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Welcome to the Neighborhood: Does Where you Live Affect the Use of Nutrition, Health, and Welfare Programs?

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Despite the recent upsurge in neighborhood effects research, few studies have examined the impact of neighborhood characteristics on the use of nutrition, health, and welfare programs. To explore these issues, this study used data from Welfare, Children, and Families: A Three-City Study, a longitudinal dataset comprised of low-income neighborhoods in Boston, San Antonio, and Chicago (n=1,712). Using hierarchical linear models, the results indicated that both individual (education, employment, and marriage) and perceived neighborhood disorder factors were related to social service use.

Key words: neighborhoods, social services, poverty, social isolation

Researchers have long sought to understand how living in poor inner-city neighborhoods influences the well-being of residents. In fact, research in this area has more than doubled

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since the mid-1990s (Sampson, Morenoff, & Gannon-Rowley, 2002). Spatial dimensions of urban inner-cities, characterized by chronic poverty, joblessness, welfare dependency, broken families, widespread teen parenthood, and crime, have increased in importance as poverty has become more concentrated over time (Tienda, 1991). Various theories of neighborhood influence, such as social disorganization, social capital, collective efficacy, and social isolation offer explanations as to how these neighborhood characteristics relate to a number of outcomes, including child well-being (e.g., Cantillon, 2006; Caughy, O'Campo, & Muntaner, 2003; Coulton, Korbin, & Su, 1999), crime (e.g., Bellair, 1997; Lambert, Brown, Phillips, & Ialongo, 2004), mental health (e.g., Aneshensel & Sucoff, 1996), and physical health (e.g., Hill, Ross, & Angel, 2005; Subramanian, Kubzansky, Berkman, Fay, & Kawachi, 2006; Thompson & Krause, 2000). Distinct neighborhood characteristics may also uniquely affect social service use; however, this relationship has received little examination.

Use of social services, including nutrition, health, and income maintenance programs, is key to the well-being of low-income populations. Nutrition programs, such as the Food Stamp Program (FSP) and Women, Infants, and Children (WIC), reduce the likelihood of experiencing food insecurity, the uncertainty of having the ability to acquire enough food due to scarce resources (Anderson, 1990; Cook, 2002; Tarasuk, 2001; Vozoris & Tarasuk, 2003), and improve the nutritional status of participants (Basiotis, Kramer Le Blanc, & Kennedy, 1998; Devaney & Moffitt, 1991). This is of particular importance for residents of low-income communities who consume less fruit, vegetables, and fish (Diez-Roux, Nieto, Caulfield, Tyroler, Watson, & Szklo, 1999). Individuals with health insurance are more likely to see a doctor regularly and be in better health, and are less likely to delay treatment for illness or injury than those without coverage (Albrecht, Clarke, & Miller, 1998; Kaiser Family Foundation, 2003; Seccombe & Lockwood. 2003). In addition, income-maintenance programs, such as Section 8 housing assistance and cash assistance (AFDC/ TANF), increase family income, decrease poverty, and help families obtain decent and affordable housing (Turner, Popkin, & Cunningham, 1999; Rainwater & Smeeding, 2003).

Social services take-up rates vary greatly. For example, participation in TANF increases with both the size of the benefit and when information about eligibility is readily available (Currie, 2004). Further, take-up is higher for Medicaid than for the State Child Health Insurance Program (SCHIP), possibly due to the associated stigma, high transaction costs, and lack of information about program eligibility and access. As evidence of this, the poorest households are less likely than slightly better off households to live in public housing, possibly because the poorer families were less able to complete the complicated application process (Reeder, 1995). In addition, lack of knowledge about the program negatively impacted participation in the FSP (Daponte, Sanders, & Taylor, 1999). Participation rates are higher where public and private institutions are incentivized to assist people to take-up benefits for which they are eligible (Currie, 2004). Social service utilization also differs by neighborhood, although little is known about how neighborhood context is related. Still, we do know that poorer and less organized communities are generally at a disadvantage for health services, recreational facilities, and supermarkets (Ellen, Mijanovich, & Dillman, 2001; Huie, 2001; Morland, Wing, Roux, & Poole, 2002).

Using data from the *Welfare, Children, and Families: A Three-City Study* that includes extensive neighborhood-level data, the present study examined the impact of the neighborhood environment, including perceived neighborhood disorder, perceived trust and cohesion, dwelling problems, informal social control, residential tenure, and social support on the use of a wide variety of nutrition, health, and welfare programs to get a broad look at access to these services, controlling for the effects of family context.

Literature Review

Four general processes provide an explanation of how neighborhood effects operate: (1) contagion; (2) socialization; (3) institutionalization; and (4) social comparison (Tienda, 1991). The contagion mechanism results from imitation and peer pressure conditioned by the varying susceptibility of individuals to conform. Socialization operates through the internalization of social norms and learning the limitations of appropriate behavior. Institutionalization mechanisms produce behavior through structured and semi-structured organizations and actors, such as employers, schools, enforcement agencies, and other social institutions. Social comparison theories involve levels of relative deprivation and status organizing processes.

While all of these theories are viable, perhaps the most appropriate to the take-up of health and social services is Wilson's (1987) structural model of social isolation, akin to what Tienda (1991) termed institutionalization. In his structural model, Wilson (1987, 1991) asserts that labor market conditions, demographic changes, racial discrimination and racial segregation have converged to create an "underclass" in the inner city. One of the central tenets is the impact that deindustrialization has had on inner-city residents. Prior to deindustrialization, low-skilled workers earned a better wage and were able to support families. A racial division of labor was established by long years of discrimination and prejudice, such that much of the underclass was clustered in low-wage, low-skill industries. Deindustrialization reinforced this division. Individuals in this group were disproportionately impacted by economic shifts, such as the "shift from goods-producing to service-producing industries...and the relocation of manufacturing industries out of the central cities" (Wilson, 1987, p. 39). When these jobs became scarce, families with the wherewithal to do so moved away. These factors resulted in a concentration of poverty, increased joblessness and welfare dependency, few middle class neighbors and working role models, and less economic mobility. Further, neighbors fail to look out for each other as who belongs and who does not becomes increasingly difficult to determine (Wilson, 1987). Wilson (1987) asserted that "a person's patterns and norms of behavior tend to be shaped by those with which he or she has had the most frequent or sustained contact and interaction" (p. 61). This, combined with the available jobs in these communities, increases the chances that these individuals will choose underground illegal activity, public assistance, and/or idleness. These characteristics were maintained by the social isolation inherent in these neighborhoods. Whereas residents of more advantaged communities have access to social networks essential to learning about or being recommended for available jobs, socially isolated innercity residents lack such networks. As Wilson (1987) wrote, "social isolation highlights the fact that culture is a response to social structural constraints and opportunities" (p. 61), and the patterns and norms of behavior are transmitted to children and carried on by them.

The social disorganization of poor, inner-city communities leads to fewer institutional resources than are available in more affluent areas. With more disadvantage, residents are less likely to come to each other's aid, especially in times of financial need. Compounding this situation, there has been historical disinvestment in the African American community (Massev & Denton, 1993). Declining public resources led to little political power within these communities. Local institutions collapsed and the destruction of the social fabric resulted in the social ills described above. Conditions in these impoverished communities made it difficult to achieve societal norms of work, marriage, and family formation. As contact with more socially mobile and higher income individuals declined, the remaining neighborhood residents developed a deep suspicion and a lack of trust in the motives of others and institutions. Female role models who corrected children's behavior were no longer present, leading to a breakdown in feelings of community (Anderson, 1990).

Prior research has used Wilson's model as a framework to assess the effects of neighborhood characteristics on individual well-being. Fernandez and Harris (1992) used data from the Chicago-based *Urban Family Life Survey* to test key propositions of the social isolation theory. Their findings indicated that, of three groups—the working poor, the non-working poor, and the non-poor—the non-working poor (those theoretically most impacted by social isolation) were least likely to participate in community organizations. This finding supports the assertion that this group, the "underclass" in Wilson's model, tends to be isolated from local institutions that provide interclass contact. This group was also found to have the narrowest range of contacts, whereas the non-poor had the broadest range. Fernandez and Harris (1992) also found a consistent pattern of neighborhood and class effects on the nature of social relations. They found that poor African American, female respondents in poor neighborhoods suffered independent isolating effects of class and neighborhood. Further, members of these disadvantaged individuals' social networks were less likely to be employed or possess higher education, and were more likely to receive public assistance benefits. These researchers concluded that "the fact that we found some evidence that at least certain dimensions of social isolation are structured along neighborhood lines is encouraging for those researchers pursuing the issue of neighborhood effects on other outcomes" (p. 290). Similarly, Tigges, Browne, & Green (1997) examined race, class, and neighborhood effects on social isolation, finding that poor African Americans have narrower networks and are less likely to have a college-educated network member. Supporting the social isolation theory, these researchers demonstrated that, for African Americans, living in a very poor neighborhood increases isolation and decreases access to social resources.

In a similar vein, Rankin and Ouane (2000) investigated the extent to which the social isolation of poor, inner-city residents is due to poverty, other forms of disadvantage, or neighborhood environments characterized by limited contact with socially connected people and access to institutional resources. With a sample of poor and middle-class African-American mothers (n = 546), Rankin and Quane found that the net effect of living in a high poverty neighborhood was a reduction in the numbers of college-educated and employed friends and an increase in friends on public assistance, analogous to previous findings. Interestingly, they also found that families were more likely to participate in community organizations if they resided in the poorest neighborhoods, surprising because the researchers anticipated that poorer neighborhoods would have fewer opportunities for community involvement because of the typically weaker institutional resource base and lower propensity to participate if social avoidance behaviors predominate. This finding may indicate that those in the poorest neighborhoods attempt to deal with the effects of neighborhood disadvantage by taking proactive measures to defend against disorder and deterioration.

Researchers have found evidence that social isolation is associated with a wide variety of outcomes including employment experiences (Elliott, 1999), access to social resources (Tigges et al., 1997), educational achievement and child development (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1992; Vartanian & Gleason, 1999), physical health (Collins & Williams, 1999; Thompson & Krause, 2000; Tomaka, Thompson, & Palacios, 2006), and crime and violence (Renzetti & Maier, 2002). However, even with the recent upsurge in neighborhood effects research, little has been done to examine the impact of neighborhood characteristics on the use of social services such as the FSP, public housing, health care, welfare, and participation in neighborhood organizations. Some researchers have explored the quality, quantity, and diversity of community institutions that serve youth, such as libraries, schools, child care services, recreational activities, medical facilities, and the like, although use of these community institutions was not used as an outcome (Sampson et al., 2002). Other researchers have evaluated the use of medical services as an outcome based on a neighborhood characteristic, in this case, affluence (Brooks-Gunn, McCormick, Klebanov, & McCarton, 1998).

While researchers examining social isolation have used different operationalizations of the construct, the evidence is fairly clear that residing in high poverty neighborhoods characterized by the conditions Wilson (1987) described and offering little interaction with middle-class individuals has negative impacts on a wide variety of outcomes. Though none of the existing research has explicitly addressed the neighborhood influence on health and social service use, it reasonably follows that these outcomes will also be affected. Therefore, we hypothesize that high social isolation, defined here comprehensively by low levels of trust and cohesion, high levels of neighborhood disorder, high numbers of dwelling problems, low levels of social control, and low social support, will result in greater use of services as a result of greater need and reduced social networks key to obtaining jobs or help during crises.

For the current study, we explored the nature of neighborhood characteristics in relation to the take-up of social services. These social services included public housing, the Food Stamp Program (FSP), the Women, Infant, and Children Nutrition program (WIC), Medicaid, Social Security Insurance (SSI), and Temporary Assistance to Needy Families (TANF). Multilevel modeling via the procedures described by Snijders and Bosker (1999) and Raudenbush, Bryk, Cheong, and Congdon (2004) was used to assess the effects of neighborhood characteristics on the take-up of social programs.

Methods

We used data from Wave 2 (September 2000-June 2001) of the Welfare, Children, and Families: A Three-City Study Data Archive (Cherlin, Angel, Burton, Chase-Lansdale, Moffitt, & Wilson, 2001). The Three-City Study is a longitudinal study of children and their caregivers, including those who received public assistance and those who did not, residing in lowincome neighborhoods in Boston, San Antonio, and Chicago (Mince, Ruiz, McKean, & Peterson, 2003; Winston, 1999). The objective of the *Three-City Study* was to explore the consequences of policy changes related to the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). The purpose of the present secondary data analysis was to assess neighborhood effects on social service program participation. Recent studies have also used this data set to assess neighborhood effects on various outcomes (Coley, Morris, & Hernandez, 2004; Hill, Ross, & Angel, 2005).

In some studies, neighborhood-level social process measures are obtained from a single respondent's report. However, there is often considerable measurement error associated with this method. One solution, implemented here, has been to survey multiple respondents, typically at least 25 individuals per neighborhood, and use the collective assessment to create neighborhood indicators (Sampson et al., 2002). In addition, many researchers have now turned to characterizing neighborhood conditions through resident perception rather than through census-based variables, such as poverty and unemployment rates. Cantillon (2006), who looked at the impact of perceived neighborhood structural characteristics, such as stability and income, on neighborhood and youth outcomes, chose to look at perception of neighborhood conditions as it is important to understand how people respond to conditions in their local environment. Further, MacIntyre, Ellaway, and Cummins (2002) asserted that characterizing neighborhoods

with census data may not adequately capture the multidimensional nature of these contexts, while Subramanian and colleagues (2006) maintain that researchers need to go beyond census-derived indicators to "understand what it is about neighborhood deprivation that produces differential patterns of risk and protection" (p. S154). As a result, we chose to use the perceived neighborhood variables provided in the *Three-Cities Study*.

Study participants were children and their female primary caregivers residing in Boston, Chicago, and San Antonio. For this analysis, only caregiver data (n=1,712) in 330 neighborhoods were analyzed. All participants lived in households with incomes below 200 percent of the federal poverty line and resided in neighborhoods with high numbers of low-income households based on the 1990 Census, though more than half of the participants came from non-concentrated poverty neighborhoods, where concentration was defined as more than 40% poor (Winston, 1999).

A subset of data was extracted from the full data archive and downloaded to SPSS. Individual demographic predictor variables included age, race, citizenship, marital status, employment status, educational attainment, and monthly household income. A number of individual and neighborhood perception variables were also extracted and used to construct one individual-level social variable and four neighborhood scales, described below. Additional individual-level variables included having family members to help pay bills, residential tenure (number of months in the neighborhood), and desire to move from the neighborhood (indicative of satisfaction with one's neighborhood). Outcome variables related to current social service program participation were TANF, WIC, the FSP, Medicaid, SSI, emergency food (use in the past two years), and public housing assistance through Section 8. For the purpose of aggregating neighborhood responses, Three-City Study neighborhoods were defined as block groups based on the 1990 U.S. Census (Winston, 1999). Neighborhood perceptions were based on what respondents considered to be their neighborhood.

Three individual-level variables, "has others for emotional support," "has others to do small favors," and "has others for emergency loans" on a scale from "enough" to "no one to

provide support," were used to construct a mean scale score of amount of perceived social support ($\alpha = .77$). Four neighborhood-level predictor variables were constructed: number of dwelling problems, informal social control, perceived trust and cohesion, and perceived neighborhood disorder. A count variable of the number of dwelling problems (Kuder-Richardson reliability coefficient = .66) was created by summing the number of affirmative answers to eight questions about one's home: "housing has peeling paint," "housing has a leaky roof," "housing has broken windows," "toilet/hot water/plumbing does not work," "housing has exposed electrical wiring," "housing has rats/mice/cockroaches," "furnace/heater does not work," and "stove/refrigerator does not work" from the Dwelling/Status section of the Three-City Study codebook. The items used to construct the social control scale and the perceived trust and cohesion scale came from Sampson's 10item Collective Efficacy scale (Sampson, Raudenbush, & Earls, 1997). Informal social control ($\alpha = .87$) was a mean scale score consisting of five items on a six-point scale where 1 = very unlikely and 6 = already happened: "neighbors would act if children were loitering," "neighbors would do something about graffiti," "neighbors would do something about disrespect to adults," "neighbors would do something about a fight," and "neighbors would do something if the fire station budget was cut." The four cohesion and trust items ($\alpha = .85$) included: "this is a good place to raise kids," "the neighborhood is close-knit," "people around here help their neighbors," and "people in this neighborhood can be trusted." These were scored on fourpoint scales where 1 = strongly disagree and 4 = strongly agree. Selected from the Neighborhood/Community/Cognition section of the codebook, the 11 perceived neighborhood disorder items ($\alpha = .90$) asked whether the following conditions were a problem in the neighborhood: high unemployment, teen pregnancy, abandoned houses, theft, assaults, gang activity, drug dealing, unsupervised children, unsafe streets, unavailability of police, and presence of undesirable children (adapted from the Denver Youth Study and the Chicago Youth Achievement Study; Elliot, Wilson, Huizinga, Sampson, Elliot, & Rankin, 1996). Each item was rated on a threepoint scale where 1 = no problem and 3 = a big problem. Last, a

composite outcome variable was created of the total number of social services utilized of the seven possible services: TANF, WIC, FSP, Medicaid, SSI, emergency food, and Section 8.

Data were screened to assess the normality of all variables. Next, level-one and level-two data sets were created. The following variables were included in the level-one (individuallevel) data set to control for background demographic factors: age, race, citizenship, marital status, employment status, educational attainment, monthly household income, total perceived social support, having a family-member to help pay bills, whether respondent would move from the neighborhood, number of months in the neighborhood, the neighborhood identifier, and the weighting variable.

To create the level-two dataset, the four variables to be used at the neighborhood level were aggregated to the neighborhood. This was done using the AGGREGATE DATA command in SPSS (SPSS, Inc., Chicago, IL), which calculated the mean for each variable for each level-two unit (neighborhood) using individual-level scores. This mean was then used to represent the neighborhood. Level-two variables included mean number of dwelling problems, mean level of informal social control, mean level of perceived trust and cohesion, and mean level of neighborhood disorder. The data sets were linked via the neighborhood identifier. The two data sets were exported to HLM6, a multilevel modeling software package, to create a new multilevel data set (Raudenbush, Bryk, & Congdon, 2000). To determine whether multi-level modeling was appropriate for the data, using HLM6, a model was run without predictors included (called an empty or unconditional model) predicting the number of social services utilized. An Intra Class Correlation coefficient (ICC) was then calculated to determine how much of the variance in the dependent variable was explained simply by the grouping/clustering within neighborhoods without the addition of any predictors. The larger the ICC the greater the similarity among individuals within neighborhoods in terms of the variable of interest, here social service use.

Next, variables at level-one and level-two were entered to ascertain their contribution to the multi-level model. The full maximum likelihood estimation method was used. This analysis was conducted in accordance with the procedure laid out by Snijders and Bosker (1999). The cases were weighted to account for the complex sampling design of the *Three-City Study*, such that individuals from the largest city, Chicago, had less chance of being selected to participate than individuals in San Antonio, who, in turn, had less of a chance of selection than individuals in Boston (Mince et al., 2003).

Results

The study sample was predominately Black (53.9%) and Latina (36.1%). The majority of participants did not have a high school diploma (53.9%) and about half were employed (52.7%). About two thirds (70.5%) were unmarried, and monthly family income was low (\$1,745.62, SD = \$1,300.10). The female caregivers reported having an insufficient network to provide social support. Nearly three quarters (73.8%) of respondents reported having a family member to help them pay bills, while 57.4% reported that they would be likely to move from their neighborhood if they were able. Finally, respondents had lived in their current residence for two and one half months on average (SD = 3.6).

Correlations, also presented in Table 1, were conducted to examine the associations between sample characteristics and the outcome of total social services used. Each predictor was significantly correlated with the outcome, though the highest correlation was only 0.32 for income. Age, being Latina and other race/ethnicities, education, employment, marriage, and income were negatively related to the number of services used, whereas being Black, social support, being likely to move if able, and residential tenure were positively correlated with services used.

There were 330 neighborhoods represented in this study. Table 1 gives the results for neighborhood characteristics. Respondents reported a small number of neighborhood dwelling problems, such as peeling paint or broken windows (mean = 1.4, SD = 1.6, out of a possible 8), and a moderate level of neighborhood informal social control (mean = 3.1, SD = 1.3, out of a possible 6). In terms of neighborhood characteristics, respondents reported moderate levels of disorder (mean = 1.9,

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Table 1. Sample Characteristics

Characteristic	Mean (SD) or Percent	Correlation with Total Services Used	
Individual Characteristics $(n = 1712)$			
Age (mean)	34.2 years (10.4)	-0.14***	
Race/ethnicity: Black	53.9%	0.30***	
Latina	36.1%	-0.30***	
White/Other	5.5%	-0.02***	
Education: Less than high school	53.9%		
High school or more	37.4%	-0.21***	
Employed	52.7%	-0.27***	
Marital Status: Married	29.5%		
Not married	70.5%	-0.31***	
Family income (mean)	\$1,745.62 (\$1,300.10)	-0.32***	
Social Support (range 1-3)	1.6 (0.6)	0.07***	
Has family to help pay bills	73.8%	-0.01**	
Desire to move: Unlikely	25.7%	-0.13***	
50-50 chance	16.9%	-0.07***	
Likely	57.4%	0.17***	
Months in residence (range 0-24)	2.5 (3.6)	0.13***	
Neighborhood Characteristics ($n = 330$,)		
Number of dwelling problems (range 0-8)	1.4 (1.6)	0.09***	
Informal social control (range 1-5)	3.1 (1.3)	-0.16***	
Perceived trust and cohesion (range 1-4)	2.4 (0.8)	-0.14***	
Perceived neighborhood disorder (range 1-3)	1.9 (0.6)	0.32***	

 $p^{+}p < .10. p^{-} < .05. p^{-} < .01. p^{-} < .001.$

SD = 0.6, out of a possible 3) and trust and cohesion (mean = 2.4 SD = 0.8, out of a possible 4). Each of these neighborhood

characteristics was significantly correlated with the number of services used, with the highest correlation of 0.32 found for neighborhood disorder.

We began the HLM analysis with an empty, unconditional model to determine whether there was sufficient betweenneighborhood variance to warrant the use of HLM methods. The Intra Class Correlation (ICC) for the empty model was found to be 0.21, suggesting substantial clustering within neighborhoods (Snijders & Bosker, 1999). The formula for calculating the ICC is:

$\tau^2/\tau^2 + \sigma^2$

Where σ^2 is the level-one variance component and τ^2 is the level-two variance-covariance component. The value of the ICC, above 0.10, indicated that multilevel analysis was appropriate (Snijders & Bosker, 1999). In terms of their social service utilization, individuals residing within the same neighborhood were more similar to each other than to individuals in other neighborhoods.

Table 2 presents the coefficients and standard errors for both individual level and neighborhood level predictors of social service use for each model. We first created a multi-level model with only individual-level demographic and neighborhood-level variables. This model included such individual variables as age, race/ethnicity, employment, education, and citizenship, and neighborhood variables, including number of dwelling problems and social control. All variables were grand mean centered and treated as fixed effects. The inclusion of these predictors significantly reduced the ICC compared to the unconditional/empty model, from 0.21 to 0.13. As predictors are added to the model that explain the difference in the dependent variable over and above the grouping/clustering, the ICC should decrease, as group differences decrease when explanatory variables are added to the model. Therefore, when differences in a predictor variable are controlled for there is less difference attributable to a grouping system, such as living in a particular neighborhood (Snijders & Bosker, 1999).

Further, the deviance scores, a measure of the magnitude of difference between the model and the data, provided evidence that Model 1 improved the fit of the model to the data at a statistically significant level (p < 0.05).

			ervices Utilized		
D	Model I. Inc		Model II. Individual social predictors		
Predictors	demogra				
	Coefficient	SE	Coefficient	SE	
Individual-level Demographic Pred	lictors				
Race					
Latina	-0.33	0.24	-0.28	0.25	
Other/White	0.57*	0.23	0.33	0.25	
Age	-0.02*	0.01	-0.02*	0.01	
Citizen	0.46†	0.26	0.60*	0.23	
Employed	-0.54***	0.12	-0.57***	0.13	
Income	-0.0002*	0.0001	-0.0001+	0.0001	
Education			0.5044	0.14	
High school or above	-0.52**	0.16	-0.50**	0.16	
Married	-0.75***	0.19	-0.83***	0.19	
Individual-level Social Predictors					
Months in residence			0.02	0.03	
Family to help pay bills Desire to move			-0.16	0.18	
Unlikely to move			-0.25	0.19	
Chances are 50-50			-0.16	0.20	
Social support			0.02	0.12	
Neighborhood-level Predictors					
Dwelling problems	-0.01	0.15	0.01	0.16	
Informal social control	0.12	0.16	0.15	0.15	
Perceived neighborhood	1.05**	0.34	0.98**	0.33	
disorder	1.05**				
Perceived trust and cohesion	0.08	0.21	0.03	0.22	
Estimated parameters	15		20		
Deviance	4170.58		4086.00		
Comparison to empty model	2062.28(12)***		2146.85(17)***		
(χ2) Comparison of Model 1 to Model 2 (χ2)	84.58(5)***				

Table	2.	Multilevel	model	results	predicting	number	of	social	
services utilized from individual and neighborhood-level factors.									

Note: Black, less than high school, likely to move are the reference categories.

tp < .10. *p < .05. **p < .01. ***p < .001.

Both separately and together, each of these predictor variables reduced the amount of residual error and improved the fit of the model to the data. Individual-level social variables (social support, desire to move from the neighborhood, residential tenure, and having family members to help pay bills) were then added to the multilevel model (referred to as Model 2 below and in Table 2). The addition of these variables into the model was done to allow for the assessment of the unique effects of those variables as compared to a model with only individual demographic and neighborhood variables.

There was a significant decrease in deviance from Model 1 to Model 2 ($\chi^2 = 84.58$, df = 5, p < 0.001), indicating that Model 2 was a better fit for the data compared to the first model without individual-level social variables. We found significant predictors of social service participation at the individual and neighborhood levels. In both models, the individual demographic-level variables of age, employment, education, and marital status were found to be predictive of social service use. Citizenship status displayed a trend toward significance in Model 1 and became significant in Model 2. Other/White moved from significant to not significant from Model 1 to 2, while income went from significant to a trend. At the neighborhood level across the two models, only the neighborhood disorder scale predicted social service utilization. While the addition of the individual-level social factors into the second model significantly improved the fit of the model to the data, none of the variables were significant predictors of service use.

Assessing the full model (Model 2), for individual-level demographic predictors, older participants ($\gamma = -0.02$, p < .05), those who were employed ($\gamma = -0.57$, p < .001), those with more education ($\gamma = -0.50$, p < .01), and those who were married ($\gamma = -0.75$, p < .001) accessed fewer social services, while citizens ($\gamma = 0.60$, p < .05) accessed more services. The neighborhood disorder scale ($\gamma = 0.98$, p < .01), the only significant neighborhood-level predictor, was related to increased service use.

Discussion

The present study examined correlates of social service use in low-income neighborhoods in three urban cities. Respondents reported fairly high social isolation, characterized by little social support, moderate informal social control, minimal neighborhood trust and cohesion, and a relatively high level of disorder in their neighborhoods. The multivariate results suggested that both individual and neighborhood characteristics were related to the use of nutrition, health, and welfare programs, providing some support for the social isolation theory (Wilson, 1987). In terms of individual demographic characteristics, age, employment, education, and marital status were significantly related to social service participation. Older caregivers took up fewer social services, perhaps because older respondents were more likely to be working and above poverty (age ranged from 16 to 75 years). We found that those who were employed also utilized fewer services, possibly because they were more advantaged or had wider social networks through which to seek assistance. This finding was consistent with previous research suggesting that workers derived much of their social support through their co-workers (e.g. Hochschild, 1997; McGuire, 2007). We would expect that unemployed participants would have fewer such resources and, therefore greater need for social services. Respondents who were unmarried, whether cohabiting or not, accessed more services than those who were married. Married families most likely had access to a greater pool of resources than their unmarried counterparts (for a review of the benefits of marriage see Waite & Lehrer, 2003). For example, married caregivers in this sample had significantly higher household incomes than unmarried caregivers. Last, those with more education used fewer social services, again suggesting greater advantage and wider social networks.

In both models, the explanatory power of the neighborhood measures was fairly weak. Only one neighborhood measure in the full model, the neighborhood disorder scale, was a significant correlate. Residents in neighborhoods with greater perceived disorder, such as problems with gangs or teen pregnancy, accessed more services than participants who lived in neighborhoods with fewer of these characteristics. This finding corresponds to previous research suggesting that increased neighborhood disorder is associated with negative influences on health (Hill et al., 2005; Robert, 1998); mental health (Latkin & Curry, 2003); and parenting (Pinderhughes, Nix, Foster, Jones, & the Conduct Problems Prevention Research Group, 2001) all of which may create a need for social services, though we did not look at potential indirect effects. Interestingly, the other indicators of social isolation in our models, informal social control, perceived trust and cohesion, and dwelling problems, were not related to service use, though they were significantly related to outcomes in past studies (e.g., Smith & Jarjoura, 1989). This study also did not find that residential tenure was associated with service use, similar to findings by Pinderhughes and colleagues (2001) for parenting behaviors and Smith and Jarjoura (1989) for burglary risk. However, in other studies tenure was a significant neighborhood predictor of alcohol use (Ennett, Flewelling, Lindrooth, & Norton, 1997), health (Hill et al., 2005), and participation in community organizations (Rankin & Quane, 2000).

These findings indicate that those with more resources, in the form of a marital partner, employment, education, and neighborhood quality, were less likely to use health, nutrition, and income maintenance programs, suggesting less need. Further, this must accrue to more than simply a higher income as income was controlled for in the models and all families in the *Three-Cities Study* were low-income and, therefore, eligible for many of these programs. Prior research suggests that those with the fewest resources, such as low educational attainment or lacking a spouse/partner, also lacked strong social support networks, such as friends and relatives, who may provide child care, transportation, financial assistance, or emotional support, should it be needed (Harknett, 2006). These factors may, in part, explain our findings.

This research has implications for policy, practice, and future research. First, according to these findings, both neighborhood-level and individual-level conditions were associated with social service utilization. Residents of the most blighted neighborhoods, characterized by high crime and other social problems, were accessing more health, nutrition, and welfare services. Perhaps, as considered by Latkin and Curry (2003), residents in the most blighted neighborhoods have social networks so disadvantaged that they are unable to provide social support capable of helping to reduce stressors, and, hence, residents must turn to public support. This may also explain why social support was not a significant predictor of service use. This finding corresponds with Wilson's (1987) work, demonstrating that in these disadvantaged neighborhoods, fellow residents are not readily identifiable making it difficult for individuals to turn to neighbors in times of need.

Numerous programs exist to improve neighborhood conditions in such disadvantaged communities, such as through improving educational and skill development, increasing employment, raising wages, and providing universal health care coverage. Though it does not address issues of selection into these more challenged communities (Duncan & Raudenbush, 2001), community development initiatives may prove valuable in increasing neighborhood resources and decreasing impoverishment. One potential mechanism is the Comprehensive Community Initiative (CCI), an effort to improve the lives of individuals, families and their communities by working comprehensively through social, economic, and physical systems (Connell & Kubisch, 2001).

One such program, targeting entire neighborhoods, is the Neighborhood Jobs Initiative (NJI) developed by the Manpower Demonstration Research Corporation with the goal of increasing "employment and earnings among a large number of residents within the targeted neighborhoods so that regular employment would become a community norm" (Austin & Lemon, 2005, p. 67). Increasing employment may also decrease social disorder, found to negatively impact take-up of social services in this study. The NJI was implemented from 1998 to 2001 in five high-poverty neighborhoods in five cities, including Chicago (Project JOBS). Programs focused on three components: (1) employment services, including job development, training, and counseling; (2) financial work incentives, such as increasing use of the Earned Income Tax Credit, earnings disregards for TANF participants, child care subsidies, Medicaid, Food Stamps, and wage subsidies; and (3) community work support, such as improving the quality and quantity of social networks to facilitate information sharing. NJI focused specifically on addressing the social isolation of whole neighborhoods by targeting services to the neighborhood level, in the belief that helping enough residents to attain and retain jobs would create positive change in the neighborhood in general. With 2,772 participants, the Chicago site achieved a high rate of voluntary program participation. Though Chicago was already a service-rich environment, with a few organizations with national reputations in the arena of workforce development, NJI provided a strategic approach for implementing new programs on a broader scale (Molina & Howard, 2003).

In addition to enhancing neighborhood quality overall, individuals should be able to access services for which they are eligible as these programs have been shown to improve wellbeing (e.g. Basiotis et al., 1998; Seccombe & Lockwood, 2003; Turner et al., 1999). Findings from the present study indicated that the mean number of services used was only about two, out of a possible seven. Given that all the respondents were below 200% of the federal poverty line there is evidence that individuals were not utilizing services for which they were most likely eligible. Some social services, such as the FSP and TANF, are stigmatizing, which results in lower take-up rates among those eligible (e.g. Stuber & Schlesinger, 2006). Researchers found that when aid was provided in voucher form allowing families to select their own products, stigma was reduced and take-up increased. Further, many safety net programs require complicated and intrusive application procedures or frequent recertification. Minimizing these barriers, by lengthening the periods between recertification or allowing recertification to be conducted over the phone or by mail, may improve utilization (Ratcliffe, McKernan, & Finegold, 2007; Ribar, Edelhoch, & Liu, 2005).

The primary limitation of this analysis is the operationalization of neighborhood. According to Sampson and colleagues (2002), neighborhoods are ecological units that are nested within larger communities, however, in practice, most social scientists and many neighborhood-level studies utilize geographical boundaries defined by the US Census Bureau or other administrative agencies, such as school districts or police districts. However, these definitions are often imperfect and may not be how residents themselves would describe their neighborhoods. We avoid this, in part, by using neighborhood variables based on resident perception, however, censusderived neighborhood definitions are used to aggregate the data. The findings are also limited in their generalizability as the sample is drawn from three cities and is not a national sample. The relationship between individual and neighborhood characteristics and social service utilization may differ in a national sample.

In terms of future research, analyses should be extended by looking at binary outcomes focusing on types of services used, such as nutrition, health, and welfare program combinations or specific programs like WIC or TANF. Further, it may be valuable to look at the role that the location of social services plays in their use. For example, when looking at utilization of non-profit social services, Kissane (2003) found that respondents did not use services they otherwise would have because the services were located in dangerous sections of the community, characterized by prostitution, drugs, and violence. Further, service location may also be highly stigmatizing for potential recipients, if, for example, they must pick up food from a food bank that is highly visible in their community.

The main contribution of this paper is to draw attention to the potential importance of individual perceptions of neighborhood characteristics for understanding the dynamics of health, nutrition, and welfare service use among low-income mothers. Very little previous research has analyzed this relationship. A focus on this area may improve the well-being of some of the most vulnerable of United States residents.

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