Disability Status, Housing Tenure, and Residential Attainment in Metropolitan America, 2009

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Abstract

In 2010, 18.7% of the non-institutionalized population had a disability. To help disabled persons live independently, the Fair Housing Amendment Act (FHAA) was passed in 1988, which prohibits housing discrimination on the basis of disability. Despite the existence of the FHAA, recent research has found that households with disabled persons live in poorer quality housing and neighborhoods than non-disabled households. However, no research has examined such disparities in residential attainment separately by housing tenure, despite the fact that enforcement of the FHAA is lower in the sales market. Given this fact and that home ownership is tied to the wealth of households, this paper seeks to fill this gap. Our preliminary findings suggest that the disability-status, residential disadvantage is worse in the sales than the rental market, suggesting that greater enforcement is needed in the sales market. In addition, more attention should be given to the role that aging plays in the maintenance of owner-occupied homes. These findings are discussed as they relate to theories on residential attainment.

Introduction

In 2010, approximately 56.7 million people (18.7%) of the U.S., civilian non--institutionalized population had a disability and about 38.3 million people (12.6%) had a severe disability (Brault 2012). In 1988, the Fair Housing Amendments Act (FHAA) was passed, which prohibits housing discrimination on the basis of disabilities. The Act was designed to help persons with disabilities reach the goal of independent living and to be incorporated into American mainstream, thus ending unnecessary exclusion (Stanton 2004:22; Smith et al. 2008). Projections show that by the year 2050, households with at least one member who has a long lasting physical disability will constitute 27.1% of the non-institutionalized population (Smith et al. 2008).

Discrimination against people with disabilities represents a large share of housing discrimination complaints (National Fair Housing Alliance 2013). For example, in fiscal year 2012, of all the complaints made to HUD alleging housing discrimination, 55.6% were on the basis of disability, while 25.2% were on the basis of race and 22.9% on the basis of national origin. The National Fair Housing Alliance (NFHA) maintains that part of the reason for such high levels of complaints on the basis of disability is because it is easier to detect. Housing providers often openly refuse to make accommodations for disabled persons. Another reason for the high levels is because the Department of Housing and Urban Development (HUD) has an office devoted to housing issues for disabled persons, making it easier for people to get information on how to file complaints.

The large number of complaints on the basis of disability raises the question of whether the presence of disabled persons in households adversely affects their residential attainment relative to those without disabled persons. There is a small but growing literature that addresses this issue. Hoffman and Livermore (2012) and Newman (2003) find that disabled households[1] live in housing of poorer quality (i.e., smaller, older, greater maintenance deficiencies) than non-disabled households.

[1] We use the term "disabled households" to refer to households with at least one member that is disabled. "Non-disabled households" contain no disabled persons.

Moreover, White et al. (1994) find that disabled households are more likely to carry severe housing cost burdens than their non-disabled counterparts. In addition, households with at least one disabled person tend to rate their neighborhoods lower, report fewer neighborhood benefits and more frequent neighborhood problems compared to non-disabled households (Newman 2003; Smith et al 2008; Hoffman and Livermore 2012).

However, no research has examined disability-status disparities in residential attainment separately by housing tenure. According to NFHA (2013), enforcement of the Fair Housing Act is lower in the sales market, relative to the rental market. This stems from the fact that testing is much easier in the rental market because "interactions are quick and rental rates are usually advertised," making the detection of discrimination more straightforward (NFHA 2013: 20). This raises the question of whether the poorer housing and neighborhood quality found in previous research is more prevalent in the sales market, where enforcement is more difficult, compared to the rental market. Given that home ownership is tied to the wealth of households (Conley 1999; Oliver and Shapiro 1995), it is important to fill this gap in the literature.

From a theoretical perspective, examining the residential attainment of disabled and non-disabled households by housing tenure is also important. No theoretical discussion, to our knowledge, exists regarding how disability status shapes residential attainment, despite the fact that the disabled population is a growing minority population in American society. The results of previous research suggest that differences in socioeconomic and demographic factors explain part of the gap in residential attainment between disabled and nondisabled, consistent with the tenets of the spatial assimilation model. However, the fact that disabled households continue to be at a significant residential disadvantage compared to nondisabled households is consistent with the tenets of the place stratification model. According to this perspective, a pattern of access to advantaged residential areas exists whereby the dominant group experiences the broadest access to such desirable housing and neighborhoods and minorities have the most limited access. Interestingly, the existing studies do not

explicitly link their findings to these theories on residential attainment. Our paper will do this more explicitly and discuss how housing tenure shapes such disparities, which has been found to be important in the realm of racial and ethnic residential segregation (Friedman et al. 2013).

Using data from the 2009 panel of the American Housing Survey (AHS), our paper seeks to address the limitations of previous research and answer three main questions: (1) Does the disability status of householders matter in shaping their neighborhood and housing quality for renters and owners? (2) Controlling for relevant socioeconomic and demographic characteristics, to what extent does disability status shape the residential attainment of owners and renters? and (3) With respect to the latter is the impact of disability status similar or different by household housing tenure? This research is the first of its kind to address these questions.

Theory and Background

To explain the variation in housing and neighborhood quality by housing tenure and disability status, we use the spatial assimilation model (Massey 1985) and the place stratification perspective (Logan and Molotch 1987; Massey and Denton 1993). According to the spatial assimilation model, socioeconomic status determines the residential distribution of households across neighborhoods. Massey (1985) posits that the theory of spatial assimilation combines the status attainment perspective with an ecological model, which argues that the socioeconomic advancement for minority populations leads to residential integration within mainstream society. Several factors associated with social and economic well-being, such as health, quality of education, access to employment, crime exposure, and social prestige, are determined by residential location. Thus, as SES increases, these minority populations attempt to transfer their socioeconomic advancements into a higher spatial position, implying assimilation with majority members.

For this research, the spatial assimilation model will be used to explain variation in housing and neighborhood outcomes of disabled and non-disabled (i.e., the majority group) households among

owners and renters. In this case, the model maintains that the gap in residential attainment between disabled and non-disabled households is attributable to the differences that exist in their levels of socioeconomic attainment, whether they are owners or renters. Hoffman and Livermore (2012) found in their multivariate analysis that controls for income and other characteristics reduced the disability-status residential disadvantage, consistent with the tenets of this model, but did not eliminate the difference. For the dependent variable, housing deficiencies, however, controlling for income and other socioeconomic and demographic characteristics, did not work as well (Hoffman and Livermore 2012). Similarly, Pynoos and Nishita (2003) state that physical deficiencies within the home were significant, independent of income, suggesting that inadequate housing is not solely due to variation in income.

While the spatial assimilation model characterizes variation in household residential attainment mostly as a function of differences in their socioeconomic status, the role of demographics, particularly aging, also need to be considered when focusing on variation between disabled and non-disabled households. This is particularly true when analyzing the impact of disability status on residential attainment by housing tenure. Older households are generally more likely to be owners and also more likely to experience disabilities (Smith et al. 2012). Based on the American Housing Survey National Tables: 2009, of the 23.1 million households headed by older persons in 2009, 80% were owners and 20% were renters (AoA 2011:12). Thus, part of the residential inequality that may be apparent between disabled and non-disabled households among owners may be attributable to the fact that older people with disabilities are unable to care for their homes as well as younger families owning their homes.

Older homeowners are more likely to live in physically distressed neighborhoods and are less likely to relocate from these places and when they do exit, they move to similarly distressed neighborhoods (Burkhauser et al., 2005; Golant 2008:6). Even older people with higher incomes are less likely to move from distressed neighborhoods than similar people living in secure neighborhoods

(Burkhauser et al., 2005:376). Homes of older householders are more likely to be older than other age groups; in 2007 the median construction year of the housing of older householders was 1970 (it was 1974 for all householders), and 4.3% of the homes had physical problems (AoA 2011:12; Golant 2012). In addition, older homeowners are less likely to spend money on routine maintenance, to replace or add major equipment or structural components to their houses (e.g. a furnace, roof, plumbing or pipes) and their homes are less likely to contain dwelling modifications (grab bars, widened doors or hallways, ramps, etc.) (Gollont 2008: 5). The lack of home maintenance and housing modifications creates an environment where elderly homeowners with both low incomes and physical disabilities are especially at risk of being disadvantaged (Golant 2012:7; Newman 2003). Therefore, any attempt to explain variation in disability-status residential attainment among owners, must account for differences in age structure of the disabled and non-disabled population in this group. For renters, it is less important because in rental housing, households are much less responsible for the upkeep of their homes, although they must notify landlords if there are problems.

Using the place stratification perspective, we can analyze the role of discrimination in determining the residential attainment of households by disability status and housing tenure. According to the place stratification perspective, an unequal pattern of access to advantaged areas exists in the U.S. where the dominant group (whites) experience the broadest access to better neighborhoods and minority groups, such as blacks, have the most limited access (Alba and Logan 1993; Logan and Alba 1993; Logan and Molotch 1987; Massey and Denton 1993). For the purposes of this study, we reinterpret the place stratification perspective and consider non-disabled households to be the majority group with the broadest access to good quality housing and neighborhoods and disabled households comprise the minority group, having more limited access to such superior residential locations. The large number of complaints alleging housing discrimination that was identified at the outset of the paper and the lack of effort on the part of providers to accommodate households with disabled persons both highlight that disability households are more affected by discrimination than non-disabled

households. Relatedly, Hemingway (2010) found that the income and employment situations of disabled people might be viewed negatively, which could affect their "risk rating" (p: 79). Additionally, responses from lender representatives and mortgage brokers revealed that particular impairments stood out as potentially "causing" difficulties in the assessment process or being regarded as "higher risk."

The place stratification perspective offers an alternative view to the spatial assimilation model in characterizing the variation in residential quality between disabled and non-disabled households focusing more on structural factors and less on variation in individual factors. The model maintains that despite having the income to purchase or rent a home, disabled households face discrimination based on their disability status that constrains their housing options, relative to non-disabled households. Thus, the tenets of the model suggest that household income is not the sole determinant of residential attainment. The fact that studies such as Hoffman and Livermore (2012) find that the coefficient for the disability status remains statistically significant after controls for income, other measures of socioeconomic status, and demographic factors suggest that such factors cannot account entirely for the residential disadvantages faced by disabled households. There are likely to be structural barriers in place.

There are reasons to believe that the disability-status residential disadvantage differs between renters and owners. Among renters, regulations among the housing laws, including those under the FHAA, all stipulate that existing facilities must enhance access and require that landlords allow tenants to make "reasonable accommodations" to their housing units to make them usable (Froehlich-Grobe et al. 2008). Disabled renters may have better housing and neighborhood quality than homeowners because, as discussed above, their complaints are easier to address and are more likely to be solved. Additionally, newer rental properties are being built with modifications in the design so there may be more options available to renters. In 2012, the U.S. Department of Justice (DOJ) settled a case with JPI Construction L.P. and other JPI entities where they alleged that JPI discriminated against disabled

person in the design and construction of 210 multifamily units (NFHA 2013). This particular case received a lot of attention because JPI was required to pay $10 million into a fund that will retrofit these properties to make them compliant with the FHAA. This is the largest fund every created by the DOJ. However, this is not the first time that a settlement has been made based upon these allegations.

While disabled owners have achieved upward social mobility by achieving homeownership status, homeowners bear the costs of modification themselves despite the existence of the same housing laws (Pynoos and Nishita 2003). According to Froehlich-Grobe et al (2008), more than 75% of people with home modifications pay for these out of pocket which may prohibit many from making them due to the cost. This affects the housing quality in terms of their quality of life and accessibility.

However, disabled owners face discrimination in financing that may contribute to their poorer residential quality, relative to non-disabled owners. Such discrimination is not a problem in the rental market. According to NFHA (2013: 32), in 2012, the "DOJ settled a case with Bank of America in which it alleged the lender engaged in patterns or practices that violated the Fair Housing Act by discriminating against people on the basis of disability, and the Equal Credit Opportunity Act (ECOA) by treating public assistance recipients differently in the underwriting process." In this case, three separate home seekers who were trying to obtain housing were asked to provide documentation of any Social Security Disability Insurance (SSDI) that had received, in violation of the Fair Housing Act and ECOA. This is one of the first major cases enforcing these laws in the owner market. It is likely that this type of discrimination is widespread, but it is harder to enforce, relative to the discrimination that occurs in the rental market. In addition to existing for home seekers trying to obtain mortgages, it could occur for homeowners who are trying to refinance their homes or take loans to rehabilitate their housing. All of this potential inaccessibility to credit would no doubt contribute to the residential disadvantages faced by disabled households, compared to non-disabled households, among homeowners.

Hypotheses

The preceding theoretical discussion suggests a number of hypotheses in characterizing the impact of disability-status on residential disadvantages experienced by renters and owners. Under the spatial assimilation model, it is expected that disabled households will be disadvantaged in their housing and neighborhood conditions. However, after controlling for socioeconomic status, demographic factors, such as age, and other relevant variables, it is expected that the residential disadvantages experienced by disabled households will decrease in magnitude or diminish. There is a possibility, however, that such characteristics may not fully attenuate the disability-status residential disparities present among owners. Simply controlling for age differences between disabled and non-disabled owners may not be enough to capture the fact that older, disabled owners may have a harder time maintaining their homes and therefore living in poorer quality homes and neighborhoods than non-disabled homeowners. It is likely that social support plays a large role in facilitating the ability of older homeowners to deal with the upkeep of their home as well as selling their homes if necessary. If such factors are not accounted for, the disability-status disadvantage that persists may be a function of these factors.

Of course, an alternative argument exists as to why disability-status residential disparities may persist. The place stratification perspective maintains that the residential disadvantages faced by disabled households are attributable to the housing discrimination that they face, which constrains their residential options and relegates them to poorer quality housing and neighborhoods. Thus such disparities will remain even after controlling for differences between disabled and non-disabled households in socioeconomic status, demographic factors, and other relevant characteristics. The preceding review of the literature suggests that renters may face slightly less disparities because enforcement of fair housing laws is greater in the rental market than in the sales market, although there is growing interest in the latter.

Data and Methods

The 2009 AHS data are well suited for our bivariate and multivariate analyses of the housing and neighborhood outcomes of disabled and non-disabled households by housing tenure. These data come from a longitudinal, representative sample of approximately 50,0000 housing units located throughout the United States that are surveyed bi- annually. In 2009, the AHS included questions to determine the disability status of household members, which had not been present on the AHS since supplemental questions were present in the 1978 and 1995 panels. Because the AHS contains many questions on housing and neighborhood quality and housing tenure, the addition of the disability questions make the data ideal for our study. Indeed, no other dataset, to our knowledge facilitates the ability to study this topic.

To measure our central dependent variables, we examine household's neighborhood conditions, residence in suburbs, neighborhood satisfaction, and housing adequacy. Specifically, we use responses to questions asking about the presence of the following conditions within a half block of the building: abandoned buildings; buildings with bars on the windows; trash, litter, or junk in the streets, roads, empty lots or on any properties; and lack of nearby open spaces, such as parks, woods, farms, or ranches. We also use data from a question asking householders if crime was present in the neighborhood. However, the question does not restrict householders to considering crime within a half block of the building. We analyze whether the household lives in the suburbs and also the respondent's rating of their neighborhood as a place to live, which is based on a scale from 1 to 10 with 10 being best. Last, we include a measure of housing adequacy gauging whether the unit is moderately or severely inadequate, relative to being adequate.

Our key independent variables gauge the disability status of the household. We use two main independent variables. One variable is a summary variable, which measures whether households contain at least one person who has at least one of the six types of disabilities included in the AHS: 1) hearing; 2) vision; 3) mental; 4) physical (walking or climbing stairs), which we denote as ambulatory;

5) self-care; and 6) go outside-home. The second main independent variable, used in a separate set of analyses, just focuses on whether households have at least one person with a physical or ambulatory disability (i.e., trouble walking or climbing stairs). We focus specifically on this latter variable because the subject of many housing discrimination complaints is the housing provider's inability to modify housing to accommodate people's physical limitations.

We include a number of control variables in our multivariate analyses that measure demographic characteristics of households, their socioeconomic status, and characteristics about their unit that might explain why disability status shapes the residential attainment of renters and owners. The demographic indicators include householder's age and three dummy variables – whether a female heads the household, a married couple heads the household, and children under 18 are present. We also include an indicator of the householder's nativity status. Socioeconomic status is gauged by several variables. Education is represented by two dummy variables indicating whether the households has 1) more than a high school degree; and 2) a high school degree (with less than a high school degree forming the reference group). We control for household median income and include three other income-related dummy variables indicating whether: 1) the household receives public assistance; 2) they receive supplemental income for their disability (either through SSI or workman's compensation); and 3) they receive housing assistance. Finally, we control for the households' duration in their housing units (i.e., in years), whether the housing unit is in the suburbs (except where suburban location is a dependent variable), and the region within which the household lives.

To address our research questions, we first conduct bivariate analyses of the 2009 AHS data, to identify disparities between disabled and non-disabled households in neighborhood and housing outcomes by housing tenure. As mentioned above, we define disability in two ways, 1) using the overall summary indicator of disability and 2) using ambulatory disability status. Thus, two sets of bivariate analyses are conducted. We then compare disability-status differences in demographic, socioeconomic, and unit-related characteristics for renters and owners using these two disability

definitions. Finally, multivariate analyses are conducted to identify how disability status affects household neighborhood and housing conditions, separately among renters and owners, controlling for demographic, socioeconomic, and unit-related characteristics. We conduct two sets of analyses, with one set using an overall indicator of disability status and the other using the indicator derived on the basis of persons with ambulatory disabilities being present in the household.

Results

Among owners and renters, how does disability status shape household neighborhood and housing quality? Table 1 addresses this question, presenting the means for our main dependent variables and focusing on comparisons between disabled and non-disabled renter and owner households defined in two ways. Our results show that there appears to be significant disability-status disparities among renters than owners, but there are fewer significant disparities among the former group. More specifically, among renters, comparing columns 1 and 2 reveals that 11.46% of disabled, renter households report the presence of abandoned buildings in their neighborhoods compared to 8.25% of non-disabled, renter households. In addition, disabled households are significantly more likely to report crime in their neighborhoods and live in moderately or severely inadequate housing compared to their non-disabled counterparts. Columns 3 and 4 reveal that restricting our definition of disability status to only considering persons with ambulatory disabilities reduces the number of disability-status residential disparities. About 11.5% of households that have at least one person with an ambulatory disability report the presence of abandoned buildings in their neighborhoods compared to nearly 8.5% of non-disabled households defined in this manner. However, no other significant differences exist.

<TABLE 1 HERE>

Table 1 shows that among owners, there are a greater number of disability-status residential disparities regardless of the way in which disability is defined. Comparing the results in columns 5

and 6 reveals that owner households with at least one disabled person experience significantly poorer neighborhood and housing outcomes than non-disabled households on all dimensions except for indicators of whether there are open spaces in the neighborhoods and whether the housing unit is in the suburbs. In other words, among owners, disabled households are significantly more likely than nondisabled households to report the presence of abandoned buildings, buildings with bars on windows, trash or junk, and crime in the neighborhoods. In addition, disabled households are less satisfied with their neighborhoods and more likely to live in housing with moderate or severe inadequacies relative to non-disabled households. When considering households with at least one person suffering from an ambulatory disability relative to those without such persons (i.e., columns 7 and 8), we find that disabled households are significantly disadvantaged on all dimensions of neighborhood and housing quality relative to nondisabled households.

Table 2 presents group differences in relevant demographic and socioeconomic characteristics for renter (columns 1-4) and owner (columns 5-8) households. As in Table 1, significance tests are presented to evaluate two sets of disability-status differences in neighborhood and housing conditions among owners and renters. Despite the fact that among renters there are fewer significant residential disadvantages for disabled households, relative to non-disabled households, as compared to owners, the characteristics of renters and owners are remarkably similar. The most notable differences are those in terms of race, receipt of housing assistance, and average duration in the unit. More specifically, among renter households, there is no difference in the percent black between disabled and non-disabled households (columns 1-4). However, among owners, a significantly greater percent of disabled households is black – either with any disability (column 5) or with an ambulatory disability (column 6) – relative to non-disabled households. Perhaps the slight over-representation of blacks among disabled owners causes them to experience poorer quality residential outcomes because blacks experience more residential inequality than other racial and ethnic groups, resulting from their higher levels of residential segregation.

<TABLE 2 HERE>

With respect to the receipt of housing assistance, it is notable that among renters, disabled households, defined in both ways, are three times more likely than non-disabled households to receive housing assistance. For example, 27.73% of households with any disability received housing assistance compared to 9.2% of non-disabled households. Owners do not receive assistance, and perhaps the greater residential disparities that exist among disabled owners relate to this lack of additional funds to better their residential circumstances.

The magnitude of the disability-status disparities in the average number of years that households reside in their units is remarkably different between renters and owners. Among renters, disabled households (defined as having any disability) live in their homes for an average of 6.25 years that is just over 2 years more than non-disabled households. However, among owners, disabled households, defined in the same way, live in their homes for an average of 20.96 years that is more than 8 years longer than non-disabled households. It is very likely that the longer duration in the home among disabled owners translates into poorer residential circumstances for them compared to non-disabled owners because they are ill and less likely to take care of their homes or move from their homes if they desire. Perhaps this disparity in duration in the home, therefore, explains why the disability-status residential disadvantages are more prominent among owners as compared to renters.

With respect to the other demographic, socioeconomic, and unit characteristics, the disability-status differences among renters and owners are quite similar, and therefore, we summarize the general trends in these patterns. With respect to race and ethnicity, disabled households are more likely than non-disabled households to be headed by white householders and less likely to be headed by Hispanic and Asian householders, regardless of housing tenure. In terms of other demographic characteristics, in general, disabled households are less likely to be headed by foreign-born individuals, males, those that are married, and with children under 18 years old; they are significantly more likely to be older

than non-disabled households, although the disability-status gap in age is not larger among owners as suggested in the literature review section.

In regards to the socioeconomic variables, disabled households are less likely than non-disabled households to be headed by householders with more than a high school degree. In addition, disabled households are more likely than non-disabled households to receive public assistance and disability income. Their total income is significantly lower than that of non-disabled households. Thus, regardless of housing tenure, disabled households are much more disadvantaged in terms of their socioeconomic resources than non-disabled households.

Table 2 reports that the differences in the locational characteristics of the housing units in which disabled and non-disabled households live are minimal. Among owners, those with ambulatory disabilities are significantly less likely than non-disabled households to live in the suburbs, although the magnitude of this difference is quite small (68.67% vs. 70.84%). No such differences exist for renters. In a similar pattern, no regional differences between disabled and non-disabled households exist in terms of location, but for owners there are significant but very small differences. Disabled owners are slightly more likely than non-disabled owners to live in the South but less likely to live in the West.

Controlling for relevant demographic, socioeconomic, and unit-based characteristics, does disability status continue to shape the residential attainment of renters and owners? Table 3 summarizes the key results from our logistic regression analyses to that address this question.[2] Logistic regression models were fitted for the dependent variables in each of the rows in Table 3 (except for neighborhood satisfaction; OLS was used). Two sets of models were fitted for each dependent variable for renters and owners. One set was done defining disability status on the basis of whether households had at least one person with any type of disability (versus not). The other set was

[2] In the interest of time (and getting this paper to you), we do not discuss all of the results presented in the full models in Tables 4 and 5.

fitted defining disability status on the basis of whether households contained at least one person with an ambulatory disability (versus not).

<TABLE 3 HERE>

Overall, the results from the multivariate analyses are consistent with those found in the bivariate analyses presented in Table 1. There are fewer disability-status residential disadvantages among renters relative to owners. Column 1 shows that among renters, the odds of households with at least one person with any type of disability reporting the presence of abandoned buildings in their neighborhoods are 1.4 times the odds of non-disabled households, controlling for relevant variables. Column 2 shows the exact same disadvantage for renters households defined as being disabled based upon the presence of at least one person with an ambulatory disability, relative to non-disabled households. Among renter households, columns 1 and 2 also reveal that disabled households (defined in either way) are significantly more likely to report crime in their neighborhoods and are less satisfied with their neighborhoods, relative to non-disabled household, controlling for demographic, socioeconomic, and unit locational characteristics. Column 1 shows that among households with at least one person that has any type of disability, there are two other residential disadvantages. The odds of disabled households reporting the presence of trash or junk in their neighborhoods and of having moderate or severe housing inadequacies are 1.23 and 1.33 times the odds, respectively, of non-disabled households, controlling for relevant factors. Interestingly, most of the differences observed here hardly changed in magnitude with the addition of the demographic, socioeconomic, and unit locational characteristics (analyses not shown).

Among owners, Table 3 shows that disabled households of either type are significantly more disadvantaged than nondisabled households on all residential dimensions except the variables indicating a lack of open spaces and the unit being in suburbs, controlling for relevant factors (see columns 3 and 4). Most notable are the significant disability-status differences found for the outcomes abandoned buildings, trash or junk, and moderately or severely inadequate housing. Controlling for

relevant demographic, socioeconomic, and unit locational characteristics, among owners, the odds of disabled households (defined as having any type of disability) reporting the presence of abandoned buildings, trash or junk in their neighborhoods, or living in moderately or severely inadequate housing were 1.72, 1.74, and 1.57 times the odds, respectively, of non-disabled households. Results that are similar in magnitude were found for households with a member experiencing an ambulatory disability relative to those with household members without any ambulatory disabilities. As in the case with renters, the residential disadvantages experienced by disabled households of any type are reduced very little after controlling for relevant demographic, socioeconomic, and unit locational characteristics (results not shown). Clearly there are other factors influencing the existence of these disparities that are not taken into account in our analyses here.

Discussion and Conclusions

The primary objective of this paper was to examine the nature of disability-status differences in residential attainment among renters and owners. To fulfill this overarching goal, the analysis focused on answering three main questions. First, does the disability status of households matter in shaping their neighborhood conditions and housing quality among renters and owners? Our descriptive analyses revealed that disability status shapes residential inequalities more for owners than renters, regardless of how disability is defined. Among owners, disabled households experience residential disadvantages on almost all residential outcomes (except for the indicator for a lack of open spaces) than non-disabled households. However, among renters fewer disability-status residential disparities are observed.

Second, controlling for relevant socioeconomic and demographic characteristics, to what extent does disability status shape the residential attainment of owners and renters? The results of our logistic regression and OLS models indicated that the nature of the disparities observed in our descriptive analyses were nearly the same as those from our multivariate analyses, indicating that the control

variables did little to account for these disability-status disparities. Third, is the impact of disability status the same on the residential attainment of both renters and owners? The answer to this question appears to be no, although we have not provided formal statistical tests to absolutely confirm it. As was the case in the descriptive analyses, among owners, there continue to be more significant disparities in neighborhood and housing conditions for disabled households, relative to non-disabled households, than was the case for renters, controlling for relevant demographic, socioeconomic, and unit-based characteristics. The pattern of the results is the same despite which disability outcome is used in these analyses.

Taken together, the results here suggest that considering housing tenure is important in understanding disability-status residential disadvantages. Theoretically, the findings here support hypotheses from both the spatial assimilation and place stratification models. With respect to the former, it is clear that socioeconomic status and demographic factors shape the residential attainment of both renters and owners. For households in both housing tenure groups, greater levels of education and income generally translate into better residential outcomes. With respect to demographic factors, married households and those with older householders are more likely than unmarried and younger households, respectively, to reside in better quality neighborhoods and housing. Time in the housing unit, however, is generally associated with poorer neighborhood and housing conditions.

At the same time, the results revealed that effect of disability status on residential outcomes persisted among renters and homeowners, even after controlling for the differences in the demographic, socioeconomic, and unit-based characteristics that were evident between disabled and non-disabled households. As mentioned above, controlling for these factors did little to explain the residential disadvantages faced by disabled households, relative to non-disabled households, regardless of whether they were renters or homeowners. These results suggest that there are additional factors, beyond those associated with the spatial assimilation model that may explain these differences.

Consistent with the tenets of the place stratification model, it is likely that discrimination in the housing market explains part of the disparities in residential outcomes left unexplained by the spatial assimilation model. As recently as 2012, the largest share of discrimination complaints, 55.6% of complaints, filed nationally at HUD were made on the basis of disability status (NFHA 2013). Our results revealed that disability-status residential disadvantages were more prevalent among homeowners than renters. This finding is consistent with our hypothesis that enforcement of the Fair Housing Act is less prevalent in the sales market than in the rental market. As mentioned above, testing for discrimination is much easier in the rental housing market because rental housing is advertised much more easily and the interactions between renters and landlords are done quickly. Moreover, discrimination in the sales market is usually found in the financing stage of the home purchase process and perhaps in securing capital to maintain the upkeep of housing. In both instances, these types of discrimination are harder to detect than when landlords refuse to make modifications to their homes for disabled persons.

One of the major limitations of our study is that our cross-sectional analyses cannot clearly identify the underlying causes of the persistence of disability-status disparities in the residential outcomes of renters and owners. Longitudinal data are clearly needed in order to follow people as they become disabled over time and modify their housing circumstances both as renters and owners. While we have controlled for the important socioeconomic and demographic variables associated with the spatial assimilation model, we have not controlled for factors that could affect disabled households' abilities to modify their residential circumstances like social support or other factors that can play a role in facilitating the ability of older homeowners to deal with the upkeep of their homes as well as being able to sell their homes. Aging and falling into poor health are processes that occur over a long period of time and knowing more about how these gradual processes shape the residential circumstances will be important in building stronger theory. In addition, knowing the specific circumstances about the disability status and health of the others in the household could play a role in

explaining the residential disadvantages experienced by disabled households as compared to non-disabled households. Having direct information about households' experiences with discrimination would also be extremely useful in understanding these residential inequalities between disabled and non-disabled households.

Our paper clearly raises more questions than it answers and therefore serves as a point of departure to build on the current, limited existing literature on the impact of disability status on residential attainment for owners and renters. Here we have offered two theoretical frameworks to frame the analyses of disability-status residential inequalities that have heretofore been absent from the existing literature. In addition to employing the use of longitudinal data, future research should pay more attention to the role of fair housing enforcement in shaping the residential attainment of protected groups like those experiencing disabilities. How powerful actors attempt to segregate disabled households, relative to non-disabled households, is an important question that needs to be addressed. This is particularly true in light of the fact that in the future as many as one in four households will have at least one member who is disabled.

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Table 1. Residential Attainment of Households with and without Disabled Persons by Housing Tenure, 2009

	Percent:							
	Renter Households				Owner Households			
	Any Disability	Non-Disabled	Ambulatory Disability	Non-Disabled	Any Disability	Non-Disabled	Ambulatory Disability	Non-Disabled
Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Reference person reports within 1/2 block of housing unit:								
Abandoned buildings	11.46***	8.25	11.46**	8.48	8.03***	4.67	8.71***	4.83
Buildings with bars on windows	20.62	20.18	20.57	20.22	11.74***	8.09	12.52***	8.25
Trash or junk	15.59	13.97	14.68	14.18	8.84***	5.59	9.65***	5.73
No open spaces	63.76	65.82	65.38	65.5	60.89	60.33	62.75**	60.18
Presence of serious crime in neighborhood	26.62**	23.46	25.93	23.76	20.24***	16.91	19.99**	17.16
Lives in Suburbs	49.49	48.29	49.43	48.38	69.71	70.81	68.67*	70.84
Neighborhood Satisfaction (10=best) (mean)	7.58	7.67	7.62	7.66	8.16**	8.25	8.12**	8.25
Housing moderately or severely inadequate	10.46*	8.74	9.86	8.93	4.35***	2.51	4.73***	2.59
N	11008				21998			

***p<.001; **p<.01; *p<.05 - differences refer to those between disabled and non-disabled households

Table 2. Demographic and Socioeconomic Characteristics of Households by Disability Status and Housing Tenure, 2009

	Percent:							
	Renter Households				Owner Households			
	Any Disabliity	Non-Disabled	Ambulatory Disability	Non-Disabled	Any Disability	Non-Disabled	Ambulatory Disability	Non-Disabled
Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Race/ethnicity								
White	59.17***	51.43	59.91***	51.91	78.38**	76.33	76.76	76.64
Black	22.12	21.85	23.49	21.73	10.46**	8.80	12.69***	8.68
Hispanic	16.39***	21.17	14.75***	21.00	9.14	10.10	9.03	10.05
Asian	2.32***	5.55	1.85***	5.36	2.02***	4.76	1.53***	4.63
Householder Vars								
Native-Born	12.03***	22.83	10.43***	22.22	9.09***	13.38	8.14***	13.19
Age (mean)	55.84***	39.72	60.65***	40.37	64.08***	50.15	66.25***	50.87
Male	37.60***	49.55	36.44***	48.82	52.86***	58.62	49.89***	58.54
Married household	23.33***	29.69	22.15***	29.36	56.69***	65.14	53.85***	64.86
Kids under 18	27.03***	36.64	18.34***	36.87	20.95***	38.20	15.26***	37.63
Education								
< h.s. degree	28.10***	16.15	29.58***	16.85	18.79***	7,86	20.41***	8.43
h.s. degree	31.88***	27.61	31.96***	27.91	30.12***	22.45	31.53***	22.82
> h.s. degree	40.02***	56.24	38.47***	55.24	51.08***	69.68	48.06***	68.75
Receipt of:								
Public assistance	7.10***	3.26	7.18***	3.53	1.41***	.431	1.47***	.491
Disability income	32.53***	5.60	34.88***	7.29	19.15***	3.92	22.31***	4.62
Housing asst.	27.73***	9.20	30.57***	10.23	N/A	N/A	N/A	N/A
Tot. hh inc (mean)	26.86***	43.68	24.68***	42.70	57.70***	89.94	51.60***	88.40
Time in unit/location								
Duration in unit	6.25***	4.04	6.93***	4.12	20.96***	12.63	22.55***	13.03
Located in suburb	49.49	48.29	49.43	48.38	69.71	70.81	68.67*	70.84
Region								
Northeast	22.45	21.21	23.50	21.19	18.82	19.75	18.53	19.72
South	32.48	33.74	32.34	33.66	37.95**	35.36	40.35***	35.29
Midwest	20.04	18.45	20.25	18.54	22.24	22.39	21.86	22.42
West	25.04	26.60	23.91	26.60	20.99*	22.49	19.26***	22.57
N	11008				21998			

***p<.001; **p<.01; *p<.05 - differences refer to those between disabled and non-disabled households

Table 3. Odds Ratios and Significance from Multivariate Models Assessing the Impact of Disability Status on Residential Attainment, 2009

	Odds Ratios:			
	Renter Households		Owner Households	
	Any Disability	Ambulatory Disability	Any Disability	Ambulatory Disability
Variables	**(1)**	**(2)**	**(3)**	**(4)**
Reference person reports within 1/2 block of housing unit:				
Abandoned buildings	1.40***	1.40**	1.72***	1.70***
Buildings with bars on windows	0.98	0.97	1.37***	1.33***
Trash or junk	1.23*	1.19	1.74***	1.79***
No open spaces	0.91	1.00	0.93	1.00
Presence of serious crime in neighborhood	1.36***	1.34***	1.46***	1.38***
Lives in Suburbs	1.01	1.01	0.96	.0.94
Neighborhood Satisfaction (10=best)	-0.26***	-0.25***	-0.21***	-0.23***
Housing moderately or severely inadequate	1.33**	1.21	1.57***	1.56***
N	11008		21998	

***p<.001; **p<.01; *p<.05 - differences refer to those between disabled and non-disabled households
NOTE: For neighborhood satisfaction, we report the OLS regression coefficients.

Table 4. Logistic Regression Models of Residential Attainment of Renter Households, 2009 (weighted)

	Abandoned buildings		Bars on Windows		Trash		No Open Spaces	
Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Disability Status								
Person in hh with:								
Any disability	.336***	N/A	-.026	N/A	.204**		-.098	N/A
	(.100)	N/A	(.080)		(.085)		(.062)	
Ambulatory dis.	N/A	.339**	N/A	-.033		.173	N/A	-.009
		(.121)		(.097)		(.105)		(.076)
Race/ethn (ref. white)								
Black	.795***	.783***	.804***	.805***	.308***	.300***	.212***	.218***
	(.085)	(.085)	(.069)	(.069)	(.073)	(.073)	(.055)	(.055)
Hispanic	.288**	.281*	.730***	.730***	.121	.117	.250***	.253***
	(.111)	(.111)	(.077)	(.077)	(.087)	(.087)	(.065)	(.065)
Asian	-.421	-.427	.452***	.452***	-.179	-.183	.312**	.253**
	(.263)	(.263)	(.121)	(.121)	(.160)	(.159)	(.112)	(.065)
Householder Vars								
Native-Born	-.445***	-.452***	.306***	.306***	-.081	-.086	.357***	.364***
	(.114)	(.114)	(.072)	(.072)	(.086)	(.086)	(.065)	(.064)
Age	-.013***	-.012***	-.005**	-.005**	-.021***	-.021***	.004*	.003*
	(.003)	(.003)	(.002)	(.002)	(.002)	(.002)	(.001)	(.001)
Male	-.167*	-.167*	-.012	-.012	-.119*	-.120*	-.041	-.039
	(.076)	(.076)	(.055)	(.055)	(.060)	(.060)	(.043)	(.043)
Married household	-.079	-.081	-.254***	-.254***	-.233**	-.234**	-.085	-.086
	(.094)	(.094)	(.066)	(.066)	(.074)	(.074)	(.051)	(.051)
Kids under 18	.164*	.175*	.005	.005	.043	.048	-.152**	-.152**
	(.082)	(.082)	(.063)	(.063)	(.067)	(.067)	(.109)	(.050)
Education (ref <h.s.)								
h.s. degree	-.068	-.072	-.111	-.111	-.068	-.071	.012	.015
	(.101)	(.101)	(.077)	(.077)	(.084)	(.084)	(.065)	(.065)
> h.s. degree	-.219*	-.224*	-.023	-.023	-.173*	-.177*	-.057	-.053
	(.102)	(.102)	(.076)	(.076)	(.084)	(.084)	(.064)	(.064)
Receipt of:								
Public assistance	.624***	.631***	.277*	.277*	.564***	.568***	-.052	-.057
	(.134)	(.134)	(.124)	(.081)	(.119)	(.119)	(.109)	(.109)
Disability income	.191	.230*	.225*	.224**	.261**	.293**	-.013	-.040
	(.111)	(.109)	(.089)	(.087)	(.095)	(.093)	(.074)	(.073)
Housing asst.	-.179	-.170	.029	.029	-.020	-.012	-.209**	-.217**
	(.103)	(.103)	(.081)	(.081)	(.088)	(.088)	(.069)	(.069)
Total hh income	-.006***	-.006***	-.001	-.001	-.004***	-.004***	-.002***	-.002***
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Time in unit/location								
Duration in unit	.002	.002	.036***	.036***	.011*	.011*	-.003	-.003
	(.006)	(.006)	(.004)	(.004)	(.005)	(.005)	(.003)	(.003)
Located in suburb	-.766***	-.767***	-1.33***	-1.33***	-.619***	-.619***	-.397***	-.397***
	(.076)	(.076)	(.057)	(.057)	(.060)	(.060)	(.042)	(.042)
Region (ref. West)								
Northeast	.195	.193	-.009	-.009	.036	.034	-.093	-.092
	(.106)	(.106)	(.069)	(.069)	(.081)	(.081)	(.061)	(.061)
South	-.016	-.017	-.838***	-.838***	-.364***	-.364***	-.130*	-.131*
	(.099)	(.099)	(.070)	(.070)	(.077)	(.077)	(.055)	(.055)
Midwest	.160	.158	-1.08***	-1.08***	-.098	-.098	-.291***	-.291
	(.109)	(.109)	(.088)	(.088)	(.086)	(.086)	(.063)	(.063)
Intercept	-1.52***	-1.50***	-.728***	-.730***	-.399**	-.392**	.894***	.898***
	(.184)	(.185)	(.134)	(.134)	(.145)	(.146)	(.108)	(.108)
N				11008				

***p<=.01; **p<=.05; *p<=.10; 1OLS regression is used here.

Table 4 (cont'd). Logistic Regression Models of Residential Attainment of Renter Households, 2009 (weighted)

	Serious Crime		Suburban Location		Neighborhood Rating[1]		Housing Inadequacy	
Variables	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**
Disability Status								
Person in hh with:								
Any disability	.304***	N/A	.009	N/A	-.262***	N/A	.285**	N/A
	(.070)		(.060)		(.057)		(.010)	
Ambulatory dis.	N/A	.295***	N/A	.013	N/A	-.255***	N/A	.192
		(.085)		(.074)		(.070)		(.123)
Race/ethn (ref. white)								
Black	.280***	.269***	-.638***	-.638***	-.342***	-.333***	.125	.113
	(.060)	(.060)	(.053)	(.053)	(.051)	(.051)	(.090)	(.090)
Hispanic	.124	.119	-.596***	-.596***	-.037	-.033	.172	.167
	(.072)	(.072)	(.062)	(.062)	(.059)	(.059)	(.103)	(.103)
Asian	-.159	-.164	-.517***	-.517***	-.189*	-.185	-.007	-.014
	(.127)	(.127)	(.101)	(.100)	(.096)	(.096)	(.175)	(.175)
Householder Vars								
Native-Born	-.232**	-.015***	-.088	-.088	.076	.082	.100	.088
	(.072)	(.072)	(.060)	(.060)	(.057)	(.057)	(.099)	(.098)
Age	-.015***	-.015***	.010***	.010***	.018***	.018***	-.010***	-.009***
	(.002)	(.002)	(.001)	(.001)	(.001)	(.001)	(.003)	(.003)
Male	-.043	-.045	.015	.015	-.050	-.048	.163*	.161*
	(.049)	(.049)	(.041)	(.041)	(.040)	(.040)	(.072)	(.072)
Married household	-.142*	-.144*	.263***	.263***	.124**	-.125**	-.224*	-.224**
	(.059)	(.059)	(.049)	(.050)	(.047)	(.047)	(.088)	(.088)
Kids under 18	.168**	.176**	.352***	.353***	-.112*	-.120**	.017	.024
	(.055)	(.055)	(.047)	(.048)	(.045)	(.045)	(.081)	(.081)
Education (ref <h.s.)								
h.s. degree	.036	.033	.160**	.160**	-.063	-.061	-.040	-.043
	(.073)	(.073)	(.061)	(.061)	(.059)	(.059)	(.102)	(.102)
> h.s. degree	.182*	.177*	-.028	-.028	-.104	-.099	-.051	-.058
	(.071)	(.071)	(.061)	(.061)	(.058)	(.058)	(.101)	(.101)
Receipt of:								
Public assistance	.227*	.231*	-.089	-.089	-.337***	-.340***	.325*	.333*
	(.113)	(.113)	(.107)	(.107)	(.101)	(.101)	(.153)	(.152)
Disability income	.178*	.217**	-.011	-.011	-142*	-.174**	.145	.197
	(.081)	(.079)	(.072)	(.071)	(.068)	(.067)	(.115)	(.113)
Housing asst.	.145	.154*	-.340***	-.340***	-.198**	-.206**	.033	.048
	(.074)	(.074)	(.067)	(.067)	(.063)	(.063)	(.107)	(.107)
Total hh income	.000	-.000	.001**	.001**	.003***	.003***	-.001	-.001
	(.000)	('-.000)	(.000)	(.000)	(.000)	(.000)	(.001)	(.001)
Time in unit/location								
Duration in unit	.016***	.016***	-.013***	-.013***	-.009**	-.009**	.001	.000
	(.004)	(.004)	(.003)	(.003)	(.003)	(.003)	(.006)	(.006)
Located in suburb	-.631***	-.631***	NA	NA	.332***	.332***	-.468***	-.467***
	(.048)	(.048)	(NA)	(NA)	(.038)	(.038)	(.071)	(.071)
Region (ref. West)								
Northeast	-.314***	-.316***	-.223***	-.223***	.064	.066	.419***	.417***
	(.070)	(.070)	(.058)	(.058)	(.055)	(.055)	(.095)	(.095)
South	-.012	-.012	.071	.071	.094	.094	-.138	-.138
	(.061)	(.061)	(.052)	(.052)	(.050)	(.050)	(.095)	(.095)
Midwest	.012	.012	-.179**	-.179	.067	.068	.066	.065
	(.070)	(.070)	(.061)	(.061)	(.058)	(.058)	(.106)	(.106)
Intercept	-.498***	-.487***	-.306**	-.306**	6.86***	6.85***	-1.87***	-1.87***
	(.121)	(.121)	(.102)	(.102)	(.099)	(.099)	(.176)	(.177)
N				11008				

***p<=.01; **p<=.05; *p<=.10; 1OLS regression is used here.

Table 5. Logistic Regression Models of Residential Attainment of Owner Households, 2009 (weighted)

	Abandoned buildings		Bars on Windows		Trash		No Open Spaces	
Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Disability Status								
Person in hh with:								
Any disability	.543***	N/A	.313***	N/A	.554***	N/A	-.070	N/A
	(.083)		(.072)		(.078)		(.042)	
Ambulatory dis.	N/A	.532***	N/A	.285***	N/A	.584***	N/A	.004
		(.096)		(.085)		(.091)		(.052)
Race/ethn (ref. white)								
Black	.997***	.981***	1.32***	1.30***	.471***	.456***	.222***	.223***
	(.083)	(.083)	(.071)	(.071)	(.086)	(.086)	(.053)	(.053)
Hispanic	.426***	.418***	1.15***	1.15***	.190	.182	.470***	.471***
	(.108)	(.108)	(.079)	(.079)	(.102)	(.102)	(.059)	(.058)
Asian	-.641*	-.650**	.192	.187	-.138	-.147	.238**	.238**
	(.256)	(.256)	(.135)	(.135)	(.178)	(.178)	(.082)	(.082)
Householder Vars								
Native-Born	-.353**	-.360**	.302***	.298***	-.197	-.203	.280***	.283***
	(.117)	(.117)	(.079)	(.080)	(.106)	(.106)	(.054)	(.054)
Age	-.022***	-.021***	-.014***	-.013***	-.029***	-.028***	.001	.001
	(.003)	(.003)	(.002)	(.002)	(.003)	(.003)	(.001)	(.001)
Male	.093	.093	.033	.033	-.022	-.019	-.037	-.036
	(.066)	(.066)	(.056)	(.056)	(.060)	(.060)	(.030)	(.030)
Married household	-.133	-.135	-.343***	-.344***	-.087	-.089	-.104**	-.104**
	(.071)	(.071)	(.059)	(.060)	(.066)	(.066)	(.033)	(.033)
Kids under 18	-.030	-.016	-.201**	-.194**	-.224**	-.209**	-.057	-.059
	(.076)	(.076)	(.065)	(.065)	(.070)	(.070)	(.035)	(.035)
Education (ref <h.s.)								
h.s. degree	-.473***	-.482***	-.310***	-.318***	-.259**	-.267**	-.009	-.003
	(.101)	(.100)	(.087)	(.087)	(.099)	(.099)	(.057)	(.057)
> h.s. degree	-.642***	-.655***	-.384***	-.393***	-.416***	-.428***	-.038	-.030
	(.096)	(.096)	(.081)	(.081)	(.095)	(.095)	(.054)	(.054)
Receipt of:								
Public assistance	-.329	-.331	.310	.318	.466	.471	.069	.060
	(.334)	(.335)	(.243)	(.243)	(.258)	(.259)	(.193)	(.193)
Disability income	.205	.244*	.174	.201*	.098	.127	-.096	-.118*
	(.110)	(.110)	(.097)	(.096)	(.108)	(.108)	(.060)	(.060)
Total hh income	-.004***	-.004***	-.001*	-.001*	-.003***	-.003***	-.000*	-.000
	(.000)	(.001)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Time in unit/location								
Duration in unit	.008**	.008**	.021***	.021***	.014***	.014***	.007***	.007***
	(.003)	(.003)	(.002)	(.002)	(.003)	(.003)	(.001)	(.001)
Located in suburb	-.625***	-.625***	-1.58***	-1.58***	-.712***	-.712***	-.642***	-.642***
	(.064)	(.064)	(.054)	(.054)	(.059)	(.059)	(.033)	(.033)
Region (ref. West)								
Northeast	-.305**	-.310**	-.532***	-.536***	-.078	-.083	-.115**	-.114*
	(.106)	(.106)	(.081)	(.081)	(.091)	(.091)	(.045)	(.045)
South	-.273**	-.208**	-.492***	-.495***	-.228**	-.235**	.004	.004
	(.087)	(.087)	(.065)	(.065)	(.079)	(.079)	(.040)	(.040)
Midwest	.058	.053	-1.34***	-1.34***	-.186*	-.191*	-.178***	-.177***
	(.092)	(.092)	(.092)	(.092)	(.087)	(.087)	(.043)	(.043)
Intercept	-.762***	-.758***	-.455**	-.456**	-.358*	-.353*	.864***	.868***
	(.193)	(.193)	(.162)	(.163)	(.178)	(.178)	(.097)	(.097)
N				21998				

***p<=.01; **p<=.05; *p<=.10; 1OLS regression is used here.

Table 5 (cont'd). Logistic Regression Models of Residential Attainment of Owner Households, 2009 (weighted)

	Serious Crime		Suburban Location		Neighborhood Rating[1]		Housing Inadequacy	
Variables	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**
Disability Status								
Person in hh with:								
Any disability	.380***	N/A	-.042	N/A	-.207***	N/A	.451***	N/A
	(.053)		(.046)		(.032)		(.109)	
Ambulatory dis.	N/A	.319***	N/A	-.068	N/A	-.233***	N/A	.442***
		(.064)		(.055)		(.039)		(.126)
Race/ethn (ref. white)								
Black	.307***	.299***	-.984***	-.982***	-.160***	-.155***	.506***	.493***
	(.059)	(.059)	(.050)	(.050)	(.039)	(.039)	(.122)	(.122)
Hispanic	.179**	.175**	-.573***	-.572***	.075	.077	.603***	.598***
	(.067)	(.067)	(.056)	(.056)	(.042)	(.041)	(.137)	(.137)
Asian	-.378**	-.382***	-.256**	-.255**	-.101***	-.100	.076	.071
	(.117)	(.116)	(.082)	(.082)	(.061)	(.061)	(.266)	(.266)
Householder Vars								
Native-Born	-.285***	-.291***	-.140**	-.141**	.018	.019	-.132	-.138
	(.070)	(.070)	(.054)	(.054)	(.040)	(.040)	(.144)	(.144)
Age	-.016***	-.015***	.006***	.006***	.022	.022***	-.016***	-.015***
	(.002)	(.002)	(.001)	(.001)	(.001)	(.001)	(.004)	(.004)
Male	-.140***	-.140***	-.033	-.034	-.076***	-.078***	.091	.093
	(.038)	(.038)	(.032)	(.032)	(.023)	(.023)	(.088)	(.088)
Married household	-.012	-.014	.333***	.333***	.140***	.140***	-.270**	-.271**
	(.042)	(.042)	(.035)	(.035)	(.025)	(.025)	(.095)	(.095)
Kids under 18	.154*	.162***	.166***	.165***	.060*	.055*	-.125	-.115
	-0.044	(.044)	(.038)	(.038)	(.026)	(.026)	(.104)	(.104)
Education (ref <h.s.)								
h.s. degree	.090	.080	.128*	.127*	-.006	-.003	-509***	-.520***
	(.074)	(.074)	(.059)	(.060)	(.042)	(.042)	(.128)	(.128)
> h.s. degree	.154*	.139*	-.072	-.073	.045	.050	-.673***	-.685***
	(.070)	(.070)	(.056)	(.056)	(.040)	(.040)	(.123)	(.123)
Receipt of:								
Public assistance	-.179	-.164	-.407*	-.407	-.306*	-.315*	.518	.522
	(.232)	(.233)	(.186)	(.186)	(.141)	(.141)	(.337)	(.337)
Disability income	.133	.175*	.031	.034	-.087	-.095*	.084	.116
	(.073)	(.073)	(.064)	(.064)	(.045)	(.045)	(.151)	(.151)
Total hh income	.000	-.000	.000	.000	.001***	.002***	-.003**	-.003***
	(.000)	(.000)	(.000)	(.000)	(.001)	(.000)	(.001)	(.000)
Time in unit/location								
Duration in unit	.006**	.006**	-.007***	-.007***	-.011***	-.011***	.011**	.011**
	(.002)	(.002)	(.001)	(.001)	(.001)	(.001)	(.004)	(.004)
Located in suburb	-.672***	-.672***	NA	NA	.332***	.332***	-.447***	-.447***
	(.038)	(.038)	(NA)	(NA)	(.024)	(.024)	(.087)	(.087)
Region (ref. West)								
Northeast	-.366***	-.370***	.634***	.635***	.203***	.205***	.775***	.772***
	(.062)	(.061)	(.050)	(.049)	(.034)	(.034)	(.137)	(.137)
South	.094	.091	.387***	.388***	.053	.055	.408**	.408**
	(.049)	(.049)	(.041)	(.041)	(.030)	(.030)	(.127)	(.127)
Midwest	-.064	-.067	.147**	.147**	.105**	.106**	.206	.203
	(.055)	(.055)	(.045)	(.045)	(.033)	(.033)	(.146)	(.146)
Intercept	-.496***	-.502***	.323***	.327***	6.75***	6.75***	-2.30***	-2.30***
	(.122)	(.122)	(.100)	(.100)	(.073)	(.073)	(.264)	(.264)
N					21998			

***p<=.01; **p<=.05; *p<=.10; 1OLS regression is used here.