

## **A Summary Overview of Moving to Opportunity: A Random Assignment Housing Mobility Study in Five U.S. Cities**

### Abstract

The U.S. Department of Housing and Urban Development's (HUD) Moving to Opportunity (MTO) for Fair Housing program is a unique experimental research demonstration designed to answer the question of whether moving from a high-poverty neighborhood to a lower-poverty community improves the social and economic prospects of low-income families. Authorized by the U.S. Congress in 1992, MTO made use of rental assistance vouchers, in combination with intensive housing search and counseling services, to assist low-income families to move from some of America's most distressed urban neighborhoods to lower-poverty communities. A total of 4,600 low-income families with children, the vast majority of them headed by African-American or Hispanic single mothers, were recruited from high-poverty public housing projects in five participating cities between 1994 and 1998. These families were assigned by lottery to one of three research groups: A Traditional Voucher group, a Low Poverty Voucher group and a control group. Because of the random assignment design, the MTO study generates comparable groups of adults and children living in different types of neighborhoods, so that a comparison of outcomes across research groups can uncover the potential effects of neighborhood characteristics across a range of family and children's outcomes. Among the households assigned to the Low Poverty Voucher group, 47 percent used a MTO voucher to relocate to a low-poverty neighborhood, while 62 percent of those assigned to the Traditional Voucher group relocated through MTO.

A follow-up study carried out 4 to 7 years after random assignment found that:

- **MTO improved neighborhood outcomes.** Assignment to either of the MTO mobility groups led participating adults to feel safer and more satisfied with their housing and neighborhoods.
- **MTO had no effect on the labor market outcomes or social program participation of adults, but improved adults' mental health as well as several important aspects of physical health.**
- **MTO improved outcomes for female youth, particularly their mental health, but on balance had deleterious effects on male youth risky behavior.**
- **MTO had no detectable effects on the math and reading achievement of children.**

The final MTO impact evaluation is currently underway and will provide an opportunity to learn more about MTO's long-term effects over a decade after families were offered the opportunity to move, and in turn, the effects on families and children of living in varying neighborhood environments.

While a majority of Americans agree that the government should provide housing assistance to low-income families,<sup>1</sup> there is ongoing debate on how such assistance should be provided. One possibility is for the government to directly provide housing units for low-income families, a strategy that began in earnest with the U.S. Housing Act of 1937 and led to a system of public housing that peaked in size in the mid-1990s at around 1.4 million units.<sup>2</sup> An alternative approach is for the government to subsidize low-income households to consume housing in the private market – a type of “tenant-based” subsidy that over time has accounted for a growing share of all new federal commitments for low-income housing.<sup>3</sup> Housing policy decisions can have important effects on housing quality as well as on the neighborhood environments of low-income families. By providing families with more choice over where they live, recipients of tenant-based subsidies on average live in lower-poverty tracts than do families with project-based subsidies.<sup>4</sup> If neighborhood context exerts an independent influence on family behavior, housing programs could have cascading influences on other aspects of family’s lives, such as earnings and health and the development of their children. It is a challenge to identify such neighborhood effects *per se* as they are confounded with the effects of other characteristics of families associated with residential selection and location. The Moving to Opportunity (MTO) research demonstration is one platform for better understanding the effects of one particular type of tenant-based subsidy and the potential influences of neighborhood environments on low-income families and children.

The U.S. Department of Housing and Urban Development’s (HUD) Moving to Opportunity for Fair Housing program is a unique experimental research demonstration designed to answer the question of whether moving from a high-poverty neighborhood to a lower-poverty community improves the social and economic prospects of low-income families. Authorized by the U.S. Congress in 1992, MTO made use of rental assistance vouchers, in combination with intensive housing search and counseling services, to assist low-income families to move from some of America’s most distressed urban neighborhoods to lower-poverty communities. The MTO demonstration has two broad research goals. The first short term goal was to compare the costs and services of the MTO program with the routine implementation of the Section 8 tenant-based rental assistance program in existence at the time of MTO’s implementation.<sup>5</sup> The second longer term goal is to assess the impact of the demonstration on the well-being of families and their children, including their housing conditions, mental and physical health, employment and earnings, receipt of social program assistance and income, education, and delinquent or risky behavior of children.

The MTO demonstration was restricted to no more than six cities with populations of at least 400,000 in metropolitan areas of at least 1.5 million people. Of the 21 U.S. cities eligible to

---

<sup>1</sup> A 2001 survey by NPR, the Kaiser Family Foundation and Harvard University found that 75% of respondents support more government spending “for housing for poor people” .  
[www.npr.org/programs/specials/polls/poverty/staticresults3.html](http://www.npr.org/programs/specials/polls/poverty/staticresults3.html)

<sup>2</sup> Olsen, 2003.

<sup>3</sup> See Quigley, 2000. There is a third possibility: government subsidies to private providers of specific housing units, although from the perspective of MTO these impose locational constraints on recipients as do other project-based subsidies.

<sup>4</sup> See Newman and Schnare, 1997; Khadduri et al., 1998; Devine et al. 2003; and Olsen, 2003. In addition, a number of studies provide suggestive evidence that per-unit costs may be lower for tenant- compared to project-based subsidy programs (HUD, 2000; Olsen, 2000; Shroder and Reiger, 2000; GAO, 2001).

<sup>5</sup> See <http://www.hud.gov/offices/pih/programs/hcv/> for more information about HUD’s Section 8 program.

participate, a competitive process selected the following five cities for the demonstration<sup>6</sup>: Baltimore, MD; Boston, MA; Chicago, IL; Los Angeles, CA; and New York, NY. Eligibility for the voluntary MTO program was limited to low-income families with children living in public housing or Section 8 project-based housing that were located in census tracts with poverty rates of at least 40 percent. The actual neighborhood poverty rate for eligible families was, on average, much higher (56 percent). HUD recognized that more families would wish to participate in the program than HUD had Section 8 rental assistance. To meet its research goals, HUD took advantage of the excess demand for Section 8 rental assistance by determining program participation via a random lottery, which in turn has been central to HUD's ability to support rigorous research efforts to understand the MTO program's causal impact on participating families.

Local Public Housing Authorities (PHAs) in each participating city recruited families through fliers, tenant associations and other means. All interested families had the chance to apply for the program. Families participated in a group orientation session to learn about the demonstration and the experimental design of the research study. Before being formally accepted into the program, families were screened for Section 8 eligibility. Almost all of the households that signed up for MTO were headed by a female, nearly two-thirds of whom were African-American (most of the rest were Hispanic). Three-quarters of household heads were on welfare at baseline and fewer than half had graduated from high school. On average these households had three children. The immigration status of MTO participants is unknown but most speak English.

A total of 4,608 families enrolled in the MTO demonstration and were randomly assigned to one of the three research groups between September 1994 and August 1998. The enrollment and randomization phase of MTO ended in February 1999, but MTO families continue to receive the housing vouchers that they were offered under the program. There have been several phases of HUD-supported research to capture MTO impacts over time.<sup>7</sup> All families who signed up for MTO were randomly assigned to one of the following three groups:

1. the **MTO LOW POVERTY VOUCHER (LPV) GROUP**, which received Section 8 certificates or vouchers usable only in low-poverty areas (areas with less than 10 percent of the population below the poverty line in 1990), along with counseling and assistance in finding a private unit to lease;
2. the **TRADITIONAL VOUCHER GROUP**, which received regular Section 8 certificates or vouchers (geographically unrestricted) and ordinary briefings and assistance from the PHAs; and
3. the **CONTROL GROUP**, which received no certificates or vouchers but remained eligible for public or project-based housing and other social programs to which families would otherwise have been entitled.

---

<sup>6</sup> Local programs were created via grant agreements between the Secretary of HUD and nonprofit organizations (NPOs) to provide counseling and services in connection with the demonstration, and local Public Housing Authorities (PHAs) to administer the rental assistance. The NPOs were funded to help pay for the costs associated with counseling participating families, assisting them in finding appropriate units, and working with landlords to encourage their participation in the MTO program. Local programs had to match federal counseling funds with funds from state or local public or private sources. PHAs received administrative funds for the increased number of Section 8 certificates or vouchers made available through the MTO program.

<sup>7</sup> See <http://mtoresearch.org>.

The experience of families assigned to the LPV group receiving the special MTO assistance can be compared with that of families who receive the "regular" vouchers, the Traditional Voucher group. The control group is essential to correctly estimate the impacts of Section 8 rental assistance separate from the impacts of MTO assistance with counseling, providing a benchmark against which the outcomes of the two other groups can be measured.

The MTO research team maintained contact with MTO-enrolled families to update information about addresses, changes in family status, employment and receipt of program services through brief canvasses that re-contacted families in 1997 and 2000.

### **Key Findings from MTO Interim Evaluation<sup>8</sup>**

HUD sponsored an MTO "interim" impact evaluation designed to measure MTO's effects on outcomes of participating families measured 4 to 7 years after enrollment in the MTO demonstration. The key findings from the interim evaluation are summarized here and in Figures 1 to 5. The figures present the outcome level for all members of the LPV group (whether or not they moved in response to MTO) and the outcome level for all members of the control group. Because of MTO's random assignment research design, any difference in the outcome levels between families and children in the LPV group versus the control group reflects the effect or impact of MTO.<sup>9</sup>

**MTO succeeded in moving families to less economically distressed communities.** Among the households assigned to the LPV group, 47 percent used a MTO voucher to relocate to a low-poverty Census tract, while 62 percent of those assigned to the Traditional Voucher group relocated through MTO. The explicit goal of MTO was to help move families into less economically distressed communities, and by this measure MTO was successful. One year after random assignment, families in the two MTO treatment groups lived in Census tracts with average poverty rates 11-13 percentage points (25-30 percent) below those of the Control group. The gap declines somewhat over time in part because of subsequent mobility among all groups. But even six years after random assignment, the treatment-control differences in tract poverty equal 7-8 percentage points (20 percent of the control mean), while the differences in cumulative exposure to neighborhood poverty (duration weighted averages) are 9-10 percentage points (20-25 percent of the control mean).

---

<sup>8</sup> See, Orr, et. al, 2003. Also see Kling, Liebman and Katz, 2007; Kling, Ludwig, and Katz, 2005; Ludwig and Kling, 2007; and Sanbonmatsu, Kling, Duncan, and Brooks-Gunn, 2006;

<sup>9</sup> This estimate is also called the intent-to-treat (ITT) effect. The ITT represents the estimated impact of MTO on the assigned group as a whole, including families who leased up and families who never rented with a voucher obtained through MTO. An alternative estimate is the treatment-on-treated (TOT). The TOT is calculated by dividing the ITT estimates for each group by the group's lease-up rate. The TOT represents the effect of MTO on the program movers, i.e. the sample members who actually moved with the program vouchers, and as such, is not an experimental impact of MTO. Because only 47 percent of the LPV group and 62 percent of the TVP group leased up, TOT estimates are substantially larger than ITT estimates. All estimates are regression-adjusted controlling for a range of individual and local characteristics measured at study entry or baseline.

**Families in the MTO LPV and Traditional Voucher groups reported feeling safer and more satisfied with their housing and neighborhoods than families in the control group.**

The interim MTO evaluation found that assignment to either of the MTO mobility groups led participating adults to feel safer and more satisfied with their housing and neighborhoods.<sup>10</sup>

Figure 1 shows that 15 percent of LPV adults reported feeling unsafe as compared to 24 percent of adults in the control group. LPV adults were also 8 percentage points less likely to report being victims of crime and 14 percentage points less likely to report seeing illicit drugs sold or used compared to adults in the control group.

**MTO had no detectable effect on the labor market outcomes or social program participation of adults. However, MTO improved adults' mental health as well as several important aspects of physical health such as obesity and health-risk behaviors including diet and exercise.**

In Figure 2, similar proportions of LPV and control group adults were unemployed or on TANF (roughly 55 and 53 percent respectively). As compared to adults in the control group, LPV adults were 5 percentage points, or 11 percent, less likely to be obese according to a body mass index (BMI) cutoff of 30 or higher.

**MTO had no effect on the reading and math achievement of children.** As shown in Figure 3, MTO had no detectable impacts for either male or female youth on academic achievement, as measured by Woodcock-Johnson tests in reading and math, or several schooling outcomes, including the likelihood of dropping out of secondary school (the latter effects are not shown).<sup>11</sup>

**MTO improved outcomes for female youth, particularly their mental health, but on balance had deleterious effects on male youth by increasing aspects of risky behavior.**

The effects of MTO on youth outcomes in the interim evaluation differed for male as compared to female youth. For a wide range of measures of risky and delinquent behaviors as well as school engagement, MTO improved outcomes for female youth but on balance had deleterious impacts on male youth. Figure 4 shows that compared to female youth in the control group, females in the LPV group had lower levels of psychological distress and were less likely to report using marijuana or be arrested for property crime. In comparison, Figure 5 shows that relative to their peers in the control group, male youth in the LPV group were slightly more likely to report using marijuana, scored higher on an index of behavioral problems (which includes acting out and aggressive behaviors), and were more likely to be arrested for property crime.

Further analyses suggest that the disruption of moving *per se* does not appear to explain the gender differences in MTO effects for youth, as MTO's deleterious impacts on male youth do not show up until a few years after random assignment.<sup>12</sup> The gender difference in impacts is also not due to families with boys versus girls moving to different types of neighborhoods, since moves are generally similar across families with boys and girls. Brothers and sisters within the same families also appear to respond differently to the MTO intervention. Qualitative interviews conducted after the interim survey data collection have helped deepen our understanding of MTO's differing effects on female as compared to male youth. This research suggests that the nature of how boys and girls interact socially with peers may enable girls to more successfully

---

<sup>10</sup> Orr et al., 2003, and Kling, Liebman and Katz, 2007.

<sup>11</sup> See Sanbonmatsu, Kling, Duncan, and Brooks-Gunn, 2006.

<sup>12</sup> Kling, Liebman and Katz, 2007; Kling, Ludwig and Katz, 2005.

adapt to life in low-poverty areas. Girls were more likely to visit with friends on their porches or inside their homes, in part because some parents may place girls on a “shorter leash” than they do boys. Boys, on the other hand, often “hang out” in public spaces and this elevates the risk for conflict with neighbors and police, in addition to increasing their exposure to delinquent peer groups as well as opportunities to engage in delinquent activities themselves.<sup>13</sup>

### **The MTO Long Term Evaluation<sup>14</sup>**

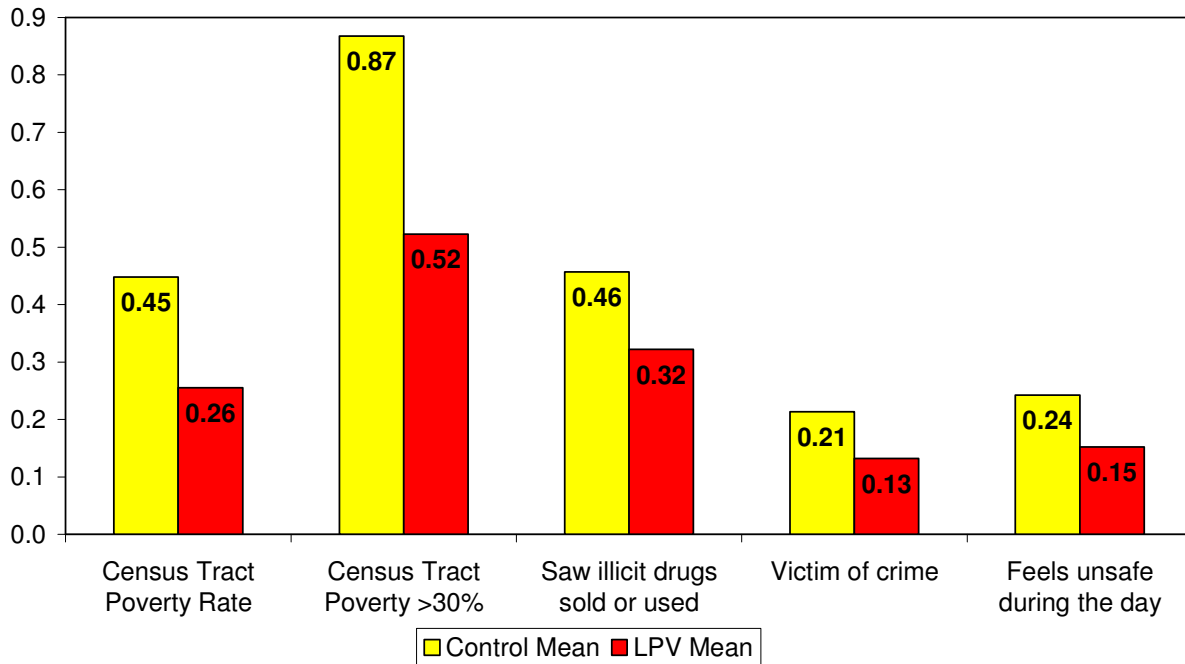
Sponsored by HUD and funded by several federal agencies and private foundations, the final MTO impact evaluation is currently underway and will provide an opportunity to learn more about MTO’s longer-term effects 10 to 12 years after enrollment in the demonstration program and, in turn, the effects of living in varying neighborhood environments on families and children. There are plausible reasons to believe that the effects of MTO moves on participants’ behaviors may increase over time as families become more socially integrated and adapt to their new lower-poverty communities and also as they learn more about how to take advantage of new schooling or work opportunities available to them in these areas. The MTO final evaluation also provides a chance to collect additional, more detailed information (compared to the interim MTO evaluation) on certain outcome domains that are important for public policy and that the interim MTO findings suggest could have been affected by the intervention. For example, the long-term survey is designed to expand the information we will ultimately have on the mental and physical health of adults and children.

---

<sup>13</sup> Clampet-Lundquist, Edin, Kling, Duncan, 2005; Popkin, Leventhal, and Weismann, 2008.

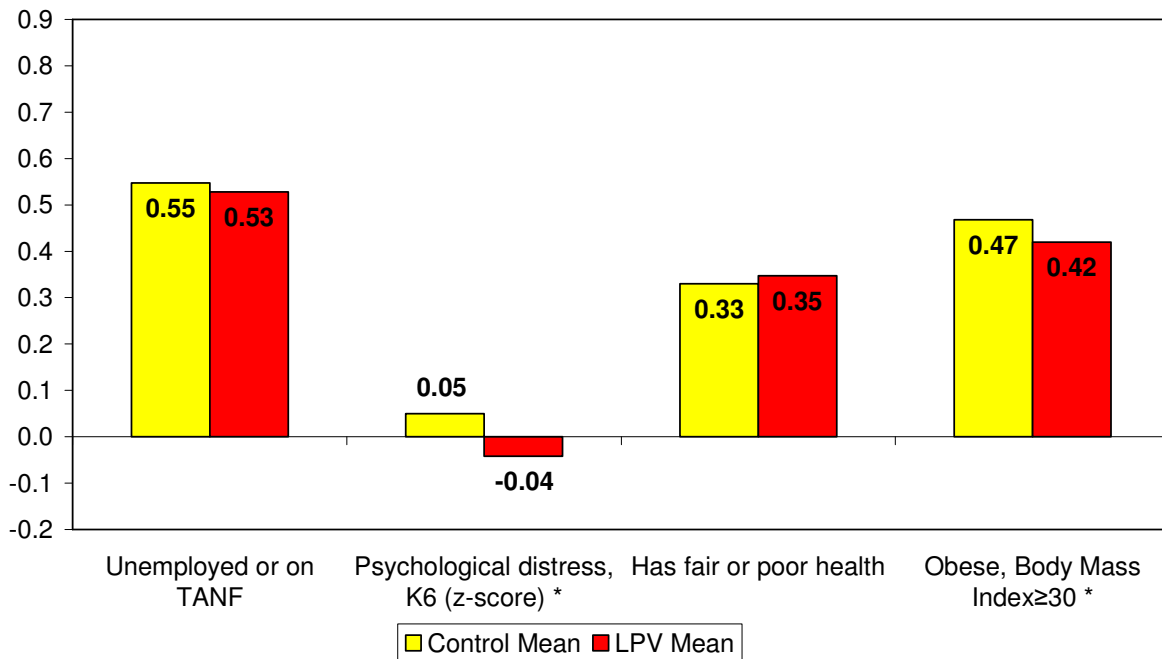
<sup>14</sup> For more detail, see justification and related documents submitted to OMB at [http://www.reginfo.gov/public/do/PRAViewDocument?ref\\_nbr=200708-2528-003](http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=200708-2528-003).

**Figure 1: MTO's Effects on Selected Neighborhood Outcomes**



Source: Orr et al., 2003, and Kling, Liebman and Katz, 2007. All differences in outcome levels between the LPV group and the control group are statistically significant at the  $p < 0.05$  level.

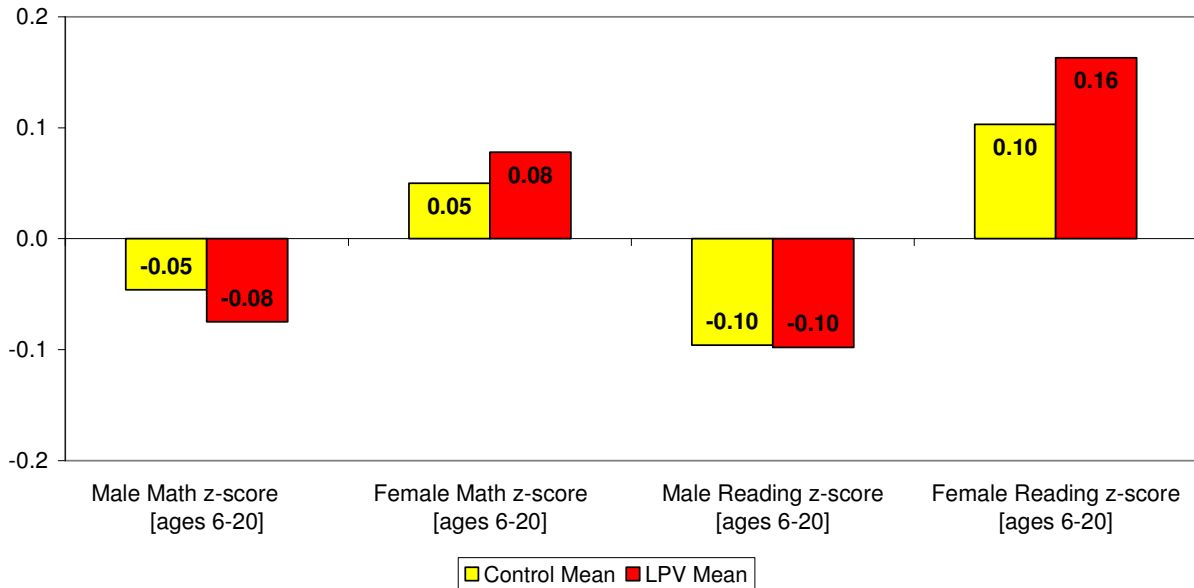
**Figure 2: MTO's Effects on Selected Outcomes for Adults**



Source: Orr et al., 2003, and Kling, Liebman and Katz, 2007.

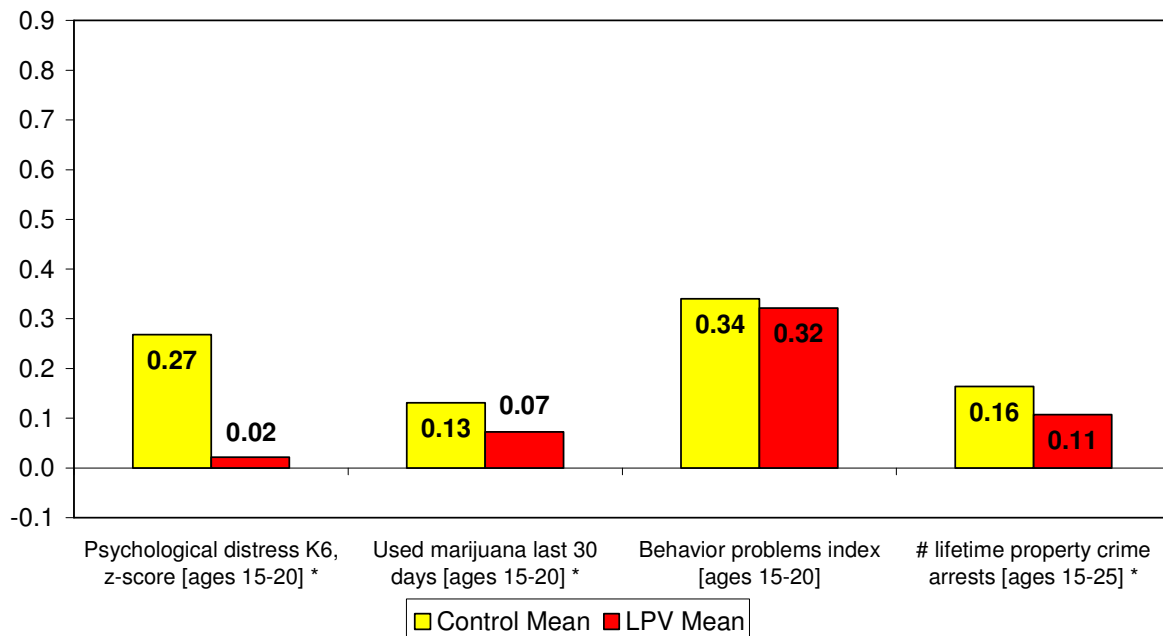
\* Indicates that the difference in outcome levels between the LPV group and the control group are statistically significant at the  $p < 0.05$  level.

**Figure 3: MTO's Effects on Children's Math & Reading Achievement**



Figures reflect Woodcock-Johnson Revised (WJ-R) Scale Scores. Performance on the WJ-R can be reported using several different metrics. We use the WJ-R's "W" scale as our underlying metric because these scores reflect an absolute measure of performance and have the attractive property of being equalinterval. To facilitate interpretation of results, we transform the W scores to z-scores that have a mean of zero and standard deviation of one for the control group.

**Figure 4: MTO's Effects on Outcomes for Female Youth**

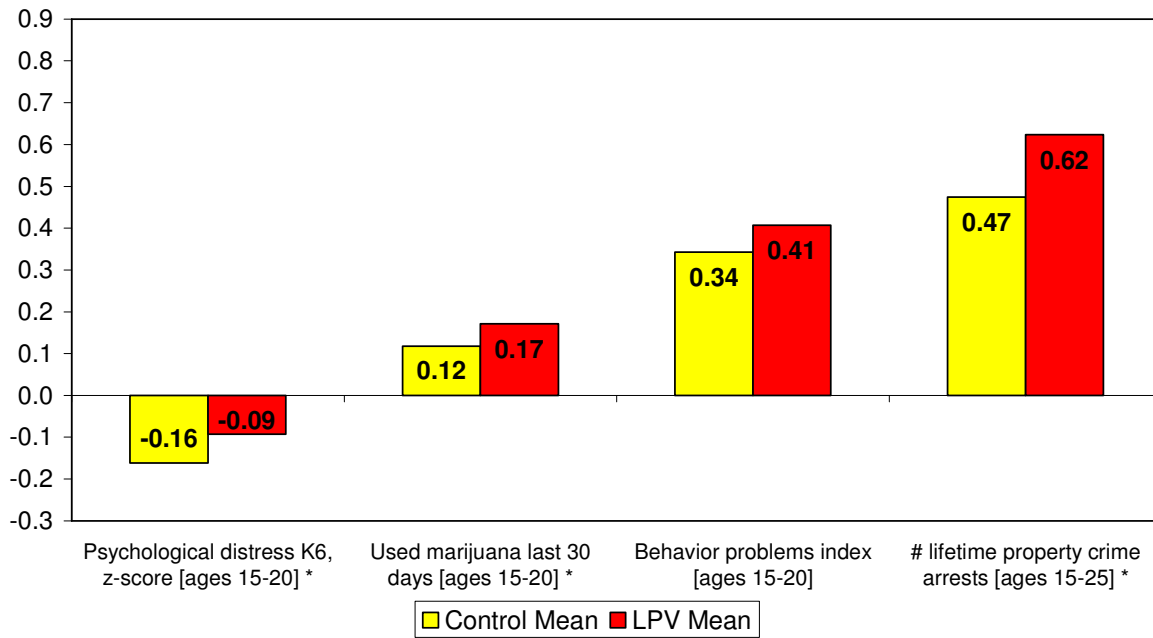


Source: Orr et al., 2003, and Kling, Liebman and Katz, 2007.

\* Indicates that the difference in outcome levels between the LPV group and the control group are statistically significant at the  $p < 0.05$  level.



**Figure 5: MTO's Effects on Outcomes for Male Youth**



Source: Orr et al., 2003, and Kling, Liebman and Katz, 2007.

\* Indicates that the difference in outcome levels between the LPV group and the control group are statistically significant at the  $p < 0.05$  level.

## References

- Clampet-Lundquist, Susan, Kathryn Edin, Jeffrey R. Kling, and Greg J. Duncan. (2005). "Moving At-Risk Kids To Better Neighborhoods: Why Girls Fare Better Than Boys." Unpublished manuscript.
- Devine, Deborah J., Robert W. Gray, Lester Rubin, and Lydia B. Taghavi (2003) Housing Choice Voucher Location Patterns: Implications for Participant and Neighborhood Welfare. Washington, D.C.: U.S. Department of Housing and Urban Development.
- General Accounting Office (2001) Federal Housing Assistance Programs: Costs and Housing Characteristics. Washington, D.C. Report GAO-01-901R.
- Kling, Jeffrey R., Jeffrey B. Liebman, and Lawrence F. Katz (2007) "Experimental Analysis of Neighborhood Effects." *Econometrica*. 75(1): 83-119.
- Kling, Jeffrey R., Jens Ludwig, and Lawrence F. Katz (2005) "Neighborhood Effects on Crime for Female and Male Youth: Evidence from a Randomized Housing Voucher Experiment." *Quarterly Journal of Economics*. 120(1):87-130.
- Khadduri, Jill, Mark Shroder, and Barry Steffen (1998) "Welfare Reform and HUD- Assisted Housing: Measuring the Extent of Needs and Opportunities." Paper presented at June 26 Conference on Managing Affordable Housing Under Welfare Reform: Reconciling Competing Demands. Washington, D.C.
- Ludwig, Jens and Jeffrey R. Kling (2007) "Is Crime Contagious?" *Journal of Law and Economics*. 50(3):491-518.
- Newman, Sandra J. and Ann B. Schnare (1997) "'... and a Suitable Living Environment': the Failure of Housing Programs to Deliver on Neighborhood Quality." *Housing Policy Debate*. 8(4): 703-41.
- Olsen, Edgar O. (2000) "The cost-effectiveness of alternative methods of delivering housing subsidies." Department of Economics, University of Virginia, Charlottesville, VA.
- Olsen, Edgar O. (2003) "Housing Programs for Low-Income Households." In *Means-Tested Transfer Programs in the United States*. Edited by Robert A. Moffitt. Chicago: University of Chicago Press. pp. 365-442.
- 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 Interim Impacts Evaluation. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.
- Popkin, Susan J., Tama Leventhal, and Gretchen Weismann. (2008) "Girls in the 'Hood: The Importance of Feeling Safe". Urban Institute Metropolitan Housing and Communities Center. <http://www.urban.org/publications/411636.html>.
- Quigley, John M. (2000) "A Decent Home: Housing Policy in Perspective." In *Brookings-Wharton Papers on Urban Affairs*. Edited by William G. Gale and Janet Rothenberg Pack. Washington, DC: Brookings Institution Press. pp. 53-100.
- Sanbonmatsu, Lisa, Jeffrey R. Kling, Greg J. Duncan and Jeanne Brooks-Gunn (2007) "Neighborhoods and Academic Achievement: Results from the Moving to Opportunity Experiment." *Journal of Human Resources*.
- Shroder, Mark, and Arthur Reiger (2000) "Vouchers Versus Production Revisited." *Journal of Housing Research*. 11(1): 91-107.
- U.S. Department of Housing and Urban Development (2000) Economic Cost Analysis of Different Forms of Assisted Housing. Office of Policy Development and Research, Issue Brief 11. Washington, D.C.: U.S. Department of Housing and Urban Development.