SUPPLEMENT TO "EXPERIMENTAL ANALYSIS OF NEIGHBORHOOD EFFECTS": WEB APPENDIX

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THIS WEB APPENDIX contains the following sections:

- B. Summary Indices and Mean Effect Sizes
- C. Calculation of Adjusted *p*-Values
- D. Comparison of Outcomes to the National Longitudinal Survey of Youth
- E. Additional Discussion of Internal Validity
- F. Additional Results for Adults
- G. Additional Results for Youth.

B. SUMMARY INDICES AND MEAN EFFECT SIZES

This paper reports results for outcomes that are summary indices, aggregating information across related outcomes. This aggregation improves statistical power to detect effects that are consistent across specific outcomes when these specific outcomes also have idiosyncratic variation. Focusing our interpretation on the indices helps us to form conclusions about the overall impact of the study and to reduce the number of statistical tests performed so as to reduce the chance of false positives. Specific outcomes are normalized in standardized units to study mean effect sizes of the indices relative to the standard deviation of the control group.

To illustrate the creation of a summary index, the 15 specific outcomes for adults are shown in Table B1. The first column (labeled "Raw") shows the mean of each outcome for the control group. In this paper, we focus on normalized transformations of each outcome (labeled "Norm"), where we subtract the mean of the control group and divide by the standard deviation of the control group. Let Y_k be the kth of K outcomes, let μ_k be the control group mean, and let σ_k be the control group standard deviation. The normalized outcome is $Y_k^* = (Y_k - \mu_k)/\sigma_k$. The summary index is $Y^* = \sum_k Y_k^*/K$. We use the control group standard deviation to compare the treatment groups to their counterfactual, because this metric does not depend on which treatment (experimental or Section 8) is being analyzed.

To calculate the normed measure, we reverse the sign for adverse outcomes (welfare, government income, distress, depression, anxiety, poor general health, physical limitations, asthma, obesity, and hypertension), so that a higher value of the normalized measure represents a more "beneficial" outcome. For earnings in 2001, the control group mean was 8,829 and the experimental – control (E – C) difference was 246—a difference of 0.02 standard deviations, relative to the control group standard deviation. For asthma

TABLE B1
COMPONENTS OF SUMMARY INDICES FOR ADULTS ^a

	С	M	Е	– C	S	– C
	Raw	Norm	Raw	Norm	Raw	Norm
	1	2	3	4	5	6
A. Economic self-sufficiency						
Employed	0.52	0	0.02	0.05	0.02	0.04
Earnings in 2001	8,829	0	262	0.02	-5	-0.00
Employed & not on welfare	0.45	0	0.03	0.06	0.02	0.04
Receiving welfare	0.30	0	-0.04*	0.08*	-0.05*	0.11^{*}
Government income in 2001	250	0	54	-0.01	-158	0.04
B. Physical health						
Overall health fair or poor	0.33	0	0.01	-0.03	0.02	-0.03
Trouble carrying/climbing	0.44	0	-0.02	0.04	-0.02	0.04
Asthma attack in past year	0.21	0	-0.01	0.02	-0.01	0.02
Obese	0.47	0	-0.05^{*}	0.10^{*}	-0.05*	0.09^{*}
Hypertension	0.30	0	0.02	-0.05	0.03	-0.06
C. Mental health						
Distress z-score	0.05	0	-0.09*	0.09^{*}	-0.04	0.04
Depression in past 12 months	0.16	0	-0.03*	0.08*	-0.02	0.05
Worrying	0.39	0	-0.02	0.05	-0.01	0.01
Calm and peaceful	0.46	0	0.07^{*}	0.13*	0.02	0.04
Sleep 7–8 hours nightly	0.45	0	0.04	0.07	0.02	0.03
D. Adult overall index		0		0.05*		0.03

^aNotation: Raw = unadjusted value; Norm = (unadjusted value - control mean)/(control standard deviation); sign reversed for risky behavior, mental health, and physical health; CM = control mean; E-C= experimental - control; S-C= Section 8- control; * indicates p-value < 0.05. Differences are based on unadjusted means, with no covariates. Summary index is the mean of normalized values of component items. The sample size for all adults is 3.484.

attack in the past year, the fraction who had an attack was 0.21 in the control group, with an E-C difference of -0.01. This is also a difference of 0.02 standard deviations, relative to the control group. This illustrates how we use this normalization to translate the magnitudes of different measures into standardized units.

The bottom row of Table B1 shows our summary index, which is the equally weighted average of the normalized transformations for each of the 15 outcomes. For 12 of the 15, the experimental group shows more beneficial outcomes than the control group, and the E-C difference for our summary index is 0.05 standard deviations. These results are based on unadjusted mean differences for simplicity of illustration, and are slightly larger in magnitude (with slightly smaller p-values) than our preferred regression-adjusted specification discussed in the text. For Table B1 and for the analyses in Table II, weights are calculated based on the assumption that if individuals were subsampled for any

one outcome in the index, then they were subsampled for all outcomes in the index.¹

We interpret this summary index as aggregating information about related constructs, but do not intend to suggest that the measures within a domain are merely proxies for a single latent factor. For the 15 key outcomes in our analysis of adults, there are three principal components with eigenvalues greater than 1. Promax rotated factors do correspond to the a priori designation of the 15 variables into the three domains prespecified: economic self-sufficiency, physical health, and mental health. There is considerable variation that is not explained by the first principal component within each domain: 39% in economic self-sufficiency, 54% in mental health, and 64% in physical health. Relatedly, instead of equal weights of 0.2 on each variable, a principal components approach would have weights that ranged from 0.17 to 0.24 in economic self-sufficiency, 0.12–0.25 in mental health, and 0.13–0.26 in physical health with lower weights on sleep, obesity, and hypertension. However, we do not believe that hypertension is less important than, say, asthma simply because it has lower correlation with self-reported overall health and with physical limitations (and consequently, with the first principal component of physical health); therefore, we do not adopt the principal component approach.

An alternative approach to estimating intent-to-treat (ITT) effects on these summary constructs is first to estimate the treatment effect for each outcome, standardized them, and then average them. This approach is very similar to that used for global significance testing in biostatistics (O'Brien (1984)) and for effect sizes in educational metanalysis (Hedges and Olkin (1985)). Let σ_k^2 equal the variance of Y_k for the control group. Equation (A1) defines the mean effect size τ for a set of K outcomes based on the treatment effect estimates and the control group standard deviations:

(A1)
$$\tau = \frac{1}{K} \sum_{k=1}^{K} \frac{\pi_{2k}}{\sigma_k}.$$

To calculate the sample variance of τ , we need to account for the covariance of the estimates π_{2k} . We obtain this covariance matrix using the seemingly unrelated regression system shown in Equation (A2). Point estimates for each outcome are identical to those obtained using Equation (1) for a specific out-

¹As discussed by Orr et al. (2003), subsampling was not conducted at the household level, but separately for youth surveys, testing, parental surveys, and blood pressure measurement depending on what data had been collected at the time of subsampling. The assumption used in creating weights for indices is that an individual subsampled for any outcome (e.g., from the youth survey, testing, or parental report of high school completion) was subsampled for all outcomes in the index. This simplification drops data for a few individuals with partially complete information, but introduces no bias.

	Summar	y Index	Mean Ef	fect Size
	E-C	S – C	E-C	S-C
	(i)	(ii)	(iii)	(iv)
Self-sufficiency	0.017	0.037	0.016	0.034
(5 measures)	(0.031)	(0.033)	(0.031)	(0.034)
Mental health	0.079*	0.029	0.084*	0.030
(5 measures)	(0.030)	(0.033)	(0.030)	(0.034)
Physical health	0.012	0.019	0.016	0.017
(5 measures)	(0.024)	(0.026)	(0.024)	(0.027)
Overall	0.036	0.028	0.039	0.027
(15 measures)	(0.020)	(0.022)	(0.020)	(0.022)

TABLE B2
SUMMARY INDEX AND MEAN EFFECT SIZE RESULTS FOR ADULTS^a

come. Let I_K be a $K \times K$ identity matrix and let Z and X be defined as in (1):

(A2)
$$Y = (I_K \otimes (Z \setminus X))\theta + v, \quad Y = (Y'_1, \dots, Y'_K)'.$$

We calculate a point estimate, standard error, and p-value for τ based on the parameters π_{2k} jointly estimated as elements of θ in (A2). These estimates treat σ_k as known. Kling and Liebman (2004) showed that delta method and bootstrap approaches yield very similar inferences using these statistical methods in a study of Moving to Opportunity (MTO) youth.

If there were no missing data on survey items and X contained only a constant, then the mean effect size in Equation (A1) would be identical to estimation using the summary index in Equation (1). Equation (A2) is a more direct summary of the treatment effects on each specific outcome and it incorporates regression adjustment for each outcome. The summary index approach is simpler to compute and can be represented graphically, which is why we use it in the paper.

A comparison of results from the two approaches is given in Table B2. As a practical matter, our results are not very sensitive to the specification for regression adjustment or to item nonresponse. Therefore, results from the two approaches are very similar.

C. CALCULATION OF ADJUSTED p-VALUES

This appendix describes our algorithm for calculating familywise adjusted *p*-values. It is based on the Westfall and Young (1993, Algorithm 2.8) free step-down resampling method, modified to utilize per-comparison *p*-values based on bootstrap estimates instead of asymptotic approximations.

For each parameter of interest, τ_j , define $\hat{\tau}_j$ as the estimated value from the actual data and define p_i^c as the asymptotic per-comparison p-value on

^aNotation is the same as Table B1. Estimates are the mean of the standardized intent-to-treat effects from Equation (A1). Standard errors are derived from Equation (A2), adjusted for correlation within individuals.

the test of the null hypothesis that τ_j equals zero. Define N as the number of bootstrap replications. The per-comparison bootstrap p-value for τ_j is p_j^b , and the Westfall–Young familywise adjusted p-value for τ_j is p_j^a .

```
/* Calculate bootstrap p-values (p_i^b) */
For j = 1 to J {
     p_{i}^{a} = p_{i}^{b} = 0
For i = 1 to N {
  Draw a sample of households with replacement.
   For j = 1 to J {
     Calculate \tau_{ii}^*, the estimated value of \tau_i^* for this bootstrap replication.
     Calculate the p-value r_{ij} for the test that \tau_{ij}^* = \hat{\tau}_j.
     If r_{ij} < p_i^c, then p_i^b = p_i^b + 1/N
}
/* Calculate p-values for each replication under null hypothesis (s_{ij}), ordering
  by r_{ij} and imposing uniform p-value distribution across replications for each
  of J parameters */
Define r_i as a vector of length N with elements r_{ij}
For j = 1 to J {
  Sort elements of r_i so r_{ki} is smallest value of r_i when k is 1
  For k = 1 to N {
     s_{ki} = (k - .5)/N
   }
}
/* Calculate adjusted p-value (p_i^a)^*/
For the J parameters in the family of tests, sort p_i^b such that j indexes family
  members in descending order of significance, so p_1^b is the smallest bootstrap
   p-value.
For k = 1 to N {
   q_{J+1} = 1
  For j = J to 1 {
     q_{j} = \min(s_{kj}, q_{j+1})
If q_{j} < p_{j}^{b}, then p_{j}^{a} = p_{j}^{a} + 1/N
}
```

/* Enforce monotonicity so that the order of outcomes according to bootstrap per-comparison *p*-values is weakly preserved according to adjusted *p*-values */

```
\begin{aligned} p_0^a &= 0 \\ \text{For } j &= 1 \text{ to } J \text{ } \{ \\ p_j^a &= \max(p_{j-1}^a, p_j^a) \\ \} \end{aligned}
```

D. COMPARISON OF OUTCOMES TO THE NATIONAL LONGITUDINAL SURVEY OF YOUTH (NLSY)

TABLE D1
RISKY BEHAVIOR OUTCOME MEANS^a

		MTO		NI	SY97
	Exp (1)	Sec8 (2)	Con (3)	Adjusted (4)	Unadjusted (5)
A. Females					
Used marijuana in past 30 days	0.07	0.08	0.13	0.10	0.16
Smoked in past 30 days	0.14	0.14	0.19	0.25	0.33
Had alcohol in past 30 days	0.14	0.14	0.21	0.26	0.44
Been or gotten someone pregnant	0.25	0.33	0.27	0.29	0.14
B. Females—gifted dropped					
Used marijuana in past 30 days	0.07	0.08	0.14	0.10	0.15
Smoked in past 30 days	0.14	0.11	0.20	0.27	0.33
Had alcohol in past 30 days	0.13	0.12	0.23	0.26	0.43
Been or gotten someone pregnant	0.26	0.32	0.27	0.29	0.14
C. Males					
Used marijuana in past 30 days	0.19	0.21	0.12	0.23	0.18
Smoked in past 30 days	0.24	0.29	0.13	0.33	0.33
Had alcohol in past 30 days	0.21	0.24	0.14	0.32	0.46
Been or gotten someone pregnant	0.16	0.19	0.12	0.19	0.07
D. Males—gifted dropped					
Used marijuana in past 30 days	0.18	0.23	0.13	0.23	0.18
Smoked in past 30 days	0.22	0.30	0.12	0.36	0.33
Had alcohol in past 30 days	0.19	0.22	0.13	0.33	0.45
Been or gotten someone pregnant	0.17	0.17	0.12	0.19	0.07

^aNotation: Exp, experimental; Sec8, Section 8; Con, control. Columns 1–3 are unadjusted means using MTO survey weights. Column 5 is the unadjusted sample mean of NLSY97 round 3 outcomes for ages 15–20 using NLSY97 survey weights. Using the same NLSY97 data, column 4 contains the predicted values from regressions of outcomes on covariates, based on MTO covariate means. Covariates were census tract poverty rate, sixth order polynomial in age, race White, race other non-Black, adult head age 19–29, adult head age 30–39, adult head age 40–49, household size 2, household size 3, household size 4, adult head has car, adult head employed, adult head never married, adult head GED or high school graduate, adult head receiving welfare, missing parental interview, youth gifted classes, youth remedial classes, youth disabled, youth special medical needs. MTO covariates are from the MTO baseline survey. NLSY97 age and census tract poverty rate are as of round 3 interview; other NLSY covariates are from round 1, recoded to match MTO baseline covariates. Regressions were estimated separately for females and males, and evaluated at the gender-specific means of the MTO baseline covariates (except missing parental interview indicator evaluated at NLSY97 mean). Panels B and D drop observations where youth had earlier been in gifted classes to illustrate the lack of sensitivity to the covariate "imbalance" shown in Table A2.

E. ADDITIONAL DISCUSSION OF INTERNAL VALIDITY

Regarding the internal validity of these results, two key concerns include the use of self-reports and the possibility of attrition bias. Most of the outcomes used in this paper were self-reported, and neither the participants nor the interviewers were blinded to the intervention. Thus, it is possible that the estimated impacts are due to some sort of reporting bias. However, the consistency between survey and administrative self-sufficiency estimates discussed in the main text and the negligible estimates of treatment effects for many outcomes help rule out the most obvious types of reporting bias. Given that the name of the demonstration is "Moving to Opportunity" and that it was promoted by the Department of Housing and Urban Development (HUD) as a pathway to better jobs, one might expect employment and earnings to be the most likely outcomes to be exaggerated by the treatment groups, but this did not turn out to be the case. Also, in related MTO research studying youth arrests (Kling, Ludwig, and Katz (2005)), self-reported and administrative data have generated similar results.

Additional supporting evidence finds strong beneficial effects on the mental health of female youth. Female adults and youth may have experienced similar outcomes from living in the same neighborhood, and the youth tend to have less awareness that their household was randomly assigned to a group in the MTO demonstration 5 years ago and seem even less likely to provide biased reports.

Because some participants and interviewers were aware of treatment status, it is possible that some survey responses reflected what the participants thought the investigators wanted to hear rather than the truth or that interviewers themselves (though not told whether a respondent was a member of the intervention group) might surmise which group the respondent was in from where the person lives and somehow administer the questions or record the answers differently. If respondents were giving positive responses because they "won the lottery," then we would have expected the Section 8 group (which received the most desirable lottery outcome, an unrestricted voucher) to report more positive responses than the experimental group (which received a geographically restricted voucher), but this did not occur for any outcome. For social desirability bias to be consistent with the results for youth, it would have to be very complex—positive bias for female substance use and mental health, negligible for female physical health, and negative for males—and the available evidence is not consistent with a broad, systematic effect of this sort. On measures where one might expect a strong social desirability bias, such as obesity, poor health, dropping out of high school, or being idle (not working or in school), there are no significant treatment effects for youth. Moreover, using the same type of demographic adjustments as in Table A1, we find that the MTO treatment groups are within a couple of percentage points of similar youth in the NLSY97 on these measures (see Table D1), whereas social desirability bias might predict that they would report significantly more desirable behavior. A lack of systematic social desirability bias between the treatment and control groups is consistent with a low level of awareness among youth about treatment status from a housing voucher lottery that their parents participated in when they were ages 8–16 and how it affected their residential location 4–7 years later when they were 15–20 years old. To the extent that outcomes like risky behavior are underreported by a constant factor (say, two-thirds of the time) in all groups, the lower prevalence in self-reported data does reduce the statistical power to detect treatment effects, but does not bias their direction or result in the appearance of treatment effects when the true effects are zero.

In terms of potential attrition bias, our effective survey response rate was 90 percent and it is possible that the characteristics of those who were not interviewed differed systematically across the three groups. However, response rates were similar across the randomly assigned groups, and our estimation models control for baseline characteristics so as to reduce the sensitivity of our results to differential attrition. Of course, it is also possible that the individuals who were not interviewed in the three groups differed in their unobservable characteristics. Kling and Liebman (2004) conducted extensive bounds calculations for youth outcomes from the MTO interim evaluation. They showed that worse case assumptions about missing data can change the results a great deal, but that the signs of summary measure estimates do not change under less extreme assumptions about missing data.

We have used the administrative data on employment, earnings, and welfare to compare estimates for full sample and for the sample with which we completed surveys and did not find significant differences. This analysis was based on the four states with individual-level Unemployment Insurance (UI) data, and the five states with individual-level welfare data. For example, the experimental group ITT estimate of the 5 years after random assignment (RA) was 0.024 for employment and -0.017 for welfare in the full sample, and 0.038 for employment and -0.022 for welfare in the sample with completed surveys (using survey weights), with p-values on the differences of 0.25 for employment and 0.62 for welfare. The point estimates of the employment rates for the survey sample were consistently higher than for the full administrative sample, and the p-values on this contrast for the six employment and earnings measures in Table IV ranged from 0.40 to 0.12. Further comparisons of the full sample to everyone we attempted to interview regardless of completion status (and therefore involving no attrition) found differences just as large or larger. Thus even these modest and statistically insignificant differences seem more likely to be the result of sampling variation from our subsampling of nonrespondents rather than of attrition bias.

F. ADDITIONAL RESULTS FOR ADULTS

TABLE F1
LIST OF TABLES FOR ADULT RESULTS

Table Number	Title
F2	Effects on Selected Mediating Factors
F3	Effects on Economic Self-Sufficiency—Self-Reported
F4	Effects on Earnings and Welfare Receipt—Administrative Data
F5	Effects on Mental Health and Physical Health
F6	Effects on Economic Self-Sufficiency and Health by Age at Randomization
F7	Effects on Employment by Age at Randomization—Administrative Data
F8	Effects on Earnings by Age at Randomization—Administrative Data
F9	Effects on Voucher Use, Housing and Neighborhood Quality, and Safety
F10	Effects on Social Networks—Self-Reported
F11	Effects on Education, Training, Health Behaviors, and Health Care Access—Self-Reported
F12	Effects on Mobility and Housing Assistance, Access to Transportation, and Relative Income
F13	Baseline Characteristics of Adult Survey Respondents and the Full Adult Sample
F14	Effects on Change in Employment Within Zip Code Between 1994 and 2001

 $\label{eq:TABLEF2} \textbf{TABLE F2}$ Effects on Selected Mediating Factors a

		Experimental versus Control					Section 8 versus Control			
	CM (i)	ITT (ii)	TOT (iii)	CCM (iv)	N (v)	ITT (vi)	TOT (vii)	CCM (viii)	N (ix)	
Average census tract										
Poverty rate	0.448	-0.119*	-0.256*	0.449	2,533	-0.097*	-0.160*	0.463	2,073	
•		(0.007)	(0.012)			(0.006)	(0.010)			
Poverty rate below 30% ^b	0.132	0.345*	0.739*	0.131	2,533	0.242*	0.401^{*}	0.130	2,073	
		(0.018)	(0.031)			(0.020)	(0.031)			
Average census tract share										
On public assistance ^b	0.228	-0.063*	-0.136*	0.227	2,533	-0.055*	-0.091*	0.239	2,073	
•		(0.004)	(0.008)			(0.004)	(0.006)			
Of adults employed ^b	0.384	0.074*	0.159*	0.386	2,532	0.056*	0.093*	0.379	2,072	
• •		(0.004)	(0.008)			(0.004)	(0.006)			
Workers in professional	0.215	0.041*	0.087*	0.207	2,530	0.016*	0.027*	0.210	2,071	
and managerial occupations ^b		(0.004)	(0.008)			(0.004)	(0.007)			
Respondent saw illicit	0.457	_0 118*	-0.253*	0.432	2 481	_0 104*	_0 171*	0.451	2 023	
drugs being sold or used in neighborhood during past 30 days ^c	0.437		(0.046)		2,401		(0.039)	0.431	2,023	

Continues

TABLE F2—Continued

		Experi	mental ver	sus Con	trol	Sect	tion 8 versu	s Contr	ol
	CM	ITT	TOT	CCM	N	ITT	TOT	CCM	N
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
Average census tract share									
Minority ^b	0.898	-0.074*	-0.159*	0.886	2,533	-0.025*	-0.042*	0.896	2,073
		` /	(0.014)			` /	(0.012)		
Minority below 50% ^b	0.058			0.064	2,533		0.010	0.062	2,073
		(0.011)	(0.024)			(0.010)	(0.017)		
Moved at least 10 miles	0.106	0.054*	0.116*	0.154	2,424	0.028	0.046	0.111	2,005
from baseline address ^b		(0.016)	(0.034)			(0.018)	(0.030)		
Housing has problem with	0.541	-0.049*	-0.104*	0.479	2,511	-0.014	-0.024	0.500	2,058
mice, rats, or cockroachesc		(0.022)	(0.046)			(0.023)	(0.039)		
Has a friend who graduated	0.518	0.053*	0.113*	0.513	2,334	0.032	0.054	0.511	1,917
college or who earns		(0.022)	(0.047)			(0.025)	(0.042)		
more than \$30,000 a vear ^c									
Attends church or religious	0.426	-0.031	-0.066	0.464	2,521	0.008	0.014	0.438	2,064
service at least once a month ^c		(0.021)	(0.046)			(0.024)	(0.039)		

^aNotation: CM, control mean; ITT, intent-to-treat is from Equation (1), using covariates in Table A1 and weights described in the text; TOT, treatment-on-treated from Equation (2) estimated by two stage least squares with treatment group assignment indicator variables as the instruments for the treatment take-up indicator variables; CCM, control complier mean, as defined in the text. * denotes statistically significant at the 5 percent level. Standard errors, adjusted for heteroscedasticity, are in parentheses.

TABLE F3
EFFECTS ON ECONOMIC SELF-SUFFICIENCY—SELF-REPORTED^a

		Expe	rimental ver	rsus Cont	rol	Sec	Section 8 versus Control				
	CM (i)	ITT (ii)	TOT (iii)	CCM (iv)	N (v)	ITT (vi)	TOT (vii)	CCM (viii)	N (ix)		
Adult employed and not on TANF	0.453	0.019 (0.020)	0.040 (0.044)	0.453	2,521	0.015 (0.023)	0.025 (0.038)	0.449	2,066		
Employed	0.520	0.015 (0.021)	0.033 (0.044)	0.533	2,525	0.024 (0.023)	0.040 (0.038)	0.522	2,068		
Earnings in 2001	8,839	125 (449)	268 (960)	9,108	2,386	-5 (486)	_9 (811)	9,305	1,950		
Receiving TANF	0.295	-0.021 (0.019)	-0.046 (0.040)	0.325	2,519	-0.031 (0.021)	-0.051 (0.034)	0.320	2,063		
Income received from government sources during 2001	2,484	194 (184)	419 (398)	2,248	2,381	-110 (205)	-181 (336)	2,297	1,946		

^aTANF denotes Temporary Assistance for Needy Families. All other notation is defined in the footnote to Table F2.

^bAddress history from tracking file linked to Census data. Census tract characteristics are the average for an individual's addresses from randomization through 2001 weighted by duration. Except for "managerial and professional occupations" (for which only 2000 Census data were used due to differences in the occupation classification used for the 1990 Census and 2000 Census), values for intercensus years are interpolated.

^cSelf-reported.

TABLE F4
EFFECTS ON EARNINGS AND WELFARE RECEIPT—ADMINISTRATIVE DATA^a

		Expe	rimental ve	rsus Con	itrol	Sec	tion 8 versu	ıs Contro	ı
	CM	ITT	TOT	CCM	N	ITT	TOT	CCM	N
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
A. Employment									_
Fraction of quarters employed									
In 2001	0.508	-0.017	-0.036 (0.035)	0.550	2,910	0.014 (0.017)	0.022 (0.028)	0.546	2,411
In years 1–5 after RA	0.422	-0.006	-0.012	0.468	2,455	0.001	0.001	0.447	2,039
In year 5 after RA	0.499	0.002	(0.028) 0.005 (0.039)	0.532	2,455	(0.014) 0.008 (0.020)	(0.023) 0.013 (0.032)	0.531	2,039
B. Earnings		(/	(,			(,		
In 2001	8,490	-287 (400)	-612 (853)	9,062	2,910	41 (441)	67 (714)	8,899	2,411
Annualized earnings in years 1–5 after RA	5,948	-6 (295)	-13 (630)	5,622	2,455	90 (345)	143 (546)	5,481	2,039
Earnings in year 5 after RA	7,924	128 (417)	273 (890)	7,475	2,455	370 (471)	587 (744)	7,313	2,039
C. TANF receipt Fraction of quarters									
received TANF In 2001	0.263	-0.001		0.281	2,912	0.005	0.008	0.265	2,407
In year 5 after RA	0.276	-0.011	(0.031) -0.024 (0.040)	0.293	2,041	(0.016) 0.018 (0.021)	(0.026) 0.029 (0.033)	0.264	1,569
D. TANF amount Amount of TANF		(0.016)	(0.040)			(0.021)	(0.055)		
Received in 2001	1,406	-44	-92	1,653	2,912	-92	-150	1,493	2,407
Payments received in year 5 after RA	1,316	(88) -116 (96)	(187) -263 (219)	1,500	2,041	(94) 7 (110)	(153) 11 (176)	1,242	1,569

^aNotation: RA, random assignment; TANF, Temporary Assistance for Needy Families. All other notation is defined in Table F2. Administrative data on employment and earnings are from state unemployment insurance (UI) records and data on TANF receipt are from state and county welfare agencies. Data were obtained for California (LA county only for TANF), Illinois, Maryland, Massachusetts, and New York. TANF data were analyzed at the individual level. UI estimates are based on cell data as described in the text, controlling for site and mean randomization quarter, baseline education, and baseline work status.

 $\label{eq:table F5} \textbf{Effects on Mental Health and Physical Health}^a$

		Expe	rimental ver	sus Con	trol	Section 8 versus Control			
	CM	ITT	TOT	CCM	N	ITT	TOT	CCM	N
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
A. Mental health									
Psychological distress, K6 <i>z</i> -score ^b	0.050		-0.196^* (0.099)		2,531		-0.054 (0.085)	0.028	2,069
Probability of major depressive episode ^b	0.164	-0.027 (0.014)	-0.059 (0.031)		2,529		-0.022 (0.027)	0.165	2,070
Worried, tense, or anxious ^b	0.393		-0.061 (0.047)	0.456	2,496		-0.013 (0.040)	0.411	2,037
Calm and peaceful ^b	0.466	0.061* (0.022)		0.443	2,530		0.024 (0.040)	0.487	2,069
Sleeps at least 7 and <9 hours per night ^b	0.450	0.033 (0.022)		0.447	2,503	0.016 (0.025)		0.443	2,046
B. Physical health									
Has fair or poor health ^b	0.330	0.017 (0.019)			2,530	0.011 (0.021)		0.310	2,073
Has trouble carrying groceries or climbing stairs ^b	0.436		-0.039 (0.045)				-0.034 (0.038)	0.418	2,070
Had an asthma or wheezing attack during past year ^b	0.212	-0.013 (0.018)	-0.027 (0.038)	0.206	2,529		-0.017 (0.032)	0.208	2,071
Obese, BMI $\geq 30^{\text{b}}$	0.468	-0.048* (0.022)					-0.077 (0.041)	0.491	1,999
Has hypertension, ^c $SBP \ge 140$ or $DBP \ge 90$	0.297	0.022 (0.020)	0.048 (0.045)	0.241	2,315	0.022	0.037 (0.039)	0.267	1,900

^a Notation: SBP, systolic blood pressure; DBP, diastolic blood pressure. All other notation is defined in Table F2.

^bSelf-reported.

^cDirect measurement.

TABLE F6
EFFECTS ON ECONOMIC SELF-SUFFICIENCY AND HEALTH BY AGE AT RANDOMIZATION^a

		Age <33 at	RA		Age ≥33 at	RA	Diff. b	y Age
	CM	E – C ITT	S – C ITT	CM	E – C ITT	S – C ITT	E – C ITT	S – C ITT
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
A. Economic self-suffic	eiency							
Adult employed and	0.467	0.050	0.021	0.439	-0.013	0.010	-0.063	-0.011
not on TANF ^b		(0.030)	(0.033)		(0.028)	(0.031)	(0.040)	(0.045)
Employed ^b	0.555	0.032	0.032	0.484	-0.001	0.015	-0.033	-0.017
		(0.030)	(0.033)		(0.028)	(0.031)	(0.041)	(0.045)
Earnings in 2001 ^b	9,643	589	-508	7,980	-362	486	-951	994
· ·		(659)	(691)		(609)	(689)	(896)	(980)
Receiving TANF ^b	0.334	-0.036	-0.042	0.254	-0.006	-0.020	0.030	0.022
· ·		(0.027)	(0.030)		(0.026)	(0.028)	(0.037)	(0.040)
Income received from	2,420	-84	-382	2,552	479	179	563	561
government sources		(252)	(277)		(269)	(295)	(370)	(400)
during 2001 ^b		` ′	. ,			` ′	` ′	. ,
D.M. (11, 14)								
B. Mental health	0.021	0.000	0.051	0.125	0.005	0.012	0.005	0.020
Psychological distress, - K6 <i>z</i> -score ^b	-0.021		-0.051	0.125	-0.095	-0.012	-0.005	0.039
	0.152	(0.064)	(0.069)	0.177	(0.067)	(0.075)	(0.092)	(0.102)
Probability of major	0.155	-0.021	-0.013	0.177	-0.035	-0.014		-0.001
depressive episode ^b	0.260	(0.020) -0.015	(0.021) 0.026	0.420	(0.021) -0.043	(0.024) -0.043	(0.029)	(0.032) -0.069
Worried, tense, or anxious ^b	0.300	-0.013 (0.030)		0.429	-0.043 (0.031)			-0.069 (0.047)
Calm and peaceful ^b	0.474	(0.050) 0.051	(0.033) 0.025	0.457	0.031)	(0.034) 0.003	(0.043) 0.022	-0.023
Caim and peaceful	0.474	(0.031)	(0.023)	0.437	(0.073)	(0.003)	(0.044)	-0.023 (0.048)
Sleeps at least 7 and	0.479	0.031)	0.027	0.420	0.020	0.005	,	-0.021
<9 hours per night ^b	0.479	(0.043)	(0.027)	0.420	(0.020)	(0.005)	(0.045)	-0.021 (0.049)
< 9 flours per flight		(0.031)	(0.034)		(0.032)	(0.055)	(0.043)	(0.049)
C. Physical health								
Has fair or poor	0.248	-0.012	-0.030	0.416	0.046	0.054	0.057	0.084*
health ^b		(0.026)	(0.028)		(0.029)	(0.033)	(0.039)	(0.043)
Has trouble carrying	0.332	-0.038	-0.043	0.545	0.001	0.002	0.039	0.045
groceries or		(0.029)	(0.031)		(0.030)	(0.033)	(0.042)	(0.045)
climbing stairs ^b								
Had an asthma or	0.205	-0.028	-0.031	0.221	0.003	0.011	0.031	0.042
wheezing attack		(0.025)	(0.026)		(0.025)	(0.028)	(0.035)	(0.038)
during past year ^b								
Obese, BMI $\geq 30^{b}$	0.452	-0.056	-0.069*	0.484	-0.040	-0.023	0.015	0.047
		(0.031)	(0.034)		(0.032)	(0.035)	(0.044)	(0.049)
Has hypertension, ^c	0.227	-0.030	-0.010	0.369	0.075*	0.055	0.104*	0.064
$SBP \ge 140 \text{ or}$		(0.027)	(0.030)		(0.031)	(0.035)	(0.041)	(0.046)
$DBP \ge 90$								

^aAll notation used in this table has been defined elsewhere. Intent-to-treat is from Equation (2), where X also contains an indicator for age <33 and Z contains interactions of age <33 and age ≥33 with the treatment indicator. The total number of completed surveys was 1,793 for adults under age 33 and 1,733 for those 33 and older.

^bSelf-reported.

^cDirect measurement.

TABLE F7
EFFECTS ON EMPLOYMENT BY AGE AT RANDOMIZATION—ADMINISTRATIVE DATA^a

		Age <33 at	RA		Age ≥33 at	RA	Diff. b	y Age					
	CM	E – C ITT	S – C ITT	CM	E – C ITT	S – C ITT	E – C ITT	S – C ITT					
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)					
A. Fraction of quarter	s emple	oyed by ca	lendar yea	r, 4 sta	tes			_					
1998	0.473	-0.015	-0.003	0.378	-0.022	0.030	-0.008	0.034					
		(0.024)	(0.027)		(0.024)	(0.027)	(0.034)	(0.038)					
1999	0.520	0.010	-0.011	0.394	-0.006	0.050	-0.017	0.061					
		(0.024)	(0.028)		(0.024)	(0.028)	(0.034)	(0.039)					
2000	0.537	0.055*	0.011	0.440	-0.009	0.026	-0.063	0.014					
		(0.025)	(0.028)		(0.026)	(0.028)	(0.036)	(0.040)					
2001	0.549	0.029	0.030	0.456	-0.017	-0.002	-0.046	-0.031					
		(0.026)	(0.029)		(0.026)	(0.029)	(0.036)	(0.041)					
B. Fraction of quarter	B. Fraction of quarters employed by year since RA, 4 states												
Year 1 after RÂ	0.363	-0.036	-0.057*	0.285	-0.007	0.016	0.029	0.072*					
		(0.022)	(0.024)		(0.022)	(0.024)	(0.031)	(0.034)					
Year 2 after RA	0.433	-0.025	-0.055	0.324	0.005	0.033	0.030	0.088*					
		(0.025)	(0.029)		(0.025)	(0.027)	(0.035)	(0.039)					
Year 3 after RA	0.462	0.024	-0.019	0.375	-0.000	0.032	-0.024	0.051					
		(0.026)	(0.030)		(0.026)	(0.028)	(0.037)	(0.041)					
Year 4 after RA	0.490	0.055*	0.029	0.407	0.002	0.055	-0.052	0.026					
		(0.027)	(0.030)		(0.026)	(0.030)	(0.038)	(0.042)					
Year 5 after RA	0.544	0.055*	-0.005	0.439	-0.013	0.023	-0.068	0.028					
		(0.027)	(0.031)		(0.027)	(0.030)	(0.038)	(0.043)					
C. Employment in 200	1 from	administr	ative versu	ıs surve	ey data								
Any positive earnings		0.017	0.055		-0.017	-0.020	-0.035	-0.075					
in 2001, 4 states		(0.028)	(0.031)		(0.028)	(0.031)	(0.039)	(0.044)					
Any positive earnings	0.690	0.007	0.006	0.570	-0.006	0.006	-0.013	0.001					
in 2001, 4 states ^b		(0.033)	(0.039)		(0.034)	(0.038)	(0.047)	(0.055)					
Any positive earnings	0.701	0.013	0.014	0.578	-0.027	-0.007	-0.040	-0.021					
in 2001, 5 states ^b		(0.028)	(0.034)		(0.029)	(0.033)	(0.041)	(0.047)					

 $^{^{}a}$ All notation has been defined elsewhere. Intent-to-treat is from Equation (1), where X also contains an indicator for age <33 and Z contains interactions of age <33 and age \ge 33 with the treatment indicator. Administrative data on individual earnings and employment are from California, Illinois, Maryland, and New York unemployment insurance records. Records were obtained for 1,615 adults less than 33 years old and 1,560 adults 33 and older.

^bSelf-reported.

 $\label{table F8} \textbf{TABLE F8}$ Effects on Earnings by Age at Randomization—Administrative Data a

		Age <33 at 1	RA		Age ≥33 at l	RA	Diff. b	by Age
	CM	E – C ITT	S – C ITT	CM	E – C ITT	S – C ITT	E – C ITT	S – C ITT
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
A. Annual earnin	gs by ca	lendar year.	, 4 states					
1998	5,377	68	-220	5,140	8	588	-60	808
		(399)	(439)		(454)	(496)	(605)	(659)
1999	6,596	490	-302	6,000	244	958	-246	1,260
		(486)	(512)		(539)	(594)	(728)	(781)
2000	7,630	1,117*	-247	6,956	-171	253	-1,288	501
		(540)	(574)		(547)	(594)	(768)	(822)
2001	8,870	480	-441	7,252	-348	344	-828	785
		(608)	(662)		(555)	(630)	(820)	(909)
B. Annual earning	gs by ye	ar since RA	, 4 states					
Year 1 after RA	3,885	-489	-857*	3,571	34	330	523	1,187*
		(350)	(360)		(376)	(413)	(514)	(543)
Year 2 after RA	4,995	-377	-950*	4,581	441	430	818	1,380*
		(436)	(439)		(494)	(495)	(665)	(661)
Year 3 after RA	5,692	544	-438	5,314	381	850	-163	1,288
		(490)	(509)		(518)	(558)	(718)	(757)
Year 4 after RA	6,595	1,011	256	6,199	-68	1,049	-1,078	793
		(560)	(585)		(555)	(624)	(791)	(851)
Year 5 after RA	7,727	1,748*	300	7,276	-538	444	-2,285*	144
		(610)	(644)		(594)	(684)	(857)	(929)
C. Earnings in 20	01 from	administrat	tive versus	survey	data			
Earnings in 2001,	8,870	480	-441	7,252	-348	344	-828	785
4 states		(608)	(662)		(555)	(630)	(820)	(909)
Earnings in 2001,	8,869	864	-765	7,550	4	515	-861	1,280
4 states ^b		(718)	(746)		(675)	(778)	(982)	(1,087)
Earnings in 2001,	9,643	589	-508	7,980	-362	486	-951	994
5 states ^b		(659)	(691)		(609)	(689)	(896)	(980)

 $^{^{}a}$ All notation has been defined elsewhere. Intent-to-treat (ITT) is from Equation (1), using covariates in Table A1 and weights described in the text, where X also contains an indicator for age <33 and Z contains interactions of age <33 and age ≥33 with the treatment indicator. Administrative data on individual earnings and employment are from California, Illinois, Maryland, and New York unemployment insurance records. Records were obtained for 1,615 adults less than 33 years old and 1,560 adults 33 and older.

^bSelf-reported.

 $\label{thm:convolution} TABLE\ F9$ Effects on Voucher Use, Housing and Neighborhood Quality, and Safety

		Experimental	– Control	Section 8 -	- Control
	CM (i)	ITT ^a (ii)	N (iii)	ITT ^a (iv)	N (v)
A. Used MTO Voucher Moved using MTO voucher ^b	0.000	0.467* (0.015)	2,533	0.602* (0.017)	2,073
B. Census tract characteristics					
Average census tract poverty rate ^b	0.448	-0.119* (0.007)	2,533	-0.097^* (0.006)	2,073
Average census tract share on public assistance ^b	0.228	-0.063* (0.004)	2,533	-0.055^{*} (0.004)	2,073
Average census tract share of adults employed ^b	0.384	0.074* (0.004)	2,532	0.056* (0.004)	2,072
Average census tract share workers in professional and managerial occupations ^b	0.215	0.041* (0.004)	2,530	0.016* (0.004)	2,071
C. Neighborhood quality					
Very or somewhat satisfied with neighborhood ^c	0.476	0.136* (0.022)	2,510	0.106* (0.024)	2,056
Neighborhood problems index ^c	0.539	-0.126^{*} (0.017)	2,510	-0.093^{*} (0.019)	2,056
Negative exterior conditions of buildings and neighborhood $^{\rm d}$	0.201	-0.038* (0.011)	2,359	-0.029* (0.012)	1,921

Continues

TABLE F9—Continued

		Experimental	l-Control	Section 8 -	- Control
	CM	ITT ^a	N	ITTa	N
	(i)	(ii)	(iii)	(iv)	(v)
D. Safety					
Streets are safe or very safe during the day ^c	0.758	0.090*	2,501	0.090*	2,049
		(0.018)		(0.018)	
Streets are safe or very safe at night ^c	0.554	0.141*	2,480	0.091*	2,031
		(0.022)		(0.024)	
Member of household victimized by crime	0.213	-0.042*	2,530	-0.055*	2,071
during past 6 months ^c		(0.017)		(0.018)	
Saw drugs sold or used during past 30 days ^c	0.457	-0.118*	2,481	-0.104*	2,023
		(0.022)		(0.024)	
Police not coming when called is a	0.342	-0.128*	2,338	-0.096*	1,913
problem in the neighborhood ^c		(0.020)		(0.023)	
E. Housing quality					
Unit is in poor or fair condition ^c	0.473	-0.096*	2,504	-0.067*	2,051
•		(0.022)		(0.024)	
Home problems index ^c	0.340	-0.050^*	2,512	-0.027	2,059
•		(0.013)		(0.014)	
Interior of the home negative conditions	0.190	-0.013	2,397	-0.016	1,950
index ^d		(0.010)		(0.011)	
Exterior of the home negative conditions	0.170	-0.034*	2,415	-0.028*	1,969
index ^d		(0.011)	•	(0.012)	•

 $^{^{}a}$ All notation has been defined elsewhere. Intent-to-treat is from Equation (1), using covariates in Table A1 and weights described in the text.

^bAddress history from tracking file linked to Census data on tract characteristics. Census tract characteristics are averaged across individual addresses since RA, weighted by duration. Except for "professional and managerial occupations" (for which only 2000 Census data were used due to differences in 1990 and 2000 occupation classifications), the characteristics of an address are a linear interpolation from the 1990 Census and 2000 Census.

^cSelf-reported.

dObserved.

TABLE F10
EFFECTS ON SOCIAL NETWORKS—SELF-REPORTED

		Experimental	- Control	Section 8 -	- Control
	CM	ITTa	N	ITTa	N
	(i)	(ii)	(iii)	(iv)	(v)
Has three or more close friends	0.351	0.017	2,525	0.006	2,071
		(0.021)		(0.023)	
Visits friends or relatives in their home	0.426	-0.023	2,525	-0.021	2,064
at least once a week		(0.022)		(0.024)	
Visits friends or relatives in own home	0.428	-0.023	2,525	0.006	2,061
at least once a week		(0.022)		(0.024)	
Has diffuse network of friends in which	0.276	-0.016	2,520	0.025	2,062
only a few friends know each other		(0.019)		(0.022)	
Found current job through a friend,	0.075	0.002	2,490	0.018	2,041
relative, or acquaintance living in neighborhood		(0.012)		(0.013)	
Has no friends who live in the	0.588	0.022	2,527	0.048*	2,067
neighborhood		(0.022)		(0.024)	
Chats with neighbor at least once a week	0.492	0.020	2,523	0.015	2,064
<u> </u>		(0.022)		(0.024)	
Has a friend who graduated college or	0.518	0.053*	2,334	0.032	1,917
earns more than \$30,000 a year		(0.022)		(0.025)	
Attends church or religious service at	0.426	-0.031	2,521	0.008	2,064
least once a month		(0.021)		(0.024)	
Believes people can be trusted	0.097	0.011	2,505	0.006	2,056
		(0.014)		(0.015)	
Experienced discrimination in a shop,	0.244	-0.038*	2,532	-0.045*	2,072
restaurant, the neighborhood, child's school, or by police during the past 6 months		(0.018)		(0.019)	

 $^{^{}a}$ All notation has been defined elsewhere. Intent-to-treat (ITT) is from Equation (1), using covariates in Table A1 and weights described in the text.

TABLE F11
EFFECTS ON EDUCATION, TRAINING, HEALTH BEHAVIORS, AND HEALTH CARE ACCESS—SELF-REPORTED

		Experiment Contr		Section 8 Cont	
	CM	ITT ^a	N	ITT ^a	N
	(i)	(ii)	(iii)	(iv)	(v)
A. Education and training					
Years of education completed	11.047	0.020	2,516	-0.104	2,057
•		(0.096)		(0.107)	
Has high school diploma or GED	0.586	-0.006	2,524	0.020	2,063
		(0.017)		(0.020)	
Participated in job training since	0.181	-0.018	2,523	0.017	2,064
September 2000		(0.016)		(0.019)	
B. Exercise and nutrition					
Moderate physical exercise, fraction	0.471	0.025	2,516	0.049*	2,064
of week engaged in		(0.018)		(0.020)	
Diet, fraction of week ate green	0.670	0.030*	2,511	0.019	2,059
vegetables or fruit		(0.014)		(0.015)	
C. Smoking and drinking					
Smoking	0.293	0.010	2,512	0.005	2,059
		(0.020)		(0.022)	
Binge drinking during past year	0.073	0.003	2,483	0.006	2,035
		(0.012)		(0.013)	
D. Health care access					
Has health insurance	0.849	0.018	2,528	0.006	2,067
		(0.017)	*	(0.018)	,
Has a usual place to go when sick	0.945	$-0.008^{'}$	2,530	0.011	2,072
		(0.011)		(0.011)	

 $^{^{}a}$ All notation has been defined elsewhere. Intent-to-treat (ITT) is from Equation (1), using covariates in Table A1 and weights described in the text.

 $\label{eq:table fig} {\it TABLE~F12}$ Effects on Mobility and Housing Assistance, Access to Transportation, and Relative Income a

		Experiment Contr		Section 8 Cont	
	CM	ITT ^b	N	ITTb	N
	(i)	(ii)	(iii)	(iv)	(v)
A. Mobility and housing assistance					
Moved more than 10 miles from baseline address ^c	0.106	0.054* (0.016)	2,424	0.028 (0.018)	2,005
Currently receiving Section 8 ^d	0.255	0.294* (0.021)	2,317	0.345* (0.023)	1,907
Lives in baseline neighborhood or still has friends there ^d	0.746	-0.050^{*} (0.020)	2,526	-0.086^{*} (0.021)	2,065
Lives in baseline neighborhood or has friends from there who come to visit at least a couple of times a year ^d	0.613	-0.083* (0.022)	2,525	-0.080* (0.023)	2,064
Lives in baseline neighborhood or goes back to visit at least a couple of times a year ^d	0.664	-0.071^* (0.021)	2,522	-0.084* (0.022)	2,062
B. Access to transportation					
Takes less than 15 minutes to get to nearest bus or train stop ^d	0.921	0.015 (0.012)	2,493	-0.003 (0.015)	2,042
Someone in household has a car, van, or truck that runs ^d	0.381	0.011 (0.020)	2,529	0.026 (0.022)	2,070
Has a valid driver's license ^d	0.454	0.016 (0.020)	2,532	-0.002 (0.023)	2,072
C. Relative income					
Household income as fraction of median household income for the tract ^d	0.811	-0.177^* (0.033)	2,220	-0.174^{*} (0.034)	1,817

^a All notation has been defined elsewhere. Relative income is household income from 2001 divided by the median household income for the Census tract for the year 1999 in 2001 dollars.

^bIntent-to-treat is from Equation (1), using covariates in Table A1 and weights described in the text.

^cAddress history from tracking file and linked to Census data.

^dSelf-reported.

Continues

BASELINE CHARACTERISTICS OF ADULT SURVEY RESPONDENTS AND THE FULL ADULT SAMPLE $^{\text{a}}$

	Controls	rols	Experi	Experimental	Section 8	on 8
	Respon-	Full	Respon-	Full	Respon-	Full
	dents	Sample	dents	Sample	dents	Sample
Variable	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Demographics						
Age in years (as of December 2001)	39.6	39.6	39.7	39.9	40.1	40.0
Male	0.02	0.02	0.01	0.02*	0.02	0.02
Baltimore site	0.15	0.15	0.15	0.15	0.15	0.15
Boston site	0.21	0.23	0.22	0.23	0.22	0.23
Chicago site	0.22	0.21	0.23	0.21^{*}	0.23	0.21^{*}
Los Angeles site	0.16	0.16	0.16	0.16	0.15	0.16
New York site	0.25	0.25	0.25	0.25	0.25	0.25
African-American	99.0	99.0	0.67	0.64*	99.0	0.64^{*}
Other race	0.27	0.27	0.26	0.28*	0.26	0.27
Hispanic ethnicity, any race	0.29	0.30	0.29	0.30^*	0.30	0.31
Never married	0.62	0.63	0.62	0.62	0.62	0.62
Teen parent	0.24	0.25	0.25	0.25	0.26	0.26
Economic and education						
Working	0.25	0.25	0.29	0.27	0.25	0.25
On AFDC	0.75	0.74	0.74	0.74	0.75	0.75
In school	0.16	0.16	0.16	0.16	0.16	0.17
High school diploma	0.38	0.38	0.41	0.42	0.41	0.40
General equivalency diploma	0.21	0.22	0.18	0.18	0.19	0.20
Household						
Had car	0.15	0.15	0.17	0.18	0.16	0.17
Household member with a disability	0.16	0.16	0.16	0.16	0.17	0.15
Household member victimized by	0.41	0.41	0.42	0.43	0.43	0.42
crime during past 6 months						
No teen children	0.62	0.63	0.59	09.0	0.61	0.61

TABLE13—Continued

	Controls	rols	Experi	Experimental	Secti	Section 8
	Respon-	Full	Respon-	Full	Respon-	Full
	dents	Sample	dents	Sample	dents	Sample
Variable	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Household						
Household of size 2	0.20	0.20	0.23	0.22	0.21	0.21
Household of size 3	0.32	0.32	0.30	0.30	0.31	0.30
Household of size 4	0.22	0.22	0.23	0.23	0.23	0.23
Neighborhood and housing						
Lived in neighborhood 5+ years	0.62	0.61	0.61	*09.0	0.63	0.62
Moved >3 times in past 5 years	0.11	0.11	0.08	0.09	0.09	0.00
Very dissatisfied with neighborhood	0.46	0.47	0.46	0.47	0.47	0.47
Streets very unsafe at night	0.49	0.50	0.48	0.49	0.49	0.50
Chats with neighbors $1 + /$ week	0.55	0.54	0.52	0.52	0.50	0.50
Very likely to tell neighbor if saw	0.56	0.57	0.53	0.55*	0.55	0.54
their child getting into trouble						
No family living in neighborhood	0.65	0.65	0.65	0.65	0.62	0.63
No friends living in neighborhood	0.41	0.41	0.40	0.41	0.38	0.39
Very sure would find an apartment	0.45	0.45	0.45	0.46	0.48	0.49
in another part of city						
To get away from gangs or drugs	0.78	0.78	0.77	0.77	0.75	0.76
was primary or secondary						
reason for moving						
Better schools was primary or	0.48	0.47	0.47	0.47	0.52	0.51
secondary reason for moving						
Had applied for S8 voucher before	0.45	0.44	0.41	0.42	0.39	0.39
N	1,080	1,310	1,453	1,729	993	1,209

^aTable consists of the covariates included in the regression models. Age is included in the model as a sixth order Legendre polynomial rather than in years. * denotes p-value < 0.05 on difference between respondents and full sample.

 $\label{eq:table fit} TABLE~F14$ Effects on Change in Employment Within Zip Code Between 1994 and 2001 a

		Experiment Cont		Section 8 Cont	
	CM	ITT ^b	N	ITT ^b	N
	(i)	(ii)	(iii)	(iv)	(v)
Residence 1 year after RA					
Change from 1994 to 1995 in	-0.008	0.010^{*}	2,462	0.013*	2,028
log of employment		(0.003)		(0.003)	
Change from 1994 to 1996 in	-0.023	0.005	2,462	-0.000	2,028
log of employment		(0.005)		(0.006)	
Change from 1994 to 1997 in	-0.028	0.015*	2,462	-0.002	2,028
log of employment		(0.007)		(0.007)	
Change from 1994 to 1998 in	-0.011	0.007	2,462	-0.006	2,028
log of employment		(0.007)		(0.008)	
Change from 1994 to 1999 in	0.015	0.005	2,462	-0.012	2,028
log of employment		(0.008)	,	(0.009)	,
Change from 1994 to 2000 in	0.056	0.001	2,462	-0.029*	2,028
log of employment		(0.009)	, -	(0.010)	,
Change from 1994 to 2001 in	0.065	0.001	2,462	-0.032*	2,028
log of employment		(0.009)	_,	(0.010)	_,
Residence in 2002					
Change from 1994 to 1995 in	0.005	0.004	2,453	0.012*	2,021
log of employment		(0.003)	,	(0.005)	,
Change from 1994 to 1996 in	-0.009	-0.006	2,453	0.005	2,021
log of employment		(0.007)	,	(0.007)	,
Change from 1994 to 1997 in	-0.014	0.004	2,453	0.005	2,021
log of employment		(0.008)	,	(0.009)	,
Change from 1994 to 1998 in	0.001	0.003	2,453	0.001	2,021
log of employment		(0.009)	,	(0.009)	,-
Change from 1994 to 1999 in	0.024	0.002	2,453	-0.003	2,021
log of employment	***-	(0.010)	_,	(0.010)	-,
Change from 1994 to 2000 in	0.050	0.002	2,453	-0.007	2,021
log of employment		(0.010)	-,	(0.011)	_,. _ _
Change from 1994 to 2001 in	0.050	-0.001	2,453	-0.006	2,021
log of employment	0.050	(0.011)	2,100	(0.011)	2,021

^aAddress history from tracking file linked to zip code level employment data. Employment data is from the U.S. Census Bureau's Zip Code Business Patterns for 1994 through 2001. Total employment represents the sum of full-and part-time employees on the payroll of establishments in the zip code. For zip codes with suppressed employment data, employment was imputed as the midpoint of the relevant range indicated by the data suppression flag. Change in employment is defined as the log of employment in the later year minus the log of employment in 1994. * denotes statistically significant at the 5 percent level. Standard errors, adjusted for heteroscedasticity, are in parentheses.

^bIntent-to-treat (ITT) from Equation (1), using covariates in Table A1 and weights described in the text.

G. ADDITIONAL RESULTS FOR YOUTH

TABLE G1
LIST OF TABLES FOR YOUTH RESULTS—INTENT-TO-TREAT

Table Number	Title
G2	Effects for Youth Outcomes
G3	Effects for Neighborhood and Victimization Mediators
G4	Effects for Housing, Parenting, and School Mediators
G5	Effects for Peer and Adult Role Model Mediators
G6	Effects for Educational Mediators
G7	Effects for Health Mediators
G8	Effects for Residential Mobility

TABLE G2
EFFECTS FOR YOUTH OUTCOMES^a

		Female			Male		Male – Female	Female
	CM	E-C	S-C	CM	E-C	S – C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
A. Physical health								
Overall health fair/poor ^b	0.101	0.008	-0.017	0.045	0.033	0.027	0.025	0.044
•		(0.029)	(0.029)		(0.019)	(0.025)	(0.035)	(0.038)
Asthma attack in past year ^b	0.201	0.002	-0.048	0.122	0.016	0.039	0.014	0.088
		(0.037)	(0.038)		(0.032)	(0.039)	(0.049)	(0.056)
Non-sport injury in past year ^b	0.115	-0.015	-0.028	0.062	0.087*	0.080^*	0.102*	0.108^{*}
		(0.025)	(0.026)		(0.026)	(0.028)	(0.036)	(0.039)
Body Mass Index >95th percentile ^b	0.173	-0.009	-0.042	0.161	0.026	-0.012	0.036	0.030
		(0.034)	(0.037)		(0.037)	(0.041)	(0.049)	(0.055)
B. Mental health								
Psychological distress—K6 scale	0.268	-0.289*	-0.145	-0.162	0.095	0.005	0.385*	0.150
z-score ^b		(0.094)	(0.106)		(0.085)	(0.100)	(0.125)	(0.143)
Ever had serious depression	0.137	-0.055	-0.061	0.031	0.013	-0.005	0.068	0.056
symptoms ^b		(0.030)	(0.032)		(0.022)	(0.024)	(0.037)	(0.040)
Ever had generalized anxiety	0.121	-0.069*	-0.075^{*}	0.055	-0.015	-0.049*	0.054	0.026
symptoms ^b		(0.027)	(0.029)		(0.024)	(0.024)	(0.036)	(0.038)
								Continues

TABLE G2—Continued

		Female			Male		Male -	- Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
C. Education								
Graduated HS or still in school ^c	0.772	0.064	0.049	0.759	-0.044	-0.040	-0.108*	-0.090
		(0.036)	(0.037)		(0.037)	(0.041)	(0.051)	(0.055)
In school or working ^b	0.771	0.040	-0.019	0.758	0.018	-0.007	-0.022	0.012
,		(0.035)	(0.037)		(0.035)	(0.040)	(0.050)	(0.054)
Reading z-scored	0.059	0.093	0.046	-0.110	-0.087	0.048	-0.180	0.002
		(0.084)	(0.092)		(0.096)	(0.111)	(0.125)	(0.142)
Math z-score ^d	0.005	0.119	0.071	-0.042	-0.095	0.019	-0.214	-0.052
		(0.095)	(0.099)		(0.097)	(0.107)	(0.132)	(0.145)
D. Risky behavior								
Used marijuana in past 30 days ^b	0.131	-0.065^{*}	-0.072*	0.118	0.051	0.055	0.115*	0.127*
		(0.029)	(0.032)		(0.030)	(0.035)	(0.041)	(0.047)
Smoked cigarettes in past 30 days ^b	0.191	-0.054	-0.055	0.125	0.103*	0.151*	0.157*	0.206*
		(0.033)	(0.036)		(0.032)	(0.037)	(0.046)	(0.052)
Had alcohol in past 30 days ^b	0.206	-0.060	-0.091^{*}	0.140	0.063	0.061	0.122*	0.151*
		(0.037)	(0.038)		(0.033)	(0.037)	(0.049)	(0.052)
Ever pregnant or gotten someone	0.267	-0.011	0.036	0.119	0.028	0.032	0.039	-0.004
pregnant ^b		(0.040)	(0.040)		(0.031)	(0.035)	(0.051)	(0.052)

^aNotation: CM, Control mean; E – C, experimental – control difference; S – C, Section 8 – control difference. Intent-to-treat differences are regression-adjusted using Equation (1), with standard errors clustered by household. * indicates *p*-value < 0.05. Surveys were completed in experimental, Section 8, and control groups with 749, 510, and 548 respondents, respectively, ages 15–20 on 12/31/2001.

^bSelf-reported.

^cParental report about youth.

^dWoodcock-Johnson Revised Assessment.

TABLE G3

EFFECTS FOR NEIGHBORHOOD AND VICTIMIZATION MEDIATORS^a

		Female			Male		Male – Female	emale
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	4)	(5)	(9)	(7)	(8)
A. General neighborhood								
Youth lives in baseline	0.455	-0.143*	-0.148^{*}	0.485	-0.101*	-0.120^{*}	0.042	0.028
neighborhood ^b		(0.043)	(0.046)		(0.045)	(0.048)	(0.059)	(0.064)
Poverty rate in current	0.402	-0.086^{*}	-0.071^{*}	0.396	-0.088*	-0.064*	-0.002	0.008
neighborhood ^c		(0.017)	(0.016)		(0.019)	(0.018)	(0.025)	(0.024)
Pct minority in neighborhood ^c	0.877	-0.033	0.017	0.869	-0.035	-0.041	-0.001	-0.058*
		(0.020)	(0.017)		(0.021)	(0.022)	(0.028)	(0.027)
Pct youth in neighborhood not in	0.120	-0.014	-0.014	0.126	-0.016	-0.015	-0.003	-0.001
school or work ^c		(0.008)	(0.008)		(0.010)	(0.011)	(0.012)	(0.013)
Pct adults in pro/mgmt occupations ^c	0.206	0.042^{*}	0.016	0.224	0.020	0.002	-0.022	-0.014
		(0.010)	(0.000)		(0.011)	(0.010)	(0.014)	(0.013)
Not satisfied with neighborhood ^d	0.555	-0.177^{*}	-0.203*	0.511	-0.100	-0.059	0.078	0.143
		(0.051)	(0.054)		(0.051)	(0.054)	(0.073)	(0.078)
Feels unsafe in neighborhood at	0.437	-0.170^{*}	-0.086	0.509	-0.178^{*}	-0.155^{*}	-0.008	-0.069
night^d		(0.047)	(0.054)		(0.049)	(0.052)	(0.070)	(0.076)
								Continues

TABLE G3—Continued

		Female			Male		Male – Female	Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
Fraction of 4 types of	0.107	-0.018	-0.006	0.134	-0.024	0.005	-0.006	0.011
discrimination in 'hood ^b		(0.019)	(0.019)		(0.019)	(0.025)	(0.027)	(0.030)
Fraction of 6 problems with	0.565	-0.164^{*}	-0.128^{*}	0.509	-0.102*	-0.064	0.062	0.064
neighborhood ^d		(0.037)	(0.041)		(0.039)	(0.037)	(0.054)	(0.056)
Saw drugs in neighborhood	0.437	-0.104^{*}	-0.122^{*}	0.441	-0.042	-0.026	0.062	0.095
1 + /week in past 30 days ^b		(0.047)	(0.051)		(0.047)	(0.056)	(0.066)	(0.075)
Heard gunshots in 'hood $1 + /$ week	0.118	-0.040	-0.053	0.155	-0.034	-0.075^{*}	0.006	-0.022
in past 30 days ^b		(0.031)	(0.028)		(0.031)	(0.032)	(0.043)	(0.043)
B. Victimization								
Household member was crime	0.275	-0.082	+960.0-	0.247	-0.014	-0.058	0.068	0.038
victim past 6 months ^d		(0.044)	(0.043)		(0.044)	(0.046)	(0.062)	(0.063)
Saw someone shot or stabbed in	0.150	-0.043	-0.047	0.209	-0.016	-0.030	0.027	0.017
past 12 months ^b		(0.036)	(0.034)		(0.039)	(0.046)	(0.053)	(0.057)
Was "jumped" in past 12 months ^b	0.085	-0.006	0.005	0.181	0.010	-0.003	0.015	-0.008
		(0.029)	(0.028)		(0.038)	(0.041)	(0.047)	(0.049)

on 12/31/2001. Types of discrimination were at school or work, neighborhood recreation program, shopping or restaurant, and with police. Problems with neighborhood were litter, graffiti, public drinking, abandoned buildings, people hanging out, and police not coming. Types of criminal victimization were purse or wallet snatched, threatened with weapon, beaten or assaulted, break-in to home, and stabbed or shot. ^aNotation and estimation is defined in the footnote to Table G2. For parental report about household (PR) measures, analysis was conducted at the household level using household average right-hand side variables. Surveys were completed in experimental, Section 8, and control groups with 749, 510, and 548 respondents, respectively, ages 15–20

^bSelf-reported.

^cAddress history from tracking file, linked to Census.

^dParental report about household.

 ${\bf TABLE} \ {\bf G4}$ Effects for Housing, Parenting, and School Mediators $^{\rm a}$

		Female			Male		Male –	Male – Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
A. Housing								
Overall housing condition is	0.477	-0.071	-0.020	0.507	-0.055	-0.098	0.016	-0.078
fair/poor ^b		(0.049)	(0.054)		(0.050)	(0.053)	(0.071)	(0.076)
Fraction of 7 problems with home ^b	0.334	-0.048	-0.035	0.333	-0.052	-0.038	-0.004	-0.003
		(0.025)	(0.029)		(0.028)	(0.029)	(0.038)	(0.042)
Fraction of 7 problems with home	0.216	-0.055^{*}	-0.013	0.222	-0.022	-0.030	0.033	-0.017
interior ^c		(0.022)	(0.026)		(0.025)	(0.030)	(0.035)	(0.040)
Fraction of 7 problems with home	0.218	-0.062*	-0.039	0.227	-0.037	-0.034	0.024	900.0
exterior		(0.024)	(0.029)		(0.026)	(0.029)	(0.037)	(0.039)
B. Parenting practices								
Mother /primary caregiver is very	0.670	0.035	0.024	0.842	-0.056	-0.054	-0.091	-0.078
supportived		(0.045)	(0.049)		(0.034)	(0.039)	(0.056)	(0.063)
Parent knows all about friends and	0.258	0.012	-0.050	0.173	-0.044	-0.034	-0.056	0.016
		(0.039)	(0.041)		(0.036)	(0.041)	(0.054)	(0.059)
No adult present after school ^d	0.242	0.046	-0.010	0.301	0.068	0.061	0.022	0.071
		(0.050)	(0.055)		(0.051)	(0.059)	(0.070)	(0.079)
Fraction days/week family eats	0.571	0.042	0.034	0.596	-0.021	0.016	-0.063	-0.019
together ^b		(0.039)	(0.040)		(0.040)	(0.042)	(0.058)	(0.059)
								Continues

TABLE G4—Continued

		Female			Male		Male –	Male – Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
Fraction of 4 types of parental	0.370	0.022	0.023	0.418	-0.034	-0.010	-0.056	-0.033
contact w/school ^b		(0.031)	(0.033)		(0.033)	(0.033)	(0.046)	(0.047)
C. School environment								
% Free lunch ^e	0.516	-0.053*	0.000	0.524	-0.079*	-0.033	-0.026	-0.033
		(0.022)	(0.022)		(0.024)	(0.026)	(0.032)	(0.033)
% Limited English proficient	0.155	-0.030*	-0.004	0.163	-0.033^{*}	-0.032^{*}	-0.003	-0.028
		(0.014)	(0.016)		(0.014)	(0.015)	(0.019)	(0.021)
% White	0.114	0.061^{*}	0.012	0.112	0.065^{*}	0.067*	0.004	0.055
		(0.020)	(0.020)		(0.021)	(0.026)	(0.029)	(0.033)
Pupil-teacher ratio ^e	18.6	0.533	-0.252	17.4	1.402*	0.607	898.0	0.859
		(0.358)	(0.459)		(0.414)	(0.441)	(0.544)	(0.633)
Percentile rank on state exame	0.240	0.040	-0.013	0.188	0.063^{*}	0.037	0.023	0.050
		(0.024)	(0.024)		(0.026)	(0.027)	(0.034)	(0.035)
Fraction of 5 positive school	0.621	-0.001	0.039	0.599	0.028	-0.008	0.029	-0.047
climate items ^d		(0.033)	(0.034)		(0.031)	(0.037)	(0.045)	(0.049)

^aNotation and estimation is defined in the footnote to Table G2. For parental report measures, analysis was conducted at the household level using household average right-hand side variables. Surveys were completed in experimental, Section 8, and control groups with 749, 510, and 548 respondents, respectively, ages 15–20 on 12/31/2001. Problems in walls, peeling paint, mold, cigarette smoke, noisy inside, noisy outside, and cluttered. Interviewer observations of problems with home exterior were condition of unit, condition with home were peeling paint, plumbing, rats or mice, cockroaches, broken locks, broken windows, and heat. Interviewer observations of problems with home interior were cracks of other units on block, metal bars on unit, metal bars on other units, condition of block, broken windows, and junk on block. Items parent knows everything about were who friends are and who with when not home.

onds are and who with when not home.

Darental report about household.

^cInterviewer observation of housing unit.

^dSelf-reported.

eState data on schools.

TABLE G5
EFFECTS FOR PEER AND ADULT ROLE MODEL MEDIATORS^a

		Female			Male		Male – Female	Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
A. Peers								
Has at least one close friend ^b	0.890	0.036	-0.013	0.917	0.008	0.051	-0.028	0.064
		(0.025)	(0.034)		(0.027)	(0.029)	(0.036)	(0.044)
Has 5 or more friends ^c	0.382	0.050	-0.004	0.530	0.024	0.067	-0.026	0.071
		(0.044)	(0.046)		(0.047)	(0.051)	(0.064)	(0.070)
Friends involved in school	0.615	0.071	0.050	0.710	-0.013	0.010	-0.083	-0.040
activities ^c		(0.045)	(0.048)		(0.042)	(0.049)	(0.062)	(0.071)
Has friends who use drugs ^c	0.295	0.002	-0.001	0.327	0.127*	0.161^{*}	0.125*	0.161^{*}
		(0.043)	(0.044)		(0.046)	(0.051)	(0.062)	(0.067)
Has friends who carry weapons ^c	0.098	0.009	0.031	0.157	0.037	-0.033	0.028	-0.064
		(0.026)	(0.030)		(0.039)	(0.036)	(0.045)	(0.046)
Has relatives or friends who	0.154	0.005	-0.029	0.187	-0.063	-0.055	-0.068	-0.027
belong to a gang ^c		(0.035)	(0.031)		(0.032)	(0.037)	(0.046)	(0.047)
Friends from baseline visit new	0.178	-0.018	-0.007	0.164	-0.022	-0.047	-0.004	-0.040
${ m neighborhood}^c$		(0.036)	(0.041)		(0.035)	(0.036)	(0.050)	(0.055)
Visits baseline 'hood but doesn't	0.234	-0.026	-0.012	0.205	0.034	0.022	0.061	0.034
live there		(0.037)	(0.043)		(0.040)	(0.044)	(0.054)	(0.061)
								Continues

TABLE G5—Continued

		Female			Male		Male – Female	Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
B. Adult Role Models								
Likely neighbors intervene vs.	0.497	0.166^*	0.105	0.575	0.052	-0.026	-0.114	-0.131
graffitid		(0.049)	(0.057)		(0.050)	(0.056)	(0.071)	(0.080)
Likely neighbors intervene if kids	0.343	0.099	0.038	0.370	0.086	0.067	-0.013	0.029
skipping school ^d		(0.053)	(0.058)		(0.050)	(0.056)	(0.075)	(0.083)
Structured activity after school ^c	0.275	0.050	0.004	0.248	0.064	0.051	0.015	0.047
		(0.043)	(0.042)		(0.041)	(0.047)	(0.060)	(0.064)
Attended 1+ church youth	0.380	900.0	-0.050	0.313	-0.020	0.012	-0.025	0.062
activities per month ^c		(0.048)	(0.048)		(0.041)	(0.045)	(0.062)	(0.065)
Saw father at least once a week in	0.253	0.068	0.078	0.365	-0.043	-0.017	-0.111	-0.095
past 12 months ^c		(0.040)	(0.046)		(0.044)	(0.047)	(0.057)	(0.065)
Father has been very supportive ^c	0.235	0.026	-0.000	0.271	0.033	-0.006	0.007	-0.006
		(0.039)	(0.043)		(0.041)	(0.043)	(0.055)	(0.060)
Comfortable talking about	0.305	0.133*	0.061	0.397	-0.005	-0.009	-0.138*	-0.069
problems $w/3+$ adults ^c		(0.042)	(0.048)		(0.046)	(0.051)	(0.062)	(0.070)
Has 4+ adults who care and will	0.448	0.070	0.028	0.498	0.003	-0.042	-0.067	-0.070
help if trouble ^c		(0.047)	(0.047)		(0.046)	(0.053)	(0.066)	(0.072)

^aNotation and estimation is defined in the footnote to Table G2. For parental report measures, analysis was conducted at household level using household average right-hand side variables. Surveys were completed in experimental, Section 8, and control groups with 749, 510, and 548 respondents, respectively, ages 15–20 on 12/31/2001. No adult present was no adult at either 3:45, 5:30, or 7:30 on selected day of week. Parental contact with school (for any child in household) was went to general school meeting, went to a school event, volunteered at school, and volunteered for team or club.

^bParental report about youth.

^cSelf-reported.

^dParental report about household.

TABLE G6
EFFECTS FOR EDUCATIONAL MEDIATORS^a

		Female			Male		Male – Female	Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
A. School engagement								
Always pays attention in class ^b	0.490	0.118*	-0.002	0.484	-0.013	0.066	-0.131	0.068
		(0.056)	(0.062)		(0.056)	(0.062)	(0.078)	(0.087)
Works hard in school ^b	0.508	0.058	0.028	0.449	-0.101	-0.013	-0.158*	-0.040
		(0.058)	(0.061)		(0.056)	(0.068)	(0.079)	(0.091)
B grades or higher last year ^b	0.415	-0.008	-0.018	0.293	-0.055	-0.105^{*}	-0.047	-0.088
		(0.047)	(0.050)		(0.042)	(0.044)	(0.062)	(0.067)
Always finishes homework ^b	0.505	0.027	-0.003	0.406	-0.029	-0.078	-0.057	-0.074
		(0.060)	(0.066)		(0.055)	(0.062)	(0.082)	(0.091)
At least 5 hours/week of	0.488	0.052	0.045	0.354	0.056	0.110	0.005	0.065
homework ^b		(0.057)	(0.063)		(0.053)	(0.061)	(0.078)	(0.087)
At least 5 hours/week of reading ^b	0.377	-0.006	-0.026	0.250	0.023	0.028	0.030	0.054
		(0.045)	(0.051)		(0.042)	(0.049)	(0.060)	(0.068)
B. Educational track								
Ever took SAT, ACT, or AP	0.426	-0.047	0.037	0.358	-0.037	0.045	0.010	0.009
exams ^b		(0.046)	(0.052)		(0.048)	(0.053)	(0.067)	(0.074)
Ever took algebra or higher math ^b	0.833	0.012	-0.005	0.827	-0.085^{*}	-0.055	-0.097	-0.050
		(0.033)	(0.039)		(0.037)	(0.035)	(0.050)	(0.053)
Gifted class in past 2 years ^c	890.0	0.057	0.010	0.147	-0.040	-0.039	-0.097	-0.049
		(0.031)	(0.034)		(0.039)	(0.037)	(0.050)	(0.051)
Special education in past 2 years ^c	0.154	0.037	-0.002	0.324	0.014	-0.038	-0.023	-0.035
		(0.038)	(0.038)		(0.050)	(0.052)	(0.063)	(0.065)
								Continues

TABLE G6—Continued

		Female			Male		Male –	Male – Female
	CM	E-C	S-C	CM	E-C	S-C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)
C. Educational problems								
Ever repeated a grade ^c	0.200	*960.0	0.00	0.326	-0.028	-0.049	-0.124*	-0.058
		(0.036)	(0.037)		(0.041)	(0.042)	(0.054)	(0.056)
Late for school once a month or	0.679	-0.020	0.033	0.616	0.030	0.060	0.050	0.027
more ^b		(0.042)	(0.048)		(0.046)	(0.051)	(0.061)	(0.070)
Absent from school 5% or more of	0.426	-0.076	-0.040	0.389	-0.002	0.005	0.074	0.045
the school year ^b		(0.047)	(0.052)		(0.045)	(0.052)	(0.065)	(0.073)
School requested meet about problem	0.184	-0.034	-0.012	0.337	0.044	0.061	0.078	0.072
past 2 years ^c		(0.039)	(0.046)		(0.050)	(0.058)	(0.064)	(0.073)
Was suspended/expelled from	0.117	0.011	0.042	0.301	-0.033	-0.080	-0.044	-0.122
school past 2 years ^c		(0.035)	(0.042)		(0.050)	(0.056)	(0.000)	(0.070)
D. Future expectations								
Believes chances high will	0.543	0.073	0.034	0.449	-0.044	-0.053	-0.117	-0.088
complete college ^b		(0.046)	(0.049)		(0.044)	(0.048)	(0.064)	(0.069)
Believes chances high will find	0.742	0.055	0.007	0.652	-0.003	0.039	-0.059	0.032
good job as adult ^b		(0.037)	(0.044)		(0.043)	(0.047)	(0.056)	(0.065)

items, pays attention, works hard, finishes homework, 5+ hours homework, gifted class, special education, school requested meeting, and suspended/expelled. School climate was teachers interested in students, students disruptive, cheating on tests, discipline fair, and felt safe. Structured activity was at school, church, or community center—participating a Notation and estimation is defined in the footnote to Table G2. Surveys were completed in experimental, Section 8, and control groups with 749, 510, and 548 respondents, respectively, ages 15-20 on 12/31/2001. Some items not asked for youth ages 19-20, resulting in smaller sample sizes: no adult present after school, fraction of school climate in a sport, club, tutoring, or other organized activity.

^bSelf-reported.

^cParental report about youth.

TABLE G7
EFFECTS FOR HEALTH MEDIATORS^a

		Female			Male		Male –	Female
	CM	E-C	S-C	CM	E-C	S - C	E-C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Healthy environment								
Fraction of past 7 days did	0.353	0.055	0.022	0.555	0.029	0.020	-0.027	-0.003
aerobic exercise ^b		(0.032)	(0.040)		(0.033)	(0.036)	(0.045)	(0.053)
Fraction of past week	0.412	0.045	-0.023	0.476	0.067	0.045	0.023	0.068
moderate activity ^b		(0.033)	(0.040)		(0.034)	(0.037)	(0.047)	(0.054)
Participates in sport after	0.032	0.061^{*}	0.006	0.138	0.014	0.033	-0.047	0.027
school ^b		(0.022)	(0.017)		(0.030)	(0.038)	(0.037)	(0.042)
Fraction of past 7 days	0.574	0.028	-0.036	0.568	0.010	0.036	-0.019	0.072
some fruits/vegetables ^b		(0.032)	(0.035)		(0.030)	(0.032)	(0.044)	(0.048)
Fraction of 6 asthma	0.187	0.011	0.021	0.212	0.003	0.014	-0.007	-0.007
triggers ^c		(0.023)	(0.024)		(0.021)	(0.023)	(0.029)	(0.032)
B. Access to care								
Youth has health	0.873	-0.011	0.003	0.809	0.081^{*}	0.047	0.092*	0.044
insurance ^d		(0.029)	(0.034)		(0.034)	(0.039)	(0.044)	(0.049)
Talked to a doctor about	0.736	0.052	-0.035	0.728	-0.058	-0.142*	-0.110	-0.108
health in past 6 months ^d		(0.046)	(0.059)		(0.056)	(0.067)	(0.073)	(0.089)
C. Adult mental health								
Adult distress K6 z-score ^c	0.170	-0.275^*	-0.193	-0.058	0.160	0.096	0.436^{*}	0.289
		(0.112)	(0.124)		(0.103)	(0.110)	(0.152)	(0.169)
Adult probability of	0.187	-0.039	-0.066	0.138	0.003	0.038	0.043	0.104*
depression ^c		(0.034)	(0.036)		(0.030)	(0.037)	(0.047)	(0.052)
Adult fraction worried,	0.424	-0.071	-0.073	0.453	-0.053	-0.024	0.018	0.049
tense or anxious ^c		(0.050)	(0.055)		(0.051)	(0.056)	(0.073)	(0.079)
Adult fraction calm and	0.375	0.140*	0.142*	0.508	-0.062	-0.113	-0.202*	-0.256*
peaceful ^c		(0.049)	(0.053)		(0.050)	(0.058)	(0.071)	(0.079)
Adult fraction sleeping	0.362	0.118*	0.078	0.409	0.089	0.058	-0.028	-0.020
7–8 hours/night ^c		(0.052)	(0.056)		(0.049)	(0.057)	(0.074)	(0.081)

^aNotation and estimation is defined in the footnote to Table G2. For parental report measures, analysis was conducted at the household level using household average right-hand side variables. Surveys were completed in experimental, Section 8, and control groups with 749, 510, and 548 respondents, respectively, ages 15–20 on 12/31/2001. Asthma triggers were rats or mice, cockroaches, wall-to-wall carpet, pets with fur, cigarette smoke, and mold.

^bSelf-reported.

^cParental report about household.

^dParental report about youth.

		Female			Male		Male -	- Female
	CM	E-C	S – C	CM	E-C	S-C	E – C	S-C
Outcome	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program move ^b	0.000	0.471*	0.556*	0.000	0.415*	0.568*	-0.056	0.012
		(0.034)	(0.039)		(0.034)	(0.039)	(0.047)	(0.056)
One or more moves ^b	0.643	0.143*	0.203*	0.687	0.084*	0.092*	-0.059	-0.112*
		(0.043)	(0.039)		(0.036)	(0.038)	(0.055)	(0.052)
One or more moves ^c	0.623	0.075	0.093*	0.654	0.012	-0.009	-0.063	-0.103
		(0.045)	(0.046)		(0.047)	(0.046)	(0.066)	(0.065)
Two or more moves ^b	0.298	0.125*	0.141*	0.301	0.079	0.159*	-0.046	0.017
		(0.043)	(0.047)		(0.042)	(0.049)	(0.058)	(0.066)
Two or more moves ^c	0.266	0.035	0.094	0.301	-0.023	0.063	-0.059	-0.031
		(0.045)	(0.050)		(0.043)	(0.049)	(0.065)	(0.072)
Number of moves ^b	1.04	0.374*	0.442*	1.14	0.208*	0.375*	-0.166	-0.067
		(0.091)	(0.094)		(0.089)	(0.105)	(0.124)	(0.138)
Number of moves ^c	1.11	0.057	0.213	1.25	-0.101	-0.022	-0.158	-0.234
		(0.114)	(0.123)		(0.120)	(0.127)	(0.175)	(0.173)

TABLE G8
EFFECTS FOR RESIDENTIAL MOBILITY^a

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REFERENCES

HEDGES, L. V., AND I. OLKIN (1985): Statistical Methods for Meta-Analysis. Orlando, FL: Academic Press. [3]

KLING, J. R., AND J. B. LIEBMAN (2004): "Experimental Analysis of Neighborhood Effects on Youth," Working Paper 483, Industrial Relations Section, Princeton University. [4,8]

KLING, J. R., J. LUDWIG, AND L. F. KATZ (2005): "Neighborhood Effects on Crime for Female and Male Youth: Evidence from a Randomized Housing Voucher Experiment," *Quarterly Journal of Economics*, 120, 87–130. [7]

O'BRIEN, P. C. (1984): "Procedures for Comparing Samples with Multiple Endpoints," *Biometrics*, 40, 1079–1087. [3]

^aNotation and estimation is defined in the footnote to Table G2.

^bAddress history from tracking file, linked to Census.

^cBased on parental report, with analysis was conducted at household level using household average right-hand side variables. Sample is ages 15–20 as of 12/31/01.

ORR, L., J. D. FEINS, R. JACOB, E. BEECROFT, L. SANBONMATSU, L. F. KATZ, J. B. LIEBMAN, AND J. R. KLING (2003): *Moving to Opportunity: Interim Impacts Evaluation*. Washington, DC: U.S. Department of Housing and Urban Development. [3]

Department of Housing and Urban Development. [3]
WESTFALL, P. H., AND S. S. YOUNG (1993): Resampling-Based Multiple Testing: Examples and Methods for P-Value Adjustment. New York: Wiley. [4]