

Environmental Support of Independent Elderly Households in Senior Housing Cooperatives

미국 노인전용 조합주택의 거주환경 평가

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Abstract

본 연구의 목적은 최근 건설된 노인전용 조합주택으로 입주한 노인가구를 대상으로 거주자 측면에서의 주거환경 평가이며, 아울러 미국 조합주택에 대한 이해를 도모하고자 한다. 설문지를 통해 수집한 자료는 빈도와 백분율, 회귀분석을 사용하여 분석하였으며, 총 171가구가 본 조사에 참여하였다. 조사대상 가구주의 평균 연령은 76세였으며, 교육 수준은 높았고, 가족형태는 부부나 독남가구가 대다수였다. 조사에 참여한 가구들은 저렴한 주택비용, 안전성, 주택유지 및 관리의 용이성, 주거 내의 접근용이성을 현 주거환경의 선택 동기로 손꼽았다. 현 주거환경의 평가를 물리적 환경, 사회적 환경, 그리고 거주자 참여방식의 관리에 대한 만족도로 크게 3가지로 나뉘었으며, 물리적 환경 관련 요소가 주거환경 평가와 관련한 만족도에 가장 중요하게 작용하였다. 본 연구결과는 장기적인 주택관련 비용의 저렴화와 노인의 독립성을 위한 지원성이 강화된 물리적인 환경의 구축이 무엇보다 주거환경 평가시 중요하므로, 향후 노인전용 대안주택 계획시 이 점에 대해 고려되어야 할 것이다.

Keywords : Housing Cooperatives, Senior Co-op Housing, Environmental Factors, Resident-controlled Management, and Residential Satisfaction

주요어 : 주택 조합, 노인전용 조합주택, 환경적 요인, 거주자 참여방식의 관리, 주거 만족도

I. Introduction

The elderly experience social, economic, and psychological changes, and housing becomes an integral part of their lives in order to maintain their independent living. Since the 1990 National Affordable Housing Act in the U.S., supportive housing for the elderly has been a pivotal element of the national housing policy. The U.S. National Affordable Housing Act stated that elderly housing should be not only a decent, safe, (Special Committee on Banking, Housing, and Urban Affairs, 1989). In fact, many senior housing options have been developed to maximize the independent living of the elderly. As an emerging

senior housing option, housing cooperatives have been notably developed. Although the concept of cooperative ownership is not well-known, senior co-op living is seen as a nurturing place for independent living (Glaser, 1981). Therefore, the purpose of this research is to introduce housing cooperatives as a housing alternative for the special population, to examine the factors affecting the decision of elderly households who recently moved to senior co-op housing, and to evaluate their assessment of senior co-op living.

II. Literature Review

1. Housing Cooperatives

Housing cooperative, as a consumer cooperative, is a business owned, controlled, and run by users who

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are members, and it is designed to socially and economically benefit from housing. The first co-op housing in the U.S. was introduced in Brooklyn, New York City in 1916 by the Finnish Home Building Association (Siegler & Levy, 1986). A cooperative form of ownership allows owner-occupancy of a unit within a variety of multi residential structures like single-family homes, town houses, apartment flats, or mobile home parks. In housing cooperatives, especially with many vertically stacked units wherein the extensive social and recreational facilities (e.g., community room, library, and gymnasiums) are provided, individuals can enjoy care-free living as well as the amenities. Moreover, as homeowners, individuals who purchase stocks in a housing co-operative can have benefits such as mortgage interest and property taxes that are deductible from federal income returns according to the Internal Revenue Code Section 216 in 1942.

Housing cooperatives are often compared to condominiums. In spite of the similarities between cooperatives and condominiums, each of them has unique, obvious differences. In a condominium, each dwelling unit is recognized as a separate legal ownership, and as a result of the separate property, the unit is separately financed. In a housing cooperative, a cooperative corporation that is usually non-profit owns the land and building, and a person who wants to live in the housing buys shares of stock based on one-vote-per-unit from the corporation (Kennedy et al., 1995). Then, the shareholder, also known a co-operator, receives a proprietary lease or occupancy agreement from the corporation that gives a rights to occupy a particular dwelling. Typically housing cooperatives are financed with a single blanket mortgage on the entire property, and nowadays individual share loan financing has been available.

Despite that housing cooperatives accommodates a variety of people, most of them recently built provided low-income families. In response to urgent housing shortage during the Great Depression and after World

War II, the federal government has developed some programs that make it possible to build a number of housing cooperatives as an alternative to affordable housing for Working-class home seekers who could not afford the traditional homeownership (Bailey, 1988). Consequently, many housing cooperatives are federally subsidized and locally supported. In addition, some public housing has been converted to cooperative housing by selling the property to tenants in the past decades throughout the Public Housing Demonstration Program in 1985 (Heskin & Leavitt, 1995). Due to the historical background, the true meaning of cooperative housing is often misleading and further misunderstood for a shotgun of poverty concentration.

In fact, a number of housing cooperatives are rooted in a unique governance structure, and as a matter of fact, the voluntary participation of cooperative members in housing-related decision-making substantially contributes to controlling housing costs as well as a lower turnover rate. As a result of the characteristics, it is possible to keep housing cooperatives affordable and competitive in housing market. However, not all of housing cooperatives are modest although many housing cooperatives are occupied by non-traditional families who are mostly low- and moderate-income people (e.g., senior citizens, students, farm workers, and single-parent families); some of the co-op housing built has become luxurious, and thus economically sufficient people can join cooperatives.

Depending on how the equity of cooperative members is built up over time, housing cooperatives are largely divided into two types: market-rate and limited-equity (Rae, 1997; Ronnow-Bunker, 1998). In a market-rate cooperative, share can absorb appreciation at market whereas in a limited-equity one the specified appreciation rate is set such as the consumer price index or 1% per year on the initial share price. By the nature of cooperatives, limited-equity housing cooperative are more likely to be affordable than are market-rate ones.

The growth of cooperative housing movement in the nation was closely related to the conservative attitude toward the non-traditional homeownership form, but it has been substantially eliminated by a series of post-war housing cooperative movement (e.g., Cooperative Housing Foundation in 1952, National Association of Housing Cooperatives in 1960, and National Cooperative Bank in 1980) along with federal and state legislation and subsequent tax incentives (e.g., Internal Revenue Code Section 216 in 1942, Section 213 in 1952, and the 1986 Tax Reform Act) (Bailey, 1988; Siegler & Levy, 1986).

Still there are some housing-related governmental programs and their requirements that do not strongly support housing cooperatives, and the fact contributes to the lack of familiarity with housing cooperative.

2. Elderly Households and Residential Environment

The declining health becomes a central concern of the elderly who want to live in an independent way, and housing plays a critical role in their independent living. Consequently residential satisfaction of the elderly is an important element in their quality of life. In response to changing needs in the process of aging, the elderly move to senior housing that is designed to continue independent living. Lawton (1998) pointed out that the physical and social environment that fits into the changing needs of the elderly enhances their ability to live independently. Supportive environment to increase the independence level of the elderly typically includes both physical characteristics and social components.

Safety of neighborhood, as a component of physical environment, is important for the elderly in that the perceived fear that comes from living in an unsafe neighborhood leads to low satisfaction of elderly people with their housing and neighborhood (Burby & Rohe, 1990; Golant, 1992).

Age-homogeneous residential settings contribute to positive social, economic, and psychological consequences (Golant, 1987; Kart, 1997). Given the nature of

communal living, age-homogeneous living arrangements are likely to produce more interaction among elderly residents. In fact, they interact and develop supportive relationships such as friendships and mutual support (Burby & Rohe, 1990; Kart, 1997).

Senior housing is designed to provide functional support. For the elderly with minor limitations who have a moderate level of ability or competence, supportive services defined as assisting basic tasks of daily living (e.g., transportation, meal services, house-keeping, and laundry) make it possible that independence is maintained, as long as the environmental demand is moderately low (Blank, 1988; van Ryzin, 1991).

Housing cost in later life becomes a critical concern due to the dramatic rise in spending for medical care in advancing years. Over a third of elderly households in 1995 spent more than 30% of their income on housing costs, and 14% of them paid more than 50% of their income (Citro, 1998; U.S. Department of Housing and Urban Development, 2000).

Accessible housing that contributes to independence level of the elderly enables the elderly to compensate for aging-induced diminished capabilities and also to live more independently than in housing that is not barrier-free (Bechtel, 1997; Brink, 1994; Leibrock & Terry, 1999).

Therefore, senior housing should be adequate, affordable, accessible and appropriate in order to support the independence of the elderly.

III. Method

Questionnaire survey was adopted to collect data, and the survey participants in this study were drawn from a nonprobability sampling method by using several criteria such as location, built year, age, income level, occupancy period, and development size. The sampling frame which consisted of housing cooperatives exclusively serving the elderly in the Twin Cities area in Minnesota was established, and

one in pilot study and three in main survey were selected. Based on the literature review, the self-administered questionnaires were constructed, reviewed, and examined in the pilot study. The survey instrument was mailed out to each of 271 households in three developments in the main survey. The response rate was 63.1%, and 171 responses were used for data analysis. The statistical techniques used in this study were descriptive and multiple regression analyses.

IV. Results

1. Demographics and Housing Characteristics

The characteristics of the elderly households participating in this survey were summarized in Table 1. Most of the responded households were highly educated, couples or male-headed, and retired.

The average age of the surveyed householders was about 76 years, and male-headed elderly households comprised of both couples and single men were dominant. More than half of the householders had college education background, and the vast majority responded that their income was adequate to meet their needs. Only a few householders were employed, and seven out of ten households answered that the current health status was not certain. The majority of the elderly households were previous homeowners, and currently resided in a two-bedroom unit. The average duration was one year and seven months.

Table 2 described the reasons of elderly households to move to co-op housing. The most cited reason was affordable housing, followed by neighborhood safety, care-free living, and accessibility. Since all of the housing cooperatives in this survey were designed to support independent living, the least important reason to move was supportive services.

2. Residential Satisfaction with Senior Co-op Living

To assess senior housing cooperatives as a residential environment, residential satisfaction was examined and categorized into three indices of senior

Table 1. Demographics and Housing Characteristics of Elderly Households in Senior Housing Cooperatives

	(N=171)	(100%)
Age		
Median	75.7	
Mean	75.9	
Standard Deviation	6.2	
Range	59 to 89	
Gender		
Male	101	59.1
Female	68	39.8
Missing	2	1.2
Education		
Less than high school	44	25.7
Some college	37	21.6
College graduate or higher	62	36.3
Missing	28	16.4
Income adequacy		
Adequate	152	88.9
Inadequate	7	4.1
Not certain	12	7.0
Employment status		
Employed	20	11.7
Not employed	149	87.1
Missing	2	1.2
Health status		
Healthy	7	4.1
Not certain	120	70.2
Poor	19	11.1
Missing	25	14.6
Tenure change		
Yes	22	12.9
No	149	87.1
Number of bedrooms		
One bedroom	28	16.4
Two bedroom	141	82.5
Three bedroom	2	1.2
Residence duration (month)		
Median	22.5	
Mean	19.0	
Standard Deviation	8.4	
Range	1.5 to 36	

Table 2. Percentage Distribution of Elderly Households Reasons for Choosing Senior Housing Cooperatives

Characteristics	Number (N=171)	Percentage (100%)
Affordability	165	96.5
Keeping housing cost down	164	95.9
Safe neighborhood	162	94.7
Ease of maintenance	160	93.6
Accessibility	158	92.4
Democratic operation	147	86.0
Social network	145	84.8
Homeownership	143	83.6
A sense of community	142	83.0
Voice in management	142	83.0
Communal living	127	74.3
Participation in community	124	72.5
Supportive services	98	57.3

co-op living; physical environment, social environment, and resident-controlled management.

Satisfaction with physical environment included safe neighborhood, communal living, ease of maintenance, accessibility, and affordability. Satisfaction with social environment was comprised of supportive services and social network. Satisfaction with resident-controlled management was evaluated by using the unique features found in housing cooperatives such as keeping housing cost down, democratic operation, a sense of community, voice in management and, participation in community.

As shown in Table 3, the number of elderly households who were satisfied with physical environment was higher than the one with social environment or resident-controlled management. However, more than one out of ten elderly households were satisfied with overall senior co-op living (Table 4).

A multiple regression was utilized to predict satisfactions of elderly households with three indices (Table 5, 6 and 7). The statistical results indicated that satisfactions with physical environment and resident-controlled management were significant. The regression on satisfaction with physical environment showed that age and income adequacy had significant effects on

Table 3. Percentage Distribution of Satisfaction Indices with Senior Co-op Living

Indices	Number (N=171)	Percentage (100%)
Satisfaction with Physical Environment		
Satisfied	118	69.0
Neither	26	15.2
Dissatisfied	16	9.4
Missing	11	6.4
Satisfaction with Social Environment		
Satisfied	94	55.0
Neither	37	21.6
Dissatisfied	4	2.3
Missing	36	21.1
Satisfaction with Resident-controlled Management		
Satisfied	98	57.3
Neither	35	20.5
Dissatisfied	15	8.8
Missing	23	13.5

Table 4. Percentage Distribution of Overall Residential Satisfaction

Indices	Number (N=171)	Percentage (100%)
Satisfied	158	92.4
Neither	6	3.5
Dissatisfied	7	4.1

Table 5. Summary of Regression Analysis for Household Variables Predicting Satisfaction of Elderly Households with Physical Environment

Variables	B	SE	Beta
(Constant)	.848	.964	
Age	.019	.010	.196*
Gender	-.014	.120	-0.12
Education	.152	.112	.124
Income adequacy	.308	.140	.199*
Employment status	.121	.161	.070
Health status	-.194	.130	-.135
Tenure change	.075	.170	.042
Number of bedroom	-.085	.154	-.054
Duration	.000	.006	.003
$R^2 = .133$, $R^2_{adj.} = .067$ $F(9, 119) = 2.025$, $p = .042$			

*p < .05

Table 6. Summary of Regression Analysis for Variables Predicting Satisfaction of Elderly Households with Social Environment

Variables	B	SE	Beta
(Constant)	1.480	.889	
Age	.001	.008	.014
Gender	.007	.107	.008
Education	.109	.104	.110
Income adequacy	.221	.120	.192
Employment status	-.040	.148	-.029
Health status	.114	.120	.100
Tenure change	.297	.159	.207
Number of bedroom	-.003	.156	-.002
Duration	.009	.006	.163
$R^2 = .103, R^2_{adj.} = .018$ $F(9, 95) = 1.212, p = .297$			

the satisfaction index, so that the co-op households who were older and had adequate income to meet their needs were more likely to be satisfied with their physical environment. As presented in Table 7, education of householder was a significant factor to

Table 7. Regression Analysis for Variables Predicting Satisfaction of Elderly Households with Resident-controlled Management

Variables	B	SE	Beta
(Constant)	.786	1.124	
Age	.017	.011	.159
Gender	-.239	.133	-.181
Education	.280	.123	.214*
Income adequacy	.283	.155	.171
Employment status	-.039	.176	-.022
Health status	-.019	.155	-.012
Tenure change	.222	.201	.113
Number of bedroom	-.093	.176	-.055
Duration	-.003	.007	-.044
$R^2 = .162, R^2_{adj.} = .092$ $F(9, 108) = 2.319, p = .020$			

*p < .05

predict satisfaction with resident-controlled management. Elderly households whose head did not have college education were likely to be satisfied with the satisfaction index.

Table 8. Regression Analysis for Variables Predicting Overall Residential Satisfaction of Elderly Households in Senior Housing Cooperatives

Variables	Step 1			Step 2		
	B	SE	Beta	B	SE	Beta
(Constant)	1.349	.870		1.062	.844	
Age	.010	.008	.157	.005	.008	.078
Gender	.016	.099	.019	.031	.094	.036
Education	.014	.095	.016	-.018	.093	-.022
Income adequacy	.252	.109	.254*	.159	.107	.160
Employment status	-.125	.135	-.105	-.136	.129	-.114
Health status	-.041	.117	-.040	-.061	.112	-.059
Tenure change	-.057	.151	.047	-.046	.146	-.037
Number of bedrooms	.033	.147	.028	.092	.141	.077
Duration	.000	.005	.006	-.003	.005	-.062
Household & Housing Characteristics						
Satisfaction with physical environment				.148	.095	.199
Satisfaction with social environment				.070	.098	.082
Satisfaction with resident-controlled environment				.123	.084	.184
$R^2 = .124, R^2_{adj.} = .030$ $F(9, 84) = 1.322, p = .238$				$\Delta R^2 = .119, \Delta R^2_{adj.} = .101$ $\Delta F(3, 81) = 4.231, \Delta p = .008$		

*p < .05

Table 8 showed a regression result to predict the relationship between nine household and housing variables, three satisfaction indices of senior co-op living, and overall satisfaction with current residential environment of elderly households in housing cooperatives. In the first step of the regression model, the relationship between the household and housing variables and the overall satisfaction with current senior living was not significant for co-op households, but income adequacy had a significant effect on the dependent variable. Elderly households with adequate income tended to have satisfaction with co-op living. None of the predictors in the second step of the regression model wherein after holding the effects of the exogenous variables constant, the satisfaction indices of current senior living were entered as a block were significant, but the addition to the regression model explained 12% of the variance at a significant level.

V. Conclusion

This study provided the information on housing cooperatives and also investigated senior co-op housing as an alternative housing for the elderly. Based on the user's evaluation on residential environment, the elderly chose senior co-op housing for several benefits; affordability, accessibility, and adequacy. One of the research findings is that overall residential satisfaction is likely to be affected and explained by the satisfaction indices of residential environment, rather than household and housing characteristics. Thus, residential environment evaluated by the elderly should be more elaborated, specified and categorized into indexes so as to better measure perception of the elderly on residential setting and further to meet growing needs of the elderly in the aging process. Another finding in this study is the importance of resident-controlled management that is a unique feature in co-op housing. Previous studies supported the important impact of satisfaction with management in multifamily housing and the positive

effects of residents involvement in management on residential satisfaction (Glunt, 1999; Rae, 1997; Ronnow-Bunker, 1998; Wasylishyn & Johnson, 1998). In particular, the locus of control for elderly whose physical capabilities become weaker in advancing years is meaningful. It is suggested to develop studies on long-term effects of resident-controlled management on the quality of life for the elderly in senior co-op housing.

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