

Relationships Among Youth Assets and Neighborhood and Community Resources

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Recent research suggests that a youth development framework emphasizing youth assets may be a promising intervention strategy for preventing adolescent risk behaviors. Understanding how neighborhood and community resources relate to youth assets may aid in identifying environmental strategies to complement individually oriented asset-building interventions. In this study, 1,350 randomly selected inner-city youth and their parents (paired interviews) were interviewed in person. After controlling for demographic characteristics of youth and parents using multivariate logistic regression, parental perception of neighborhood safety was associated with the nonparental adult role model asset, peer role model asset, and for African American youth, the community involvement asset. City services and neighborhood services were associated with use of time (groups/sports) and use of time (religion), respectively. Psychological sense of community was associated with community involvement for Native American youth. Findings suggest that neighborhood and community-level influences should be considered when designing youth development interventions to reduce risk behaviors.

Keywords: *youth development; youth assets; protective factors; adolescent health; neighborhood context*

Positive youth development is rapidly emerging as a major framework for preventing problem behavior in youth (Connell & Kubisch, 2001; Kirby, 2001; Lonczak, Abbott,

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Hawkins, Kosterman, & Catalano, 2002). The compelling logic underlying this approach is that youth with sufficient support and opportunities from their families, neighborhoods, and communities develop assets that enable them to avoid problem behaviors and to thrive as they transition to adulthood (Connell & Kubisch, 2001; Leffert et al., 1998; Scales, 1990). Youth development efforts acknowledge that risk and protective factors often cut across multiple problem behaviors (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1998; Mahoney & Lafferty, 2003; Scales, Leffert, & Vraa, 2003). Youth development research attempts to identify these protective factors or youth assets and to understand how they prevent problem behavior and promote positive behavior. In turn, intervention strategies based on this approach attempt to create environments that promote assets in youth (Catalano et al., 1998; Scales et al., 2003).

Numerous studies have documented protective effects of selected assets or protective factors on adolescent risk behaviors (Beal, Ausiello, & Perrin, 2001; DiIorio, Kelley, & Hockenberry-Eaton, 1999; Wallace & Forman, 1998). Resnick and colleagues (1997), for example, found that delayed sexual debut and less frequent cigarette use was associated with parent-family connectedness and connectedness to school. They also found that higher levels of importance ascribed to religion and prayer, frequent parental presence in the home, greater number of shared activities, and higher perceived levels of parental expectations for school completion were protective across a range of adolescent risk behaviors. Lonczak and colleagues (2002) reported decreased sexual risk behavior and associated adverse health consequences as a result of an intervention designed to promote social competencies along with school and family bonding. Wallace and Forman (1998) reported associations between the importance of religion, religious attendance, and several injury-related, substance use, and lifestyle behaviors.

One of the challenges faced by the field of positive youth development is to identify a common set of protective factors or youth assets. In an effort to operationalize positive youth development for a review of program effectiveness, Catalano and colleagues (1998) identified 19 possible objectives for these kinds of programs. Objectives included bonding, resiliency, clear and positive identity, belief in the future, prosocial norms, and several types of competencies such as moral, emotional, and social. Some leaders in the practice-oriented side of the field promote 40 developmental assets grouped into those that are external to youth and those that are internal (Benson, 1997; Scales et al., 2003).

The current study is based on a subset of "9 Key Assets" identified through a community assessment conducted as part of a community-based teen pregnancy prevention initiative (Kegler, Rodine, Marshall, Oman, & McLeroy, 2003; Oman, Vesely, et al., 2002). These assets were selected through a review of the literature and 2 years of quantitative and qualitative data collection, followed by a priority-setting process with staff who worked in the neighborhoods. The five assets addressed here are those that are either external to youth and/or have clear potential to be influenced by neighborhood contexts: nonparental adult role models, peer role models, use of time (groups/sports), use of time (religion), and community involvement.

Research on these assets confirms that each is associated with multiple youth risk behaviors. For example, youth with the nonparental adult role models, constructive use of time (religion), or community involvement assets were significantly less likely to have used alcohol, tobacco, and other drugs, had sexual intercourse, or participated in violence (Aspy et al., 2004; Atkins et al., 2002; Oman et al., 2004; Oman, Vesely, Kegler, McLeroy, & Aspy, 2003; Vesely et al., 2004). Similarly, youth with the peer role models asset were significantly less likely to have used alcohol, tobacco, and other drugs, had sexual intercourse, or participated in violence and were significantly more likely to have

used contraceptives if they were sexually active (Aspy et al., 2004; Atkins et al., 2002; Oman et al., 2003, 2004; Vesely et al., 2004). Finally, youth with the constructive use of time (groups/sports) asset were significantly less likely to have used drugs and tobacco or to have participated in violence (Aspy et al., 2004; Atkins et al., 2002; Oman et al., 2004).

Research on these assets also suggest that combinations of assets may be more effective than any one asset for avoiding risk behavior. Youth with the peer role models, use of time (religion), family communication, and responsible choices assets were 4.44 times more likely to have not used alcohol compared to youth with three or fewer of the assets (Oman et al., 2004). In addition, youth with the peer role models, use of time (religion), and responsible choices assets were 5.41 times more likely to have not used drugs compared to youth with two or fewer of the assets (Oman et al., 2004).

Given the potential of youth assets to serve as protective factors, it would be helpful to understand more about the social and physical environments or contexts that support development of these assets. Numerous environments, including families, peer groups, schools, other institutions in which youth participate, neighborhoods, and communities, are likely to facilitate the development of assets in youth (Allison et al., 1999; Bogenschneider, 1996). Research on contextual effects such as neighborhoods or school environments, however, typically focus on health outcomes (Baumer & South, 2001; Diez-Roux, 2001; Schulz et al., 2000). Neighborhood effects have been documented for low birth weights, cardiovascular disease, injury, violence, neural tube defects, school readiness and achievement, behavioral and emotional problems in youth, and adolescent sexuality and childbearing (Aneshensel & Sucoff, 1996; Averett, Rees, & Argys, 2002; Brooks-Gunn, Duncan, Klebanov, & Sealander, 1993; Cubbin, LeClerre, & Smith, 2000; Garner & Raudenbush, 1991; O'Campo, Xue, Wang, & Caughy, 1997; Pearl, Braveman, & Abrams, 2001; Rankin & Quane, 2002; Rauh, Andrews, & Garfinkel, 2001; Wasserman, Shaw, Selvin, Gould, & Syme, 1998). School effects have been documented for youth sexual activity and substance abuse (Allison et al., 1999; Ennett, Flewelling, Lindrooth, & Norton, 1997; Teitler & Weiss, 2000). Although empirical evidence showing neighborhood effects on health outcomes is growing steadily, theory underlying neighborhood and other contextual effects, particularly from an epidemiologic perspective, is not well developed (Kawachi & Berkman, 2003; O'Campo, 2003). Given the early stages of research in positive youth development, studies on how neighborhoods and other environments may influence youth assets are almost nonexistent.

The purpose of this article is to explore associations between youth assets and neighborhood and community resources. Given the plausibility of youth assets as a mediating mechanism for neighborhood effects on adolescent outcomes, a logical step in building both neighborhood effects theory and positive youth development theory is to explore associations between neighborhood characteristics and youth assets. By extrapolating from existing theoretical and empirical work on neighborhood effects, as well as psychological sense of community, several hypotheses were developed to guide the analyses reported here. Although stated as hypotheses, the current study is clearly exploratory in nature.

The first hypothesis is grounded in an institutional resources model of neighborhood effects (Jencks & Mayer, 1990; Leventhal & Brooks-Gunn, 2000). The institutional resource model posits that child and adolescent outcomes can be influenced by the accessibility and quality of organizational resources in neighborhoods and communities (Leventhal & Brooks-Gunn, 2000). For example, institutions that support learning, such as libraries and museums, might mediate neighborhood effects on school readiness or achievement outcomes. The availability of recreational and organized social activities,

such as community centers, parks, and arts and sports programs, might mediate neighborhood effects on adolescent behavior by providing a constructive way for youth to spend their time. At present, the institutional resource model is not sufficiently developed to explain precisely how these resources influence youth behavior. An interesting possibility, consistent with theoretical work in positive youth development, is that they operate through youth assets. We hypothesized that neighborhood services, neighborhood safety, city services, and city quality of life will be associated with all five youth assets (i.e., nonparental adult role models, peer role models, constructive use of time [groups/sports], constructive use of time [religion], and community involvement).

The second hypothesis guiding this study is grounded in a norms and collective efficacy framework for understanding neighborhood effects (Leventhal & Brooks-Gunn, 2000). We hypothesized that informal social control will be associated with nonparental adult role models. In a discussion of how neighborhoods might influence child and adolescent outcomes, Sampson (2001) suggested that informal social control is facilitated in neighborhoods with interlocking social networks. When residents know neighborhood youth and their parents, they are more likely to monitor youth behavior and intervene when they observe problem behavior (Sampson, 2001). The existence of interlocking social networks also facilitates communication about children among residents and the establishment of norms for acceptable behavior. In a study of Chicago neighborhoods, Sampson and colleagues demonstrated that collective efficacy, operationalized as informal social control and social cohesion, was associated with lower rates of violent crime (Sampson, Raudenbush, & Earls, 1997).

According to Sampson (2001), neighborhood-based organizations and their linkages both within the neighborhood and to outside resources, such as police and fire protection, constitute the formal or institutional components of social control. These institutional and public control mechanisms may decrease crime and illegal behaviors as well as increase perceptions of safety. Perceptions of safety, in turn, may influence parental monitoring of youth as well as youth exposure to the neighborhood.

Psychological sense of community may be another mechanism through which neighborhoods influence youth assets. Research has shown that sense of community, characterized by belonging, influence, fulfillment of needs, and shared connections, is related to self-reported general health, mental health, and well-being (Davidson & Cotter, 1991; McMillan & Chavis, 1986; Parker et al., 2001). Brodsky and colleagues found associations between community involvement (e.g., church/synagogue, mosque attendance, involvement in neighborhood organizations, higher voter registration) and sense of community (Brodsky, O'Campo, & Aronson, in press). They also found associations between knowing a successful parent and sense of community. Thus, it is quite possible that sense of community could facilitate increased youth involvement in the community as well as increased connections among young residents, their peers, and nonparental adults. We hypothesized that sense of community will be associated with nonparental adult role models, peer role models, and community involvement assets.

METHOD

Detailed methods for this study have been reported elsewhere and will be summarized here (Oman, McLeroy, et al., 2002). Data were collected from 1,350 randomly selected households in inner-city areas of two midwestern cities with populations of approximately 500,000 and 400,000. One parent and one adolescent (aged 13 to 19 years) from

each household were randomly selected to participate in interviews that were conducted in the respondents' homes using a computer-assisted data entry system. The adolescent and parent were interviewed at the same time but in different rooms of the residence. The teenager self-administered the risk behavior questionnaire by listening to tape-recorded items with headphones and entering responses into the computer. These methods minimized problems with missing data, securing respondent confidentiality, and the respondents' reading comprehension skills. The response rate was 51%, in part due to the necessity of obtaining consent from two persons per household and the difficulty in scheduling two in-home interviews to be conducted simultaneously in highly mobile, low-income neighborhoods.

Measures

Basic demographic information was collected from adolescent respondents (age, race/ethnicity, and gender) and parent respondents (age, race/ethnicity, gender, household income, family structure, and parent education). Other measures focused on two general areas: (1) youth assets and (2) parental perceptions of neighborhood/community resources. Assets were measured by youth responses to the adolescent survey, and the neighborhood/community resources were measured by parent responses from the parent survey.

Parental Perceptions of Neighborhood/Community Resources

There were four main areas of initial interest: Psychological Sense of Community, Informal Social Control, Neighborhood Concerns, and City Concerns. Factor analysis, using principal axis factoring and varimax rotation, was conducted to determine whether the items loaded as intended. A factor loading cut-off point of .40 or higher was selected as the inclusion criteria for factor interpretation (Hatcher, 1994). Internal consistency of all factors consisting of three or more variables was assessed using the standardized Cronbach's coefficient alpha (Cronbach, 1951). Factors were retained if the Cronbach's alpha was at least .60.

Psychological Sense of Community. The 10-item Psychological Sense of Community (PSOC) scale was used to assess sense of community (McMillan & Chavis, 1986). Factor analysis of the PSOC resulted in the extraction of two factors. One factor containing 7 of the items was retained (alpha = .84).

Informal Social Control. Informal Social Control was represented by five items that have been used in previous research (Sampson et al., 1997). Factor analysis was performed and one factor containing all 5 items was extracted. The Cronbach's alpha was .82.

Neighborhood Concerns. Neighborhood Concerns was assessed using 15 items, some of which have been used in previous research and some that were created specifically for this study (Aronson & O'Campo, 1997). Factor analysis resulted in the extraction of three factors. The first factor contains 5 items related to Neighborhood Safety (e.g., crime and violence, drug dealing and selling, feeling unsafe) with alpha = .87, and the second factor

contains 4 items related to Neighborhood Services (e.g., too much trash on streets and in yards, poor police protection, poor fire protection) with $\alpha = .69$.

City Concerns. City Concerns was assessed in a manner similar to Neighborhood Concerns. Thirteen items, some of which have been used in previous research and some that were created specifically for this study, were used to assess City Concerns (Aronson & O'Campo, 1997). The factor analysis extracted two factors, both of which were retained. The first factor contained 6 items related to City Services (e.g., not enough good places to shop for food, poor emergency services, poor sanitation) with $\alpha = .76$, and the second factor contained 6 items related to City Quality of Life (e.g., not enough good jobs in this city, not enough affordable housing, poor school system) with $\alpha = .71$.

Youth Assets

Youth assets were selected by the research team using needs assessment and focus group methodology. Twenty-three focus groups involving a total of 186 adolescents were conducted. The focus groups were comprised of youth of several races/ethnicities including White, African American, Hispanic, Native American, and Vietnamese American. Needs assessment and focus group data were analyzed and discussed in a series of meetings for the purpose of identifying and refining asset constructs and items to measure these constructs (Kegler et al., 2003; Oman, Vesely, et al., 2002).

The assets were measured using items with established reliability and validity when possible (Oman, Vesely, et al., 2002). The research team created original items when items were not available through extant publications. Factor analyses and reliability testing determined items included in the final scales. The number of items in each asset and the Cronbach's alphas are shown in Table 1. The five assets (with example items) included in the analyses for this article are (1) nonparental adult role models ("You know adults that encourage you often. Most of the adults you know are good role models for you."), (2) peer role models ("Are most of your friends responsible? Do most of your friends stay out of trouble?"), (3) use of time (groups/sports) ("You participate in an organized activity after class. You participate in school sports teams or groups such as swimming, cheerleading, or soccer."), (4) use of time (religion) ("How often do you participate in church/religious activities? On average, how often did you attend religious services during the past 12 months?"), and (5) community involvement ("You work to make your community a better place. You know where to volunteer in your community"). A complete description of the measures and asset survey development procedures has been published elsewhere (Oman, Vesely, et al., 2002). For conceptual reasons and to facilitate communication about the assets, they were dichotomized into present or absent.

Statistical Analysis

The primary analyses in this study included a sample of 1,275 observations. Data pairs were not included in the analyses if there were missing demographic data (41 parental income, 8 youth race/ethnicity, 2 parent race/ethnicity) or if the race/ethnicity reported for either the parent or youth was different than those listed in Table 2 (20 youth other race, 8 parents other race).

The dependent variables were the youth assets. Assets were reported as present (1) or absent (0) based on youth mean responses to the variables included in the asset. Items

Table 1. Descriptive Information for the Youth Assets and the Parental Perceptions of Neighborhood/Community Resources

Youth Assets	<i>N</i>	Youth With Asset (%)		Number of Items	Cronbach's α
Nonparental role model	1,147	80.6		7	.74
Peer role models	1,273	55.9		6	.81
Use of time (groups/sports)	1,272	32.2		4	.71
Use of time (religion)	1,275	50.3		2	.71
Community involvement	1,272	14.3		6	.78

Neighborhood/Community Resources ^a	<i>N</i>	Median	<i>SD</i>	Number of Items	Cronbach's α
Psychological sense of community	1,267	3.0	.51	7	.84
Informal social control	1,262	3.0	.69	4	.82
Neighborhood services	1,273	2.8	.50	4	.69
Neighborhood safety	1,230	2.3	.63	5	.87
City services	1,272	2.8	.41	6	.76
City quality of life	1,273	2.3	.48	6	.71

a. Response options range from 1 (*strongly agree*) to 4 (*strongly disagree*).

comprising each asset were generally scored from 1 to 4 (4 being the most positive response), and an individual was reported to have the asset if his or her mean score was 3 or higher. This indicated that the youth typically responded to the asset items by indicating "usually or almost always," "very important or extremely important," and/or "agree or strongly agree." Thus, assets were conceptualized as present or not present, rather than present in varying degrees.

The independent variables were parental perceptions of the neighborhood/community resources. Each resource consists of an average of the scores of the items included in the asset. The items were measured on a Likert-type scale with responses such as *strongly disagree*, *disagree*, *agree*, and *strongly agree* and were scored from 1 to 4 (4 being the most positive response). Resources were calculated if at least half of the items in the resource were answered.

Statistical analyses were performed with SPSS for Windows, Release 10.0 or the SAS System, Version 8.1. An alpha of .05 was used to determine statistical significance. Bivariate associations between the categorical demographic variables and the continuous neighborhood/community resource were assessed using the Kruskal-Wallis test. The Jonckheere-Terpstra Test was performed to test for trends in the community/neighborhood resources medians for the ordinal demographic variables. The unadjusted odds ratios (OR) between the presence of each youth asset and each neighborhood/community resource were calculated using logistic regression. Individual multiple logistic regression analyses were performed to examine the relationship between the presence of the youth asset and the neighborhood/community resources while adjusting for possible confounders. Possible confounders such as youth age (continuous), gender, and race/ethnicity, parent age (continuous), gender, and race/ethnicity, parent income and education, and family structure (one- or two-parent household) were controlled for if bivariate analysis

Table 2. Percentage of Youth With Individual Youth Assets by Youth and Parent Demographics

Demographic Characteristic	Nonparental Adult Role Model	Youth Peer Role Model	Use of Time (Groups/Sports)	Use of Time (Religion)	Community Involvement
Youth age					
13-14	79*	60	32*	58*	13
15-17	80	53	35	48	14
18-19	91 ^a	56	22	41 ^a	19
Youth race					
African American	80*	59*	39*	60*	21*
Native American	82	56	35	48	13
Caucasian	86	58	31	47	13
Hispanic	69	48	26	47	9
Youth gender					
Female	83	58	30	51	16*
Male	78	54	34	50	12
Parent age					
≤ 35	75	61	33	51	12
36-45	81	55	31	50	15
46-55	85	55	65	47	14
56-85	80 ^a	57	28	59	19
Parent race					
African American	78*	58*	39*	60*	21*
Native American	79	54	34	44	11
Caucasian	86	58	31	47	14
Hispanic	67	46	25	50	9
Parent gender					
Female	80	55	31	50	15
Male	81	59	36	52	13
Parent income					
< \$20K	72*	54	31*	43*	14
\$20-\$35K	80	56	27	52	13
> \$35K	88 ^a	58	39 ^a	55 ^a	17
Family structure					
Two parents	82	58	35*	54*	16
One parent	79	55	30	47	13
Parent education					
Less than high school	66*	50	18*	43*	9
High school, GED, some college	81	56	32	50	15
One parent a college grad	89 ^a	59	46 ^a	59 ^a	17 ^a

a. Significant trend (< .05).

* $p < .05$.

(between the demographics and the youth assets) resulted in a p value of .10 or less, indicating a possible independent relationship with the specific neighborhood/community resource. Potential interactions between each neighborhood/community resource and each demographic variable were assessed in each logistic regression. To decrease the risk of Type I error, the alpha level was set at .01 to evaluate the interactions.

RESULTS

Descriptives

Youth ($N = 1,275$) mean age was 15.4 (± 1.7) years, and 52% of the sample was female. The youth sample racial/ethnic characteristics were 48% Caucasian, 23% African American, 19% Hispanic, and 10% Native American. Approximately 48% of the youth lived in two-parent households. Thirty-one percent lived in households with reported income levels of less than \$20,000, 35% in households with income levels from \$20,000 to \$35,000, and the remaining 34% in households with reported income levels greater than \$35,000. Thirteen percent of the youths' parents had not graduated from high school, 72% of the youth had at least one parent that had a high school degree, GED or some college, and 15% had at least one parent with a bachelor's degree or higher level of education. The mean age of the parents was 42.4 (± 8.4) years and 81% were female. The racial/ethnic characteristics of the parents were 54% Caucasian, 23% African American, 15% Hispanic, and 9% Native American.

Correlations Among Neighborhood and Community Constructs

Correlations among the six neighborhood and community constructs were calculated. All but one of these correlations were statistically significant; however, they were all relatively modest in size. The largest correlation was between city services and neighborhood services ($r = .394$). The only other correlation above .30 was between psychological sense of community and informal social control ($r = .313$).

Youth Assets and Parental Perceptions of Neighborhood/Community Resources

Nonparental Adult Role Models. The percentage of youth with the Nonparental Adult Role Model asset differs significantly across youth age, youth and parent race/ethnicity, parent income, and parent education (see Table 2). A significant trend for a higher percent of youth with the asset exists for increasing youth age, increasing parent age, increasing parent income, and increasing parental education. As predicted, all six neighborhood/community resources were significantly related to this asset (see Table 3), with the unadjusted OR ranging from 1.29 to 1.54. Multiple logistic regression, adjusting for significant demographic variables (all variables with a p value $< .10$), potentially including all six neighborhood/community resources revealed that Neighborhood Safety was related to the Nonparental Adult Role Model asset, with an OR of 1.39 (95% confidence interval [CI] 1.09 to 1.78) (see Table 4). Therefore, after controlling for related demographic factors, the odds of having the Nonparental Adult Role Model asset increase 1.39 times for each point increase in the Neighborhood Safety resource. For example, those with a score of 3 on the Neighborhood Safety resource scale have a 1.4 times higher odds of having the Nonparental Adult Role Model asset than those with a resource score of 2.

Peer Role Models. The percentage of youth with the Youth Peer Role Model asset differs significantly across youth and parent race/ethnicity (see Table 2). Psychological Sense of Community, Neighborhood Services, Neighborhood Safety, and City Services were significantly associated with the asset with unadjusted ORs ranging from 1.24 to

Table 3. Unadjusted Odds Ratios Between Parental Perceptions of Neighborhood/Community Resources and Youth Assets

Youth Asset	Informal Social Control	Psychological Sense of Community	Neighborhood Services	Neighborhood Safety	City Services	City Quality of Life
Nonparental adult role models	1.29*	1.49*	1.54*	1.38*	1.43*	1.40*
Peer role models	1.11	1.25*	1.30*	1.24*	1.31*	1.05
Use of time (groups/sports)	1.27*	1.34*	1.47*	1.28*	1.54*	1.33*
Use of time (religion)	1.07*	1.29*	1.30*	1.22*	1.22	1.34*
Community involvement	1.35*	1.69*	1.14	1.22	0.94	1.04

NOTE: Community indicators are continuous.

* $p \leq .05$.

1.31 (see Table 3). Informal Social Control and City Quality of Life were not related to the peer role model asset. Multiple logistic regression, adjusting for significant demographic variables, revealed that only Neighborhood Safety was related to the Peer Role Model asset with an OR of 1.27 (95% CI 1.06 to 1.52) (see Table 4).

Use of Time (Groups/Sports). The percentage of youth with the Use of Time (Groups/Sports) asset differs significantly across youth age, youth and parent race/ethnicity, parent income, family structure, and parent education (see Table 2). A significant trend exists for a higher percentage of youth with the asset for increasing parent income and parental education. All six neighborhood/community resources were significantly related to this asset (see Table 3) with the unadjusted OR ranging from 1.27 to 1.54. The associations between informal social control and sense of community were not predicted. Multiple logistic regression, adjusting for significant demographic variables, revealed that only City Services was related to the Use of Time (Groups/Sports) asset with an OR of 1.46 (95% CI 1.06 to 1.99) (see Table 4).

Use of Time (Religion). The percentage of youth with the Use of Time (Religion) asset differs significantly across youth age, youth and parent race/ethnicity, parent income, family structure, and parent education (see Table 2). A significant trend for a higher percentage of youth with the asset exists for decreasing youth age, increasing parent income, and increasing parental education. Five of the six neighborhood/community resources were significantly related to this asset (see Table 3), with the unadjusted OR ranging from 1.07 to 1.34. Multiple logistic regression, adjusting for significant demographic variables, revealed that Neighborhood Services was related to the Use of Time (Religion) asset, with an OR of 1.31 (95% CI 1.03 to 1.65) (see Table 4).

Community Involvement. The percentage of youth with the Community Involvement asset differs significantly across youth and parent race/ethnicity and youth gender. There is a significant trend for an increasing percentage of youth with the asset with increasing parental education (see Table 2). Informal Social Control (OR = 1.35) and Psychological Sense of Community (OR = 1.69) are significantly associated with the Community Involvement asset before controlling for the significant demographic variables. The neighborhood and community resource constructs were not related to the community involvement asset. Significant interactions between youth race/ethnicity and three neighborhood/community resources were indicated after adjusting for other significant demographic variables. Therefore, the sample was stratified by youth race/ethnicity prior to conducting multiple logistic regression. For African American youth, after controlling for demographic variables, Neighborhood Safety was significantly related to the Community Involvement asset, with an OR of 2.05 (95% CI 1.26 to 3.34). For Native American youth, after controlling for demographic variables, Psychological Sense of Community was significantly related to the Community Involvement asset, with an OR of 5.12 (95% CI 1.60 to 16.39).

DISCUSSION

This study investigated the relationships among youth assets and neighborhood and community resources in an attempt to provide insight into how neighborhood and community environment may influence specific youth assets. Three hypotheses were exam-

Table 4. Multiple Logistic Regression Models by Youth Assets for Parental Perceptions of Neighborhood/Community Resources Controlling for Youth and Parent Demographics

Youth Asset and Significant Neighborhood/Community Resources ^a	<i>N</i>	Adjusted	
		Odds Ratio	95% CI
Nonparental adult role models ^b			
Neighborhood safety	1,110	1.39*	(1.09, 1.78)
Peer role models ^c			
Neighborhood safety	1,228	1.27*	(1.06, 1.52)
Use of time (groups/sports) ^d			
City services	1,269	1.46*	(1.06, 1.99)
Use of time (religion) ^e			
Neighborhood services	1,273	1.31*	(1.03, 1.65)
Community involvement ^f			
Interaction	—	—	—

NOTE: CI = confidence interval.

a. Community indicators are continuous.

b. Adjusted for youth age, youth race, youth gender, parent age, parent race, parental income, and parent education.

c. Adjusted for youth race and parent race.

d. Adjusted for youth age, youth race, parent race, parent income, family structure, and parent education.

e. Adjusted for youth age, youth race, parent income, family structure, and parental education.

f. Significant interactions; see narrative for details.

* $p \leq .05$.

ined. The first was that parental perceptions of neighborhood services, neighborhood safety, community services, and community quality of life would be associated with each of the youth assets. Two of the assets were associated with all four of these neighborhood/community constructs: nonparental adult role models and use of time (groups/sports). Two additional assets—positive peer role models and constructive use of time (religion)—were associated with three of the four neighborhood/community constructs. Contrary to expectations, community involvement was not associated with any of these neighborhood/community constructs in the bivariate analyses. With the exception of the community involvement asset, these findings generally support the notion that safer neighborhoods with higher quality services, at least as perceived by parents, may facilitate positive relationships between adolescents, peers, and adults as well as constructive use of time in groups, sports, and religious organizations.

The second hypothesis explored in this research was that informal social control would be related to nonparental adult role models. Informal social control implies a social fabric in which mutual trust exists between residents, along with a willingness to intervene for the common good (Sampson, 2003). Thus, it stands to reason that youth living in neighborhoods with higher levels of informal social control are more likely to report having the nonparental adult role model asset. This hypothesis was supported by study findings. Interestingly, several other relationships were also observed between informal social control and youth assets, including both use of time assets and the community involvement asset.

The third hypothesis was that parent's psychological sense of community would be associated with youth community involvement, nonparental adult role models, and peer role models. This was supported by the study findings. In addition, both use of time assets were associated with psychological sense of community. It may be that neighborhoods in which residents have a greater sense of community exhibit more frequent and higher quality exchanges among both adult and youth residents. Similar to results reported by Brodsky et al. (in press), an association between community involvement and psychological sense of community was observed in the current study. Brodsky posited that increased community involvement led to sense of community, but the reverse could be just as likely, particularly in the current study in which parental sense of community was associated with self-reported community involvement on the part of youth. Parents with greater sense of community may seek out opportunities and/or encourage their children to be actively involved in neighborhood activities.

Each of the assets was significantly associated with two or more of the neighborhood and community resources before adjusting for the demographic factors. Most of these associations were nonsignificant after adjusting for the demographic factors. The substantially fewer number of significant associations after statistically adjusting for the demographic variables indicates the importance of demographic characteristics in the youth asset/community resource relationship. Factors such as age, race/ethnicity, income, and education appear key to understanding how the neighborhood and community environment might influence youth assets. Indeed, in many studies, demographic characteristics of residents are aggregated to a neighborhood level and conceptualized as neighborhood-level predictors (Diez-Roux, 2001). For example, a recent study found that neighborhood characteristics (i.e., percentage African American, percentage Hispanic, and median household income) were more important predictors of adolescent sexual behavior than were government policies related to family planning services and sexual education requirements (Averett et al., 2002).

The final major result in the current study was that after adjusting for the demographic factors all of the assets (nonparental adult role models, peer role models, use of time [groups/sports], use of time [religion], and community involvement) were significantly associated with one neighborhood and community resource. Taken together, these results suggest that environmental factors, in the form of safety, social control, institutions, and services, may have a role in the development of certain youth assets.

The precise mechanisms or nature of the specific asset/resource relationships are less clear. The results from this study generally support the institutional resource and norms/collective efficacy theories that offer explanations for how neighborhoods influence children and adolescents (Leventhal & Brooks-Gunn, 2000). Institutional resource models suggest that access to community and neighborhood services contribute to stimulating social and learning environments (Jencks & Mayer, 1990; Leventhal & Brooks-Gunn, 2000). This explanation was supported by several findings in the current study. Both use of time assets were related to city and neighborhood services, suggesting that youth who live in an environment in which relatively basic services are available are more likely to engage in constructive use of time activities related to religion and participation in sports and clubs.

Safety, which is likely influenced by both formal control through police presence and informal social control, also emerged as an important neighborhood construct associated with the presence of youth assets. The two role model assets—nonparental adult role models and peer role models—were both associated with neighborhood safety. Thus, the

more safe the neighborhood was perceived to be by parents, the more likely that youth were to have both peer and nonparental adult role models.

The findings related to neighborhood safety also are consistent with collective socialization and social control theories of neighborhood influence (Jencks & Mayer, 1990; Leventhal & Brooks-Gunn, 2000; Sampson, 2001, 2003). For example, if neighborhoods are perceived as safe, youth may spend more time outside the home and, as a result, have increased opportunities to form positive relationships with peer and nonparental adult role models.

Other interesting findings in the current study include the interactions between the resources and demographic factors and the resulting association with the community involvement asset. Neighborhood safety was significantly associated with community involvement only for African Americans, and psychological sense of community was significantly associated with community involvement only for Native Americans. Therefore, African American youth were more likely to be involved in the community if their parents perceived that they lived in a safer neighborhood environment. Similarly, Native American youth were more likely to be involved in their community if their parents had a stronger sense of community. Perhaps the unexpected aspect of these results is that neighborhood safety and psychological sense of community were not significant issues in regard to community involvement for all youth regardless of their race/ethnicity. Additional research is clearly needed to further our understanding of the role that race/ethnicity might have in these particular asset/neighborhood resource relationships.

Limitations

Findings from this study may be limited by the method used to measure neighborhood and community resources. Individual-level responses from parents were used to measure these constructs, thus the measures are perceptions of resources rather than actual levels of resources and/or services available within the neighborhoods. Subsequent research should examine the extent to which individuals' and families' perceptions of resources correspond to other, more direct measures of neighborhood and community resources.

The data are cross-sectional. This makes it difficult to delineate the causal direction of the relationships among variables and constructs. Although the response rates in the neighborhoods may raise questions about the generalizability of the results, comparisons of race/ethnicity and median household income levels between the sample and census data from the same neighborhoods indicated no major differences by zip code. This suggests that the sample was representative of the neighborhoods studied.

One difficulty with studying neighborhood effects is self-selection of individuals and families into neighborhoods. Individuals may select neighborhoods in which they live based on demographic characteristics or other characteristics of the neighborhood residents. If self-selection into neighborhoods is occurring, then it is difficult to separate out the contribution of neighborhood from demographic characteristics. To partially address this issue, future analyses will involve geocoding addresses and assessing the extent to which individuals in geographically bounded neighborhoods share perceptions of neighborhood characteristics and community resources.

An alternative theory to the self-selection hypothesis is that age, gender, and race/ethnicity have more profound effects on perceptions of neighborhood and community characteristics than more objective measures of neighborhood characteristics. That is, age, gender, and ethnicity affect how individuals perceive their neighborhoods.

Geocoding addresses and looking at consistency in neighborhood perceptions will enable examination of differential consistency by demographic characteristics.

Implications for Research and Practice

Although there are limitations to this study arising from the cross-sectional design, the finding that youth assets are significantly associated with several neighborhood and city-level resources is an important one. The specific youth asset and neighborhood/city resource relationships found in this study suggest that intervention programming to promote youth assets should consider the potential effects of the presence or absence of community and neighborhood resources. Just as the environment has an important role in influencing health behaviors and health outcomes, the environment may also influence youth assets that are considered to be protective from high-risk behavior (Brooks-Gunn et al., 1993; Cubbin et al., 2000; Garner & Raudenbush, 1991; O'Campo et al., 1997; Pearl et al., 2001; Rankin & Quane, 2002; Rauh et al., 2001; Wasserman et al., 1998). The current study found that youth assets are more likely to exist among adolescents whose parents report higher levels of neighborhood and community resources. This study also found that demographic characteristics of parents and youth had a significant role in the asset/resources relationship. Based on these findings, practitioners designing youth development programs should include measures of neighborhood and community resources in their community needs assessments. Understanding the connections that residents have with their neighbors, in combination with perceptions of neighborhood safety, city and neighborhood services, and city quality of life, will help practitioners develop interventions that are appropriate for particular communities. As research accumulates to show a causal relationship between neighborhood resources and youth assets, interventions that focus on strengthening neighborhoods may become an important component of youth development programs.

Additional research is needed to elucidate the mechanisms through which city and neighborhood resources influence youth assets. Further research is also needed to assess whether youth assets mediate demographic and neighborhood effects on adolescent risk behavior. Finally, additional research will determine the extent to which the youth asset, neighborhood/city resource, and risk behavior associations are context-specific and whether neighborhood and city resources can be strengthened to increase youth assets and decrease adolescent risk behavior.

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