

Neighborhood Safety and Leaseholder Characteristics

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Introduction by Shannon Nelson

Introduction

Empirical research generally confirms that neighborhoods play a role in individual development; with most scholars agreeing that the conditions of a neighborhood have significant influences on both adults and children. That the physical, social, and economic characteristics of a neighborhood environment have direct effects and consequences on inhabitants provides a rationale for residential mobility programs. Unlike project-based housing assistance popular in the first half of the twentieth century, tenant-based assistance programs seek to integrate low-income families, both economically and socially, by enabling, and in some cases requiring, participants to relocate to “better” neighborhoods. Nearly all of those who choose to participate in residential mobility programs, such as Gautreaux, Gautreaux Two, and Moving to Opportunity (MTO), reveal that escaping neighborhoods ridden with crime and violence is their primary motive for enrolling (Kling, Liebman et al. 2001, Varady and Walker 2003). As a vast majority of those who enroll have children, participants overwhelmingly list the safety of their children as their principle aim. The goal of this section is to address two related questions concerning residential mobility programs: do characteristics of families predict who will benefit from such programs, and what effects do residential mobility programs have on the safety of children?

Do Family Characteristics Predict Who Will Benefit from Residential Mobility Programs?

The question of what types of families benefit from residential mobility programs is really a series of questions dealing with a number of things, including: what types of families

choose to participate in residential mobility programs in the first place, what families actually move, and what families stay in the improved neighborhoods to which they are relocated?

The first of these questions, what types of families choose to participate in residential mobility programs¹ in the first place, is difficult to answer because the discerning characteristics of participants are hard to measure; in fact, Rosenbaum et al. (1991) tells us that participants of programs such as Gautreaux and Moving to Opportunity do not differ demographically from other public housing and section 8 residents. Keels, Duncan et al. (2005) makes clear what *is* noticeably different about program participants, though, is that they *volunteered* to participate. MacDonald (1997) asserts that those who volunteer to participate in such programs are more highly motivated, talented, likely to exhibit leadership skills, and to serve as role models in some capacity, than those who do not volunteer to participate².

Even those motivated to volunteer for such programs do not all actually move. Although various programs in a variety of cities have experienced differing results, the success rates of residential mobility programs leave a lot to be desired, ranging from a high of 69 percent (Finkel and Buron 2001) to a low of 20 percent of participants “leasing up”(Goering and Feins 1996, www.huduser.org). Numerous factors such as the inability to find a landlord to accept them as tenants, failure to comply with program guidelines, fear of being ostracized in a new neighborhood, unwillingness to leave social networks, among others, prevents families that sign up from moving. Studies divulge patterns among those who have successfully moved, as well as among families who have failed to relocate.

¹ When referring to program participants we mean those who volunteered to participate in programs such as Gautreaux, Gautreaux Two, or Moving to Opportunity, in which there are program guidelines that restrict where participants are able to move. We are not referring to those who receive regular housing vouchers from programs such as Section 8.

² Critical of such programs, MacDonald asserts that the out-migration of such people actually leaves neighborhoods worse for those who remain.

A study of the Gautreaux Two Program³ conducted by Pashup, Edin, Duncan, and Burke (2004) revealed that eighteen months into the program, only one-third of participants had completed a program move. In-depth interviews conducted with participants who had moved, as well as those who had not, allowed the researchers to devise profiles of successful and unsuccessful participants. They found that participants who had moved fit into four general categories they describe as: relatively advantaged, “mature” households, north siders, and luck or pluck. Those unsuccessful in moving were divided into two categories: external obstacles or personal obstacles.

Comprised of relatively young families with three or less children, many of which have some college experience or professional certifications, the relatively advantaged comprise the largest group⁴ of successful movers in Pashup, Edin, Duncan, and Burke’s (2004) study. The second group, accounting for nearly twenty percent of successful movers, is the mature household. Those that fall in this category tend to be 45 years old or older and have neither minor nor adult children in the household; the lack of dependents qualifying them for more readily available one-bedroom units. Additionally, many in this group receive help finding places to live from adult children living outside of CHA. Pashup, Edin, Duncan, and Burke’s (2004) third group, the north siders, have an advantage in that their current location provides them access and exposure to the north side’s 275 census tracts that meet program requirements as “opportunity areas.”⁵ The last group of successful movers is a catch all for those that did not fit

³ Implemented in 2002, The Gautreaux Two Program assisted low-income residents of Chicago public housing special opportunity to move to neighborhoods in which at least 76.5 percent of households were non-poor and 70 percent were non-black.

⁴ Half of all successful movers fall into this category.

⁵ Although Chicago’s north side is half as big as the south side, it held two-thirds of the city’s “opportunity areas” in 2000.

into any other successful group, but nonetheless, succeeded in moving. Pashup et al. call them the “luck or pluck” group. Following MacDonald’s (1997) assertion about those who volunteer for residential mobility programs, the “luck and pluck” group consists of those who demonstrate extreme drive and determination, some of which report calling hundreds of units during their search. Others included in this group are those who just had good luck finding a place to move.

Although motivated to volunteer for special residential mobility programs, many, and in some cases most, participants do not actually move. Pashup, Edin, Duncan, and Burke (2004) divide those unsuccessful in finding a rental unit into two groups, one in which moves are prevented by external obstacles, the other personal obstacles. External obstacles include discrimination, problems with landlords, program flaws, and the state of the housing market. Some landlords blatantly discriminate against participants, others refuse to take vouchers due to bad experiences, and still others are unwilling to make the repairs necessary to qualify the unit. Moreover, many landlords are reluctant to rent to families with children. As can be expected with government programs, implementation and bureaucratic stalling impede participants from moving. Further, the race and poverty requirements of the program itself further limit unit choice and make it difficult to find a place for participants to move. Lastly, market rates make it hard for participants to find rental units. Landlords are often unwilling to rent units to program participants if they can collect higher rents from others. Participants are not allowed to make up the difference between landlord rents and program vouchers.

The other group unsuccessful in making a program move is those who experience personal obstacles. Non-movers in this group tend to be limited by large household size, lack of exposure to opportunity areas, lack of knowledge about the private housing market, and unawareness of program rules. In addition, many participants have mental and physical health

problems. A small group of participants were unable to locate housing due to a lack of time owing to employment and educational commitments.

The last question in the series of questions regarding which families derive benefits from residential mobility programs is: which families stay in the improved neighborhoods to which they are relocated? This is an important question as it is common for those who complete successful moves to subsequently move after the requirements of their program are met (Orr et al. 2003, Keels et al. 2005). Boyd, Edin, Duncan, and Clampet-Lundquist's 2006 study of the Gautreaux Two program found that less than half⁶ of participants who made a program move remained in their placement neighborhoods beyond the one year requirement. The fact that participants make secondary moves is not, in itself, a negative. Using data regarding participants' origins, initial destinations, and most recent locations, as well as neighborhood characteristics of each, Keels et al. (2005) determined that those who made subsequent moves in the first Gautreaux program tended to maintain the economic advantages of their placement neighborhood. Fifteen years after the implementation of the original Gautreaux, 67 percent of mothers placed by the program resided in neighborhoods with poverty rates as low as in their original placement neighborhoods (Duncan Gautreaux at 40 conference 2006). Secondary moves are not necessarily indicative of program failures. Programs fail when participants move back to low income, highly segregated, violent neighborhoods.

Although Boyd, Edin, Duncan, and Clampet-Lundquist's 2006 study of the Gautreaux Two program is disheartening in its revelation that secondary movers tend to return to neighborhoods with high levels of segregation and poverty, it offers insight into what types of participants move back to disadvantaged neighborhoods and which stay in good neighborhoods. Overall, they find factors that provoke a negative secondary move to include: poor quality rental

⁶ 47 percent of their sample remained in their placement neighborhoods for the duration of the study.

units, problems with landlords, inability to integrate in the new neighborhood, distance/separation from family and friends, complications with or lack of transportation, negative reactions by their children to the new neighborhood, and financial difficulties. Further, they find that those who return to high poverty, highly segregated neighborhoods are likely to be from such neighborhoods originally. On the other hand, those who remain in placement neighborhoods or move to comparable neighborhoods are more likely to have experience in lower poverty, more integrated neighborhoods.

Residential mobility programs have the ability to have positive long-term impacts on participants, as was the case with the original Gautreaux program. Families that derive the most benefits from such programs are those that stay in their placement neighborhoods or relocate to similar neighborhoods. Such families experience superior employment, education, and health compared to those who return to disadvantaged neighborhoods (Rosenbaum and DeLuca 2000; Rubinowitz and Rosenbaum 2001; Keels et al. 2005; Mendenhall, DeLuca, and Duncan 2005). Even more importantly, families that stay in more affluent neighborhoods experience “intergenerational success” (Duncan Gautreaux at 40 conference 2006) as the benefits of growing up in such neighborhoods are passed on to future generations.

Of all the benefits families derive from successful participation in residential mobility programs, safety is chief among them, as it serves as a precursor for further advantages in their immediate lives, in adulthood, and for future generations. Thus, the effects of residential mobility programs on the safety of children is discussed in the following section.

Effects of Residential Mobility Programs on the Safety of Children

Building on social disorganization theory⁷, Shaw and McKay (1969) aimed to demonstrate how crime was “a normal response to social, structural, and cultural characteristics of a community and to explain how deviant behavior was produced among lower class, urban males” (Wong, 2001-07). In seeking environmental explanations of crime, the authors mapped delinquency rates and neighborhood characteristics and, to no surprise, found that poor urban areas experienced disproportionately high levels of crime, leading them to conclude that neighborhoods unable to oversee and control youth groups were susceptible to delinquency. Shaw and McKay’s (1969) connection of poor urban neighborhoods to delinquency is at the root of many contemporary studies researching the relationship between neighborhood conditions, crime, and youth and, therefore, between residential relocation programs, neighborhoods, and youth safety.

Ellen and Turner (1997) discuss ways in which exposure to crime and violence affects those who live in high-crime neighborhoods. Beyond the obvious risk of being victimized and/or injured in areas with high crime rates, people, particularly young children, who live in such areas often suffer emotional trauma, as well as develop negative worldviews. A study of Neighborhood Disadvantage (ND), a type of chronic stress measured by a community’s level of poverty, unemployment, substandard housing, and crime rates, reveals a serious and lasting impact on child development. Attar, Guerra, and Tolan (1994) find that exposure to violence predicts both concurrent and prospective aggressive behavior in children. A predisposition to aggression combined with a view of the world as “fundamentally violent, dangerous, and unjust”

⁷ Social Disorganization Theory comes from the Chicago school of sociology in the early 1920’s and is defined as the decline of influence of existing social rules of behavior upon individuals within a group. In essence, social disorganization is the consequence of a community's inability to realize common values and to solve the problems of its residents, resulting in the breakdown of effective social control within that community. Social Disorganization Theory claimed that delinquency was not caused at the individual level, but was considered to be the normal response of normal individuals to abnormal social conditions (Wong).

(Ellen and Turner, 841) entangles children in these neighborhoods in a cycle of crime and violence.

By moving families out of low income, high crime, urban housing projects, residential mobility programs offer hope for families able to relocate. Such moves are particularly important and encouraging for children. Ludwig, Duncan et al.'s (2001) study of Baltimore found that juveniles in a MTO treatment group⁸ were less likely to be arrested for violent crimes than juveniles in the control group. The same relationship, though statistically insignificant, was also true regarding arrests for property crimes. Moving children from low income, high crime neighborhoods to more well-off communities, reduces the likelihood of criminal behavior and greatly increases their safety.

Interestingly, Levanthal and Brooks-Gunn's (2001) study of a New York MTO site revealed differences in parenting between those in experimental and control groups. Parents in the experimental group were less likely than parents in the control group to use punitive or restrictive techniques. The finding is important in that many child psychologists associate punitive parenting techniques with increased levels of disruptive behavior and aggression in children (Stormshack et al. 2000). Further, such differences may at least partially reflect the absorption of a new culture, which could benefit families in a number of ways.

Rosenbaum et al.'s (2002) evaluation of the Gautreaux program reveals that adults who move to more affluent neighborhoods are more likely to find jobs and their children are less likely to drop out of school, both of which decrease the likelihood of being involved in, or a

⁸ Moving to Opportunity programs randomly divide participating families into three groups: an *experimental group* in which families receive housing subsidies, counseling, and search assistance to move to private-market housing in low-poverty census tracts (poverty rates under 10 percent), a *comparison group* in which families receive private-market housing subsidies with no constraints on relocation choices, and a *control group* in which families receive no special assistance.

victim, of crime. They explain that an increased sense of safety is paramount to the success of families who move from low-income urban areas to higher-income suburban neighborhoods.

A major reason families sign up for residential mobility programs is to escape dangerous neighborhoods infiltrated with drugs and gangs (Varady and Walker 2003). As discussed above, such neighborhoods have disproportionately high levels of crime due to lacking social structures. Neighborhoods with high levels of crime stress, and sometimes destroy, family relations. Keels et al. (2005) demonstrate that families able to move to suburbs with higher SES levels experience substantial improvements in family relations due to decreased levels of crime. Further, Keels et al. assert that moving families out of highly segregated, low income urban areas to more affluent suburban areas allows families to be more economically prosperous, both short and long term.

Residential mobility programs provide many low income families opportunities to move to neighborhoods where their lives do not have to be consumed by crime and fear. Varady and Walker (1999) surveyed and interviewed people who had vouchered-out of poor neighborhoods and were relocated to more prosperous neighborhoods in Baltimore, Newport News, Virginia, Kansas City, Missouri, and San Francisco. Their research revealed that a large majority of those who had moved felt safe or very safe around their new home and felt safer in their new home than in their previous home. Respondents cited decreased loitering, fewer shootings and drug deals, increased security, and more attentive neighbors as reasons for their increased sense of safety.

Residential mobility programs have provided thousands of families across the United States an opportunity to move from depressed urban areas of concentrated poverty and high levels of crime to more prosperous and safe communities. Beyond the reduced likelihood of being a victim of crime, moving from low income, high crime neighborhoods decreases the

chance that children will participate in crime. The increased sense of safety experienced by families who are successful in program moves and who stay in relatively advantaged neighborhoods provides families great benefits and opportunities.

The Present Study

Relocating residents to safer neighborhoods is an important goal of relocation programs. However, not all residents who participate in a relocation program will move to neighborhoods where there is less crime. One of the goals of this paper is to determine whether or not it is possible to predict which residents will ultimately end up in safer neighborhoods by examining leaseholder and household characteristics. Just as there are differences among residents in terms of who participates in resident relocation programs, we hypothesize that there may also be differences in residents in terms of who successfully moves to a safer neighborhood and who does not.

Moving to safer neighborhoods may also have an effect on parenting. Perhaps parents in safer neighborhoods will rate their neighborhood as safer and also allow their children to spend more time playing outdoors.

The specific hypotheses explored in this paper are as follows:

Hypothesis 1: The neighborhoods in which our leaseholders reside at the second follow-up interview will be neighborhoods that were safer on average in the year 2000 than the neighborhoods associated with their original units.

Hypothesis 2: Leaseholders with children in the household will move to safer neighborhoods at the second follow-up interview than families with no children in the household.

Hypothesis 3: At the second follow-up interview, leaseholders living in HCV will move to safer neighborhoods than leaseholders living in CHA.

Hypothesis 4: There will be an interaction between having children in the household and living in HCV such that the relation between leaseholders living in HCV and living in a safe neighborhood will be greatest for leaseholders with children in the household.

Hypothesis 5: Leaseholders living in safer neighborhoods as measured by the crime data will report that the places where the focal child plays outdoors are safer than leaseholders living in less safe neighborhoods.

Hypothesis 6: Leaseholders living in safer neighborhoods as measured by the crime data will report a greater number of days the focal child plays outdoors than leaseholders living in less safe neighborhoods.

Hypothesis 7: Leaseholder and household characteristics will predict who moves to safe neighborhoods. Specifically, variables such as employment, age, housing type, education, disability, children, and income will predict the safety of the neighborhoods in which leaseholders live.

Methods

Variables on criminal activity were provided by Dr. Richard Block of Loyola University. These variables indicate criminal activity aggregated at the block group level for seven distinct types of crimes: robberies, homicides, vandalism, weapons violations, drug-related arrests, prostitution-related arrests, and sexual assaults.

Data on criminal activity is for the year 2000. These variables indicated the number of times a particular type of crime was reported in that block group in the year 2000. In order to construct a variable of criminal activity that accounts for the density of the block group, a second set of variables indicating criminal activity were created by dividing the number of crimes by the population of the block group. Most analyses are run with both types of crime variables.

It is important to understand that because these variables denote crime in the year 2000, they do not necessarily reflect the level of crime in these neighborhoods at the time of the interviews. However, this is not important for the purpose of most of these analyses. The purpose of most of these analyses is not to examine the safety of the neighborhoods at the time the leaseholders lived in them, rather, the purpose is to examine the safety of the neighborhoods when leaseholders were making their decisions about where to live. Specifically, for hypotheses 1-4 and 7, we are interested in examining ways to predict who moves to neighborhoods thought to be safer. For this purpose, data from the year 2000 should be sufficient. However, for hypotheses 5 and 6, the year 2000 crime data serve as a proxy for the neighborhood's level of reported crime at the time of the interview.

Results

Hypothesis 1: The neighborhoods in which our leaseholders reside at the second follow-up interview will be neighborhoods that were safer on average in the year 2000 than the neighborhoods associated with their original units.

In terms of total crimes, the new neighborhoods appear to be safer than the original neighborhoods as measured by year 2000 crime statistics. All seven paired t-tests were

significant (p 's $< .001$; N 's=629) with the neighborhoods at the second follow-up interview appearing to have less crime than the original neighborhoods.

When multiple t-tests are conducted, it is important to keep in mind that the more tests run, the more likely a significant finding will result from chance. With this in mind, we use the Bonferroni correction. Adjusting for the seven tests conducted, we find that all seven t-tests remain significant.

However, when the population-adjusted crime variables are used the differences between neighborhoods at origin and at the second follow-up interview disappears (p 's $> .10$; N 's = 629) (Table 1).

Table 1. Differences Between Original and New Neighborhoods.

Type of Crime	Total Crimes		Crimes per Inhabitant	
	Old NH	New NH	Old NH	New NH
Robberies	15.63	12.55***	.0114	.0168
Homicides	1.58	.78***	.0011	.0009
Vandalism	104.37	52.91***	.1209	.0952
Weapons Violations	7.62	3.73***	.0051	.0045
Drug-related Crimes	203.79	79.33***	.2452	.1763
Prostitution-related Crimes	18.42	4.28***	.0088	.0080
Sexual Assaults	2.12	1.55***	.0019	.0027

*** $p < .001$

Thus, while the number of crimes in the new neighborhoods is less than in original neighborhoods, this may be due to the density of the original neighborhoods. A comparison of the year 2000 populations of the original neighborhoods with the year 2000 populations of the new neighborhoods demonstrates that the new neighborhoods had significantly fewer inhabitants ($p < .001$; $N = 629$).

Examination of the crime statistics that were adjusted for the population of the block group reveals one block group that stands out as an outlier. Only one leaseholder inhabited this

block group, but this case yielded such unusually high crime rates per inhabitant that we felt it was important to re-run analyses without this case.

When the crime variables that are not adjusted for the block group’s population are used, all t-tests remain significant; although, when the Bonferroni correction is applied for seven tests, the significance of the analysis with the dependent variable “prostitution” yields only a trend. However, for the population adjusted crime variables, differences are found that were obscured by the outlier in the original set of analyses. When we correct for the number of tests performed, only the differences for homicide rates and weapons violations remain statistically significant (Table 2).

Table 2. Differences Between Original and New Neighborhoods Without Outlier.

Type of Crime	Crimes per Inhabitant	
	Old NH	New NH
Robberies	.011406	.013483*
Homicides	.001061	.000579***
Vandalism	.120807	.071237 ^t
Weapons Violations	.005050	.003678***
Drug-related Crimes	.245273	.137041*
Prostitution-related Crimes	.008780	.006647
Sexual Assaults	.001854	.001617*

t = p<.10

*p<.05

**p<.01

***p<.001 (only these remain significant with Bonferroni correction)

Many leaseholders were in the same block group at the second follow-up interview as their original address. When these leaseholders and the outlier case are all removed we still have 464 cases. Repeating the t-tests with this subgroup we find that when the dependent variables are used that do not account for population of the block groups, all of the t-tests remain significant (p’s<.001). When these t-tests are repeated using the crime statistics that are adjusted for block

group population we find a pattern of results similar to that in the analysis with only the outlier removed (Table 3).

Table 3. Differences Between Original and New Neighborhoods Without Outlier for Households that Changed Block Groups.

Type of Crime	Crimes per Inhabitant	
	Old NH	New NH
Robberies	.011839	.014653*
Homicides	.001173	.000521***
Vandalism	.140931	.073792 ^t
Weapons Violations	.005292	.003434***
Drug-related Crimes	.270156	.123564*
Prostitution-related Crimes	.011288	.008399
Sexual Assaults	.001923	.001601*

t = p<.10

*p<.05

**p<.01

***p<.001 (only these remain significant with Bonferroni correction)

Hypothesis 2: Leaseholders with children in the household will move to safer neighborhoods at the second follow-up interview than families with no children in the household.

Hypothesis 2 was examined in conjunction with hypotheses 3 and 4. A MANOVA was performed with the dichotomous variable “children in the household” and the dichotomous variable “leaseholder in CHA or HCV” as independent variables and the seven crime variables as dependent variables. This MANOVA was completed with the raw 2000 crime variables and the 2000 crime variables divided by the 2000 population of each block group.

The analysis with the unadjusted crime variables indicate that households with children lived in neighborhoods that were statistically significantly safer (per year 2000 crime statistics) than households without children (F=2.28, p<.05). However, this relation did not hold when the crime variables adjusted for population were used as dependent variables (F=1.14, p>.10).

Between subjects effects were not significant for either analysis (Table 4).

Table 4. Differences in Reported Crimes Between Households with and without Children.

Type of Crime	Total Crimes		Crimes per Inhabitant	
	HH w/children	HH w/o children	HH w/children	HH w/o children
Robberies	12.22	12.78	.019315	.012773
Homicides	.69	.94	.001106	.000666
Vandalism	46.87	63.98	.083918	.118690
Weapons Violations	3.62	3.95	.005198	.003622
Drug-related Crimes	65.15	101.09	.154421	.221443
Prostitution-related Crimes	5.00	3.04	.010358	.004508
Sexual Assaults	1.49	1.68	.003322	.001642

It appears that perhaps households with children moved to neighborhoods that were not as densely populated as households without children. A t-test indicates that households with children lived in neighborhoods with an average 2000 population of 1,244.86 while households without children lived in neighborhoods with an average population of 1,367.37; however, this difference is not statistically significant although it is very near significance ($t=-1.80$, $p=.07$).

This MANOVA was repeated with the outlier discussed earlier removed. The analysis utilizing the unadjusted crime statistics yielded a significant overall difference between households with children and households without children finding that households with children were in safer neighborhoods ($F=2.40$; $p<.05$). However, as in the previous analysis, the between subjects effects were not significant, although vandalism yielded a trend ($p<.10$).

When the crime statistics that were adjusted for the population was used, there was not a significant difference between households with and without children ($p>.10$).

Hypothesis 3: At the second follow-up interview, leaseholders living in HCV will move to safer neighborhoods than leaseholders living in CHA.

The MANOVA indicated that households living in HCV were in safer neighborhoods than households living in the CHA as measured by the unadjusted crime statistics ($F=27.11$,

p<.001). This relation remained true when crime statistics adjusted for the population of the block group were used as the dependent variables (F=6.35, p<.001) (Table 5).

Table 5. Differences in Reported Crimes Between Households in HCV Units and Households in CHA Units.

Type of Crime	Total Crimes		Crimes per Inhabitant	
	HCV	CHA	HCV	CHA
Robberies	13.07	11.47*	.013129	.022398
Homicides	.52	1.18***	.000495	.001605
Vandalism	38.75	75.18***	.035085	.189863*
Weapons Violations	2.87	5.05***	.002949	.007076*
Drug-related Crimes	41.91	133.89***	.039742	.389399**
Prostitution-related Crimes	6.19	1.36***	.008904	.007010
Sexual Assaults	1.44	1.75*	.001441	.004552

*p<.05

**p<.01

***p<.001

These analyses were repeated with the outlier removed. When the crime statistics that were unadjusted for population were used as the dependent variables, the analysis remained significant (F=26.88, p<.001). The only crime type whose level of significance changed was sexual assaults which yielded only a trend (p<.10) in the analysis without the outlier.

When the crime statistics that were adjusted for population were used as dependent variables and the outlier was removed the analysis remained significant (F=7.01, p<.001) (Table 6).

Table 6. Differences in Reported Crimes Between Households in HCV Units and Households in CHA Units without Outlier.

Type of Crime	Total Crimes		Crimes per Inhabitant	
	HCV	CHA	HCV	CHA
Robberies	13.07	11.45*	.013129	.013993
Homicides	.52	1.17***	.000495	.000718*
Vandalism	38.75	74.98***	.035085	.128458*
Weapons Violations	2.87	5.05***	.002949	.004868***
Drug-related Crimes	41.91	133.59***	.039742	.288921***
Prostitution-related Crimes	6.19	1.34***	.008904	.003463 ^t
Sexual Assaults	1.44	1.73 ^t	.001441	.001890*

*p<.05

**p<.01

*** $p < .001$

Hypothesis 4: There will be an interaction between having children in the household and living in HCV such that the relation between leaseholders living in HCV and living in a safe neighborhood will be greatest for leaseholders with children in the household.

Neither analysis yielded support for an interaction. The MANOVA utilizing unadjusted 2000 crime statistics did not reveal a significant interaction ($F=1.65, p > .05$). The analysis using crime statistics adjusted for population also did not have a statistically significant interaction, although the interaction in this model did approach significance ($F=1.87, p = .07$).

When the outlier was removed, there was still not a significant interaction in either MANOVA (unadjusted crime statistics: $F=1.65, p > .10$; population adjusted crime statistics: $F=1.70, p > .10$).

Hypothesis 5: Leaseholders living in safer neighborhoods as measured by the crime data will report that the places where the focal child plays outdoors are safer than leaseholders living in less safe neighborhoods.

Question 160 of the second follow-up interview asked leaseholders “How safe are the places where CHILD plays outdoors?” A multiple regression indicated no relation between how safe a leaseholder judged their neighborhood to be and the unadjusted year 2000 crime statistics ($F=1.41, p > .10, N=279$). Using the crime data that was adjusted for population, we still find no relation ($F=1.03, p > .10, N=279$).

When the regression was repeated with the outlier removed, the analysis using the unadjusted crime variables was still not significant ($F=1.41, p > .10$). The analysis without the

outlier that utilized the populations adjusted crime statistics was also not significant ($F=1.03$, $p>.10$).

Hypothesis 6: Leaseholders living in safer neighborhoods as measured by the crime data will report a greater number of days the focal child plays outdoors than leaseholders living in less safe neighborhoods.

Question 161 of the second follow-up interview asked leaseholders “When the weather is good, how many days, in an average week, does CHILD play outdoors?” A multiple regression indicated no relation between how many days per week leaseholders indicated their children played outdoors and the unadjusted year 2000 crime statistics ($F=.46$, $p>.10$, $N=289$). Using the crime data that was adjusted for population, we still find no relation ($F=.89$, $p>.10$, $N=289$).

With the outlier removed and the unadjusted crime variables as independent variables, there was still no relation between the number of days reported and the crime statistics ($F=.46$, $p>.10$). This was also true when the crime variables adjusted for the population were used in the analysis ($F=.89$, $p>.10$).

Hypothesis 7: Leaseholder and household characteristics will predict who moves to safe neighborhoods. Specifically, variables such as employment, age, housing type, education, disability, children, and income will predict the safety of the neighborhoods in which leaseholders live.

A series of multiple regressions were conducted to examine the relation between characteristics of the leaseholder and their household and the crime variables. In order to reduce the number of regressions conducted, these analyses utilized the crime variables that were

adjusted for the population as independent variables and were conducted with the outlier excluded. The dependent variables were as follows:

- Full-time employment: This variable indicated whether or not there was an adult in the household who was employed full-time.
- Age: This variable indicates the leaseholder's age.
- HCV/CHA: This variable indicated whether the leaseholder currently resided in an HCV unit or a CHA unit.
- Education: Leaseholders were broken into three categories according to education. The categories were "less than high school graduation", "high school graduation or GED", and "beyond high school".
- Income: This variable divided leaseholders into four groups according to what they reported their total household income was for the year 2005. The groups were "\$0 - \$3,999", "\$4,000 - \$7,999", "\$8,000 - \$15,999", "\$16,000 or more".
- Disability: This variable indicated whether or not there was someone in the household who was disabled.
- Children in Household: This variable indicated whether or not there were children under the age of 18 years living in the household.

A regression was run for each of the seven crime variables. The regressions using the following dependent variables were statistically significant: Homicides ($F=2.29$, $p<.05$), Weapons ($F=3.58$, $p<.01$), Drug-related crimes ($F=2.79$, $p<.05$), and Sexual assaults yielded a trend ($F=1.90$, $p<.10$). However, when using a Bonferroni correction to adjust for the number of analyses conducted (7), only the analysis with the dependent variable "Weapons" remains significant while "Drug-related crimes" yielded a trend.

Although most of these analyses are not considered significant when the Bonferroni correction is used, it is worth noting that the only individual variable that consistently contributes to the regressions is HCV/CHA, with residents living in HCV living in neighborhoods with less crime in the year 2000. For the “Weapons” analysis, “HCV/CHA” ($p < .001$) and age ($p < .05$) were significant. For “Homicides” “HCV/CHA” was significant ($p < .01$) and “Children in the Household” yielded a trend ($p < .10$) with households with children being in neighborhoods with less reported crime. The analysis with “Drug-related Crimes” as the dependent variable revealed significant relations with “HCV/CHA” ($p < .001$) and a trend with “disability” ($p < .10$). Finally, the trend found in the analysis with “Sexual Assaults” as the outcome measure revealed a relation to “HCV/CHA” ($p < .01$).

Discussion

Several interesting, and not necessarily expected, findings resulted from these analyses. First, we predicted that residents would move to neighborhoods that they expected to be safer than the ones in which they originally lived. While we find that people moved to neighborhoods with less crime, we also find that the difference between old and new neighborhoods is less when the populations of the neighborhoods are taken into account. When the outlier was removed from the analyses, old and new neighborhoods still differed on most crime variables; however, the difference was not as strong and most differences disappeared when the Bonferroni correction for multiple analyses was applied.

This pattern held true when we examined the neighborhoods of households with and without children. While the raw number of reported crimes were less in the neighborhoods of households with children, when adjusted for the population these differences went away. A t-test

showed a trend for households with children to live in slightly less densely populated neighborhoods.

The difference between households living in HCV units and those living in CHA units remained even when the crime variables were adjusted for the population. This is consistent with the findings found under hypothesis seven, where HCV/CHA was the only variable that seemed to be a consistent predictor of neighborhood safety. Residents living in HCV moved to safer neighborhoods than residents living in CHA. This was true even when crime was measured per inhabitant indicating that HCV leaseholders were not simply moving to less dense neighborhoods. Rather, they moved to neighborhoods that were different in a more meaningful way.

Equally interesting is what these analyses did not find. When asked about the safety of the places where the focal child plays outdoors, leaseholders' judgments of safety did not reflect the 2000 crime statistics for their neighborhoods. It is impossible to deduce from this that leaseholders are not accurate judges of their neighborhoods' safety. While it is possible that leaseholders are not accurately judging the safety of their neighborhoods, it is also possible that these neighborhoods went through so many changes between the year 2000 and the second follow-up interviews that the crime statistics were no longer very accurate predictors of neighborhood safety.

Also interesting, was the fact that hypothesis seven did not find much support for leaseholder characteristics predicting movement to safer neighborhoods. The housing status of a leaseholder emerged as the best predictor of the safety of the leaseholder's neighborhood. Future analyses might consider the issues presented in this report separately by housing type. Perhaps

leaseholder characteristics will become predictive within a sample that consists only of HCV residents.

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