Child Characteristics and Successful Use of Housing Vouchers: Estimates from the Moving to Opportunity Demonstration

Emily K. Snell and Greg J. Duncan
Northwestern University

Abstract

Voucher-based programs have become the most common form of housing assistance for low-income families in the United States, yet only a slim majority of households that are offered vouchers actually move with them. This article uses data from 2,938 households in the Moving to Opportunity demonstration program to examine whether child characteristics influence the probability that a household will successfully use a housing voucher to lease-up.

Our results suggest that while many child characteristics have little bearing on the use of housing vouchers, child health, behavioral, and educational problems, particularly the presence of multiple problems in a household, do have an influence. Households with two or more child problems are 7 percentage points less likely to move than those who have none of these problems or only one. Results suggest that such families may need additional support to benefit from housing vouchers or alternative types of affordable housing units.

Keywords: Low-income housing; Mobility; Poverty

Introduction

"A decent home in a suitable living environment for every American family," as stated in the Housing Act of 1949, has been a long-standing policy goal in the United States. For much of the 20th century, the federal government worked toward this goal with the construction of project-based housing; more than a million public housing units were built after the Housing Act of 1937 was passed (Schill 1993). Beginning in the 1970s, however, federal low-income housing efforts began to shift away from project-based assistance and toward voucher-based approaches that allow families to rent in the private market. In 2003, about 2.1 million low-income families received housing vouchers sup-

plied by the U.S. Department of Housing and Urban Development's (HUD's) Section 8 rental subsidy programs (Center on Budget and Policy Priorities 2003).

Voucher-based assistance has become a popular alternative to project-based housing for several reasons. First, research has suggested that project-based housing concentrates poverty, which in turn is associated with diminished child well-being; lower adult employment; reduced social efficacy; and increased drug use, crime, and violence (Brooks-Gunn, Duncan, and Aber 1997; Crane 1991; Sampson, Morenoff, and Earls 1999; Wilson 1986, 1996). Legal and civil rights concerns over the segregating effects of project-based housing have also been expressed (Massey and Denton 1993; Rubinowitz and Rosenbaum 2000).

Further, the move away from project-based housing has been motivated by a desire to stem the escalating costs of these programs (Shroder and Reiger 2000). Analysts have suggested that a market-driven, voucher-based system of housing allocation is more efficient than project-based assistance and leads to lower overall costs and higher resident satisfaction.

As the public housing stock ages and deteriorates and maintenance costs mount, housing authorities may find it cheaper to tear buildings down and provide households with vouchers rather than renovate existing buildings. Olsen (2001) suggests that tenant-based vouchers provide equal- or better-quality housing at a much lower cost than any type of project-based assistance. For these reasons, the voucher-based approach became one of the two main components of HUD's housing policy strategy by the late 1990s, the other being the creation of mixed-income communities (Popkin et al. 2000). Federal budget allocations reflect this change in strategy as well, with an estimated $14.8 billion spent on tenant-based assistance and $5.3 billion spent on project-based assistance in fiscal year 2005 (Office of Management and Budget 2005).

With the emphasis on vouchers as the vehicle to provide low-income housing comes the implicit assumption that families will be able to successfully use the voucher to lease a residence in the private market, a concept called "take-up." Successful take-up of vouchers is far from universal, however. Finkel and Buron (2001) estimate that only 69 percent of families offered a Section 8 voucher in 2000 succeeded in using it to move to a new residence, compared with 80 percent in the late 1980s. Low take-up rates are a concern because they lead to lower efficiency, higher costs, and fewer families being able to enjoy program benefits (Currie 2004). In the case of Section 8, the voucher is unlikely to be wasted, because it will be reassigned to another family on the waiting list if it is not used. However, this still results in higher overall administrative costs.

More important, however, low take-up rates are worrisome for another reason: As low-income housing policy increasingly moves toward tenant-based allocation, households that cannot use their vouchers may experience inadequate housing. For example, if households with young children are systematically less likely to take up vouchers, these types of households may be disadvantaged in their long-term housing and neighborhood outcomes. Qualitative work (Popkin and Cunningham 2002; Popkin, Cunningham, and Burt 2005) has suggested that a substantial proportion of residents or families in public housing are indeed "hard-to-house" because of drug, alcohol, or mental health problems; disabilities; criminal records; or large household size. They estimate that between one- and two-thirds of current HOPE VI (Housing Opportunities for People Everywhere) residents face serious obstacles in navigating the housing voucher program and the private market and maintaining stable housing. A better understanding of which households are less likely to successfully lease-up can help tenant-based housing policies and programs better target populations at risk for lease-up failure, as well as assess the need for an larger supply of particular types of affordable units, such as assisted housing for families with members who have a disability.

Although a number of studies have examined how various characteristics of adult housing voucher recipients relate to take-up, many questions remain as to why some households successfully use vouchers and others do not (Currie 2004). Despite the fact that most of the households that use vouchers also have children (HUD 2000), few studies have examined the influence of children's characteristics on take-up. We do know that children can have a profound influence on parents' behavior, choices, opportunities, employment, and overall life course (Bell 1968; Crockenberg and Leerkes 2001; Rueter and Conger 1998; Thomas and Chess 1968). Our article examines whether child characteristics—such as school history, health, and behavior—can also influence the probability that families will use a housing voucher.

Background

Housing mobility programs

We use data collected from the Moving to Opportunity (MTO) demonstration program to estimate the influence of child characteristics on a household's probability of taking-up a Section 8 housing voucher. The MTO demonstration was a random-assignment housing mobility program designed to test the effects of neighborhood placement on family well-being. The demonstration was conducted between 1994 and 1998 in five cities: Baltimore, Boston, Chicago, Los Angeles, and New York. The target population was very

low income families that had children and were living in public and assisted housing projects located in high-poverty census tracts. Applicants who passed a screening test and credit check were randomly assigned to one of three groups:

1. The experimental group (1,729 families) received counseling to help with moving, as well as a housing voucher that could be used only in areas where less than 10 percent of households were below the poverty line.

2. The Section 8 group (1,209 families) received a standard Section 8 voucher, which could be used to rent any apartment, regardless of location, that met rent specifications and passed a housing inspection.

3. The control group (1,310 families) did not receive a housing voucher but continued to be eligible for other assistance.

The MTO interim evaluation (Orr et al. 2003) found a large impact on treatment families' neighborhood location, neighborhood quality, and maternal psychological health. There were few to no effects on maternal work and child academic achievement. Effects on child behavior were mixed, with positive effects for adolescent girls and negative effects for adolescent boys.

The motivation behind the MTO demonstration came from the Gautreaux Program, a federal court–ordered racial desegregation program in Chicago. Participating families received help in moving out of racially isolated areas through the (then new) tenant-based Section 8 program; encouraging outcomes were found for many Gautreaux families. In 2001, as a result of ongoing litigation, the Chicago Housing Authority (CHA) contracted with the Leadership Council for Metropolitan Open Communities to implement a new round of the Gautreaux residential mobility program. Residents who were current leaseholders in good standing in CHA projects were eligible to sign up for a Housing Choice Voucher through the Gautreaux Two program. Take-up for Gautreaux Two was quite low (Pashup et al. 2005).

Factors influencing take-up

In exploring take-up questions for social programs, economists have developed utility-maximizing decision models; these assume that take-up is the result of recipients' weighing the payoff and cost of participating in the program (Currie 2004; Moffitt 1983). When modeling take-up among housing program participants, for instance, whether a family takes-up a voucher or not would be seen as the result of weighing the costs and benefits of finding and moving to a new unit against the costs and benefits of staying in the current location (Kennedy and Finkel 1994; Shroder 2002). To the extent that

families have incomplete information about these costs and benefits in making the decision, this can also be included in the model.

A growing literature on factors related to housing voucher take-up has identified several promoters and barriers to a successful move. First, factors beyond the control of households, such as landlords, rental markets, racial discrimination, and explicit program design characteristics, are important determinants of take-up. Landlord preferences for particular types of families can affect take-up rates. A landlord's familiarity with the housing voucher program can influence willingness to lease to participants; research suggests that renting from a landlord who has had experience with Section 8 families increases the likelihood of successful take-up (Kennedy and Finkel 1994). The tightness of the local rental market is also a key factor. Finkel and Buron (2001) found that take-up rates in very loose markets are 20 percentage points higher than in the very tightest markets, and Shroder (2002) also found that the vacancy rate in a particular metropolitan area had a significant effect on take-up.

Qualitative studies suggest that voucher holders see a lack of rental units as a major obstacle to mobility (Pashup et al. 2005). Racial barriers and discrimination are also important factors influencing take-up rates (Bobo and Zubrinsky 1996; Crowder 2001; DeLuca and Rosenbaum 2003; Logan, Alba, and Leung 1996; Pashup et al. 2005; Pendall 2000; Rubinowitz and Rosenbaum 2000). Finally, programmatic restrictions on where families can move, as were used in the Gautreaux and MTO programs, appear to have a particularly strong effect. In the MTO program, for example, the experimental group was required to use the housing voucher in a neighborhood where less than 10 percent of households had incomes below the poverty line, while the Section 8 group faced no neighborhood restrictions. Shroder (2002) estimated that this restriction decreased the probability of take-up by at least 14 percentage points among the experimental group.

Successful lease-up also varies with participant characteristics. Qualitative research from the Gautreaux Two project suggests, for example, that moving is less likely among those who work (Reed, Pashup, and Snell 2005). Shroder's (2002) analysis of the MTO program did not find work effects, but was based on a 1997 sample. (The Gautreaux Two finding was based on a 2003 sample, and differences in results may be due to welfare reform, which increased the opportunity costs of not working—namely the loss of entitlement programs, increased sanctions, and the rise of welfare-to-work programs.) The availability of transportation also affects the costs associated with searching and moving. Several studies have found that participants fare better when they have reliable access to transportation, particularly automobiles, during their search (Pashup

et al. 2005; Shroder 2002), perhaps because this reduces the time spent house hunting and increases their reach beyond transit-accessible neighborhoods.

Other personal characteristics of the head of household, such as age, work status, and disability, may also influence take-up rates (Pashup et al. 2005; Shroder 2002). Finkel and Buron (2001) found that older householders are less likely to successfully lease-up with a housing voucher. Households with members who have substance abuse, mental health, or domestic violence problems also experienced lower success rates (Popkin et al. 2002).

Studies of other social programs have suggested that family size can influence program take-up. Family size is positively correlated with successful Medicaid program take-up (Currie 2004), perhaps because larger families benefit more but face a similar cost of enrollment. The opposite has been found for housing vouchers: Larger families are less likely to successfully lease-up because of the difficulty of finding large rental units (Finkel and Buron 2001; Pashup et al. 2005; Popkin et al. 2002; Shroder 2002).

Psychological variables, including motivation to leave the old apartment and neighborhood and relocate to a new one, also relate to take-up. Not surprisingly, participants who express greater interest in moving and are motivated are more likely to lease-up successfully, while higher social connectedness in the baseline neighborhood and uncertainty about liking a new one can decrease the probability of moving (Shroder 2002). Research suggests that apprehension about the racial and cultural composition of new neighborhoods may also have a negative impact on lease-up rates (Pashup et al. 2005; Rubinowitz and Rosenbaum 2000; Shroder 2002).

Qualitative evidence suggests that housing search skills, including an understanding of program requirements and how to find a unit, as well as the quantity and quality of available housing market information, can act as promoters of or barriers to lease-up success (Pashup et al. 2005). Housing-search assistance can help families with fewer skills negotiate searching and moving (Cunningham and Popkin 2002; Shroder 2002), but the quality and type of assistance matter (Feins, McInnis, and Popkin 1997).

However, we know little about how child characteristics might positively or negatively influence a family's ability to move. Shroder's (2002) study of the MTO experiment examined the influence of only three variables—the number of school-age children, the number of preschool-age children, and the comfort level householders felt in moving their children to a nearly all-white school—on take-up for the Section 8 group and the experimental group. Shroder (2002) found that the number of school-age children in the household had no effect on lease-up for either group although the number of preschool-age children significantly raised the probability of lease-up in the Section 8 group, but not

in the experimental group. A psychological variable measuring the comfort level in having children in a nearly all-white school was a statistically significant predictor of success for the experimental group, but not for the Section 8 group.

Neither the Shroder (2002) study nor any other study of which we are aware examines how child characteristics such as health, behavior, or academic problems relate to the probability of lease-up. Since many of the families receiving or eligible to receive vouchers have children, it is important to understand whether child characteristics affect the ability to make use of mobility programs.

The influence of child characteristics on take-up

How might child characteristics such as age, behavioral problems, academic experiences, or health status influence take-up? First, parents may be more likely to move if they wish to remove a misbehaving teenager from the temptations of a dangerous neighborhood. We know that parents report trying to regulate their children's behavior by managing the initiation and regulation of peer contacts (Furstenberg et al. 1999; Mounts 2000; Parke 2004) and acting as environmental gatekeepers (Cooper and Cooper 1992; Furstenberg et al. 1999; Parke et al. 1994). For example, about half of the parents in a Philadelphia study (Furstenberg et al. 1999) tried to keep their adolescents at home and out of the neighborhood, and a smaller proportion of parents would allow their adolescents to do activities, but only outside the neighborhood. Notably, none of the families in the study were able to move in order to manage their children's environment, although the authors note that parents frequently mentioned this as a potential tactic.

On the one hand, the Philadelphia study (Furstenberg et al. 1999) suggests that urban parents make a great effort to manage, and even change, their adolescents' daily environment. However, the study does not examine whether parents make *more* of an effort to manage the environment if their adolescents have specific problems, such as running with the wrong crowd or doing poorly in school. Only one study has examined whether parents who have children with problems might be more likely to take-up housing vouchers. In a study using early results from the MTO experiment, Ludwig, Duncan, and Hirschfeld (2001) found that take-up was higher among households that had adolescent members with criminal records. These results suggest that parents might respond to bad behavior with increased motivation to move the child and the family to a better environment.

On the other hand, many other studies suggest that children's problems, such as poor health or behavior, might make it *less* likely for a parent to move.

For example, children's health problems often increase maternal stress and depression and decrease efficacy (Crockenberg and Leerkes 2001). Parents of children with a disability have lower rates of employment, lower levels of income, and more mental and physical health problems than the general population (Hauser-Cram et al. 2001; Seltzer et al. 2001). Because families that have children with health problems tend to have fewer emotional and financial resources, this might limit their ability to effectively search for housing and to take the numerous steps needed to effectively lease-up. In addition, there is good evidence that households that have adult members with mental health, substance abuse, or other types of disabilities face lower rates of take-up (Popkin et al. 2002; Shroder 2002). Perhaps households that have children with disabilities might face similar obstacles. Families with multiple problems often experience the most distress (Sameroff et al. 1998).

In summary, there is only one published study suggesting that child problems might increase the probability of take-up and a number of studies suggesting the opposite. In our research, we investigate this issue directly through testing four related hypotheses.

1. First, we hypothesize that child problems will reduce take-up. A child's health or behavioral problem might make it more costly for a parent to successfully take-up a voucher, because the disorder, illness, or disability decreases the monetary or psychological resources needed to attend information sessions, meet with counselors, look for a new apartment, and move. Moving may also carry fewer benefits for a household that has a child with behavioral or health problems because there may be long-standing relationships with doctors or counselors in the home neighborhood that a parent may be reluctant to disrupt.

2. Second, we predict that multiple child health or behavioral problems may have a particularly negative impact on take-up.

3. Third, we predict that the influence of children's problems should be stronger for the Section 8 group than for the experimental group, which received substantial counseling assistance to help participants use their vouchers. The counseling intervention included services such as transportation assistance, referrals for mental health and health care, and assistance in obtaining child care (Feins, McInnis, and Popkin 1997). All of these could have been useful to families that have children with health, behavioral, or educational problems. We hypothesize that this counseling might then compensate for the limitations a family that has children with problems would normally face in searching for housing. Thus, we predict

that the effect of child problems will be greater for the Section 8 group than for the experimental group.

4. Finally, we predict that households with more human capital will be more likely to move when one of the children in the household has been identified as gifted or as having a health or behavioral problem. We predict that this might be true because such parents would be more likely to seek out neighborhoods with the resources to nurture the child's talents or address the difficulties.

Analytic approach: Using the MTO experiment to model take-up

At the time of enrollment, just before randomization, each head of household completed a baseline survey, answering questions about herself (most respondents were female) and other household members, including each child under age 18. Abt Associates, Inc., conducted the random-assignment baseline data collection and the five-year data collection.

Our sample is composed of the 2,938 MTO families that were randomly assigned to the experimental and Section 8 groups through December 31, 1997 (a total of 4,248 families were enrolled in the demonstration through that date).[1] We do not include the 1,310 families in the control group because our question of interest concerns take-up of the housing voucher, which applied only to the Section 8 and experimental groups. All independent and control variables come from the baseline survey answered by each head of household. The outcome variable—whether the household successfully moved and leased-up in a new residence—comes from administrative data. To prevent the loss of cases, missing values are recoded to 0, and dummy indicators are included in the analyses to adjust for these cases. Our final sample is composed of the heads of 2,938 households and the 7,348 children in those households, including biological, adopted, and foster children, as well as grandchildren.

This article builds on previous work by Shroder (2002), who examined how baseline adult characteristics, together with information on the strength of the local housing market and the quality of the counseling services received by the experimental group, related to successful lease-up in the MTO experiment. We extend the analysis of MTO data to estimate the relationship between the characteristics of the children in the household at baseline and the

---

[1] This is not the entire MTO population: Intake continued at one site (Los Angeles) through July 1998, and lease-ups occurred there until March 1999. The full MTO sample comprised 4,608 families.

probability that families will take-up a housing voucher. Child characteristics are represented by dummies indicating whether any child in the family has a particular attribute.[2]

A dummy variable indicating program take-up of the housing voucher was used as the outcome variable in logistic analyses, which allowed us to estimate the association between the characteristics of children in a household and the probability of lease-up. The logistic coefficients generated from the models were used to estimate the change from the baseline take-up probability of 52.2 percent for the sample. Because of the large number of independent variables in our models, we tested for multicollinearity by comparing the size of the standard errors in full models with the standard errors of reduced-form models. Standard errors were of similar magnitude in both full and reduced-form models, indicating that multicollinearity was not a problem.

After examining the main effects of child characteristics on the household's probability of take-up, we explored whether the effects of child problems and talent varied as a function of group assignment (experimental versus Section 8) and householder human capital. This was done by independently entering a series of interaction terms into the regression, including interactions between child problems (or gifted status) and the potential moderator of group assignment or human capital. We used the Norton, Wang, and Ai (2004) algorithm for computing interaction effects and their standard errors in logistic regression.

Measures

Outcome measure

Our outcome of interest is whether a household did indeed use its housing voucher and move through the program. The measure is a dummy with 1 indicating that the household used its housing voucher and 0 indicating that it did not. Just over half of all households were able to take-up the voucher (table 1).

Child characteristics measures

Our key independent variables of interest are measures of child characteristics gleaned from the baseline interview. Dummy variables indicate whether

---

[2] We ran two additional analyses, one at the child level, where we estimated the association between any one child's characteristics and the family's chances of take-up, and another at the household level, where we estimated the association between the proportion of children in the household with a particular characteristic and take-up. The results from these analyses are quite similar to the results of the analytic approach discussed here and are available from the authors on request.

Table 1. Summary Statistics (N = 2938 Families)

	Percentage
Outcome variable	
Household took-up voucher	52.2
Child health characteristics	
Physical, emotional, or mental problems that require medicine	17.5
Physical, emotional, or mental problems that make it hard to go to school	6.6
Physical, emotional, or mental problems that make it hard to play active games or sports	11.5
Low birth weight	10.3
Was hospitalized before his or her first birthday because of sickness or injury	14.4
Child learning and behavioral problem characteristics	
Goes to a special class because of behavior problems	12.2
Provoked a call from the school about schoolwork or behavior	31.0
Has been suspended or expelled in the past two years	15.7
Goes to a special class because of learning problems	22.2
Goes to a special class for gifted students or does advanced work in any subject	18.0
Child problem index	
Total number of child problems	141.4
No child problems	40.1
One child problem	22.1
Two child problems	16.0
Three child problems	9.8
Four child problems	6.0
Five child problems	3.6
Six or more child problems	2.0
Child demographic characteristics	
Male child	59.9
Child aged 5 or under	69.0
Child aged 6 to 12	41.5
Child 13 and over	42.0
Nonbiological child	13.0

any child in the household had a given demographic characteristic, as well as denote child health, behavior, and school problems (table 1).

We include measures indicating whether the household had any children between zero and 5, between 6 and 12, or between 13 and 17, whether there were any male children, and whether any child in the household was not the respondent's biological child. We also include measures of whether any child in the household had a physical, emotional, or mental problem that necessitated special medicine or equipment; made it hard to get to child care, preschool, or

school; or made it hard to play active games or sports. An important feature of the baseline survey was that although there were some questions asked about all children in the household, some were asked only of children between zero and 5 and others were asked only of children between 6 and 17.

We include two health-related variables about children under 6: whether any child in the household was less than six pounds at birth (low birth weight) or was hospitalized before his or her first birthday because of sickness or injury. We include responses to five health, school, and behavioral questions about children between 6 and 17: whether any child in the household was attending school, whether any child got special help in school or had gone to a special class for behavioral or emotional problems in the two years before baseline, whether the parent had received a call from school concerning problems with schoolwork or behavior in those two years, whether any child had been expelled or suspended in those two years, and whether any child was currently in a gifted class or did advanced work in any subject.

To test our hypothesis that an increasing number of child health, academic, or behavior problems might be associated with greater difficulty in taking-up a housing voucher, we created a cumulative problem index that reflected the total number of child educational, health, and behavioral problems in the household. About two-fifths of households had no child problems, while 12 percent had four or more. In addition, we created measures to examine whether there were nonlinear associations between child problems and take-up by assigning indicators for each child problem level, as well as an indicator that a household had two or more child problems. Some 37 percent of households fell into this category.

Household control measures

We grouped the baseline control measures hypothesized to be related to successful lease-up into several different categories, including demographic characteristics, psychological and motivational attitudes about moving, size of the social network, assessment of the safety and quality of the neighborhood and housing (as defined by the respondent), employment, and welfare receipt characteristics. These measures all come from the baseline survey answered by each head of household before random assignment. Means and standard deviations for family control variables are summarized in table A.1.

Demographic measures

Baseline demographic measures consist of dummy variables for the house-holder's experimental group status, program site, age category, race, and His-

panic ethnicity. We include continuous measures of the total number of residents in the household, the number of children between zero and 5, and the number of children between 6 and 17.

Socioeconomic status and background measures consist of dummy variables for whether the householder had a high school diploma, had a car, had a license, had ever been married, had ever received Aid to Families with Dependent Children (AFDC), had previously applied for a Section 8 voucher, had moved more than three times in the past five years, was a parent before age 18, had lived with both parents at age 16, and had ever lived in a family that received food stamps. We created a measure of "high" human capital that took into account whether the householder finished high school, lived with both parents until age 16, did not become a parent until age 18, and was not currently receiving AFDC. Those respondents who had three or four of these four characteristics were considered to have "high" human capital compared with the rest of the sample. About 25 percent of respondents were in this category.

To measure respondents' neighborhood histories, we include continuous measures of how long they had lived in their neighborhood and in their apartment, as well as dummy indicators for previous neighborhood racial and ethnic composition.

Baseline motivation for moving

The MTO baseline questionnaire also asked psychological and motivational questions about the respondent's potential move. We used dummy variables indicating the type of neighborhood the respondent wanted to move to: the same neighborhood, somewhere else in the city, a suburb, another city, or other. We also created a detailed index that measured how the respondent felt about moving.[3] The Cronbach alpha for this measure is 0.77.[4]

---

[3] This index is an average of the following standardized variables: whether the respondent wanted to move, how positive she felt about moving; how confident she was about finding a new apartment; how sure she was that she would like to live in a new apartment, that she would like to live in a new neighborhood, that she would get along with her new neighbors, that she would like living in a neighborhood where most of her neighbors made more money, that she would like living in a neighborhood where all of her neighbors made more money, that she would like living in a neighborhood with neighbors who earned more than she did, and that she would be able to get a job in the new neighborhood; how comfortable she would be with having her child attend an all-white school or a school where half of the children were white; and how sure she was that she would be able to keep her child out of trouble in the new neighborhood.

[4] The Cronbach alpha is a reliability measure of how well a set of variables in an index measures a single latent construct. Values close to 1.0 indicate the validity of the index.

Finally, we include measures of the reasons why the respondent was interested in moving, with dummy indicators noting whether a particular reason was the first or second one mentioned. These were getting away from gangs and drugs, getting a bigger and better apartment or better schools, finding a job, and moving closer to current employment, in addition to a residual category for other reasons.

Baseline friends and networks

Because the strength of a respondent's neighborhood, friend, and family social networks might have an effect on the probability of moving, we also developed an index of the respondent's social network.[5] The Cronbach alpha for this measure is 0.70.

We created a measure of parental school involvement by averaging four items pertaining to school involvement: whether the parent or another adult who lived in the household had gone to a general meeting at school; had gone to a school or class event like a play, sports event, or science fair; had volunteered at school; or had worked with a youth group, sports team, or club outside of school. The Cronbach alpha for this measure is 0.85.

Baseline neighborhood safety and quality

In addition, we created an index by using variables that measured the feeling the respondent had about the quality and safety of her baseline neighborhood.[6] The Cronbach alpha for this measure is 0.81.

Baseline apartment characteristics and condition

Further, we created an index of baseline apartment conditions by averaging the following standardized items: the overall condition of the apartment and problems with peeling paint or broken plaster, rats or mice, locks, windows, the plumbing or heating system, the stove or refrigerator, and wires or

---

[5] This index was an average of the following standardized measures: how many of her friends or family members lived in her current neighborhood, how often she lent items to or borrowed items from neighbors, how often she watched a neighbor's children, how often she ate with or talked with a neighbor, how likely it was that she would tell a neighbor that his or her child was getting into trouble, and how likely it was that another parent would tell her that her own child was getting into trouble.

[6] This index is an average of the following standardized variables: overall respondent satisfaction with the baseline neighborhood; problems with litter, graffiti, public drinking, drugs, and abandoned buildings in the baseline neighborhood; how safe the respondent felt in the parking lots and sidewalks near school, at home alone at night, and in the streets during the day or at night; and whether someone in the household had a purse snatched, was threatened with a knife or gun, was beaten or assaulted, was stabbed or shot, or experienced a break-in in the past six months.

electricity, as well as problems with too little space. The Cronbach alpha for this measure is 0.80.

Baseline work and assistance

We measured work and assistance status with dummy variables indicating whether the respondent was working at baseline; looking for work; attending school; doing small jobs; or receiving food stamps, supplemental security income (SSI), Social Security, child support, educational assistance, unemployment, Medicaid, AFDC, or aid from the Special Supplemental Food Program for Women, Infants, and Children (WIC).

Results

Table 2 presents the results of program take-up regressed on child characteristics and controls. We display only the results for the characteristics, since these are the variables of interest for this analysis, although we discuss variables that reach statistical significance from the full model (full regression results are presented in table A.2).

Households with a child who had a physical, emotional, or medical problem that made it hard to go to school experienced a 12 percentage point decline in the probability of take-up[7] (from 52 percent to 40 percent), and households that had a child who was between zero and 5 and had a low birth weight experienced a 10 percentage point decline in the probability of take-up (from 52 percent to 42 percent). None of the other problem indicators were statistically significant predictors of take-up.

We failed to find any association between basic child demographics and take-up: Whether a household had a child of particular age[8] or gender or whether the household contained a child who was not a biological child had no bearing on take-up. In addition, we failed to find any association between take-up and whether a household had a gifted child.

Cumulative risk framework

We also hypothesized that the cumulative effect of child problems might in fact influence whether a family could successfully use a voucher or not. In table 3 we present results from this cumulative risk framework. In the linear measure

---

[7] The new probability of take-up is calculated with the following formula:
$0.522 * e^{\text{logit coefficient}}/0.522 + 0.522 * e^{\text{logit coefficient}}$.

[8] We also examined whether having two or more young children, or three or more older children, contributed to take-up, but coefficients on these variables were not statistically significant.

Table 2. Logistic Regression of Take-Up on Child Characteristics

	Full Sample	(N = 2,938 Families)
Physical, emotional, or mental problems that require medicine	0.108	(0.132)
Physical, emotional, or mental problems that make it hard to go to school	−0.382**	(0.193)
Physical, emotional, or mental problems that make it hard to be active	0.057	(0.165)
Low birth weight	−0.306**	(0.143)
Was hospitalized before his or her first birthday because of sickness or injury	0.095	(0.129)
Goes to a special class because of behavior problems	−0.056	(0.152)
Provoked a call from the school to the parent about schoolwork or behavior	−0.129	(0.113)
Has been suspended or expelled in the past two years	−0.023	(0.137)
Goes to a special class because of learning problems	−0.086	(0.120)
Goes to a special class for gifted students or does advanced work in any subject	0.058	(0.112)
Male child	−0.037	(0.103)
Child aged 5 or under	0.014	(0.242)
Child aged 6 to 12	0.015	(0.148)
Child 13 and over	−0.001	(0.123)
Nonbiological child	0.154	(0.140)
Pseudo R^2	0.111	

Note: Standard errors in parentheses. All models include household controls.
*$p < 0.10$. **$p < 0.05$. ***$p < 0.01$.

model, we find that for every additional problem in the household, the probability of moving declines by 3.6 percentage points.

Because we wished to understand whether the cumulative problem index had nonlinear associations with take-up, we also ran regressions including indicator variables for various levels of child problems, with having no problems as the omitted group (table 3, the Dummy Measure column). These models included the full battery of independent variables used in the previous analysis. The coefficient on "one problem" is essentially zero, but the coefficients on all the dummy indicators for two, three, four, five, and six or more problems are negative, although only the coefficient for two or more and six or more problems reach statistical significance. When we constrain all the coefficients on the variables for two, three, four, five, and six or more problems to be equal, results indicate that we cannot reject the hypothesis that all of these coefficients are identical. This suggests that the preferred model compares households with two or more and fewer than two problems.

Table 3. Logistic Regression of Take-Up on Child Problem Indices and Controls

	Linear Measure		Dummy Measure		2+ Dummy Measure	
Cumulative child problem index	−0.056**	(0.028)				
No child problems			Reference Group			
One child problem			0.004	(0.109)		
Two child problems			−0.214*	(0.124)		
Three child problems			−0.122	(0.148)		
Four child problems			−0.153	(0.183)		
Five child problems			−0.060	(0.231)		
Six or more child problems			−0.566**	(0.281)		
Two or more child problems					−0.185**	(0.091)
Constant	0.225	(0.529)	−0.202	(0.681)	0.256	(0.529)
Pseudo R^2	0.107		0.108		0.107	

Note: Standard errors in parentheses. All models include household controls.

*$p < 0.10$. **$p < 0.05$. ***$p < 0.01$.

When we ran a regression including a variable indicating that the household had two or more child problems (again, including the full battery of controls), we found that this was associated with a 7 percentage point decline in the probability of moving compared with those who had no child problems or only one (table 3, 2+ Dummy Measure column). The three models—the linear model, the dummy indicator model, and the two problem or more versus less than two problem model—all had approximately the same fit (with an adjusted R^2 of 0.11), so it is not clear whether one model better explains the association between child problems and take-up than another. Overall, these results suggest that households with more than one child problem do face increased difficulty in successfully using a housing voucher.

Do impacts vary by group assignment or human capital?

Because we thought that child problems, or child gifted status, might have a different bearing on take-up depending on group assignment, we tested whether there were interactions between child problems or gifted status and random-assignment status. We failed to find any statistically significant interactions between group status and child problems (measured as individual variables or as the cumulative risk variable). We should note, however, that although the interactions were not significant at the standard level, the general trend was that child problems were more highly associated with decreased take-up for the Section 8 group. We also ran regressions examining whether

child gifted status and/or problems interacted with householder human capital, but found no evidence of any interaction.[9]

Results from the full model

Our findings from the full model are similar to the other quantitative analysis of take-up in the MTO study (Shroder 2002). Living in Baltimore or Los Angeles, compared with New York, Chicago, or Boston, was associated with higher rates of take-up. Being a younger respondent (between 20 and 29) was associated with higher rates of take-up than being between 30 and 39. Being older (over 40) was associated with lower rates of take-up than being between 30 and 39. Those who had previously applied for Section 8, felt positive about moving, had weaker neighborhood social networks, and rated their neighborhood as poor were more likely to move successfully. We found no significant effects from the householder's racial status, level of education, marital status, or car ownership.

Conclusions

Our results suggest that basic child characteristics have little bearing on the take-up of housing vouchers. They indicate that families with young children or families with teenagers, for example, will not face extra difficulty in using their vouchers.

We did find, however, that health, behavioral, or educational problems that make it difficult for a child to go to school, as well as the presence of a child who had a low birth weight, pose a hindrance to families trying to move through housing voucher programs. Perhaps moving is less attractive because the special educational or medical services these children may require to get to school or attend class would have to be set up again. In addition, if the child has a physical disability that makes it difficult to go to school, this could very well mean that a handicapped-accessible housing unit would be required. In a similar way, the presence of a child with a low birth weight—one who would be at an increased risk for a host of medical problems—could make moving difficult. We note, however, that having a baby with a low birth weight is more common among sicker, younger, and poorer women (Shiono and Behrman 1995). To the extent that a woman's health, age, or socioeconomic status is not being captured by our numerous controls, the association between low birth weight and decreased take-up may be correlative rather than causal.

---

[9] Results from all interaction analyses are available from the authors on request.

To put these effects in context, the coefficients for these two child problems were a little smaller than the programmatic effect of being in the experimental group or a change of one standard deviation in baseline feeling about moving or a little more than one standard deviation in baseline neighborhood satisfaction and network strength.

In addition, we found that families with any two child problems were less likely to move with a housing voucher. (We assessed whether this was because these families were more likely to have one of the two problems—low birth weight and difficulty going to school—that individually predicted take-up, but did not find this to be the case.) Presumably, multiple problems reduce successful take-up because of a combination of increased costs and decreased benefits: Negotiating the private market and finding units that are appropriate for their children's physical needs may be more difficult for these families, while moving may mean the disruption of a network of social, educational, or medical services.

These results are of concern, since about 8 percent of U.S. children have been identified as having a learning disability, while about 2 percent have fair or poor health, and about 8 percent were low weight at birth (Bloom and Dey 2006). Among low-income children, rates of physical, behavioral, and academic disability are even higher than in the general population: About one in six low-income children, for example, had a low birth weight (Martin et al. 2003), and in our sample, about half of all households had at least two children with problems or one child with at least two problems. This high prevalence of child problems means that a significant portion of the families at whom housing vouchers are targeted may be at risk for lower take-up rates due to the presence in the household of a child or children with disabilities.

Our finding that there are no significant differences between the Section 8 and experimental groups means that the effect of child characteristics on take-up was not reduced in the experimental group, which did receive assistance with the move. It might be hoped that the effect of child characteristics would be less harmful for the experimental group because of the additional counseling members received, but finding a home and moving were more arduous for this group since the neighborhoods to which they could move were restricted. In fact, it is possible that the counseling services may have helped the families of children with problems to move, but that the greater difficulty in finding housing canceled out any positive benefits. Further research is needed on whether counseling is helpful to families that are hard-to-house due to children with disabilities or other problems. We also failed to find evidence of an interaction between the householder's human capital and child problems or gifted status. Most families in this sample were very poor and disadvantaged, so

perhaps the range of human capital was not large enough to pick up an interactive effect.

While the MTO research platform may be the best we have to date for examining these issues, there are limitations to using this study. In particular, participants were residents of distressed public housing; they are likely quite different from the general voucher recipients who come off housing authority waiting lists. The extent to which our findings would translate to this population is hard to say. In addition, 10 years have passed since the sample for this study was drawn, and it is quite likely that the population currently eligible for vouchers is different than it was a decade ago. We can speculate that the population might be even more at risk today than it was then, but further research is needed to help us understand the processes by which child characteristics influence take-up. In particular, open-ended qualitative interviews can help us better understand what households with children who have problems find most challenging in their search.

Our findings that child problems are associated with decreased take-up add to the existing literature linking adult mental health and physical health problems with difficulty in using housing vouchers and other social programs. This article, along with the wider literature (Popkin, Cunningham, and Burt 2005), suggests that unless policy makers and program implementers find ways to effectively target those families with problems, reduced take-up among this particularly needy population will continue.

Funding for Section 8 has been dropping in the current policy climate. To the extent that families are competing for increasingly scarce vouchers, it is important to know whether families are competing on an equal footing. Echoing Popkin, Cunningham, and Burt's (2005) findings, our study suggests that this is not the case for families that have children with multiple physical, emotional, and behavioral problems. Policy makers, program staff, and housing researchers should consider programs or techniques that best address these families' needs. Perhaps, as Popkin, Cunningham, and Burt (2005) argue, housing all families through vouchers should not be the aim, and instead the most hard-to-house families should be provided with supportive housing. Alternatively, programs could provide better screening and counseling services for families that have children with problems. Such households may need assistance in finding accessible units, identifying new medical facilities, or obtaining transportation to care. Further research is needed to determine how best to meet these families' needs for housing.

Families that have children with physical, emotional, or educational disabilities bear most of the burden of the disability. Surely it is not this group of families that the U.S. public or policy makers would want to fall through

gaps in the safety net. It may take more effort on the part of policy makers or program implementers, but we must adequately provide for these households that do so much for their children so that they too can enjoy a "decent home in a suitable living environment."

Appendix

Table A.1. Summary Statistics for Control Variables

	Mean	Standard Deviation
Experimental group	0.59	0.49
Boston	0.22	0.41
Baltimore	0.15	0.36
Chicago	0.23	0.42
Los Angeles	0.14	0.35
New York	0.26	0.43
Adult is aged 19 to 29	0.15	0.35
Adult is aged 30 to 39	0.45	0.50
Adult is aged 40 to 49	0.29	0.45
Adult is aged 50 to 59	0.12	0.33
Adult is black	0.65	0.47
Adult is another race	0.28	0.44
Adult is of Hispanic ethnicity	0.30	0.46
Adult graduated from high school	0.39	0.49
Adult has never been married	0.62	0.48
Adult gets AFDC	0.93	0.26
Adult was a parent before age 18	0.26	0.43
Adult lived with both parents at age 16	0.45	0.50
Adult's mother got AFDC	0.50	0.50
Adult has car	0.16	0.37
Adult has driver's license	0.32	0.47
Adult had previously applied for Section 8	0.41	0.49
Adult has moved more than three times in the past five years	0.08	0.28
Number of years the adult has lived in the neighborhood	10.05	9.48
Number of years the adult has lived in the apartment	6.22	6.78
Desire to live with black and white families	0.50	0.50
Desire to live with black and Hispanic families	0.60	0.49
Desire to live with Hispanic and white families	0.32	0.47
Desire to live with all races	0.52	0.50

Table A.1. Summary Statistics for Control Variables *Continued*

	Mean	Standard Deviation
Desire to live with mostly white families	0.17	0.37
Household total	3.84	1.56
Number of children aged 6 to 17	1.63	1.24
Number of children aged 0 to 5	0.88	0.93
Desire to live in a different apartment in the same neighborhood	0.06	0.25
Desire to live in a different neighborhood	0.57	0.49
Desire to live in the suburbs	0.17	0.37
Desire to live in a different city	0.16	0.37
Overall positive feeling for moving	−0.02	0.68
Desire to move to have a new apartment	0.45	0.50
Desire to move to have better schools	0.48	0.50
Desire to move to find a new job	0.06	0.23
Desire to move for other reasons	0.10	0.30
Desire to move to be closer to current job	0.01	0.09
Desire to move to get away from drugs	0.75	0.43
Network score	0.00	0.53
Parental involvement score	−0.01	0.83
Neighborhood derelict score	0.00	0.53
Apartment derelict score	0.01	0.59
Spent the last week working	0.23	0.42
Spent the last week looking for a job	0.14	0.35
Spent the last week in school	0.10	0.29
Spent the last week doing small jobs	0.12	0.32
Gets AFDC	0.75	0.44
Gets food stamps	0.80	0.40
Gets SSI	0.17	0.38
Gets child support	0.14	0.35
Gets Medicaid	0.69	0.46
Gets educational assistance	0.09	0.28
Gets WIC	0.33	0.47
Gets unemployment	0.02	0.13
Gets Social Security disability payments	0.08	0.28

Table A.2. Full Model

	Full Sample	(N = 2,938 Families)
Experimental group	−0.507***	(0.084)
Boston	0.139	(0.140)
Baltimore	0.597***	(0.180)
Chicago	−0.231	(0.168)
Los Angeles	1.111***	(0.161)
Between the ages of 19 and 29	0.527***	(0.149)
Between the ages of 40 and 49	−0.369***	(0.109)
Aged 50+	−0.646***	(0.168)
Black	−0.111	(0.203)
Other	−0.218	(0.176)
Hispanic	−0.196	(0.158)
Graduated from high school	0.090	(0.089)
Never been married	−0.074	(0.097)
Received AFDC in the past	−0.096	(0.177)
Parent before age 18	0.159	(0.105)
Lived with both parents at age 16	−0.142*	(0.086)
Mother got AFDC	0.027	(0.092)
Has a car	0.159	(0.136)
Has a license	0.055	(0.104)
Previously applied for Section 8	0.243***	(0.086)
Moved three times	0.200	(0.152)
Length of time in the neighborhood	−0.005	(0.006)
Length of time in the apartment	0.012	(0.008)
Lived in a neighborhood with blacks and whites	0.127	(0.106)
Lived in a neighborhood with blacks and Hispanics	0.069	(0.123)
Lived in a neighborhood with Hispanics and whites	−0.094	(0.117)
Lived in a neighborhood with a mix of races	−0.127	(0.111)
Lived in a neighborhood with mostly whites	0.119	(0.124)
Total number in the household	0.006	(0.068)
Total number of children aged 6 to 17 in the household	−0.052	(0.089)
Total number of children aged 0 to 5 in the household	−0.186*	(0.106)
Would like to move to a new apartment in the same neighborhood	−0.334	(0.333)
Would like to move to a new neighborhood	0.032	(0.294)
Would like to move to the suburbs	0.090	(0.306)
Would like to move to a new city	0.004	(0.307)
Overall feeling about moving	0.432***	(0.083)
Primary reason to move—apartment	0.023	(0.140)
Primary reason to move—schools	0.059	(0.139)
Primary reason to move—find a new job	−0.113	(0.215)
Primary reason to move—other	−0.027	(0.189)

Table A.2. Full Model *Continued*

	Full Sample	(N = 2,938 Families)
Primary reason to move—for a job	0.200	(0.457)
Primary reason to move—drugs	0.054	(0.147)
Network score	−0.144*	(0.082)
Parental involvement score	0.089	(0.060)
Neighborhood quality score	−0.252***	(0.096)
Apartment quality score	0.093	(0.079)
In school	0.356**	(0.154)
Looking for a job	−0.078	(0.127)
Working	0.029	(0.127)
Does small jobs	0.198	(0.127)
Gets AFDC	0.181	(0.153)
Gets food stamps	0.102	(0.154)
Gets SSI	−0.009	(0.125)
Gets child support	0.096	(0.119)
Gets Medicaid	−0.056	(0.108)
Gets educational assistance	−0.090	(0.155)
Gets WIC	−0.007	(0.110)
Gets unemployment	0.426	(0.317)
Gets disability	−0.176	(0.159)
Male child	−0.037	(0.103)
Child aged 5 or under	0.014	(0.242)
Child aged 6 to 12	0.015	(0.148)
Child aged 13 and over	−0.001	(0.123)
Nonbiological child	0.154	(0.140)
Physical, emotional, or mental problems that require medicine	0.108	(0.132)
Physical, emotional, or mental problems that make it hard to go to school	−0.382**	(0.193)
Physical, emotional, or mental problems that make it hard to play	0.057	(0.165)
Low birth weight	−0.306**	(0.143)
Hospitalized before his or her first birthday	0.095	(0.129)
Goes to a special class for gifted students or does advanced work	0.058	(0.112)
Goes to a special class because of behavior problems	−0.056	(0.152)
Called by the school about the child's schoolwork or behavior	−0.129	(0.113)
Has been suspended or expelled in the past two years	−0.023	(0.137)
Goes to a special class because of learning problems	−0.086	(0.120)
Constant	0.431	(0.592)
Pseudo R^2	0.111	

Note: Standard errors in parentheses.

*$p < 0.10$. **$p < 0.05$. ***$p < 0.01$.

Authors

Emily K. Snell is a Ph.D. student in the Department of Human Development and Social Policy in the School of Education and Social Policy at Northwestern University. Greg J. Duncan is Edwina S. Tarry Professor in the School of Education and Social Policy at Northwestern University.

References

Bell, Robert Q. 1968. A Reinterpretation of the Effects of Socialization. *Psychological Review* 75:81–95.

Bloom, Barbara, and Achintya N. Dey. 2006. Summary Health Statistics for U.S. Children: National Health Interview Survey, 2004. *Vital and Health Statistics*, Series 10, No. 227. Hyattsville, MD: National Center for Health Statistics.

Bobo, Lawrence, and Camille Zubrinsky. 1996. Attitudes on Residential Integration: Perceived Status Differences, Mere In-Group Preference, or Racial Prejudice? *Social Forces* 74:883–909.

Brooks-Gunn, Jeanne, Greg Duncan, and Larry J. Aber. 1997. *Neighborhood Poverty: Context and Consequences for Children.* Vols. I and II. New York: Russell Sage Foundation.

Center on Budget and Policy Priorities. 2003. *Introduction to the Housing Choice Program.* Washington, DC.

Cooper, Catherine R., and Robert G. Cooper Jr. 1992. Links between Adolescents' Relationships with Their Parents and Peers: Models, Evidence, and Mechanisms. In *Family-Peer Relationships: Modes of Linkage,* ed. Ross D. Parke and Gary W. Ladd, 135–58. Hillsdale, NJ: Lawrence Erlbaum.

Crane, Jonathan. 1991. The Epidemic Theory of Ghettos and Neighborhood Effects on Dropping Out and Teenage Childbearing. *American Journal of Sociology* 96:1226–59.

Crockenberg, Susan, and Elizabeth Leerkes. 2001. Infant Temperament, Caregiving, and Family Relationships. Paper presented at the Penn State University National Symposium on Children's Influences on Family Dynamics: The Neglected Side of Family Relationships, State College, PA. December.

Crowder, Kyle D. 2001. Racial Stratification in the Actuation of Mobility Expectations: Microlevel Impacts of Racially Restrictive Housing Markets. *Social Forces* 79:1377–96.

Cunningham, Mary K., and Susan J. Popkin. 2002. *CHAC Mobility Counseling Assessment Final Report.* Washington, DC: Urban Institute.

Currie, Janet. 2004. The Take-Up of Social Benefits. Working Paper No. 10488. National Bureau of Economic Research.

DeLuca, Stefanie, and James E. Rosenbaum. 2003. If Low-Income Blacks Are Given a Chance to Live in White Neighborhoods, Will They Stay? Examining Mobility Patterns in a Quasi-Experimental Program with Administrative Data. *Housing Policy Debate* 14(3):305–45.

Feins, Judith D., Debra McInnis, and Susan J. Popkin. 1997. *Counseling in the Moving to Opportunity for Fair Housing Demonstration Program.* Cambridge, MA: Abt Associates, Inc.

Finkel, Meryl, and Larry Buron. 2001. *Study on Section 8 Voucher Success Rates: Final Report.* Cambridge, MA: Abt Associates, Inc. World Wide Web page <http://www.huduser.org> (accessed December 1, 2003).

Furstenberg, Frank F. Jr., Thomas D. Cook, Jacquelynne Eccles, Glen H. Elder Jr., and Arnold Sameroff. 1999. *Managing to Make It: Urban Families and Adolescent Success.* Chicago: University of Chicago Press.

Hauser-Cram, Penny, Marji Erickson-Warfield, Jack Shonkoff, and Marty Krauss. 2001. Children with Disabilities: A Longitudinal Study of Child Development and Parent Well-Being. *Monographs of the Society of Research in Child Development* 66(3).

Kennedy, Stephen D., and Meryl Finkel. 1994. *Section 8 Rental Voucher and Rental Certificate Utilization Study: Final Report.* Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

Logan, John R., Richard D. Alba, and Shu-Yin Leung. 1996. Minority Access to White Suburbs: A Multiregional Comparison. *Social Forces* 74:851–81.

Ludwig, Jens, Greg J. Duncan, and Paul Hirschfeld. 2001. Urban Poverty and Juvenile Crime: Evidence from a Randomized Housing Mobility Experiment. *Quarterly Journal of Economics* 116:655–79.

Martin, Joyce A., Brady E. Hamilton, Paul D. Sutton, Stephanie J. Ventura, Fay Menacker, and Martha L. Munson. 2003. Births: Final Data for 2002. *National Vital Statistics Reports.* Vol. 52, No 1. Hyattsville, MD: National Center for Health Statistics.

Massey, Douglas S., and Nancy A. Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass.* Cambridge, MA: Harvard University Press.

Moffitt, Robert A. 1983. An Economic Model of Welfare Stigma. *American Economic Review* 73:1023–35.

Mounts, Nina S. 2000. Parental Management of Adolescent Peer Relationships: What Are Its Effects on Friend Selection? In *Family and Peers: Linking Two Social Worlds*, ed. Kathryn A. Kerns, Josefina M. Contreras, and Angela M. Neal-Barnett, 169–94. Westport, CT: Praeger.

Norton, Edward C., Hua Wang, and Chunrong Ai. 2004. Computing Interaction Effects and Standard Errors in Logit and Probit Models. *Stata Journal* 4:103–16.

Office of Management and Budget. 2005. *Budget of the United States Government.* World Wide Web page <http://www.gpoaccess.gov/usbudget/fy06/browse.html> (accessed October 1).

Olsen, Edgar O. 2001. Housing Programs for Low-Income Households. Working Paper No. 8208. National Bureau of Economic Research.

Orr, Larry, Judith D. Feins, Robin Jacob, Erik Beecroft, Lisa Sanbonmatsu, Lawrence F. Katz, Jeffrey B. Liebman, and Jeffrey R. Kling. 2003. *Moving to Opportunity for Fair Housing Demonstration Program: Interim Impacts Evaluation.* Report prepared by Abt Associates, Inc., and the National Bureau of Economic Research. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

Parke, Ross D. 2004. Development in the Family. *Annual Review of Psychology* 55:365–99.

Parke, Ross D., Virginia M. Burks, James L. Carson, Brian Neville, and Lisa Boyum. 1994. Family-Peer Relationships: A Tripartite Model. In *Exploring Family Relationships with Other Social Contexts,* ed. Ross D. Parke and Sheppard G. Kellam, 115–45. Hillsdale, NJ: Lawrence Erlbaum.

Pashup, Jennifer, Kathryn Edin, Greg J. Duncan, and Karen Burke. 2005. Participation in a Residential Mobility Program from the Client's Perspective: Findings from Gautreaux Two. *Housing Policy Debate* 16(3/4):361–92.

Pendall, Rolf. 2000. Why Voucher and Certificate Users Live in Distressed Neighborhoods. *Housing Policy Debate* 11(4):881–910.

Popkin, Susan J., Larry F. Buron, Diane K. Levy, and Mary K. Cunningham. 2000. The Gautreaux Legacy: What Might Mixed-Income and Dispersal Strategies Mean for the Poorest Public Housing Tenants? *Housing Policy Debate* 11(4):911–42.

Popkin, Susan J., and Mary K. Cunningham. 2002. *CHA Relocation Counseling Assessment Final Report.* Prepared for the John D. and Catherine T. MacArthur Foundation. Washington, DC: Urban Institute.

Popkin, Susan. J., Mary K. Cunningham, and Martha Burt. 2005. Public Housing Transformation and the Hard-to-House. *Housing Policy Debate* 16(1):1–24.

Popkin, Susan J., Diane K. Levy, Laura E. Harris, Jennifer Comey, Mary K. Cunningham, and Larry F. Buron (with William T. Woodley). 2002. *HOPE VI Panel Study: Baseline Report.* Prepared for the Annie E. Casey Foundation, the John D. and Catherine T. MacArthur Foundation, and the U.S. Department of Housing and Urban Development. Washington, DC: Urban Institute.

Reed, Joanna, Jennifer Pashup, and Emily K. Snell. 2005. Voucher Use, Labor Force Participation, and Life Priorities: Findings from the Gautreaux Two Housing Mobility Study. *Cityscape* 8:219–39.

Rubinowitz, Leonard S., and James E. Rosenbaum. 2000. *Crossing the Class and Color Lines: From Public Housing to White Suburbia.* Chicago: University of Chicago Press.

Rueter, Martha A., and Rand D. Conger. 1998. Reciprocal Influences between Parenting and Adolescent Problem-Solving Behavior. *Developmental Psychology* 34(6):1470–82.

Sameroff, Arnold J., W. Todd Bartko, Alfred Baldwin, Claire Baldwin, and Ronald Seifer. 1998. Family and Social Influences on the Development of Child Competence. In *Families, Risk, and Competence,* ed. Michael Lewis and Candice Feiring, 161–86. Mahwah, NJ: Lawrence Erlbaum.

Sampson, Robert J., Jeffrey D. Morenoff, and Felton Earls. 1999. Beyond Social Capital: Spatial Dynamics of Collective Efficacy for Children. *American Sociological Review* 64:633–66.

Schill, Michael H. 1993. Distressed Public Housing: Where Do We Go from Here? *University of Chicago Law Review* 60:497–554.

Seltzer, Marsha M., Jan S. Greenberg, Frank J. Floyd, Yvette Pettee, and Jinkuk Hong. 2001. Life Course Impacts of Parenting a Child with a Disability. *American Journal of Mental Retardation* 106:265–86.

Shiono, Patricia H., and Richard E. Behrman. 1995. Low Birth Weight: Analysis and Recommendations. *Future of Children* 5:4–18.

Shroder, Mark. 2002. Locational Constraint, Housing Counseling, and Successful Lease-Up in a Randomized Housing Voucher Experiment. *Journal of Urban Economics* 51:315–38.

Shroder, Mark, and Arthur Reiger. 2000. Vouchers Versus Production Revisited. *Journal of Housing Research* 11(1):91–107.

Thomas, Alexander, and Stella Chess. 1968. *Temperament and Behavior Disorders in Children.* New York: New York University.

U.S. Department of Housing and Urban Development, Office of Policy Development and Research. 2000. *New Facts about Households Assisted by HUD's Housing Programs: Recent Research Results.* World Wide Web page <http://www.huduser.org/periodicals/rrr/rrr_10_2000/1000_6.html> (accessed August 15, 2006).

Wilson, William J. 1986. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy.* Chicago: University of Chicago Press.

Wilson, William J. 1996. *When Work Disappears: The World of the New Urban Poor.* New York: Vintage.