influences adolescent deviance. According to Baron and Kenny (1986) “the basic moderator effect can be represented as an interaction between a focal independent variable and a factor that specifies conditions for its operation” (p. 1174). In the present study the focal independent variable is social control because this is theorized to diminish deviant behaviors, while nonprofits are theoretically linked to establishing the social connections that generate social control. Figure 1 uses Baron and Kenny’s model with our variables to depict this relationship.

Table 3 provides the results of the multilevel model³. Model 1 shows only the main effects of both the individual and neighborhood characteristics (see Eqs. (1) and (2) above). Within Model 1, Level 2 (zip code) characteristics relate directly to the Level 1 intercept. Model 2 adds the moderating effects of zip code characteristics on child-centered social control.

Model fit statistics compare the deviance of the intercept and slopes as outcomes models show that the slopes as outcomes model is a better fit of the data ($\chi^2=8.622$, $df=2$, $p=0.013$). For Model 1, age, male gender and the mean of social control had a positive relationship with the square root of deviance. The neighborhood level variables did not have significant main effects. For Model 2, the individual main effects remain significant and the interaction between social control and the square root of deviance did not have statistically significant main effects.

Table 4 shows the random effects components of the models. The results indicate that the variance at both level 1 (r_{ij}) and level 2 (u_{0j} and u_{1j}) are not statistically significant. Thus, the square root of deviance did not vary significantly either within or across zip codes.

4. Discussion

This study examined whether neighborhoods with greater nonprofit density (nonprofits per mile) and/or larger nonprofit expenditures (nonprofit expenditures per 10,000 people) interact with social control to experience lower levels of adolescent deviancy. The existing literature has applied the “institutional resource” model, in order to consider how the number of neighborhood institutions that provide social, recreational, health, and employment services influence social control to deter deviant or criminal behaviors (Leventhal & Brooks-Gunn, 2000, 2003, 2004; Sampson, Morenoff, & Gannon-Rowley, 2002).

The results of our study indicate that only individual level characteristics were related to the square root of self-reported deviant behaviors among the respondents, who were 14 to 16 years old. As Table 4 indicates, there was not statistically significant variation either within or across neighborhoods. Consequently, the results of ordinary least squares (OLS) regression would be virtually identical to those obtained from our hierarchical linear analysis. This means that the youth who participated in this study were very similar in their levels of deviance despite the fact that youths were drawn from neighborhoods with high, medium and low median incomes. Additionally, differences in the number of nonprofits per

³The significance tests for the fixed-effects parameters (i.e., the gammas) are comparable to the significance tests used in multiple regression (Luke, 2004). The t-ratios represent the estimated parameter coefficients divided by their standard errors, with degrees of freedom $J-p-1$, wherein J equals the number of level-2 neighborhoods, and p equals the number of level-2 predictors. Because the variance components may not be normally distributed the HLM 6.02 statistical software uses a chi-square test of the residuals (Luke, 2004).

roadway mile and/or the differences in expenditures of nonprofits did not affect the square root of deviance.

Despite the lack of variation, we found statistically significant positive correlations between age and increases in the square root of deviance. We also found statistically significant positive relationships between being male and increases in the square root of deviance. Both of these findings were consistent with those of Furstenberg and colleagues (1999), who found increased problematic behavior among older youths and males. Another finding for our study was a correlation between identifying ethnically or racially within the category “other” and increases in the square root of deviance. However, the studies we reviewed did not report this trend.

Our study also found that social control was positively related to the square root of deviance, suggesting that neighborhoods that experience greater levels of deviance may respond by exercising more social control. Our results contradict Sampson and colleagues’ results (1997); they found associations between social control and decreased victimization and reduced homicide rates. Additionally, our results differ from those of Elliott and colleagues (1996), who found in both Denver and Chicago that social control decreases deviant behaviors.

Previous studies’ results were inconsistent with regards to whether nonprofit density establishes social control. Some studies found that higher densities of nonprofit institutions yielded increased social control (Morenoff, Sampson, & Raudenbush, 2001; Sampson, 2006b; Sampson, Morenoff, & Gannon-Rowley, 2002). However, one study by Peterson and colleagues (2000) found that libraries and recreation centers were associated with crime, and that employment institutions held very weak negative relationships with crime. Another study by Furstenberg and colleagues (1999) found that as participation in nonprofits rose so did behavioral problems among youth.

Our results failed to support our hypothesis that neighborhoods with more nonprofits will be likely to experience higher levels of social control and lower levels of youth deviance (or steeper negative slope). Thus, our results are similar to those found by Sampson and colleagues (1997), which did not find associations between homicides and respondents’ reports of either organizational participation or neighborhood services. This could indicate that nonprofits, regardless of density or spending, are not contributing sufficiently to the formation of child centered social control. Future studies should explore both what efforts neighborhood institutions make to contribute to child-centered social control and which efforts successfully generate child-centered social control.

Similarly, we did not find support for our hypothesis that neighborhoods with greater nonprofit expenditures will be more likely experience higher levels of social control and lower levels of youth deviance (or steeper negative slope). Hence, there may not be a tangible impact on social control that is solely based on the financial investment of nonprofits. This area has not been studied previously, so it is important to consider that future studies may produce varying results.

The rationale for our study mirrors the demand for measurable outcomes found in request for funding proposals at all levels of government. Specifically, we wanted to see whether numbers matter among the nonprofits that theoretically address youths’ social connectedness. To measure accessibility, we examined nonprofit density. To measure the presence of institutional resources we examined the nonprofit expenditures per youth.

The fact that our results did not find any significant relationships between either nonprofit density, or nonprofit expenditures and the square root of deviance could partially

substantiate Putnam's (2000) contention that the increasing number of nonprofits does not indicate a surge in social capital. Specifically, Putnam (1995) explained, "To identify trends in the size of the nonprofit sector with trends in social connectedness would be another fundamental conceptual mistake" (p. 71). Putnam (2000) argued that nonprofits may not serve the same social role that they previously did, and a greater number of nonprofits may provide fewer social connections. As an example, environmental nonprofits that rely solely on mail solicitations for their survival surged over the last several decades. Further evidence of the decline of social connections through nonprofit organizations was the loss of 500,000 members in the Parent-Teachers Association (PTA) from 1990 to 1997, even though during that time period the number of school age children increased by two million.

Our study had several strengths that were lacking from existing literature. First, one strength is that the study was not limited to a small geographic neighborhood. Instead our study explored deviance across 50 zip codes throughout California. Second, our study expanded knowledge by exploring nonprofit expenditures, which have not been previously included in analysis of neighborhood social control. The inclusion of expenditures allowed us to explore whether we found a nexus between expenditures and social control.

Despite the information gained from this study, there are also some limitations that future studies should address. First, the individual level data comes from self reports that are not corroborated through another source. In addition, the cross-sectional nature of the analysis provides a temporally limited view of behavior that may change over time. Another concern is that the survey utilized for this study did not ask youth about any nonprofit programs in which the youths or their immediate families participate. In addition, the response rate for this survey was rather low, so the results may not adequately capture the experiences of youths who engage in higher levels of deviance. Similarly, the low response rate may account for the overrepresentation of both White youth and youth who reported having both male and female guardians with the major responsibility of raising them. Thus, future studies should also seek to include more respondents from diverse ethnic/racial backgrounds, with greater numbers of single parent homes.

An additional limitation of the study arises from the use of NCCS data. NCCS data may provide inaccurate estimations of both the number of nonprofit organizations that generate social connections and the total amount of nonprofit expenditures invested in a neighborhood. One reason for inaccuracy is that NCCS only counts nonprofits with gross receipts of at least \$25,000, and agencies that file taxes (Kil, Howard, Garrow, & Lam, 2008). Religious organizations, (e.g., churches, temples or mosques), informal groups (e.g., book clubs, meet-up groups or special interest groups), and small nonprofit organizations are also excluded from NCCS data. Another concern with NCCS data is that it is not possible to know what organizations' functions are. For example, it is possible that a headquarters that does not provide services could be counted.

Even with our study's limitations our results provide some policy implications. Because nonprofits benefit from government contracts and grants, future contracts and grants should require nonprofits to engage in efforts to either establish or revitalize social connections within neighborhoods. Naturally, these efforts should especially target the neighborhoods with the greatest risk factors for deviant behaviors. In addition, because this study corroborates prior findings that boys and older youth are at greater risk for deviant behaviors, nonprofit programs should gear resources towards older male youths.

Acknowledgments

Research for and preparation of this manuscript were supported by National Institute on Alcohol Abuse and Alcoholism (NIAAA) Center Grant P60-AA006282.

References

- Anheier, HK. Nonprofit organizations: Theory, management, policy. London: Routledge; 2005.
- Anheier HK. What kind of nonprofit sector, what kind of society? *American Behavioral Scientist*. 2009; 52(7):1082–1094.10.1177/0002764208327676
- Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*. 1986; 51(6):1173–1182. [PubMed: 3806354]
- Bielefeld, W.; Linders, K. Financial comparisons of the nonprofit sectors in Indianapolis and eight metropolitan areas. Indianapolis, Indiana: School of Public and Environmental Affairs Indiana University–Purdue University Indianapolis; 2004.
- Boris, ET. Nonprofit organizations in a democracy: Varied roles and responsibilities. In: Boris, ET.; Steuerle, CE., editors. *Nonprofits & government: Collaboration & conflict*. 2. Washington, DC: The Urban Institute Press; 2006. p. 1-36.
- Elliott DS, Wilson WJ, Huizinga D, Sampson RJ, Elliott A, Rankin B. The effects of neighborhood disadvantage on adolescent development. *Journal of Research in Crime and Delinquency*. 1996; 33(4):389–425.10.1177/0022427896033004002
- Furstenberg FF. Managing to make it: Afterthoughts. *Journal of Family Issues*. 2001; 22(2):150–162.10.1177/019251301022002002
- Furstenberg, FF.; Cook, TD.; Eccles, JS.; Elder, GH, Jr. Managing to make it: Urban families and adolescent success. Chicago: The University of Chicago Press; 1999.
- Grube, JW.; Keefe, DB.; Stewart, K. Guide to conducting youth surveys. Calverton, MD: Pacific Institute for Research and Evaluation; Aug. 2002
- Gruenewald PJ, Freisthler B, Remer L, LaScala EA, Treno A. Ecological models of alcohol outlets and violent assaults: Crime potentials and geospatial analysis. *Addiction*. 2006; 101(5):666–677.10.1111/j.1360-0443.2006.01405.x [PubMed: 16669900]
- Kasarda JD, Janowitz M. Community attachment in mass society. *American Sociological Review*. 1974; 39(3):328–339.
- Kil, HJ.; Howard, DB.; Garrow, E.; Lam, M. Local patterns & dynamics: The state of the nonprofit sector in Los Angeles. Los Angeles: University of California Los Angeles School of Public Affairs Center for Civil Society; 2008.
- Kornhauser, RR. Social sources of delinquency : An appraisal of analytic models. Chicago: University of Chicago Press; 1978.
- Leventhal T, Brooks-Gunn J. The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*. 2000; 126(2):309–337.10.1037//0033-2909.126.2.309 [PubMed: 10748645]
- Leventhal T, Brooks-Gunn J. Children and youth in neighborhood contexts. *Current Directions in Psychological Science*. 2003; 12(1):27–31.10.1111/1467-8721.01216
- Leventhal, T.; Brooks-Gunn, J. Diversity in developmental trajectories across adolescence: Neighborhood influences. In: Lerner, RM.; Steinberg, L., editors. *Handbook of adolescent psychology*. 2. Hoboken, New Jersey: John Wiley & Sons, Inc; 2004. p. 451-486.
- Lipton R, Gruenewald P. The spatial dynamics of violence and alcohol outlets. *Journal of Studies on Alcohol*. Mar; 2002 63(2):187–195. [PubMed: 12033695]
- Luke, DA. Multilevel modeling (A Sage university paper series. Quantitative applications in the social sciences No. 143). Thousand Oaks, CA: Sage; 2004.
- Morenoff JD, Sampson RJ, Raudenbush SW. Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. *Criminology*. 2001; 39(3):517–558.10.1111/j.1745-9125.2001.tb00932.x
- Park, RE.; Burgess, EW. Introduction to the science of sociology. 1921. Retrieved from <http://ia350613.us.archive.org/3/items/IntroductionToTheScienceOfSociology/IntroductionToTheScienceOfSociology.pdf>
- Peterson RD, Krivo LJ, Harris MA. Disadvantage and neighborhood violent crime: Do local institutions matter? *Journal of Research in Crime and Delinquency*. 2000; 37(1):31–63.10.1177/0022427800037001002

- Putnam RD. Bowling alone: America's declining social capital. *Journal of Democracy*. 1995; 6(1):65–77.
- Putnam, RD. *Bowling alone: The collapse and revival of community in America*. New York: Simon & Schuster; 2000.
- Rathgeb, Smith S. Government financing of nonprofit activity. In: Boris, ET.; Steuerle, CE., editors. *Nonprofits and government: Collaboration and conflict*. 2. Washington, DC: The Urban Institute Press; 2006. p. 219-256.
- Raudenbush, SW.; Bryk, A.; Cheong, YF.; Congdon, RT, Jr. *HLM 6: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: Scientific Software International; 2004.
- Raudenbush, SW.; Bryk, AS.; Congdon, R. *HLM: Hierarchical Linear and Nonlinear Modeling Statistical Software (Release 6.02)* [Computer software]. Lincolnwood, IL: Scientific Software International; 2004.
- Raudenbush, SW.; Bryk, AS. *Hierarchical Linear Models: Applications and data analysis methods*. 2. Thousand Oaks, CA: Sage Publications; 2002.
- Salamon, LM. The resilient sector: The state of nonprofit America. In: Salamon, LM., editor. *The state of nonprofit America*. Washington, DC: Brookings Institution Press; 2002. p. 3-64.
- Sampson, RJ. A neighborhood-level perspective on social change and the social control of adolescent delinquency. In: Crockett, LJ.; Silbereisen, RK., editors. *Negotiating adolescence in times of social change*. New York: Cambridge University Press; 2000. p. 178-190.
- Sampson RJ. Neighbourhood and Community. *New Economy*. 2004a; 11(2):106–113.10.1111/j.1468-0041.2004.00346.x
- Sampson, RJ. Networks and neighbourhoods: The implications of connectivity for thinking about crime in the modern city. In: McCarthy, H.; Miller, P.; Skidmore, P., editors. *Network logic: Who governs in an interconnected world?*. London: Demos; 2004b. p. 157-166. Retrieved from http://www.wjh.harvard.edu/soc/faculty/sampson/articles/2004_NetworkLogic.pdf
- Sampson, RJ. Collective efficacy theory: Lessons learned and directions for future inquiry. In: Cullen, FT.; Wright, JP.; Blevins, KR., editors. *Taking stock: The status of criminological theory*. New Brunswick, New Jersey: Transaction Publishers; 2006a. p. 149-167.
- Sampson, RJ. How does community context matter? Social mechanisms and the explanation of crime. In: Wikström, P-OH.; Sampson, R., editors. *The explanation of crime: Context, mechanisms, and development*. New York: Cambridge University Press; 2006b. p. 31-60.
- Sampson RJ, Groves WB. Community Structure and Crime: Testing Social-Disorganization Theory. *The American Journal of Sociology*. 1989; 94(4):774–802.
- Sampson RJ, Morenoff JD, Felton E. Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review*. 1999; 64(5):633–660.
- Sampson RJ, Morenoff JD, Gannon-Rowley T. Assessing “Neighborhood Effects”: Social Processes and New Directions in Research. *Annual Review of Sociology*. 2002; 28:443–478.10.1146/annurev.soc.28.110601.141114
- Sampson RJ, Raudenbush SW, Earls F. Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*. 1997; 277(5328):918–924.10.1126/science.277.5328.918 [PubMed: 9252316]
- Shaw, CR.; McKay, HD. *Juvenile delinquency and urban areas*. 2. Chicago: University of Chicago Press; 1969.
- Small ML, Stark L. Are Poor Neighborhoods Resource Deprived? A Case Study of Childcare Centers in New York. *Social Science Quarterly*. 2005; 86(s1):1013–1036.
- Strom KJ, MacDonald JM. The influence of social and economic disadvantage on racial patterns in youth homicide over time. *Homicide Studies*. 2007; 11(1):50–69.10.1177/1088767906296199
- Urban Institute. The NCCS nonprofit database core files. Washington, DC: National Center for Charitable Statistics; 2003a. Available from National Center for Charitable Statistics Web site, <http://nccsdataweb.urban.org>
- Urban Institute. The NCCS nonprofit database IRS Business Master Files. Washington, DC: National Center for Charitable Statistics; 2003b. Available from National Center for Charitable Statistics Web site, <http://nccsdataweb.urban.org>

- Urban Institute. Guide to using NCCS Data. Washington, DC: National Center for Charitable Statistics; Aug. 2006 p. 1-24. Available from National Center for Charitable Statistics Web site, <http://nccsdataweb.urban.org/kbfiles/742/NCCS-data-guide-2006c.pdf>
- Urban Institute. 501(c)(3) Public Charities. Washington, DC: National Center for Charitable Statistics; n.d. Available from National Center for Charitable Statistics Web site, <http://nccsdataweb.urban.org/PubApps/nonprofit-overview-segment.php?t=pc>
- Wells W, Schafer JA, Varano SP, Bynum TS. Neighborhood residents' production of order: The effects of collective efficacy on responses to neighborhood problems. *Crime & Delinquency*. 2006; 52(4):523–550. 10.1177/0011128705284681
- Wilson, WJ. *The truly disadvantaged: The inner city, the underclass, and public policy*. Chicago: The University of Chicago Press; 1987.

Figure 1.
Moderating Relationship

Table 1

Respondents' demographic characteristics

Variable Name	Survey Responses	
	%	(n)
Sex		
Male	51.50%	(794)
Female	48.50%	(747)
Age		
14	34.30%	(528)
15	33.40%	(514)
16	32.40%	(499)
Identify as Hispanic/Latino		
Yes	35.60%	(548)
No	63.90%	(984)
Missing Data	0.60%	(9)
Racial Group		
African American/Black	6.10%	(94)
Caucasian/White	44.26%	(682)
Hispanic	35.56%	(548)
Other Race	13.24%	(204)
Missing Data	0.84%	(13)
Family Composition		
Single Female Parent/Guardian	8.40%	(130)
Single Male Parent/Guardian	1.20%	(18)
Two Parents/Guardians	90.30%	(1392)
Missing Data	0.10%	(1)

Table 2

Descriptive statistics for individual and neighborhood characteristics

Variable Name	Mean	Standard Deviation	Minimum	Maximum
Individual Level				
Square Root of Average Youth Deviance (n = 1540)	0.41	0.43	0.00	3.10
Social Control (n = 1515)	2.37	1.01	1	5
GPA (n = 1447)	3.13	0.73	0	4
Neighborhood (Zip Code) Level				
Nonprofit Per roadway mile (n=50)	0.15	0.14	0.00	0.61
Nonprofit Expenditures Per 10,000 People (n = 50)	0.09	0.16	0.00	0.80

Table 3

HLM Main Effects Model

<i>Fixed Effects</i>	<i>Model 1 (Intercept Only)</i>				<i>Model 2 (Full Model)</i>			
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p Value</i>	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p Value</i>
Respondent Characteristics (Level 1)	Neighborhood Characteristics (Level 2)							
For Intercept, β_{0j}								
Intercept, γ_{00}	0.553	0.015	36.827	0.000	0.553	0.015	36.786	0.000
	0.027	0.051	0.533	0.596	0.027	0.051	0.526	0.601
	-0.002	0.033	-0.057	0.955	-0.002	0.034	-0.046	0.964
For Mean Social Control Slope, β_{1j}								
Mean Social Control, γ_{10}	0.038	0.008	4.810	0.000	0.038	0.013	3.010	0.005
					-0.040	0.034	-1.160	0.252
					0.009	0.023	0.418	0.677
For Age Slope, β_{2j}								
Age, γ_{20}	0.025	0.010	2.480	0.013	0.025	0.010	2.469	0.014
For Black Slope, β_{3j}								
Black, γ_{30}	0.060	0.050	1.220	0.223	0.061	0.050	1.217	0.224
For Latino/Hispanic Slope, β_{4j}								
Latino/Hispanic, γ_{40}	0.040	0.021	1.930	0.053	0.041	0.020	1.983	0.047
For Other Race Slope, β_{5j}								
Other Race Slope, γ_{50}	0.017	0.030	0.554	0.579	0.018	0.030	0.591	0.554
For Male Slope, β_{6j}								
Male, γ_{60}	0.063	0.016	3.999	0.000	0.063	0.016	4.043	0.000
For GPA Slope, β_{7j}								
GPA, γ_{70}	0.001	0.013	0.072	0.943	0.001	0.013	0.074	0.941

Table 4

Random Effects

Random Effects														
Respondent Characteristics (Level 1)							Neighborhood Characteristics (Level 2)							
							Std. Dev.	Var. Comp.	χ^2	p Value	Std. Dev.	Var. Comp.	χ^2	p Value
Level-1, e_{ij}							0.017	0.000	50.128	0.350	0.019	0.000	50.133	0.350
r_{ij}							0.326	0.106			0.326	0.106		
Model Fit							Deviance		Parameters		Deviance		Parameters	
							896.393		2		905.015		4	