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## Housing Assistance among Low-income Families with Children in 20 American Cities

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# Factors Contributing to the Receipt of Housing Assistance by Low-Income Families with Children in Twenty American Cities

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**ABSTRACT** The excess demand for housing assistance in the United States is well documented, but little is known about the factors that contribute to a family's likeliness to receive housing assistance. This study tracks 3,237 low-income families in 20 large US cities over a 9-year study period to see which families would wind up receiving housing assistance. Thirty percent of the families subsequently received either public housing or voucher-based assistance. Families experiencing greater socioeconomic disadvantage and episodes of homelessness were more likely to receive housing assistance. Neighborhood characteristics were weakly associated with the receipt of housing, and health and criminal justice measures showed no associations with the likelihood of receiving housing assistance. Our findings show that housing assistance is a scarce resource that only reaches a minority of those who are eligible, but that the minority who do receive assistance is disproportionately composed of the most economically disadvantaged families.

Lack of affordable housing is a critical problem in the United States (Sirmans and Macpherson 2003). There are approximately 7 million federally subsidized housing units available for low-income households, which is enough stock for only about one-fourth of eligible families (Joint Center for Housing Studies 2013). Not surprisingly, there is high demand for these units, and the waiting lists maintained by local housing authorities can be years long. Those who receive housing assistance directly benefit econom-  
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ically and in terms of housing quality (Quane, Rankin, and Joshi 2002; Berger et al. 2008). The inability to access affordable, adequate housing contributes to a range of undesirable health-, employment-, and child-related outcomes (Bratt 2002; Anderson et al. 2003; Saegert and Evans 2003; White and Rog 2004; Harkness and Newman 2005). The result is an inequitable system that “provides some households with a subsidy worth up to the market rate for rental units in that area, while other equally deserving households receive nothing” (Freeman 2002, 710).

While the excess demand for housing assistance among low-income families is well documented (Turner and Kingsley 2008), little is known about the differences between the households that do and do not obtain housing assistance. To understand these differences, we use data from the Fragile Families and Child Wellbeing Study (FFS), following a cohort of 3,237 children and their families for 9 years to see what factors predict the future receipt of housing assistance. We devote particular attention to the role of individual, family, and community-level factors that the research and policy literature identifies as germane to determining the distribution of housing assistance overall, and public housing versus voucher-based housing assistance specifically.

## BACKGROUND

Housing assistance aims to make adequate, affordable housing attainable for low-income families who have difficulty accessing it on the private market. Housing quality has improved greatly over the past half century, so the primary issue driving the need for maintaining and expanding the nation's supply of housing assistance has become affordability. The federal government, through the US Department of Housing and Urban Development (HUD), subsidizes a wide portfolio of housing that includes project-based public housing units, which are typically owned and operated by local public housing authorities; site-based units, which are privately owned and charge affordable rents as determined by HUD; and housing vouchers, which are primarily under the aegis of the Housing Choice Voucher Program. People living in project-based and site-based housing (subsequently referred to collectively here as public housing) typically pay 30 percent of their income as rent, while voucher-based assistance typically subsidizes the difference between local fair market rent and 30 percent of the household's income, with the household paying the balance of the actual rent.

DETERMINING ELIGIBILITY: THE ROLE OF HOUSING  
AND ECONOMIC FACTORS

Eligibility for housing assistance is primarily based on income. A household must have income under 80 percent of the area median income (AMI) to be eligible for housing assistance. Local public housing authorities (PHAs) are mandated to allocate 75 percent of their Housing Choice Voucher Program vouchers and 40 percent of their project-based vacancies to households classified as having extremely low incomes, or incomes less than 30 percent of the AMI. Yet, even among extremely low income households, the demand for housing assistance overwhelms the supply (Jacob and Ludwig 2008).

While extreme poverty is one factor influencing a family's ability to obtain housing, it is not the only condition that may lead to difficulty maintaining housing arrangements on the private market. Homelessness can also contribute to increased difficulty in obtaining housing. According to HUD's Annual Homelessness Assessment Report (AHAR), homelessness affected an estimated 537,414 people in 172,767 families in 2011 (HUD 2012). Joshua Leopold (2012) surveyed families who either recently received housing assistance or were on PHA waiting lists and found that 7 percent of surveyed households were homeless either at the time of the interview or just prior to their receiving voucher-based assistance, while 23 percent were homeless in the year prior to being interviewed. Federal policies once mandated PHAs to give homeless families expedited status on waiting lists for housing assistance, but the 1998 Quality Housing and Work Responsibility Act (QHWRA) ended this mandate. Since then, the National Low Income Housing Coalition (2004) studied PHA waiting lists and found that only about one-fifth of PHAs give homelessness some sort of preference in allocating housing assistance.

High rent burden, or having housing costs that eat up a significant portion of household income, can also affect a family's ability to obtain housing. HUD's biennial *Worst Case Housing Needs Report* (Steffen et al. 2011) examines the extent to which low-income households have excessive housing cost burdens. In 2009, they estimated that 17.1 million people live in what they call worst case need households, with both very low income (under 50 percent of AMI) and housing costs that exceed 50 percent of household income. This comprised 41 percent of all very low income households. Forty percent of very low income families lived in worst case

need households, while another 25 percent received voucher-based assistance. Like homelessness, high rent burden was a federally mandated preference until the 1998 QHWA. Following this policy change, only 17 percent of PHAs maintain a preference for high rent burden in allocating housing units to applicants on their waiting lists (National Low Income Housing Coalition 2004).

Low-income families who are in doubled-up living situations, or who live with family and friends, also are in need of housing assistance. These families do not get included in the AHAR and WCHNR because they are not considered homeless and are not formally renting their homes. Furthermore, they may pay no rent or only token rent to their hosts, which would not classify them as rent burdened. In some cases, doubled-up living situations can be so tenuous and stressful due to overcrowding, incompatibility, and financial strain (Evans 2006; Leventhal and Newman 2010; Solari and Mare 2012) that these families can meet the criteria for homelessness (National Alliance to End Homelessness 2012). In other cases, doubled-up families live in arrangements that are stable and last for years. Joshua Leopold (2012), in the previously cited study, found that 40 percent of families were living in doubled-up arrangements either when surveyed or immediately prior to receiving a subsidized housing placement.

Household mobility is another dynamic that is not typically taken into account when gauging the need for affordable housing. An unknown number of low-income families move frequently from one unsustainable living situation to another. These frequent moves often negatively affect the family's cohesiveness, the viability of its support systems, and the ability for adults to maintain employment and for children to maintain schooling (Berger et al. 2008; Leventhal and Newman 2010; Holupka and Newman 2011). Moving frequently also may inhibit a family's ability to maintain and follow up on a housing assistance application, especially when there is a wait involved.

#### OTHER FACTORS AFFECTING THE ABILITY TO OBTAIN AND MAINTAIN HOUSING

Other factors may also affect a low-income family's ability to obtain housing. Susan Popkin, Mary Cunningham, and Martha Burt (2005) examined what they refer to as hard to house households during relocation efforts of project-based housing tenants as part of HUD's Housing Opportunities for

People Everywhere (HOPE VI) initiative. They describe hard to house families as “the most vulnerable and the most in need of additional services and support to make a successful transition” to safe, stable housing (Popkin et al. 2005, 16). These hard to house families had exacerbating characteristics, including family members with disabilities, large family size, and family members with a history of legal problems, eviction, domestic violence, or substance abuse, that may require special accommodations and present obstacles to obtaining housing.

Health problems also pose difficulty in accessing affordable, acceptable housing. Susan Saegert and Gary Evans (2003) assert that health affects “the assets that residents have for moving to better places” (571), and, at worst, severe health issues put low-income families at higher risk for negative housing outcomes such as homelessness (Curtis et al. 2010). In less extreme situations, health issues limit income opportunities and reduce the number of suitable housing units for families. This can make housing assistance more attractive for families with health issues, and thereby would increase the likelihood that such families will seek out housing assistance (Ruel et al. 2010). An undetermined number of PHAs maintain an admissions preference for families with a disabled member (National Low Income Housing Coalition 2004).

Criminal activity and drug use, past or present, can also impede access to stable housing (Human Rights Watch 2004; Metraux, Roman, and Cho 2008). As a result of new policies set by the QHWRA passed in 1998, local PHAs enacted provisions to evict or disqualify tenants based on criminal history or drug use (Solomon 2005; Kaplan and Rossman 2011). While the implementation of this policy varied considerably across PHAs, Amanda Geller and Marah A. Curtis (2011) find that a history of incarceration was associated with impeded access to subsidized, project-based housing.

A history of domestic violence can also make it difficult for families to obtain housing assistance. Few women leaving domestic violence situations receive housing assistance, despite the crucial role stable housing plays in facilitating their exits (Postmus et al. 2009). Domestic violence is a risk factor for housing instability, and not having stable housing options may force a family to choose between remaining in an abusive situation and becoming homeless (Menard 2001; Rollins et al. 2011). In addition, the upheaval caused by domestic violence can lead to poor rental history, legal problems, and a reduced credit rating, all of which make accessing housing, including housing assistance, more difficult (Baker et al. 2010). In re-

sponse to the special needs and circumstances faced by these families, about one-third of PHAs maintain some type of preference for domestic violence victims and their families (National Low Income Housing Coalition 2004; Martin and Stern 2005).

Employment is another potentially influential factor in gaining housing assistance. The preference given by many PHAs to working families (National Low Income Housing Coalition 2004) demonstrates the desirability of working tenants. As the gap between median area rent and median household income grows, more working families have difficulty finding affordable, adequate quality housing without rental subsidies (Sirmans and Macpherson 2003; National Low Income Housing Coalition 2012). However, working may render housing assistance less attractive because any income gained through working will be scaled back through corresponding rent increases, given that rental rates under housing assistance are usually set at 30 percent of income (Shroder 2002; Newman 2008). This is one of a host of additional costs that families face when pursuing work rather than—or in addition to—receiving income solely from Temporary Assistance for Needy Families (TANF) or other income assistance (Edin and Lein 1997).

#### CHARACTERISTICS OF FAMILIES WHO RECEIVE HOUSING ASSISTANCE

Many families receiving welfare benefits also receive housing assistance. In a study of housing needs among low-income families in three cities, Quane and colleagues (2002) report that 52 percent of those receiving welfare lived in project-based housing and another 17 percent lived in voucher-based housing. In a study looking at factors associated with the likelihood of using housing vouchers among households who were granted them, Brian Jacob and Jens Ludwig (2008) find that those receiving welfare benefits—specifically TANF—were more likely to use the vouchers when given the opportunity.

Race and other sociodemographic characteristics that are associated with economic difficulty may also be associated with the receipt of housing assistance. Parents among families who are receiving housing assistance are disproportionately single or cohabiting females, are undereducated, were young when their children were born, and have three or more children (Shroder 2002; Popkin et al. 2005; Kalil and Ryan 2010). Race may



also be associated with the receipt of housing assistance, as families in subsidized housing are disproportionately African American, even after controlling for the racial disparities among families in poverty. Legal immigrants receive housing assistance at about the same levels as native-born citizens, while immigrants with illegal status use housing assistance at much lower rates, largely because they are usually ineligible to receive it (Camarota 2011).

Racial and economic segregation in housing manifests itself in geographic terms (Wilson 1987; Massey and Denton 1993; Jargowsky 1997), and project-based housing assistance in particular has buttressed this residential segregation (Carter, Schill, and Wachter 1998; Shroder 2002). Families coming from neighborhoods with high levels of economic disadvantage or racial and ethnic minority composition may be more open to living in public housing, which is often located in similar neighborhoods. Alternately, they may also be more likely to take advantage of the mobility of voucher-based housing in order to move out of such neighborhoods. Jacob and Ludwig (2008) found that neighborhood disadvantage, measured by rates of poverty and violent crime in census tracts, increased the likelihood that families who were offered housing vouchers would use them.

There are also socioeconomic differences between families who pursue public housing and families who pursue voucher-based assistance, which may influence which families wind up receiving housing assistance. Since the 1970s, federal funding of subsidized housing has increasingly focused on vouchers to supplant an aging and declining public housing stock (Turner and Kingsley 2008; Joint Center for Housing Studies 2013). As a result, families have the opportunity to live in more economically and racially diverse neighborhoods than the neighborhoods that typically contained public housing (Newman and Schnare 1992; Quane et al. 2002; Galvez 2010). In 2007, 56 percent of families receiving housing assistance had vouchers, as compared to 22 percent in project-based housing and another 22 percent in site-based housing (Turner and Kingsley 2008). Sandra Newman and Ann Schnare (1993), drawing on data from 1989, conclude that voucher- and project-based housing assistance served “different clienteles” (424). Specifically, they find that families in project-based housing assistance were generally more disadvantaged than their counterparts who lived in voucher-based housing. They received somewhat lower income (also reported in Joint Center for Housing Studies 2011), were more likely to be African American and headed by a single mother, had lower

educational levels, and had more children in their households. Newman and Schnare (1993) argue that a set of processes occurred both before and after families applied for PHA-based housing (voucher-based or public housing) with the result that “those less willing or less able to secure housing in the private market through the certificate or voucher program end up in public [i.e., project-based] housing” (424). No subsequent published research has further evaluated this assertion.

#### DETERMINING THE FACTORS THAT INFLUENCE THE LIKELIHOOD OF RECEIVING HOUSING ASSISTANCE

Despite the fact that the number of eligible households exceeds the available housing assistance supply by a ratio of 4:1, little is known about the characteristics and circumstances that affect a family’s odds of receiving subsidized housing (Leopold 2012). These dynamics influence both a family’s choice to pursue housing assistance and the subsequent administrative machinations that determine who receives housing. Families who take the initiative to pursue housing assistance must negotiate a complex, extended application process and are subject to PHA processes, which almost universally involve waiting lists and policies that expedite the process for some families and impose delays and barriers for others. Federal policies, which structure and monitor the PHAs and their handling of applications, and landlords, whether private or public, also have a role in determining which families ultimately obtain housing assistance. Other more tangential factors, such as neighborhood influence, also are likely to factor into this process.

This study examines whether the factors reviewed here increase the likelihood that income-eligible families will receive housing assistance. Along with income and housing circumstances, factors as diverse as health and legal statuses, sociodemographic and personal characteristics, and employment status and neighborhood characteristics potentially influence which families apply for housing assistance, negotiate the application process, and ultimately receive assistance. We recognize that different factors may have different effects at different points in the process, that not every eligible household will apply for assistance, that delays and barriers may discourage certain families from persisting with their applications, and that preferences and other factors influence who receives housing assistance. We aim to evaluate how well the outcomes of the current selection

process match policy designs and accurately identify and serve the families who are most in need of housing assistance (Grigsby and Bourassa 2003).

The primacy of poverty and income to the process of identifying candidates for housing assistance is clear from the research literature. Housing assistance was designed to provide adequate, affordable housing to those who could not afford it on their own. Given the scarcity of housing assistance, however, numerous other dynamics are also involved. Federal policies dictate that households with extremely low income receive preference for assistance, and this should be reflected in assessing which families are more likely to receive assistance. However, at least two factors stand to mitigate this relationship.

First, it is important to note that only one-third of households with extremely low income receive housing subsidies. Other circumstances that these needy families may be facing, such as homelessness, high rent burden, domestic violence, or living doubled-up in other households, can both facilitate and hinder receipt of assistance. Families experiencing homelessness, for example, may receive assistance more quickly due to their more acute need, but they may also have more difficulty completing an application process that demands, among other things, that the housing provider be able to contact the applicant.

Second, there are factors beyond extreme poverty that can influence a family's need for and receipt of housing assistance. The tension between the established policies that favor families in extreme poverty and local preferences for more stable, higher-income tenants can lead to inconsistencies in determining who receives assistance. Employed families are more desirable to housing assistance providers, but these families may prefer other housing arrangements. There are also other circumstances, including health factors and criminal or substance abuse histories, that are less directly related to housing but can still render a family hard to house. Finally, there are family attributes, such as female-headed households and black race, as well as neighborhood characteristics that are disproportionately represented among housing assistance recipients and which may influence the likelihood of receiving housing assistance.

While the extant literature provides a basis for identifying salient factors and characteristics related to receiving housing assistance, it does not directly address the roles these factors play in identifying which families will receive housing assistance and which will not. For example, research on

health factors primarily has focused on households already receiving housing assistance, not on those who may be eligible and in need of assistance. Going beyond poverty, we seek a better understanding of the way in which other factors potentially affect the receipt of housing assistance and how these factors affect the receipt of voucher-based assistance versus public housing.

## METHOD

### DATA AND SAMPLE

This study is based on the data from the Fragile Families and Child Well-being Study (FFS), which provides longitudinal information about a cohort of approximately 5,000 children born in 20 large US cities between 1998 and 2000.<sup>1</sup> Mothers were surveyed at the time of their child's birth and again 1, 3, 5, and 9 years after the child's birth. Of the baseline sample, 90 percent of the mothers responded to the 1-year follow-up, 88 percent to the 3-year follow-up, 87 percent to the 5-year follow-up, and 76 percent to the 9-year follow-up.

The sample consists of all households who reported having income at or below 80 percent of the AMI at one or more of the four follow-up waves and who did not receive housing assistance at baseline. We include households if they had at least one follow-up. As this study focuses on predicting future receipt of housing assistance among families who had not received such assistance, we dropped 780 out of 4,017 households (19 percent) because they had housing assistance at baseline. Compared to the mothers

1. Interviewers sampled those women who were admitted to deliver a baby at hospitals throughout each city. Unwed mothers were oversampled so that approximately 20 percent of women in the sample were married at the time of their child's birth. Fathers of the babies were interviewed at the hospitals as well. Follow-up interviews were conducted over the phone. Add-on studies have supplemented the original survey with in-home observations, qualitative interviews, medical record data, and census-tract level data. The 20 cities are Austin, Texas; Oakland, California; Baltimore, Maryland; Detroit, Michigan; Newark, New Jersey; Philadelphia, Pennsylvania; Richmond, Virginia; Corpus Christi, Texas; Indianapolis, Indiana; Milwaukee, Wisconsin; New York, New York; San Jose, California; Boston, Massachusetts; Nashville, Tennessee; Chicago, Illinois; Jacksonville, Florida; Toledo, Ohio; San Antonio, Texas; Pittsburgh, Pennsylvania; and Norfolk, Virginia. A stratified random sampling strategy was used to select among large US cities (defined as having a population of over 200,000), grouped according to their policy environments and labor market conditions. The sample design is described in detail by Nancy Reichman and colleagues (2001).

dropped from the analysis, those included in the sample were slightly more educated, less likely to be black, more likely to be Hispanic, more likely to be immigrants, and had fewer children. We compared the results of multivariate analysis with and without those who were housing assisted at baseline. The final sample for this study comprises 3,237 households.

## MEASURES

We obtained data from the main FFS survey and the In-Home Longitudinal Study, which is a collaborative project following up the FFS sample. The FFS survey measured housing assistance by asking two questions: whether the current home is in a public housing unit and whether the federal, state, or local government is helping to pay for the rent.<sup>2</sup> Measures of housing assistance were available in all interview waves.

The FFS survey also measured several sociodemographic characteristics, including the mother's age at the time of the sampled child's birth, race and ethnicity, immigrant status, education, marital status, residential status of the children's fathers, and household size. Individual-level economic conditions were captured by asking about the mother's employment status; household income relative to the AMI;<sup>3</sup> government program participation, such as TANF, food stamps, supplemental security income (SSI), and disability payments; and the availability of support from family members. At every wave, the mothers reported whether they experienced domestic violence at the hands of their children's fathers. The mothers' exposure to domestic violence was assessed by their responses to questions about whether they were hit or slapped and whether the fathers of their children cut, bruised, or seriously hurt them during fights. The mothers were also asked if they had been convicted of a serious crime,<sup>4</sup> and if their

2. The interviewer could add to this latter question, "This help can be in the form of additional money added to your benefits, as a voucher that you give your landlord, or as assistance from Section 8."

3. The AMI was obtained from HUD for the years 2000, 2002, 2004, and 2008 and matched to the 20 cities in the FFS.

4. We define a serious crime as aggravated assault, rape, or murder (an attack on a person with a weapon or hands, e.g., battery, rape, aggravated assault, manslaughter); robbery, theft, or larceny (taking something from someone with or without using a weapon); forgery, fraud, embezzlement, bad checks; shoplifting; or possession, use, or sale of marijuana, cocaine, or other illegal drugs.

children's residential fathers had ever been in jail, in order to evaluate criminal history.

The study measured housing instability by asking about episodes of homelessness, doubled-up living, and residential moves. We ascertain episodes of homelessness using responses to two survey items that were asked at each follow-up interview. A family is considered homeless in the period leading up to the interview if the mother indicated (1) that she lived in temporary housing, in a group shelter, or on the street at the time of the interview or (2) that, in the 12 months prior to the interview, she stayed in a shelter, an abandoned building, an automobile, or any other place not meant for regular housing, even for one night. At each follow-up interview the mothers were also asked if they were living doubled-up with family or friends, that is, living in a house not owned by the respondent where there was no payment of rent. We obtain information on residential mobility from the baseline interview and the follow-up interviews using two different survey items. At the follow-up interviews, the mothers were asked whether they had moved since the last interview and if so, the number of residential moves since the last interview.

The FFS survey evaluates maternal and child health with several measures. The mothers were asked at every follow-up interview whether they had a serious health condition that limited the amount or kind of work they could do. The Composite International Diagnostic Interview–Short Form (CIDI-SF) was used to measure depression in the mothers. At every wave, the mothers also reported whether drinking or drugs had interfered with their work or personal relationships in the last 12 months. We measure the child's physical health with questions regarding whether the child had a physical disability, which we defined as having Down syndrome, cerebral palsy, sickle-cell anemia, a heart condition, deafness, blindness, or a problem with the limbs. We use HUD's Picture of Subsidized Households, which includes measures showing the availability of housing assistance, to capture the availability of housing vouchers and public housing units for the 20 cities (see fig. A1).

In order to reflect community characteristics, we also include census tract-level socioeconomic and demographic characteristics, including the percentage of non-Hispanic black people in the community, the percentage of foreign-born residents, the mean number of people per household, the percent of adults with a high school degree, the unemployment rate, the housing vacancy rate, the fraction of occupied housing units that are renter-

occupied, the median monthly rent, the percentage of families receiving public assistance, the poverty rate, and the median household income.

#### DATA ANALYSIS

We conducted descriptive analyses to compare sociodemographic characteristics, housing instability, maternal and child health, and community characteristics among the families by receipt of housing assistance. We used chi-square and *t*-test analyses to test for differences among categorical variables and continuous variables, respectively;  $p < .05$  was selected as a minimum level of statistical significance.

We performed multivariate analyses using the logistic regression model for discrete-time data with time-variant covariates, which is analogous to the discrete-time proportional odds model (Allison 1995). To estimate this model, we converted the sample into family-year observations. The standard errors were adjusted for intra-cluster correlations at the individual family level. All data analyses were performed using Stata statistical software, release 12.1 (StataCorp 2011). The model is written as

$$\log[\text{prob}(\text{HA}_{it})/(1 - \text{prob}(\text{HA}_{it}))] = a_{-t} + g_{-j} + b1 \times x_{-i} + b2 \\ \times z_{-it} + b3 \times c_{-i},$$

where  $i$  denote households,  $t = 1, 2, 3, 4$  denote the interview waves,  $j = 1-20$  denote city,  $a_{-t}$  is a set of time dummies,  $g_{-j}$  is a set of city dummies that allow the hazard of housing assistance for an average household to vary by interview and city,  $x_{-i}$  is a set of time-constant household characteristics,  $z_{-it}$  is a set of time-varying household characteristics, and  $c_{-i}$  is census-tract level characteristics. A household is considered at risk of receiving housing assistance after the baseline ( $t = 1$ ) and is no longer at risk when housing assistance is received or when the household is censored by the end of the study period.  $\text{Prob}(\text{HA}_{it})$  is the conditional probability that housing assistance is received at time  $t$ , given that it has not already been received.

We ran regressions restricting the two types of housing assistance to be mutually exclusive. That is, we assigned those who reported receiving both types of housing assistance in a given year to having only received public housing, as self-report of public housing is considered in the literature to be more reliable. The results were not noticeably different from the regressions without the mutually exclusive restriction.

We lagged the relevant explanatory variables to ensure that explanatory variables were time-constant or occurred before the receipt of housing assistance. All of the explanatory variables occurred before the housing assistance outcomes. Time-constant variables were fixed at baseline, and the community-level variables came from the 2000 Census (see table A1 for the time frame of covariates). We checked multicollinearity by calculating the variance inflation factor, which suggested multicollinearity would not bias estimates of the contributions of the individual explanatory variables in our specification.

The percentage of missing was 10 percent for public housing and 5 percent for voucher-based assistance. Covariates were missing for fewer than 7 percent of the sample. In order to maximize precision, we used multiple imputation (with Stata's MI commands) to estimate missing values. The results were estimated using 20 imputed data sets.

## RESULTS

Figure 1 shows that 30 percent of the sample (961 out of 3,237 households) reported receiving one of the two types of housing assistance in at least one of the four follow-up interviews: 16.5 percent received public housing and 16.7 percent received voucher-based assistance. As shown in figure 2,

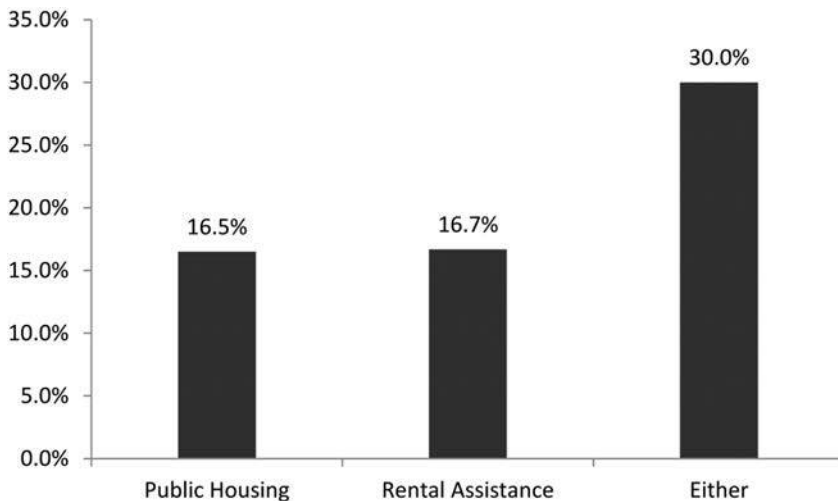


FIGURE 1. Percentage of low-income families with children who received housing assistance over a 9-year period ( $N = 3,237$ ).



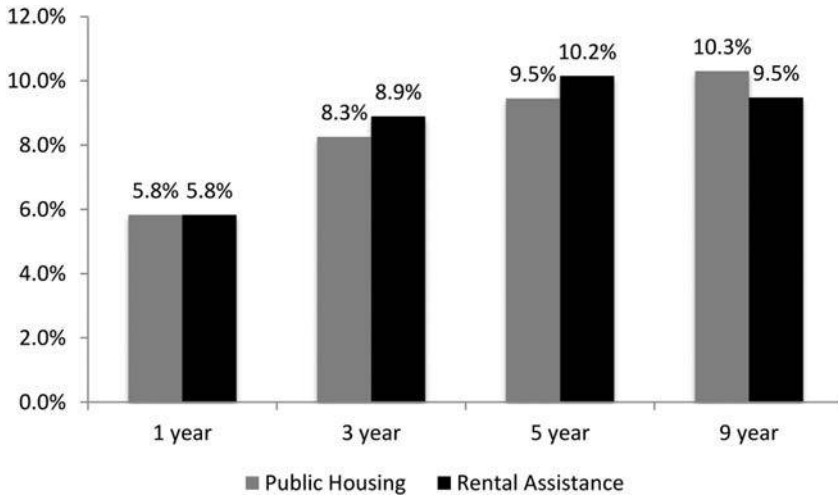


FIGURE 2. Percentage of low-income families with children who received housing assistance across four interview waves ( $N = 3,237$ ).

the housing assistance rates increased across time. While 6 percent of the sample received public housing at the first follow-up interview (which occurred between 1999 and 2001), 10 percent received public housing at the 9-year interview. The receipt of voucher-based assistance rose from 6 percent at the first year interview to 10 percent at the 5-year interview and then fell slightly to 9 percent at the 9-year interview.

#### UNCONDITIONAL COMPARISONS OF SOCIODEMOGRAPHIC CHARACTERISTICS

Table 1 provides the unconditional comparisons of sociodemographic characteristics, housing instability, maternal and child health, housing assistance availability, and community characteristics among families by receipt of housing assistance. The significance tests shown in the table indicate whether the low-income families who did not receive housing assistance during the study period were different from those who received either type of housing assistance. These groups were significantly different in many characteristics. Mothers who received housing assistance were younger, more likely to be African American, less likely to be Hispanic, less likely to be immigrants, less likely to have a high school degree, less likely to be married or living with their child's father, and had a greater number of children, on average. Mothers who received housing assistance were less

likely to be working and more likely to have household incomes below 30 percent of the AMI. These mothers were more likely to receive welfare/food stamps and disability benefits but had lower levels of family support.

Our analysis also demonstrates differences in housing history between families who received and did not receive housing assistance. Those families who received housing assistance were more likely to have had a homeless episode, were more often in doubled-up arrangements, and moved more times on average since the last interview compared to families who did not receive housing assistance. The availability of public housing units and housing vouchers at the city level was similar between mothers with and without housing assistance.

Mothers who received housing assistance were only slightly more likely to face some of the challenges that, as previously discussed, might render their families hard to house. Disability and depression were more prevalent among mothers with housing assistance, but there was little difference in the extent of having a drug or alcohol problem between mothers with and without housing assistance. Housing assistance status was not associated with an increased or decreased likeliness to be exposed to domestic violence. Mothers who received housing assistance were slightly more likely to have a history of conviction of crime.

The data also reveal some differences between families who lived in public housing and those who received voucher-based assistance. Community environment tended to be worse, on average, for families with housing assistance receipt. Those with housing assistance were more likely to live in census tracts with higher poverty rates, less educated residents, higher renter-occupied housing rates, higher public assistance participation rates, and lower median household incomes. The neighborhoods of the housing assisted also had, on average, higher percentages of non-Hispanic black residents and lower average monthly rent. In general, those who received voucher-based assistance tended to have more hardships than those who received public housing. Mothers who received voucher-based assistance were more likely to be African American, less likely to be married or living with their child's father, and more likely to receive welfare and disability benefits than those who received public housing.

#### MULTIVARIATE RESULTS

Table 2 reports multivariate results for individual, family, and community characteristics that were associated with the odds of obtaining housing

**TABLE 1.** Sample Description by the Receipt of Housing Assistance (*N* = 3,237)

	Housing Assistance			
	No	Yes		
		Any	Public Housing	Voucher-Based Assistance
No. of observations	2,276	961	534	540
SES and demographics:				
Mother's age at child's birth (years)	25.0	23.7***	23.6***	23.6***
Mother is African American (%)	41	60***	57***	64***
Mother is Latina (%)	32	27**	29	24***
Mother is immigrant (%)	21	13***	16	9***
Mother has high school degree (%)	68	56***	52***	56***
Mother married to father (%)	31	15***	19***	10***
Mother living with father (%)	62	42***	45***	38***
No. of children in household	2.2	2.4**	2.3	2.5***
Mother currently works (%)	56	43***	43***	41***
Household income <30% of AMI	36	61***	62***	63***
Household income 30%–80% of AMI	46	32***	32***	31***
Mother reported welfare receipt (%)	30	63***	58***	70***
Mother reported SSI/disability receipt (%)	2	3*	2	4***
Mother has family who would babysit (%)	90	85***	87	82***
Mother has family who would loan \$ (%)	86	78***	78***	78***
Mother reported domestic violence (%)	7	9	9	9
Mother was convicted of serious crime (%)	2	3*	3	3*
Father was in jail and lives with mother (%)	3	3	3	3
Housing instability:				
Mother reported homeless spell (%)	2	5***	5***	5***
Mother reported doubling-up episode (%)	11	17***	17**	17***
No. residential moves since last interview	.61	.86***	.90***	.83***
Health and health behavior:				
Mother's health limits her ability to work (%)	6	10***	9*	10***
Mother is depressed** (%)	16	19*	18	21**
Mother has alcohol/drug problem (%)	2	2	3	3
Child has disability (%)	2	2	1	2
Housing assistance availability:				
Public housing units per 1,000 people	12.6	12.9	13.0	12.9
Housing vouchers per 1,000 people	7.3	7.5	7.1	8.0***

TABLE 1. (continued)

	Housing Assistance			
	No	Yes		
		Any	Public Housing	Voucher-Based Assistance
Community characteristics:				
Non-Hispanic black (%)	36	46***	45***	48***
No. of persons in household (mean)	2.82	2.84	2.78*	2.87
25 + year-olds with HS + education (%)	71	67***	67***	67***
Housing units renter-occupied (%)	47	56***	56***	57***
Monthly gross rent (log median)	\$631	\$574***	\$555***	\$588***
Households on public assistance (%)	7	10***	9***	10***
Families below poverty level (%)	16	22***	22***	23***
Household income (median; \$)	37,691	31,647***	31,001***	31,677***

Note.—The individual-level characteristics were from the mother's responses at the baseline or the 1-year interview. Community characteristics were based on the 2000 Census. Significance tests compare means between housing assistance group and no housing assistance group. AMI = area median income; HS = high school; SES = socioeconomic status; SSI = Social Security income.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

assistance. African Americans were 1.6 times more likely to receive housing assistance than those of other racial and ethnic groups. Those who received welfare benefits had an 83 percent increase in the odds of obtaining housing assistance. Families who experienced an episode of homelessness were 3.6 times more likely to receive housing assistance than those who had not experienced homelessness. Increased availability of housing vouchers was also associated with increased odds of receiving housing assistance.

Certain characteristics increase the odds of receiving public housing over voucher-based assistance, and vice versa. Those who were African American, had household income less than 30 percent of the AMI, received welfare benefits, and experienced an episode of homelessness were more likely to receive public housing. Mothers who were immigrants or married had lower odds of receiving voucher-based assistance. Mothers who received welfare benefits or disability benefits, and who had a greater number of children in their household, were more likely to receive voucher-based assistance.

**TABLE 2.** Results of the Logistic Regression Model for Discrete-Time Data with Time-Variant Covariates

	Receipt of Housing Assistance (OR)	Public Housing (OR)	Voucher-Based Assistance (OR)
SES and demographics (baseline):			
Mother's age at birth	.98	.98	.97*
Mother is African American	1.57*	1.72*	1.45
Mother is Latina	.86	.96	1.08
Mother is immigrant	.70	1.33	.33***
Mother has high school degree	.82	.73	.97
SES and demographics (lagged):			
Mother married to father	.90	1.22	.59*
Mother living with father	.75	.87	.80
No. of children in household	1.08	1.00	1.12*
Mother currently working	.86	.73	.96
Household income <30% of AMI	1.54	1.98*	1.19
Household income 30%–80% of AMI	1.22	1.69	.92
Mother reported welfare receipt	1.83***	1.79***	1.98***
Mother received SSI/disability receipt	1.31	.27	2.65**
Mother has family who would babysit	.90	.98	1.08
Mother has family who would loan \$	1.02	.93	.88
Mother experienced domestic violence	1.03	.92	1.02
Mother has been convicted of serious crime	1.23	.75	1.06
Father has been in jail	.93	.96	.78
Housing instability (lagged):			
Mother reported homeless spell	3.63***	3.40***	1.90
Mother reported doubling-up episode	1.06	1.01	.94
No. residential moves since last interview	.98	.94	1.03
Health and health behavior (lagged):			
Mother's health limits her ability to work	1.03	1.08	.89
Mother is depressed	.96	.94	1.05
Mother has alcohol/drug problem	1.60	1.59	1.96
Child has disability	.56	1.05	.45
Housing assistance availability (time-varying):			
Public housing units per 1,000 people	.96	.97	.98
Housing vouchers per 1,000 people	1.03*	1.03	1.02
Community characteristics (2000 Census):			
Non-Hispanic black (%)	1.00	.99	1.00
No. of persons in household (mean)	.94	.99	.87
25 + year-olds with HS + education (%)	1.00	1.02	.99
Occupied housing units renter-occupied (%)	1.01	1.00	1.01*
Monthly gross rent (log median)	.90	.62	1.56
Households on public assistance (%)	1.00	1.00	1.00
Families below poverty level (%)	1.02	1.01	1.03
Household income (log median)	1.13	.60	2.19
No. of observations	4,744	5,371	5,360
No. of individuals	2,113	2,289	2,312

Note.—Observations after first housing assistance were censored. All regressions included a constant term. Multiple imputation estimates ( $m = 20$ ) presented. AMI = area median income; OR = odds ratio; SES = socioeconomic status; SSI = Social Security income.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

We estimated whether the associations between the covariates and the measures of housing assistance were the same at all points in time. Departures from this assumption would correspond to interactions between the covariates and the time dummies. We subsequently conducted tests for all the possible two-way interactions for significantly associated covariates. For the outcomes of receipt of housing assistance overall, no interaction term had a significant coefficient. For the outcome of public housing, the interaction term with the receipt of welfare had a significant coefficient, which suggests its effect varied across points in time. The coefficient of the receipt of welfare we estimated should be considered an average effect over the range of times observed in our data.

When we conducted the analysis including the sample who were housing assisted at baseline, the results had roughly the same coefficients and if anything, a few additional marginally statistically significant results due to the increased sample size. Although the women in the analysis sample have slightly more earning potential than those in the full sample of low-income households, it appears that omitting those with housing assistance at baseline does not bias our results.

## DISCUSSION

Thirty percent of the families in the Fragile Family Study whose income indicated eligibility for housing assistance received either public housing or voucher-based assistance at some point during the 9-year study period. Low-income families, particularly those with income less than 30 percent of the AMI, those receiving public assistance benefits, and those who had experienced episodes of homelessness, were more likely to receive housing assistance than those who did not have these characteristics. The availability of rental vouchers in cities had a weak but significant association with the likelihood of receiving housing assistance, and the health, criminal justice involvement, and community characteristics measures examined here were not significantly associated with the likelihood of receiving housing assistance.

The substantially increased likelihood that the most financially destitute households would receive housing assistance is consistent with policies mentioned earlier that mandate that preference be given to very low-income families. Whether having worst case housing needs, as defined by HUD (Steffen et al. 2011), further increased the likelihood of receiving

housing assistance is unclear, as there was insufficient data available on rental amounts. Sixty-one percent of families with incomes under 30 percent of the AMI received housing assistance over the 9-year study period. Yet even at this rate, substantial housing need can be presumed to remain among this subgroup, given the limited housing options these families have in the absence of housing assistance (Jacob and Ludwig 2008). The descriptive findings also provide some evidence that, conversely, families with greater economic stability, as indicated by having a working mother, parents who finished high school, and parents who are married or cohabitating, are less likely to obtain housing assistance than families who do not exhibit these indicators of economic stability. If working families are given preferences by housing authorities, it is not reflected in the findings. Working families may move out of the pool of housing assistance applicants as their housing choices increase by virtue of their increased income, perhaps seeking to avoid the stigma associated with obtaining subsidized housing (Shroder 2002).

Families who had experienced an episode of homelessness were considerably more likely to receive housing assistance than those who had not. While current federal policy does not give homeless families preference for housing assistance, localities may still make these families a priority, either formally or informally. Additionally, while they are sheltered, homeless families may be in close contact with caseworkers who advocate on their behalf for housing assistance. This contrasts with doubled-up households, who also show residential instability but are not more likely to obtain housing assistance, perhaps because they are less likely than homeless families to have caseworker support.

Our study finds no evidence that the factors included in Susan Popkin and colleagues' (2005) description of hard to house families provided any advantage or disadvantage in obtaining housing assistance. In this case, the factors that affect families once they have received housing assistance are not necessarily the same as those shaping their initial receipt of housing assistance. The hard to house factors examined here included measures of physical and mental health, substance abuse, criminal justice involvement, domestic violence, and large household size. While there were significantly higher rates of self-reported health problems that inhibited ability to work, receipt of welfare benefits, and depression among the women in the study group who received housing assistance, none of these factors

was significant in the multivariate analyses. A slightly higher proportion of women receiving housing assistance reported being convicted of a serious crime, but this was also not significant in the multivariate analyses.

African American women in the study group were significantly more likely to receive housing assistance, particularly in public housing. This difference did not extend to neighborhood-level factors, as the racial composition of the census tracts where the women were living before housing placement was not associated with the likelihood of receiving housing assistance. Taken together, race appears to be a factor in receiving housing assistance, which should be expected given the endemic nature of racial segregation in US housing, but the results offer little insight about the specific dynamics of this association.

Finally, there are some differences in the dynamics associated with receipt of public housing as compared to receipt of voucher-based assistance. Our study finds that those who received voucher-based assistance tended to have more hardships than those who received public housing, which is inconsistent with Newman's and Schnare's (1993) conclusion that different types of housing assistance served "different clienteles" (424), and that those receiving public housing were less socioeconomically advantaged than their counterparts who received voucher-based assistance. On the other hand, the larger effect sizes of coefficients on measures of disadvantage, such as receipt of welfare benefits and homeless episodes, suggest that women in the study with these characteristics may have been somewhat more likely to receive public housing. The disparity in the findings between Newman's and Schnare's study and ours may be due to changes in federal housing assistance policies in the 20 years between these studies, particularly the large-scale transfer of former public housing residents to rental assistance-based units resulting from initiatives such as HOPE VI.

This study draws on a large, geographically diverse sample of families. While the families were recruited from 20 different US cities, the sample is not nationally representative. If dynamics for the receipt of housing were different in smaller cities or rural areas, this is not captured here. The study also assesses factors influencing housing assistance on a geographically aggregate level. Thus, we are unable to show local variation in selection dynamics, although a set of covariates that control for location was included in the regression models. The results for these covariates (not



shown in table 2) indicate significant variation in only three of the 20 cities. Further research that replicates this study with larger local samples may yield results on dynamics in particular jurisdictions that may vary from the results found here. Additionally, we only include heads of family households, and these results cannot be used to draw conclusions about selection dynamics for other populations that receive housing assistance, such as low-income households consisting of persons who are disabled or elderly. Finally, it is conceivable that families who experienced greater hardship and instability, such as homelessness, may be more likely to be lost to follow up in a panel study. How this would affect the results is a matter of speculation, but it may be that families who were lost to the study were also less likely to maintain the ongoing contact with housing authorities needed to successfully navigate the housing assistance process.

## CONCLUSION

This study presents a unique overview of which eligible, low-income families wind up receiving housing assistance. The process of applying for and obtaining housing assistance is labyrinthine, and success hinges on factors on both individual and structural levels, which may also vary across localities. The upshot of this complex process, as summarized by the current study, is that, while housing assistance only reaches a minority of those who are eligible, the minority who do receive assistance is disproportionately comprised of the most economically disadvantaged families and those with histories of homelessness. The former finding confirms a basic intent of federal housing assistance programming, and the latter finding may also reflect a favoring of the extreme poor. Alternately, the increased likelihood that families who have experienced homelessness will receive housing assistance may reflect a remnant of federal policy that once gave homeless families preference for housing assistance. Beyond income and homelessness, across the 20 cities studied here, little was found that advantaged or disadvantaged families in the process of gaining housing assistance. Additional factors, such as employment, health, criminal justice, and race, potentially influence selection for housing assistance, but we found none that did so systematically. This may reflect the way in which the overwhelming demand for the scarce supply of housing assistance makes it impossible to refine targeting beyond anything but the most extreme need.

APPENDIX

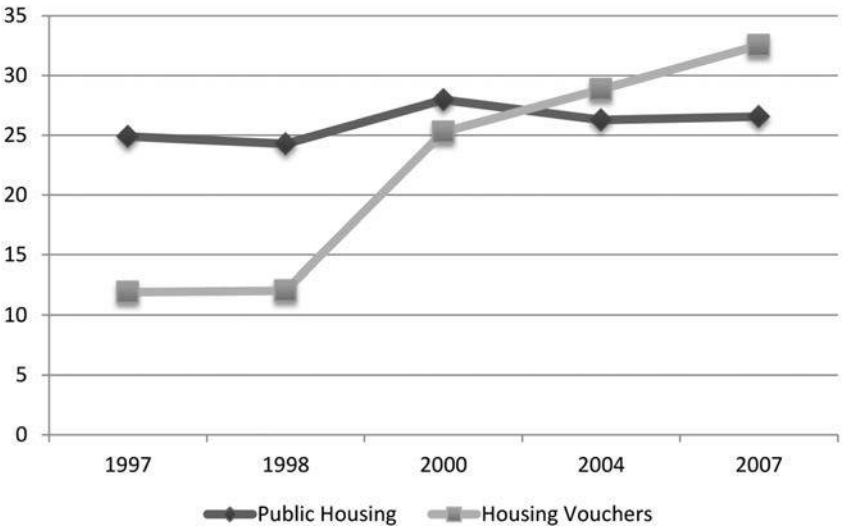


FIGURE A1. Average no. of public housing and rental vouchers per 1,000 people in 20 large US cities.

TABLE A1. Time Frame of Explanatory Variables

Variable	Timing
Mother's age at birth	Wave 1
Mother is African American	Wave 1
Mother is Latina	Wave 1
Mother is immigrant	Wave 1
Mother has high school degree	Wave 1
Mother married to father*	All waves
Mother living with father*	All waves
No. of children in household*	All waves
Mother currently working*	All waves
Household income <30% of AMI*	All waves
Household income 30%–80% of AMI*	All waves
Mother reported income from public assistance*	All waves
Mother received SSI/disability*	All waves
Mother has family who would babysit*	All waves
Mother has family who would loan \$*	All waves
Mother experienced domestic violence*	All waves
Mother has been convicted of serious crime*	All waves (retrospectively covers waves 1–2)
Father has been in jail*	All waves (retrospectively covers waves 1–2)
Mother reported homeless spell*	Waves 2–5
Mother doubled-up with family/friends*	All waves
No. of residential moves since last interview*	All waves
Mother's health limits her ability to work*	Waves 2–5
Mother is depressed*	Waves 2–5
Mother has alcohol/drug problem*	All waves

TABLE A1. (continued)

Variable Timing	Timing
Child has disability*	Waves 2–5 (can use low birth weight for wave 1)
Non-Hispanic black (%)	2000 Census
No. of persons in household (mean)	2000 Census
25 + year-olds with HS + education (%)	2000 Census
Occupied housing units renter-occupied (%)	2000 Census
Monthly gross rent (log median)	2000 Census
Households on public assistance (%)	2000 Census
Family below poverty level (%)	2000 Census
Are household income (log median)	2000 Census

Note.—The table provides time frame of explanatory variables. The time-constant demographic variables were from the baseline interview. The community characteristics were from the 2000 Census. The time-varying variables were available in all interview waves with a few exceptions noted below. AMI = area median income; HS = high school; SSI = Social Security income.

\* Time-varying explanatory variable.

NOTE

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REFERENCES

Allison, Paul David. 1995. *Survival Analysis Using the SAS System: A Practical Guide*. Cary, NC: SAS Institute.

- Anderson, Laurie M., Joseph St. Charles, Mindy T. Fullilove, Susan C. Scrimshaw, Jonathan E. Fielding, Jacques Normand, and the Task Force on Community Preventive Services. 2003. "Providing Affordable Family Housing and Reducing Residential Segregation by Income: A Systematic Review." *American Journal of Preventive Medicine* 24 (3S): 47–67.
- Baker, Charlene K., Kris A. Billhardt, Joseph Warren, Chiquita Rollins, and Nancy E. Glass. 2010. "Domestic Violence, Housing Instability, and Homelessness: A Review of Housing Policies and Program Practices for Meeting the Needs of Survivors." *Aggression and Violent Behavior* 15:430–39.
- Berger, Lawrence M., Theresa Heintze, Wendy B. Naidich, and Marcia K. Meyers. 2008. "Subsidized Housing and Household Hardship among Low-Income Single-Mother Households." *Journal of Marriage and Family* 70 (4): 934–49.
- Bratt, Rachel. 2002. "Housing and Family Well-Being." *Housing Studies* 17 (1): 13–26.
- Camarota, Steven A. 2011. *Welfare Use by Immigrant Households with Children: A Look at Cash, Medicaid, Housing, and Food Programs*. Washington, DC: Center for Immigration Studies.
- Carter, William H., Michael H. Schill, and Susan M. Wachter. 1998. "Polarisation, Public Housing, and Racial Minorities in US Cities." *Urban Studies* 35:1889–1911.
- Curtis, Marah, Hope Corman, Kelly Noonan, and Nancy E. Reichman. 2010. "Effects of Child Health on Housing in the Urban US." *Social Science and Medicine* 71:2049–56.
- Edin, Kathryn, and Laura Lein. 1997. *Making Ends Meet: How Single Mothers Survive Welfare and Low-Wage Work*. New York: Russell Sage Foundation.
- Evans, Gary W. 2006. "Child Development and the Physical Environment." *Annual Review of Psychology* 57:423–51.
- Freeman, Lance. 2002. "America's Affordable Housing Crisis: A Contract Unfulfilled." *American Journal of Public Health* 92 (5): 709–12.
- Galvez, Martha M. 2010. *What Do We Know about Housing Choice Voucher Program Location Outcomes? A Review of Recent Literature*. Washington, DC: What Works Collaborative.
- Geller, Amanda, and Marah A. Curtis. 2011. "A Sort of Homecoming: Incarceration and the Housing Security of Urban Men." *Social Science Research* 40:1196–213.
- Grigsby, William G., and Steven C. Bourassa. 2003. "Trying to Understand Low-Income Housing Subsidies: Lessons from the United States." *Urban Studies* 40 (5–6): 973–92.
- Harkness, Joseph, and Sandra J. Newman. 2005. "Housing Affordability and Children's Well-Being: Evidence from the National Survey of America's Families." *Housing Policy Debate* 16 (2): 223–55.
- Holupka, C. Scott, and Sandra J. Newman. 2011. "The Housing and Neighborhood Conditions of America's Children: Patterns and Trends over Four Decades." *Housing Policy Debate* 21 (2): 215–45.
- HUD (US Department of Housing and Urban Development). 2012. *2011 Annual Homeless Assessment Report to Congress*. Washington, DC: HUD.
- Human Rights Watch. 2004. *No Second Chance: People with Criminal Records Denied Access to Public Housing*. Human Rights Watch, New York.
- Jacob, Brian A., and Jens Ludwig. 2008. *The Effects of Housing Assistance on Labor Supply: Evidence from a Voucher Lottery*. Cambridge, MA: National Bureau of Economic Research.

- Jargowsky, Paul A. 1997. *Poverty and Place: Ghettos, Barrios, and the American City*. New York: Russell Sage Foundation.
- Joint Center for Housing Studies. 2011. *America's Rental Housing*. Cambridge, MA: Joint Center for Housing Studies of Harvard University.
- . 2013. *The State of the Nation's Housing: 2013*. Cambridge, MA: Joint Center for Housing Studies of Harvard University.
- Kalil, Ariel, and Rebecca M. Ryan. 2010. "Mothers' Economic Conditions and Sources of Support in Fragile Families." *Future of Children* 20 (2): 39–61.
- Kaplan, Wendy J., and David Rossman. 2011. "Called Out at Home: The One Strike Eviction Policy and Juvenile Court." *Duke Forum for Law and Social Change* 3:109–38.
- Leopold, Joshua. 2012. "The Housing Needs of Rental Assistance Applicants." *Cityscape* 14 (2): 275–98.
- Leventhal, Tama, and Sandra J. Newman. 2010. "Housing and Child Development." *Children and Youth Services Review* 32:1165–74.
- Martin, Emily J., and Naomi S. Stern. 2005. "Domestic Violence and Public and Subsidized Housing: Addressing the Needs of Battered Tenants through Local Housing Policy." *Clearinghouse Review: Journal of Poverty Law and Policy* 38 (9–10): 551–60.
- Massey, Douglas S., and Nancy A. Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press.
- Menard, Anne. 2001. "Domestic Violence and Housing: Key Policy and Program Challenges." *Violence against Women* 7 (6): 707–20.
- Metraux, Stephen, Caterina G. Roman, and Richard Cho. 2008. "Incarceration and Homelessness." In *Toward Understanding Homelessness: The 2007 National Symposium on Homelessness Research*, ed. Deborah Dennis, Gretchen Locke, and Jill Khadduri. Washington, DC: US Department of Housing and Urban Development.
- National Alliance to End Homelessness. 2012. "Changes in the HUD Definition of 'Homeless.'" National Alliance to End Homelessness, Washington, DC.
- National Low Income Housing Coalition. 2004. "A Look at Waiting Lists: What Can We Learn from the HUD Approved Annual Plans?" Research Note 04-03. National Low Income Housing Coalition, Washington, DC.
- . 2012. "Out of Reach: America's Forgotten Housing Crisis." National Low Income Housing Coalition, Washington, DC.
- Newman, Sandra J. 2008. "Does Housing Matter for Poor Families? A Critical Summary of Research and Issues Still to Be Resolved." *Journal of Policy Analysis and Management* 27 (4): 895–925.
- Newman, Sandra J., and Ann B. Schnare. 1992. *Assessing Bricks and Mortar: Reexamining the Purpose and Effects of Housing Assistance*. Washington, DC: Urban Institute Press.
- . 1993. "Last in Line: Housing Assistance for Households with Children." *Housing Policy Debate* 4 (3): 417–55.
- Popkin, Susan J., Mary K. Cunningham, and Martha R. Burt. 2005. "Public Housing Transformation and the 'Hard to House.'" *Housing Policy Debate* 16 (1): 1–24.
- Postmus, Judy L., Margaret Severson, Marianne Berry, and Jeong A. Yoo. 2009. "Women's Experiences of Violence and Seeking Help." *Violence against Women* 15 (7): 852–68.

- Quane, James M., Bruce H. Rankin, and Pamela Joshi. 2002. "Housing Assistance, Housing Costs, and Welfare Reform." Policy Brief 02-4. Johns Hopkins University, Baltimore.
- Reichman, Nancy E., Julian O. Teitler, Irwin Garininkel, and Sara S. McLanahan. 2001. "Fragile Families: Sample and Design." *Children and Youth Services Review* 23 (4/5): 303–26.
- Rollins, Chiquita, Nancy E. Glass, Nancy A. Perrin, Kris A. Billhardt, Amber Clough, Jamie Barnes, Ginger C. Hanson, and Tina L. Bloom. 2011. "Housing Instability Is as Strong a Predictor of Poor Health Outcomes as Level of Danger in an Abusive Relationship: Findings from the SHARE Study." *Journal of Interpersonal Violence* 27 (4): 623–43.
- Ruel, Erin, Deirdre Oakley, G. Elton Wilson, and Robert Maddox. 2010. "Is Public Housing the Cause of Poor Health or a Safety Net for the Unhealthy Poor?" *Journal of Urban Health* 87 (5): 827–38.
- Saegert, Susan, and Gary W. Evans. 2003. "Poverty, Housing Niches, and Health in the United States." *Journal of Social Issues* 59 (3): 569–89.
- Shroder, Mark. 2002. "Does Housing Assistance Perversely Affect Self-Sufficiency? A Review Essay." *Journal of Housing Economics* 11:381–417.
- Sirmans, G. Stacy, and David A. Macpherson. 2003. "The State of Affordable Housing." *Journal of Real Estate Literature* 11 (2): 134–55.
- Solari, Claudia D., and Robert D. Mare. 2012. "Housing Crowding Effects on Children's Well-being." *Social Science Research* 41:464–76.
- Solomon, Rod. 2005. *Public Housing Reform and Voucher Success: Progress and Challenges*. Washington, DC: Brookings Institution Metropolitan Policy Program.
- StataCorp. 2011. *Stata Release 12: Multiple-Imputation Reference Manual*. College Station, TX: StataCorp.
- Steffen, Barry L., Keith Fudge, Marge Martin, Maria Teresa Souza, David A. Vandenbroucke, and Yung Gann David Yao. 2011. *Worst Case Housing Needs 2009: Report to Congress*. Washington, DC: US Department of Housing and Urban Development, Office of Policy Development and Research.
- Turner, Margery Austin, and G. Thomas Kingsley. 2008. *Federal Programs for Addressing Low-Income Housing Needs: A Policy Primer*. Washington, DC: Urban Institute.
- White, Ruth Anne, and Debra Rog. 2004. "Introduction to Special Issue on Housing and Child Welfare." *Child Welfare* 83 (5): 389–92.
- Wilson, William J. 1987. *The Truly Disadvantaged*. Chicago: University of Chicago Press.