

U. S. Fair Housing Amendments Act (FHAA) and Home Accessibility - Comparison of before and after the FHAA -

U.S. Fair Housing Amendments Act와 접근 가능한 공동주택 디자인 - 법 시행 전 · 후 비교 -

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Abstract

This study examined whether the Fair Housing Amendments Act of 1988 (FHAA) in the US provides more home accessibility features and reduces the home accessibility problems of senior residents with physical disability. The 2011 American Housing Survey data with a sample of 2,326 senior residents age 55 and over with physical disability and living in multifamily housing built between 1970 and 2011 were analyzed. We compared senior residents living in multifamily before (1970-1990) and after (1991-2011) the FHAA. The results show that senior residents living in multifamily housing before the FHAA were at a greater disadvantage because they were more likely to live in older buildings located in urban areas, yet paid lower rent and received government subsidies. This study confirmed that the FHAA enabled residents of multifamily housing to have more home accessibility features. However, there was no significant difference in perceived home accessibility problems between the two groups, indicating that senior residents in multifamily housing have experienced home accessibility problems both before and after the FHAA. This study has important implications for housing policy makers to consider home accessibility features for multifamily housing buildings before the FHAA, and to revisit if the FHAA sufficiently compensates physical disability of senior resident living in multifamily housing after the FHAA.

Keywords : U.S. Fair Housing Amendments Act of 1988, Multifamily Housing, Home Accessibility, Senior Residents, Physical Disability

주요어 : U.S. Fair Housing Amendments Act of 1988, 공동주택, 접근 가능한 디자인, 노인거주자, 지체장애

I. Introduction

1. Background and Aims of the Study

As people grow older, they are likely to develop physical limitations. The disability rate in the senior population is higher than in the younger population. Slightly less than 20% of the United States' total population reported some type of disability and more than half of the people 65 and over had a physical

limitation (Steinmetz, 2006). However, the vast majority of senior residents want to remain in their current housing as long as possible (Victor et al., 2000; Keenan, 2010). Researchers have asserted that accessible housing design could accommodate the special needs of seniors who are experiencing difficulty performing their activities of daily living (Wahl et al., 2009).

The Fair Housing Act (FHA) sets accessibility guidelines for the U.S. The original FHA was passed in 1968 and later amended to prohibit discrimination in the sale, renting and financing of dwellings, and in other housing-related transactions on the basis of race, color, national origin, sex, familial status, and disability (U.S. Department of Housing and Urban Development, n.d.). The 1988 amendment included home accessibility guidelines. The Fair Housing Amendments Act of 1988 (FHAA) requires all newly constructed multifamily housing, with four or more units in elevator-equipped buildings to be accessible (U.S. Department of Housing and Urban Development, 1991). These regulations do not apply to single-family homes, but any multifamily housing built after 1991

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must provide zero-step entrances, wide interior doorways and several other access features. Despite the accessibility requirements of FHAA, there has been a high degree of noncompliance; with the increasing number of seniors with disabilities, research is in great demand (Schwemm, 2006). Thus, this study is concerned with home accessibility features and problems before and after FHAA enforcement.

We compared housing accessibility features before and after the FHAA took effect. We compared two groups -multifamily housing built before (1970-1990) and after (1991-2011) the FHAA- in terms of senior residents' physical disability, home accessibility features and home accessibility problems. This study explored the following hypotheses:

- H₁: There are significant differences between senior residents living in multifamily housing built before and after the FHAA in terms of their socio-demographic and housing characteristics.
- H₂: There are significant differences between senior residents living in multifamily housing built before and after the FHAA in terms of their physical disability, housing accessibility features, and housing accessibility problems.
- H_{3,1}: There are significant correlations among physical disability, housing accessibility features, and housing accessibility problems among senior residents living in multifamily housing built before the FHAA.
- H_{3,2}: There are significant correlations among physical disability, housing accessibility features, and housing accessibility problems among senior residents living in multifamily housing built after the FHAA.

II. Literature Review

1. U.S. Multifamily Housing

The U.S. Department of Housing and Urban Development (HUD) defines multifamily housing as "buildings consisting of four or more dwelling units, if such buildings have one or more elevators, and ground floor dwelling units in other buildings consisting of four or more dwelling units" (U.S. Department of Housing and Urban Development, 1991, para. 24). Multifamily housing, accounts for 17% of the total housing types in the U.S., is the second most dominant housing type (U.S. Census Bureau, 2011). Almost 90% of the total multifamily housing market is rental (i.e., apartment) and the rest is owner-occupied multifamily housing (i.e., condominium). The percentage of owner-occupied multifamily housing is the highest (21%) in households with a member age 65 and over (U.S. Census Bureau, 2011).

Because multifamily housing is a dense structure type, it has

unique characteristics in terms of its community and location. Residents in multifamily housing communities in the U.S. share amenities and services such as 24-hours maintenance services, pools and fitness centers (Haughey, 2003). Multifamily housing tends to be located close to local services such as public transportation and shopping areas (Bernes & Mitchell, 1990; Colton & Collignon, 2001; NAHB, 2011). For such reasons, residents who have fewer people in their households and want maintenance-free living and proximity to local areas prefer multifamily housing living. More than 65% of all multifamily rental housing residents are single people, young couples without children or older adults (Goodman, 1999; Joint Center for Housing Studies of Harvard University, 2011).

Researchers have argued that multifamily housing could be a viable housing option for older adults, because of the advantages of little to no home maintenance, lower upfront costs, and the variety of amenities and services (Goodman & Scott, 1997; Bookout, 1998; Kwon & Beamish, 2013). In addition, U.S. federal government specifies affordability and accessibility of multifamily housing in law. Low-to moderate-income residents may be eligible for housing assistance from the federal government in two ways: in a project-based multifamily housing development such as the Rental and Cooperative Housing program, and through a rent subsidy such as the Housing Choice Voucher program (U.S. Department of Housing and Urban Development, 2012). In addition, the FHAA requires home accessibility for multifamily housing.

2. Fair Housing Amendments Act of 1988 (FHAA) and Home Accessibility

The Fair Housing Amendments Act of 1988 established accessibility guidelines for multifamily housing built after 1991. The act covers multifamily housing containing more than four housing units. All units in elevator buildings and ground-floor units in buildings without elevators should meet the FHAA. The accessibility features may provide ease-of-use living environments for people with physical disabilities as well as older adults. Covered multifamily housing developments and units must meet seven design and construction requirements: 1) an accessible building entrance on an accessible route; 2) accessible public and usable public common use areas; 3) usable doors; 4) accessible route into and through the dwelling unit; 5) light switches, electrical outlets, thermostats, and environmental controls in accessible locations; 6) reinforced walls for grab bars in bathrooms; and 7) usable kitchens and bathrooms (U.S. Department of Housing and Urban Development & Office of Fair Housing and Equal Opportunity Office of Housing, 1998).

According to the Americans with Disabilities Amendments

Act of 2008, a disability is “a physical or mental impairment that substantially limits one or more major life activities of such individual” (U.S. Equal Employment Opportunity Commission, 2008). This definition protects independent living by removing environmental barriers. In our study, we confine our use of the term disability to a physical impairment that limits an individual’s ability to walk, enter, leave or get around safely at home, and to perform self-care. Our study does not include vision or hearing impairments, or cognitive, emotional and other disabling conditions.

The lack of home accessibility features has serious consequences for people with disabilities and their caregivers. Barriers at home can be the main cause of falls, social isolation and the reduction of life and residential satisfaction (Pynoos et al., 2006; Saville-Smith et al., 2007; Steinfeld & Maisel, 2012). The lack of home accessibility can also result in unnecessary relocation to nursing homes (Steinfeld & Maisel, 2012) that adds to the cost of institutional care and services.

Previous studies confirmed that home accessibility features enhance independent living and contributes to the quality of life of aging populations (Wahl et al., 2009). Eliminating environmental barriers is important to meet the needs of seniors who wish to remain in their homes instead of moving to institutional facilities (Hwang et al., 2011). Home modification using accessible design features improves overall function of older adults and contributes aging in place. Major exterior modifications were more likely to help single older adults to remain in their home too (Safran-Norton, 2010). In response to home accessibility problems, the FHAA requires landlords to allow tenants with disabilities to make reasonable modifications.

III. Methodology

This study analyzed a national sample of 2011 American Housing Survey (AHS) data. The AHS has been conducted by U.S. Census Bureau sponsored by the HUD since 1973. The U.S. Census Bureau collects the AHS data every two years. The AHS survey asks questions about socio-demographic and housing characteristics targeting household members age 16 years old or over in the U.S. (U.S. Census Bureau, 2014). In the 2011 AHS, 186,448 cases were collected. The sample of this study included households age 55 and over with some types of physical disability living in multifamily housing built between 1970 and 2011 (N=2,326).

Variables in our study included socio-demographic characteristics (age, gender, education level, income, and number of household) and housing characteristics (tenure type, number of bedrooms, year of residence, monthly housing cost, geographic location, and subsidized housing), physical disability (3 items), home

accessibility features (16 items), and home accessibility problems (9 items). Each item in physical disability, home accessibility features, and home accessibility problems variables was measured using dichotomous choice (yes=1 or no=0). The sum of all items in each variable was averaged for further hypotheses testing.

IV. Results

1. Descriptive analysis of socio-economic and housing characteristics of the participants

Among participants age 55 and over living in multifamily housing built between 1970 and 2011, 32.1% had at least one physical disability. For this study, we excluded all participants without physical disability (N=2,326).

As <Table 1> shows, in terms of socio-demographic characteristics of participants living in multifamily housing built before the FHAA, mean age was 73.28 years old. Almost 28% were male and 72% were female. For education level, 61% had less than high school diploma, 25% had some college or associate degree, 9% had a bachelor’s degree, and 5% had a master’s degree or higher. Participants living in multifamily housing built before the FHAA had annual income of \$18,652. Mean number of household was 1.28.

Regarding socio-demographic profile of participants living in multifamily housing built after the FHAA, mean age was 75.69 years old. About 20 % were male and 80% were female. In terms of education level, 56% had less than a high school diploma, 27% had some college or an associate’s degree, 11% had a bachelor’s degree, and 6.3% had a master’s degree or higher. Annual income of participants living in multifamily housing built after the FHAA was \$25,069. The average household size was 1.25.

For housing characteristics of participants living in multifamily housing built before the FHAA, 8% owned their housing unit and 92% were renters. They had 1.35 bedrooms on average. Participants living in multifamily housing built before the FHAA have lived in their current housing for 8.75 years on average. This group of senior residents paid \$620.78 monthly for their housing. Forty-nine percent lived in urban areas, 49.5% lived in suburban areas, and 1.5% lived in rural areas. About 56% received government subsidies for their housing unit.

In terms of housing characteristics of participants living in multifamily housing built after the FHAA, 5.6% were homeowners and 94.4% were renters. Mean number of bedrooms was 1.39. Participants living in multifamily housing built after the FHAA had lived in their current housing for 4.18 years. They paid \$1,022 per month for their housing. Thirty-six

percent lived in urban areas, 61% lived in suburban areas, and almost 3% lived in rural areas. Subsidized housing residents accounted for 45.5% and 54.5% were non-subsidized housing residents.

2. H₁: There are significant differences between senior residents living in multifamily housing built before and after the FHAA in terms of their socio-demographic and housing characteristics

As <Table 1> displays, in terms of socio-demographic characteristics, age and gender were significantly different by participants living in multifamily housing built before and after the FHAA. Participants living in multifamily housing built after the FHAA were more likely to be older ($t = -3.95, p < .001$) and female ($\chi^2 = 8.89, p < .001$) compared to those who lived in multifamily housing built before the FHAA.

For housing characteristics, there were significant differences between participants living in multifamily housing built before and after the FHAA in year of residence, monthly housing cost, geographical location, and subsidized housing. Participants living in multifamily housing built after the FHAA were more likely to live in their current multifamily housing shorter

period of time ($t = 13.77, p < .001$), to pay higher monthly housing cost ($t = -5.65, p < .001$), to live in suburban areas ($\chi^2 = 23.53, p < .001$), and were less likely to be subsidized housing residents ($\chi^2 = 14.49, p < .001$) compared to participants living in multifamily housing built before the FHAA.

3. Descriptive analysis of physical disability, home accessibility features, and home accessibility problems

As <Table 2> reports, among three items of physical disability, participants living in multifamily housing built both before and after the FHAA, “disability with walking” was the most frequently mentioned item, followed by “disability with go-outside-home” and “disability with self-care.” For further analyses, mean value of the three items of physical disability for each group was created. Mean value of physical disability of participants living in multifamily housing built both before the FHAA was 0.52 out of 1.0 (SD=0.25) and the mean value of physical disability of participants living in multifamily housing built after the FHAA was 0.51 (SD=0.24).

In terms of 16 items of home accessibility features, “wheelchair accessible electrical switches,” “wheelchair accessible electrical outlets,” and “handrails/grab bars in bathroom” were

Table 1. Socio-demographic and Housing Characteristics of Participants Living in MFA before and after FHAA (N=2,326)

Variables	Participants living in MFH built before FHAA (n=1,948)		Participants living in MFH built after FHAA (n=378)		Point Estimate
	n	%	n	%	
Socio-demographic Characteristics					
Age	M=73.28	SD=11.47	M=75.69	SD=10.76	$t = -3.95***$
Gender					
Male	550	28.2	78	20.6	$\chi^2 = 8.89***$
Female	1,398	71.8	300	79.4	
Education Level					
Less than high school degree	1,190	61.1	210	55.6	$\chi^2 = 4.89$
Some college or associate degree	483	24.8	101	26.7	
Bachelor's degree	178	9.1	43	11.4	
Master's degree or higher	97	5.0	24	6.3	
Income (USD)	M=18,651.82	SD=26,633.00	M=25,069.89	SD=85,179.02	$t = -1.45$
Number of Household	M=1.28	SD= .63	M=1.25	SD= .65	$t = .97$
Housing Characteristics					
Tenure Type					
Own	160	8.2	21	5.6	$\chi^2 = 2.76$
Rent	1,788	91.8	357	94.4	
Number of Bedrooms	M=1.35	SD= .55	M=1.39	SD= .57	$t = -1.29$
Year of Residence	M=8.75	SD=9.13	M=4.64	SD=4.18	$t = 13.77***$
Monthly Housing Cost (USD)	M=620.78	SD=656.44	M=1,022.22	SD=1,351.63	$t = -5.65***$
Geographical Location					
Urban	955	49.0	136	36	$\chi^2 = 23.53***$
Suburban	964	49.5	231	61.1	
Rural	29	1.5	11	2.9	
Subsidized housing					
Yes	1,097	56.3	172	45.5	$\chi^2 = 14.49***$
No	851	43.7	206	54.5	

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2. Descriptive Information of Physical Disability, Home Accessibility Features, Home Accessibility Problems, and Residential Satisfaction (N=2,326)

	Participants living in MFH before FHAA (n=1,948)			Participants living in MFH after FHAA (n=378)		
	Mean	SD	Rank	M	SD	Rank
Physical Disability	<i>M</i> = .52 (<i>SD</i> = .25)			<i>M</i> = .51 (<i>SD</i> = .24)		
Disability with walking	.91	.29	1	.89	.32	1
Disability with go-outside-home	.45	.50	2	.43	.50	2
Disability with self-care	.21	.40	3	.21	.41	3
Home Accessibility Features	<i>M</i> = .32 (<i>SD</i> = .19)			<i>M</i> = .48 (<i>SD</i> = .22)		
Wheelchair accessible electrical switches	.71	.45	1	.80	.40	1
Wheelchair accessible electrical outlets	.70	.46	2	.79	.41	2
Handrails/grab bars in bathroom	.65	.48	3	.74	.44	3
Wheelchair accessible countertops	.59	.49	4	.70	.46	6
Wheelchair accessible climate controls	.53	.50	5	.68	.47	4
Wheelchair accessible bathroom	.51	.50	6	.66	.47	5
Sink handles/levers	.37	.48	7	.57	.50	8
Wheelchair accessible kitchen	.35	.48	8	.56	.50	10
Door handles instead of knobs	.25	.43	9	.49	.50	7
Extra-wide doors/hallways	.24	.43	10	.47	.50	9
Wheelchair accessible kitchen cabinets	.24	.42	11	.30	.46	12
Raised toilets	.20	.40	12	.27	.45	11
Handrails/grab bars in home	.18	.38	13	.25	.43	14
Built-in shower seats	.16	.37	14	.19	.40	13
Kitchen trays/lazy Susans	.11	.31	15	.16	.36	15
Handrails/grab bars in other areas	.06	.25	16	.09	.28	16
Home Accessibility Problems	<i>M</i> = .12 (<i>SD</i> = .20)			<i>M</i> = .12 (<i>SD</i> = .20)		
Getting into bathtub	.29	.45	1	.29	.45	2
Reaching kitchen cabinets	.28	.45	2	.25	.43	1
Using walk-in shower	.15	.36	3	.14	.35	3
Opening kitchen cabinets	.11	.31	4	.12	.32	4
Getting to bathroom	.08	.27	5	.07	.25	5
Using stove	.06	.24	6	.06	.23	6
Using kitchen counters	.05	.21	7	.05	.21	7
Using faucets	.04	.20	8	.04	.19	8
Using sink	.04	.20	9	.03	.17	9

the items with the highest means, and “handrails/grab bars in other areas,” “kitchen trays/lazy Susans,” and “built-in shower seats” were the items with the lowest means for both before and after the FHAA groups. Mean value of the 16 items of home accessibility features of participants living in multifamily housing built before the FHAA was 0.32 (*SD*=0.19) out of 1.0, and the mean score of home accessibility features of participants living in multifamily housing built after the FHAA was 0.48 (*SD*=0.22).

Regarding nine items of home accessibility problems, the most frequently perceived items were “getting into bathtub,” “reaching kitchen cabinets,” and “using walk-in shower,” and the items with the lowest means were “using sink,” “using faucets,” and “using kitchen counters” for both groups. Mean value of home accessibility problems for multifamily housing

built before the FHAA group was 0.12 (*SD*=0.20) out of 1.0 and for multifamily housing built after the FHAA group was 0.12 (*SD*=0.20).

4. H_2 : There are significant differences between senior residents living in multifamily housing built before and after the FHAA in terms of their physical disability, housing accessibility features, and housing accessibility problems

According to <Table 3>, there was a significant difference between participants living in multifamily housing built before and after the FHAA in terms of home accessibility features ($t = -9.35, p < .001$). Participants living in multifamily housing built after the FHAA were more likely to have more home accessibility features and were more likely to be satisfied with

their housing unit than those who living in multifamily housing built before the FHAA. However, there was no significant difference in physical disability and home accessibility problems between the two groups.

Table 3. T-test Results of Physical Disability, Home Accessibility Features, Home Accessibility Problems and Residential Satisfaction by before and after FHAA

Variables	Participants living in MFH before the FHAA (n=1,948)		Participants living in MFH after the FHAA (n=378)		t-value
	M	SD	M	SD	
	Physical Disability	.52	.25	.51	
Home Accessibility Features	.32	.19	.48	.22	-9.33***
Home Accessibility Problems	.12	.20	.11	.20	.63

*p< .05, **p< .01, ***p< .001

5. H₃₋₁: There are significant correlations among physical disability, housing accessibility features, and housing accessibility problems among senior residents living in multifamily housing built before the FHAA

As <Table 4> shows, all variables were significantly correlated with each other among participants living in multifamily housing built before the FHAA. Senior residents with more than one physical disability were more likely to have more home accessibility features ($r=0.113, p<.001$). Those who had more physical disabilities experience more home accessibility problems ($r=0.510, p<.001$). However, participants who had more home accessibility features also perceived greater home accessibility problems ($r=0.073, p<.001$).

Table 4. Correlations among Variables of before the FHAA (n=1,948)

Variables	Correlation Coefficient		
	PD	HAF	HAP
Physical Disability (PD)	1		
Home Accessibility Features (HAF)	.113***	1	
Home Accessibility Problems (HAP)	.510***	.073***	1

*p< .05, **p< .01, ***p< .001

6. H₃₋₂: There are significant correlations among physical disability, housing accessibility features, housing accessibility problems, and residential satisfaction among senior residents living in multifamily housing built after the FHAA

Among participants living in multifamily housing built after the FHAA, those who had greater physical disability reported greater home accessibility problems ($r=0.526, p<.001$). There was no significant correlation between physical disability

and home accessibility features, or between home accessibility features and home accessibility problems (see Table 5).

Table 5. Correlations among Variables of after the FHAA (n=378)

Variables	Correlation Coefficient		
	PD	HAF	HAP
Physical Disability (PD)	1		
Home Accessibility Features (HAF)	.080	1	
Home Accessibility Problems (HAP)	.526***	.047	1

*p< .05, **p< .01, ***p< .001

V. Discussions and Conclusions

The purpose of this study was to identify if the Fair Housing Amendments Act of 1988 (FHAA) contributed to the provision of more home accessibility features and to the reduction of home accessibility problems of senior residents with physical disability. First, we compared socio-demographic and housing characteristics of participants living in multifamily housing before and after the FHAA. The results showed some notable differences and identified senior residents with physical disability who may need more attention.

Participants living in multifamily housing before the FHAA seemed to be at a greater disadvantage because they were more likely to live in older buildings located in urban areas, yet paid lower rent and received government subsidies. Particularly, more than half of those who lived in multifamily housing built before the FHAA received housing subsidies. Even though there was no significant difference in income between the two groups, monthly income of the both groups was considerably lower than the national median income of people 55 to 59 years old (\$50,000) and even lower than people 80 and older (\$25,000) (Joint Center for Housing Studies, 2014). In addition, since the majority of senior households living in multifamily housing are apartment renters, they may not have the freedom to modify their home to accommodate their physical disability.

Second, we compared physical disability, home accessibility features, and perceived home accessibility problems of senior residents with physical disability living in multifamily housing before the FHAA and after the FHAA. We found that multifamily housing built after the FHAA had significantly more home accessibility features compared to multifamily housing built before the FHAA; there was no significant difference in physical disability and perceived home accessibility problems. This study confirmed that the FHAA makes it possible for residents of multifamily housing to have more home accessibility features.

Third, correlations among physical disability, housing

accessibility features, and housing accessibility problems among senior residents living in multifamily housing built before and after the FHAA were analyzed. Among people living in housing built before the FHAA, they had greater home accessibility problems although participants with more physical disability had greater home accessibility features. It can be interpreted that home accessibility features in multifamily housing before the FHAA do not compensate physical disability of senior residents and home accessibility problems still exist. On the other hand, participants with greater physical disability and living in multifamily housing after the FHAA still had home accessibility problems.

Researchers assert that congruence between person and environment is more important than person and environment characteristics, because each person's physical capability may require its own environmental support (Edwards, Caplan & Harrison, 1998; Iwarsson & Ståhl, 2003; Lawton, 1980). Thus, misfits between person and environment depend on subjective perception rather than objective person and environmental characteristics (Edwards, Caplan, & Harrison, 1998). Our study revealed that even though home accessibility features significantly increased in multifamily housing after the FHAA, perceived home accessibility problems were not significantly different. It can be interpreted that the FHAA allows multifamily housing residents to have more home accessibility features. However, senior residents with physical disability still experience problems with home accessibility.

Nevertheless, the benefits of home modifications have been proven in the literature. For example, seniors in the United Kingdom whose homes had been modified to accommodate their disability tended to stay at home longer than those who did not have home modification (Hwang et al., 2011). Likewise small home modification projects (e.g., ramps, railings, bath and toilet bars, and shower seats) can improve the quality of life of senior residents and significantly impact their ability to remain in their current housing (Safran-Norton, 2010). The biggest challenge is affording the home modifications (Schwemm, 2006).

Housing is the core of autonomy and independence for many seniors. For renters, the FHAA enables them to request reasonable accommodations and modifications that change their individual suites or common areas when the environment no longer meets their needs. However, often reasonable accommodation depends on the fiscal burden for the housing provider and for this reason, the request may be denied as the landlords are not legally required to pay for the change. Even if the renters are allowed to modify their apartments, they may not have the resources to do so. Policy makers and housing providers should make more efforts ensure that home

modifications are possible. Housing policy makers need to revisit the FHAA, which may no longer be sufficient to compensate for the physical disability of senior residents.

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