

## Housing Satisfaction of 55+ Single-Person Householders in U.S. Urban Communities

### 미국 도시에 거주하는 55세 이상 독신가구의 주거만족도에 관한 연구

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#### Abstract

This study aims to analyze the housing satisfaction of 55 years and older (55+) single-person householders in U.S. urban communities with the 2011 American Housing Survey Data. Single-person householders younger than 55 years of age (55-) were used as a reference group. Housing Adjustment Theory was used to develop a research framework to depict the relationships of housing satisfaction (dependent variable) with demographic and housing variables (independent variables). The regression analysis revealed that age, health status, government income, race, gender, age of house, housing quality, neighborhood, structure type, and tenure status had a significant effect on housing satisfaction levels of both those aged 55- and 55+. However, for the cohort of 55+, education, census region, housing affordability, and structure size also affected their housing satisfaction. Neighborhood satisfaction had the strongest effect on housing satisfaction of both groups. These variables were discussed in terms of resources and constraints contributing to their housing satisfaction. This study highlights the present and future housing trends and challenges of U.S. single householders in U.S. urban communities.

Keywords : Housing Satisfaction, 55+ Single, U.S. Urban, American Housing Survey, Housing Adjustment Theory

주요어 : 주거만족도, 55세 이상 독신가구, 미국 도심지, 미국 인구총주택조사, 주거조절이론

#### I. Introduction

In the U.S., the proportion of one-person (single) households increased from 17% in 1970 to 27% in 2012. This increase of single households is one of the recent U.S. demographic trends (Mayoseitz Media, 2012). Since household structure plays an important role in the economic and social well-being of families and individuals (Jacobsen, Mather, & Dupuis, 2012), this segment of the population has been a central focus of various research areas (Wulff, 2001; Mayoseitz Media, 2012).

Generally, single households tend to occur more often in larger U.S. cities. In the U.S., More than 40% of single households live in metropolitan urban areas, such as Atlanta, Washington, D.C., Denver, and Seattle (Mayoseitz Media, 2012). Based on the 2011 American Housing Survey National and Metropolitan (AHS) data analysis, among the U.S. national sample, 87% of the households lived in urban areas. Almost 29% of the urban householders lived alone, and 48% of single urban householders were 55 years old and over (55+). Thus, older adults need to receive more attention as a major segment of single urban residents.

Urban residents, particularly with limited resources, face challenges with unaffordable and unavailable housing units due to high rent, inadequate housing quality with accessibility issues due to aged units, and unsafe neighborhood (Glaeser & Gyourko, 2001; Browning & Cagney, 2002; Molnar et al., 2004). Compared to younger counterparts, older adults tend to have decreasing incomes (Joint Center for Housing Studies of Harvard University [Harvard], 2014) and increasing needs for home accessibility (Kwon, Hwang, & Beamish, 2014). Compared to married couples, single households tend to earn lower income (Harvard, 2014). Therefore, single elderly households in urban areas are likely to face more housing

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challenges compared to younger and married counterparts, particularly when they have financial constraints. However, when considering the elderly population that are likely to express higher housing satisfaction with their aging (James III, 2007), those urban older residents might have their unique resources to mitigate this situation.

The primary purpose of this study is to analyze the housing satisfaction of elderly single householders who live in U.S. urban communities with the 2011 AHS data and suggest policy and programmatic implications for offering elderly more satisfactory housing conditions. Housing satisfaction was discussed in relation to their resources and constraints, focusing on their demographic and housing profiles, grounded by Housing Adjustment Theory (Morris & Winter, 1975, 1978, 1998). Householders younger than 55 years old (55-) were considered a reference group.

## II. Literature Review

### 1. Single elderly householders in the U.S.

According to the Administration on Aging (2011), about 29% of older adults age 65 and over lived alone in 2010 in the U.S. The proportion of single senior householders steadily grows from the age of 50 (Harvard, 2014). The proportion of single elderly householders is higher among women and increases with advanced age, primarily because of the increasing number of widows and older adults who can afford to live alone, unlike in the past (Luken & Vaughan, 2003). About four-fifths of single elderly householders are women, and almost half (47%) of women aged 75 and older live alone (Administration on Aging, 2011).

Single elderly householders are more likely to experience financial difficulties and physical issues. Between ages 50-64, a married couple makes \$50,000 more compared to single senior householders. Even though annual income decreases with age for both married couples and single senior householders, single senior householders continuously make less than half of the income of married couples (Harvard, 2014). Based on a study of 2011 AHS, Kwon, Hwang, and Beamish (2014) found that single senior householders age 55 and over living in urban areas had more disabilities and reported greater home accessibility problems. A recent study using the 2010 wave data of the National Health Interview Survey (65+) indicates that older adults living alone or with others had lower quality of life compared to those living with a spouse only, yet the results varied by gender (Henning-Smith, 2014).

### 2. Previous study on housing satisfaction

Most empirical studies have found similar determinants of

residential satisfaction. Many studies indicate that socio-demographic and housing characteristics are recognized as important determinants of residential satisfaction. Regarding socio-demographic characteristics, age, gender, income, health status, and household size were important determinants of residential satisfaction (Barcus, 2004; Hwang & Ziebarth, 2006; Lee & Parrott, 2010; Grinstein-Weiss et al., 2011). Relationships between satisfaction and age show different patterns when considering urbanicity and income levels. With age, rural residents are more likely to be satisfied with their residential environment (Filkins, Allen, & Cordes, 2000).

In terms of housing characteristics, tenure type, structure type, structure size, and design features were found to be significantly associated with residential satisfaction (Coveney & Rudd, 1986; Hwang & Ziebarth, 2006; Liu & Crull, 2006). Housing satisfaction was also positively and significantly associated with housing quality (Amérigo & Aragonés, 1990; Zhu & Shelton, 1996; Lee & Parrott, 2010), meaning that residents having adequate housing quality tend to be more satisfied with their housing unit.

Particularly for single elderly householders with physical difficulties, accessibility problems in their home were significantly negatively related to residential satisfaction (Kwon et al., 2014). Quality of neighborhood (Perez et al., 2001; Liu & Crull, 2006) and proximity to local services, such as grocery stores, doctors' offices, and public transportation, are important factors affecting neighborhood satisfaction (Leslie & Cerin, 2008; Van Dyck et al., 2011)

### 3. Theoretical perspectives on housing satisfaction

To examine housing satisfaction of aging households in U.S. urban areas, Housing Adjustment Theory (HAT, originally named as Theory of Housing Adjustment Behavior) (Morris & Winter 1975, 1978, 1998) was employed as a theoretical framework in this study. The theory explains complex processes through which American families make decisions about their housing and reveals the relationships among individual characteristics and housing within the social context (Morris & Winter, 1978).

According to the HAT, housing norms (housing space, tenure, structure type, quality, and neighborhood norms) and constraints (e.g., limited financial resources) are important influential factors in evaluating housing. American housing norms prescribe homeownership (an example of tenure norm), single-family dwellings (structure type), adequate numbers of rooms (structure size) for the number of household members (household size) of each age and gender category, and private outdoor space (Morris & Winter, 1998). Quality norms are more likely to be subjective and congruent with household

income. Neighborhood norms are related to the location of the housing unit and the area nature that determines the family's satisfaction with the dwelling and its ability to meet the non-housing goals (e.g., the quality of the children's education is greatly determined by the location of the dwelling) (Morris & Winter, 1975).

Constraints may interfere with people's ability to live in normative housing conditions. Constraints include: (a) resources (income, wealth, information, skills, and time); (b) family organization (the household's ability to effectively make and implement decisions about its housing); (c) housing market (prices, supplies of housing, building materials, and mortgage money); (d) predispositions (psychological characteristics of household members); and (e) discrimination (due to race, ethnicity, gender, age, disability or social class) (Morris & Winter, 1998). The constraints lead either to housing adjustment or adaptation to reduce housing deficits or to continued dissatisfaction (Morris & Winter, 1975, 1978).

This theory has been widely used to explore housing satisfaction among and decisions made by various segments of the population, such as Asian and Pacific elders in the U.S. (Lee & Parrott, 2010), military families (Parks, Carswell, & James, 2009), and low-income single-parent families (Bruin & Cook, 1997). Recently, Lee and Ahn (2013) employed this theory to understand baby boomers' housing affordability. They found not only common constraints, such as tenure status, gender, and education attainment, but also age related constraint, such as the age of house for baby boomers. Thus, it is assumed that unique constraints and resources related to family composition (single), age (55+), and location (urban communities), and their interrelationships are likely to influence housing satisfaction.

#### 4. Research questions

The intensive literature and past research review identified two main research questions that directed this study. They were: (a) What are the demographic and housing characteristics of 55+ single householders in the U.S. urban communities [those who are less than 55 years old (55-) were considered a reference group] and (b) What are the relationships between housing satisfaction of 55+ single householders in the U.S. urban communities and their demographic and housing characteristics [those who are less than 55 years old (55-) were considered a reference group].

### III. Methods

#### 1. Data and sample

This study used a secondary dataset, the 2011 AHS (U.S.

Department of Housing and Urban Development, 2013). In the U.S., the AHS is the most comprehensive national housing survey, sponsored by the HUD and conducted by the U.S. Census Bureau. The biennial AHS provides a current and continued series of data on selected housing and demographic profiles as a longitudinal housing unit survey. In 1973, the initial AHS was conducted with a sample size of 60,000 housing units, and in 1985, the national sample was redesigned based on the data of the 1980 Census with about 47,000 housing units with rotating supplemental samples of around 6,000 to 9,000 added to each survey. The AHS is restructured from time to time to mirror the current needs and new subjects for specific survey years. For the data collection, the U.S. Census Bureau interviewers conduct in-person or telephone surveys with the sample households by using the Computer Assisted Personal Interview (i.e., using laptop computers) (Montfort 1998; U.S. Census Bureau, 2013a).

The sample for this study was selected based on three AHS variables, age (55+), household size (one person), and urbanicity (urban). A useable sample size of 55+ single householders in U.S. urban communities was 16,816.

#### 2. Research variables

Based on the HAT (Morris and Winter 1975; 1978), demographic and housing variables [independent variables (IVs)] were selected either as constraints or as resources that influence U.S. urban 55+ single householders' satisfaction with housing [dependent variable (DV)]. In this study, demographic IVs included age, education, health status, household income, government income assistance, location, marital status, race, and gender. Housing IVs included built year of the house, housing affordability level, housing quality, neighborhood satisfaction, structure size and type, and tenure status.

#### 3. Data analysis

The IBM Statistical Package for the Social Sciences (SPSS; IBM Corporation, Armonk, NY) version 22 was used to analyze the data for this study. Descriptive statistics (frequencies, percentages, and means) were employed to provide the demographic and housing profiles of 55+ single householders in urban U.S. communities. When comparing the profiles of 55+ single householders to those aged 55 and less, t-tests (for continuous variables) and Chi-square test (for categorical variables) analyses were employed <Table 1>. To reveal the relationships between IVs and DV, a simultaneous multiple regression was used with a significance level of  $\alpha = .05$ .

## IV. Results

## 1. Demographic and Housing Profile of 55+ Single-Person Householders in U.S. Urban Communities

<Table 1> presents the demographic and housing profiles of 55+ ( $M=71$  years old) single households in the U.S. urban communities along with those aged 55- ( $M=39$  years old) and provides the results of comparisons (p-value). Differences between individuals 55+ and 55- were found for all variables based on comparative group analyses using t-test or Chi-square test.

Table 1. Profile of 55+ and Comparison to Those Aged 55-

Variables	55+	55-
	( $n=16,816$ ) % or $M$	( $n=13,763$ ) % or $M$
<i>Dependent variable</i>		
Housing satisfaction* <sup>a</sup>	8.50 ( $M$ )	7.86( $M$ )
<i>Independent variables</i>		
<i>Demographic variables</i>		
Age*	70.7years ( $M$ )	38.9 years ( $M$ )
Education*		
Less than high school	19.4%	8.4%
High school graduate	26.3%	19.0%
Some college or associate's degree	28.9%	30.9%
Bachelor's degree or more	25.3%	41.7%
Health status*		
Excellent	20.4%	39.9%
Very good	46.2%	44.8%
Fair	25.7%	12.5%
Poor	7.6%	2.7%
Household income* <sup>b</sup>	\$32,296 ( $M$ )	\$46,436 ( $M$ )
Less than \$25,000	58.4%	35.8%
\$25,000 to \$34,999	13.0%	14.1%
\$35,000 to \$49,999	11.3%	17.4%
\$50,000 to \$74,999	9.1%	17.0%
\$75,000 and over	8.3%	15.8%
Government income assistance* <sup>c</sup>		
Not received	84.8%	90.0%
Received	15.2%	10.0%
Location*		
Northeast	18.2%	13.9%
Midwest	25.7%	25.9%
South	26.3%	29.2%
West	29.8%	31.1%
Marital status*		
Married	2.4%	3.4%
Not married	97.6%	96.6%
Race*		
White only	73.9%	63.5%
Black only	15.0%	19.1%
Asian only	2.9%	4.8%
Hispanics	6.5%	10.4%

Table 1. Continued

Variables	55+	55-
	( $n=16,816$ ) % or $M$	( $n=13,763$ ) % or $M$
Others	1.6%	2.2%
Gender*		
Male	32.5%	55.4%
Female	67.5%	44.6%
<i>Housing variables</i>		
<i>Built year of the house*</i>		
Before 1970	47.3%	46.6%
1970-1979	19.6%	17.2%
1980-1989	14.9%	14.5%
1990-1999	10.3%	10.3%
2000-2011	7.9%	11.4%
<i>Housing affordability level*<sup>d</sup></i>		
Unaffordable	54.0%	49.5%
Affordable	46.0%	50.5%
Housing quality* <sup>e</sup>	2.92 ( $M$ )	2.89 ( $M$ )
Neighborhood satisfaction* <sup>a</sup>	8.19 ( $M$ )	7.63 ( $M$ )
Structure size (bedroom #)*	2.17 ( $M$ )	1.92 ( $M$ )
<i>Structure type*</i>		
One-unit building, detached from any other building	47.8%	34.7%
One-unit building, attached to one or more buildings	7.9%	8.6%
Building with two or more apartments	40.3%	55.0%
Manufactured (mobile) home	4.0%	1.8%
<i>Tenure status*</i>		
Owned	57.6%	35.6%
Rented	41.0%	62.9%
Occupied without payment of rent	1.5%	1.4%

Note. <sup>a</sup>Scale: 10=best, 1=worst

<sup>b</sup>Categorical income variable for descriptive statistics (frequencies)

<sup>c</sup>Householders who received SSI (supplemental security income), AFDC/TANF or Welfare, or Food Stamps

<sup>d</sup>Affordable= Spending less than 30 % of monthly household income for their housing; Unaffordable=spending 30 % or more of monthly household incomes for their housing.

<sup>e</sup>Scale: 3=adequate, 1=severely inadequate

\* $p < .05$

Single householders aged 55+ in urban areas were more satisfied with their housing [ $M=8.50$  (1-10 range)] compared to those aged 55- ( $M=7.86$ ). In the U.S. urban areas, 55+ had lower education compared to 55- in that 45.7% of 55+ single householders reported their education level as a high school graduate or lower than high school compared to 27.4% of 55-. Furthermore, 25.3% of 55+ had Bachelor's degree or beyond compared to 41.7% of 55-. The respondents aged 55+ were less healthy, as only 20.4% reported their health status as excellent compared to 39.9% of 55-. The annual average household income of 55+ (\$32,296) was less compared to 55- householders (\$46,436). Overall, almost 83% of 55+ and 67% of 55- earned less than the 2011 U.S. median household income of \$50,502 (U.S. Census Bureau, 2013b). However,

only 15.2% of 55+ and 10.0% of 55- householders received government income assistance [e.g., SSI (Supplemental Security Income), welfare, or Food Stamps]. In terms of census region, a greater proportion of 55+ (18.2%) lived in the Northeast compared to 55- (13.9%). In terms of marital status and gender of householders, a greater proportion of 55+ householders were non-married (97.6%) or female (67.5%) compared to 55- (96.6% non-married and 44.6% female). Regarding race/ethnicity, more 55+ were Whites (73.9%), compared to 63.5% of 55-.

Regarding housing characteristics, almost half of both groups lived in housing units built before 1970. However, a greater proportion of 55+ lived in older housing units. Only 7.9% of 55+ lived in housing built between 2000 and 2011 compared to 11.4% of 55-. Concerning housing affordability, 54.0% of 55+ spent 30% or more of monthly household incomes for their housing related costs compared to 49.5% of 55-. Regarding housing quality and neighborhood satisfaction, 55+ lived in more adequate housing [ $M=2.92$  (1-3 range)] and were more satisfied with neighborhood [ $M=8.19$  (1-10 range)] compared to 55- ( $M=2.89$  for housing quality and  $M=7.63$  for neighborhood satisfaction). Structure size of 55+ households was larger ( $M=2.17$  bedrooms) compared to that of 55- ( $M=1.92$  bedrooms).

One-unit detached building was the most prevalent structure type (47.8%) for 55+, followed by apartment buildings (40.3%). For 55-, apartment was the most common type (55.0%), followed by one-unit detached building (34.7%). Moreover, 55+ (4%) were more likely to live in manufactured housing compared to 55- (1.8%). Lastly, 55+ (57.6%) were more likely to own their home compared to 55- (35.6%).

## 2. Housing Satisfaction of 55+ Single-Person Householders in U.S. Urban Areas

Simultaneous multiple regression was employed to examine the relationship of housing satisfaction of 55+ single householders with their demographic and housing characteristics. Simultaneous multiple regression allows all IVs (predictor variables) to be entered into the equation simultaneously, and each IV is “evaluated regarding its predictive power, over and above that offered by all the other IVs” (Pallant, 2007, p. 147). In this study, categorical IVs of the model were converted into dummy variables for the regression analysis. As shown in <Table 2>, when housing satisfaction was regressed on demographic and housing variables of 55+ single householders in U.S. urban communities, the variables accounted for about 37% of the total variance in housing satisfaction ( $R^2=.371$ ,  $p<.05$ ). The regression model was statistically significant,  $F(31, 16,784)=318.855$ ,  $p<.05$ .

Table 2. Simultaneous Multiple Regression: Relationships between Housing Satisfaction of 55+ Single-Person Householders in U.S. Urban Communities, and their Demographic and Housing Variables (N=16,816)

Model 1 Variable	B	SE B	$\beta$
Constant	3.315	.186	
<i>Demographic Variables</i>			
Age	.013	.001	.081*
Education (R: Less than high school)			
High school graduate	-.080	.032	-.021*
Some college or associate degree	-.154	.033	-.041*
Bachelor's degree or more	-.246	.035	-.063*
Health status (R: Excellent)			
Very good	-.240	.028	-.071*
Fair	-.422	.032	-.110*
Poor	-.629	.046	-.099*
Household income	.006	.025	.002
Government income assistance (R: No)			
Yes	.100	.034	.021*
Unit location (R: Northeast)			
Midwest	-.070	.032	-.018*
South	-.146	.033	-.038*
West	-.100	.032	-.027*
Marital Status (R: Married)			
Non-Married	.001	.068	.000
Race (R: White)			
Black only	.053	.031	.011
Asian only	-.290	.063	-.029*
Hispanics	.140	.044	.020*
Others	.142	.082	.011
Gender (R: Male)			
Female	.164	.023	.046*
<i>Housing Variables</i>			
Age of house (R: Before 1970)			
1970-1979	.060	.029	.014*
1980-1989	.102	.032	.021*
1990-1999	.237	.036	.043*
2000-2011	.299	.041	.048*
Housing affordability level (R: Unaffordable)			
Affordable	.056	.024	.017*
Housing quality	.253	.030	.052*
Neighborhood satisfaction	.461	.005	.537*
Structure size	.039	.015	.024*
Structure type (R: One-unit building, detached from any other building)			
One-unit building, attached to one or more buildings	-.091	.043	-.015*
Building with two or more apartments	.017	.037	.005
Manufactured home	-.260	.057	-.030*
Tenure status (R: Owned)			
Rented	-.206	.034	-.060*
Occupied without payment of rent	-.215	.086	-.016*
R <sup>2</sup>	.371		
F	318.855*	(df 31 and 16,784)	

Note. Dependent variable: Housing satisfaction score. R: Reference group. \* $p<.05$

Based on the standardized regression coefficients ( $\beta$ ), demographic variables [age, education (high school graduate, some college or associate degree, and Bachelor's degree or more), health status (very good, fair, and poor), government income assistance, unit location (Midwest, South, and West), race (Asian only and Hispanics), and gender] and housing variables [age of house (1970-1979, 1980-1989, 1990-1999, and 2000-2011), housing affordability level, housing quality, neighborhood, structure size, structure type (one-unit building, attached to one or more buildings and manufactured home) and tenure status (rented and occupied without payment of rent)] were statistically associated with housing satisfaction scores of 55+ single householders when controlling for other variables.

Regarding significant demographic variables, for 55+ single householders, age ( $\beta = .081, p < .05$ ) had a positive relationship with housing satisfaction in that the housing satisfaction was predicted to increase by .013 per year. In terms of education, high school graduates ( $\beta = -.021, p < .05$ ), those with some college or associate degree ( $\beta = -.041, p < .05$ ), and those with Bachelor's degree and beyond ( $\beta = -.063, p < .05$ ), scored .08, .154, .246 lower on housing satisfaction scale, respectively, compared to the reference group of less than high school when controlling for other variables. In terms of health status, those having "Very good" ( $\beta = -.071, p < .05$ ), "Fair" ( $\beta = -.110, p < .05$ ), and "Poor" ( $\beta = -.099, p < .05$ ) health, respectively, scored .240, .422, and .629 points lower on the housing satisfaction scale compared to those with "Excellent" health. Those who received government income assistance ( $\beta = .021, p < .05$ ) scored .100 points higher on the housing satisfaction compared to those who did not receive assistance. Midwest ( $\beta = -.018, p < .05$ ), South ( $\beta = -.038, p < .05$ ), and West ( $\beta = -.027, p < .05$ ) groups scored, on average, .070, .146, and 100 points lower, respectively, on housing satisfaction scale compared to those living in the Northeast when controlling for other variables. Regarding race, Asians ( $\beta = -.029, p < .05$ ) scored on average .290 points lower on housing satisfaction compared to Whites while Hispanics ( $\beta = .020, p < .05$ ) scored on average .140 points higher than Whites. Females ( $\beta = .046, p < .05$ ) scored .164 points higher on housing satisfaction compared to males.

Among the significant housing variables, those 55+ single householders who lived in a housing unit built in 1970-1979 ( $\beta = .014, p < .05$ ), 1980-1989 ( $\beta = .021, p < .05$ ), 1990-1999 ( $\beta = .043, p < .05$ ), and 2000-2011 ( $\beta = .048, p < .05$ ) scored .060, .102, .237, and .299 higher on the housing satisfaction compared to those living in a housing unit built before 1970. Those who could afford their housing ( $\beta = .017, p < .05$ ) scored .056 points higher on housing satisfaction compared to those

who could not afford their housing. Housing satisfaction score was predicted to increase .253 per one unit in housing quality ( $\beta = .052, p < .05$ ). Regarding neighborhood rating ( $\beta = .537, p < .05$ ), housing satisfaction score was predicted to increase .461 per one unit in neighborhood rating. Moreover, housing satisfaction score was predicted to increase .039 per one unit increase in structure size ( $\beta = .024, p < .05$ ). Regarding structure type, those living in one unit-building attached to one or more buildings ( $\beta = -.015, p < .05$ ) and a manufactured home ( $\beta = -.030, p < .05$ ), respectively, scored .091 and .260 points lower, respectively, on the housing satisfaction scale compared to those living in single detached housing. Renters ( $\beta = -.060, p < .05$ ) and those occupied without payment of rent ( $\beta = -.016, p < .05$ ) scored .206 and .215 points lower, respectively, on the housing satisfaction scale compared to homeowners.

Generally,  $\beta$  can explain the strength of the effects of the variables. According to Keith (2005),  $\beta$ s below .05 are too small to be considered meaningful;  $\beta$ s above .05 are considered small and meaningful;  $\beta$ s above .10 are considered moderate; and  $\beta$ s above .25 are considered large. Neighborhood satisfaction had the strongest effect on housing satisfaction among 55+ single householders in the U.S. urban communities. Household income and marital status had no effect on housing satisfaction when controlling for other variables.

To compare 55+ single householders with 55- single householders in variables that had significant effects on housing satisfaction; a simultaneous multiple regression for 55- was conducted additionally. For both 55+ and 55- (refer to <Tables 2 and 3>), age, health status, government income assistance, race, gender, age of house, housing quality, neighborhood satisfaction, structure type, and tenure status had significant effect on housing satisfaction with similar relationship patterns. However, education, census region, housing affordability, and structure size were only significant variables for 55+. The strongest predictor of housing satisfaction for both groups was neighborhood satisfaction.

Table 3. *Simultaneous Multiple Regression: Relationships between Housing Satisfaction of 55- Single-Person Householders in U.S. Urban Communities, and their Demographic and Housing Variables (N=13,763)*

Model 1 Variable	B	SE B	$\beta$
Constant	3.563	.185	
<i>Demographic Variables</i>			
Age	.003	.001	.019*
Education (R: Less than high school)			
High school graduate	.030	.048	.007
Some college or associate degree	.015	.046	.004
Bachelor's degree or more	-.037	.048	-.011
Health status (R: Excellent)			
Very good	-.187	.025	-.056*

Table 3. Continued

Model 1 Variable	B	SE B	$\beta$
Constant	3.563	.185	
Fair	-.437	.040	-.087*
Poor	-.522	.075	-.051*
Household income	-.010	.029	-.003
Government income assistance (R: No)			
Yes	.150	.045	.027*
Unit location (R: Northeast)			
Midwest	-.070	.038	-.018
South	-.064	.039	-.017
West	-.067	.038	-.018
Marital Status (R: Married)			
Non-Married	-.005	.063	-.001
Race (R: White)			
Black only	.079	.032	.019*
Asian only	-.133	.055	-.017*
Hispanics	.090	.039	.016*
Others	.018	.078	.002
Gender (R: Male)			
Female	.132	.023	.039*
<i>Housing Variables</i>			
Age of house (R: Before 1970)			
1970-1979	-.006	.033	-.001
1980-1989	.072	.035	.015*
1990-1999	.187	.040	.034*
2000-2011	.436	.039	.083*
Housing affordability level (R: Unaffordable)			
Affordable	.021	.027	.006
Housing quality	.245	.029	.058*
Neighborhood satisfaction	.482	.006	.553*
Structure size	.027	.016	.016
Structure type (R: One-unit building, detached from any other building)			
One-unit building, attached to one or more buildings	-.106	.047	-.018*
Building with two or more apartments	-.020	.039	-.006
Manufactured home	-.582	.090	-.046*
Tenure status (R: Owned)			
Rented	-.250	.034	-.072*
Occupied without payment of rent	-.046	.098	-.003
R <sup>2</sup>	.372		
F	261.918*	(df 31 and 13,731)	

Note. Dependent variable: Housing satisfaction score.  
R: Reference group. \* $p < .05$ .

## V. Conclusions

This study identified unique constraints and resources of 55+ single urban U.S. residents based on the relationships between housing satisfaction and demographic and housing variables. From a simultaneous multiple regression, demographic variables (age, education, health status, government income assistance, unit location, and race), and housing variables (age

of house, housing affordability level, housing quality, neighborhood, structure size, structure type, and tenure status) were statistically associated with housing satisfaction of 55+ single householders in U.S. urban communities when controlling for other variables. When compared to 55-, education, census region, housing affordability, and structure size were only significant variables for 55+.

Linking the significant variables to the HAT (Morris & Winter, 1975, 1978, 1998), variables having positive relationships with housing satisfaction are considered as the resources of 55+ single householders in the U.S. urban communities. That is, getting older, receiving government income assistance, being Hispanic (compared to White householders) or female, and having an affordable house, larger structure size, or an adequate housing can be considered as resources which can increase housing satisfaction levels. In terms of neighborhood, the significant effect of neighborhood satisfaction on housing satisfaction suggests urban areas provide greater access to local services or public or commercial facilities (i.e., resources), which can lead to higher neighborhood and then housing satisfaction (Leslie & Cerin, 2008; Van Dyck, Cardon, Deforche, & De Bourdeaudhuij, 2011). In terms of age of house, living in a housing unit built after 1970 is considered as resource to 55+ because less money is spent on utilities or home modifications compared to those living in a housing unit built before 1970.

Constraints can be identified based on negative relationships: having less education, having unhealthy health status, being Asian (compared to White householders), living in one-unit building, attached to one or more building or manufactured home, or renting. Moreover, living in Midwest, South, or West areas can be considered as constraints compared to living in Northeastern areas.

One of the interesting findings is homeownership. The homeownership rate for 55+ (58%) was much lower compared to the national average homeownership for 55+ (79% for 55-64; 81% for 65+) (Harvard, 2012). It could result from their unique situation, i.e., living alone, because they may face financial difficulties (Harvard, 2014), which cannot allow them to pursue homeownership in urban areas where the housing or living costs are generally greater compared to non-urban areas. Another explanation can relate to different housing preference, in that this aging cohort might pursue maintenance-free structure type (e.g., apartments which are free from home ownership responsibility) (Kwon & Beamish, 2014).

Another important finding is that housing affordability is a critical variable in predicting housing satisfaction while household income is insignificant. It might imply that housing costs (e.g.,

utility bills or paying rent or mortgage) affecting housing affordability of older households are more relevant variables compared to household income itself in understanding the housing satisfaction of 55+ single urban residents.

This study is very meaningful for researchers, educators, nonprofit organizations, and/or policymakers because it provides insightful information on housing profiles and challenges of 55+ single householders in U.S. urban communities. The results of this study have implications for such stakeholders. This study found that almost 48% of 55+ single householders in urban areas lived in single-detached housing and 47% of those structures were built before 1970. This means that half of 55+ single householders in the U.S. urban areas live in outdated or single-detached housing units. With aging, those aged 55+ are likely to have physical difficulties or face accessibility issues in their home, which can lead to negative satisfaction with their housing unit (Kwon et al., 2014). Therefore, non-profit organizations or policymakers will need to focus on home modifications, home repairs, or loan programs to improve their housing environment. That will lead to an increase in not only elder's well-being, but also their satisfaction with community environments. Another implication based on our findings is that almost 83% of 55+ single households in urban areas earned less than the U.S. median income of \$50,502 (U.S. Census Bureau, 2013b), and those receiving government assistance expressed higher housing satisfaction compared to those not receiving government assistance. However, only 15% received government assistance. In this aspect, policymakers should consider how they would administer public income-oriented programs to single elderly householders in urban areas.

This study suggests a holistic approach to examining housing satisfaction of older households in U.S. urban communities. In addition to individual housing, surrounding neighborhood environments needs to be considered to improve residential satisfaction of older residents. Since most of residents aged 55+ tend to pursue aging in place, this comprehensive approach should be useful. The study results with the national dataset, AHS, can be generalized to the population. However, using the secondary dataset has a limitation as well that the variables in this study are limited to what is available within the AHS. A future study could focus on housing satisfaction of elderly single householders in urban nonmetropolitan or rural areas with more housing problems, such as unaffordability and unmaintained housing units. Also, another future study could include some AHS variables related home improvement (i.e., RAY: Year alteration/repair completed) or residency period (HHMOVE: Year householder moved in) that may influence housing satisfaction of elderly householders. Yet, the results

indicated significant variables that affect older households' housing satisfaction, which suggest future strategies that could be used to improve housing environments for older residents aged 55+.

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