

ELDER-COTTAGE HOUSING: A HOUSING ALTERNATIVE FOR THE OLDER POPULATION

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Abstract

The objectives of this research were to quantify the extent of both general and personal acceptance of elder cottage housing (ECHO) units and to identify profiles of persons who most readily accept them. The study population included University of Nevada-Reno employees 40 years of age and older. Questionnaires were returned by 598 employees, a 75 percent response rate. Eighty percent of respondents found elder cottage housing generally acceptable. Over 65 percent approved of ECHO units in their neighborhood, but only 42 percent wanted to live in one. Females were more apt than males to find ECHO units acceptable, especially females in fair health. Increased public recognition that elders and their care-giving families need a variety of housing options may result in ECHO units becoming more common. With this general acceptance for ECHO housing, builders and home buyers should anticipate approval of special use permits which do not endanger current zoning regulations.

Literature Review

Most older Americans prefer to live in their own homes (Hubbard, 1984; Makela, 1989). Likewise, the elderly want to remain responsible for their own lives as long as possible (Hare and Haske, 1983/1984). Maintaining independence in their own homes may be difficult or impossible for some elders because of increasing frailty or a disability. Sometimes a poorly-designed home is a problem: the house is too large; there are stairs to climb; the cabinets are too high; there may be poor lighting; or slippery surfaces exist in bathtubs, showers, or floors. Even in a well-designed home, the failing health of the occupant may make coping with maintenance and upkeep impossible. In these cases housing is needed that accommodates an elder's changing capabilities and offers nearby help when needed.

Housing arrangements which lessen household chores, provide safety features, and shared social activities are ideal. These include house sharing, accessory apartments, board-and-care retirement communities, nursing homes, and elder cottage housing units. Of these, ECHO units offer the advantages of independence and privacy without excluding the beneficial exchange of services that comes with proximity to another household (Hare and Haske, 1986).

The elder cottage is a small, free standing, barrier free, energy efficient, and removable housing unit. It is designed for one or two occupants and can be located near an existing single-family, detached house (Lightfoot, 1986). The Australian version, called a "granny flat," is similar to a small mobile home. The "granny flat" is purchased, located, rented, and removed by the government upon the death or relocation of the occupant to a care facility (Ham, 1983; Pring and Portney, 1985). A United States version requires that the elderly person or care-giver be responsible for the construction, location, and removal of the building when no longer needed (Baldwin and Miller, 1985).

The concept of more than one building on a lot is not new. The Amish, for example, have "grosmutter" houses for grandmothers. Ranchers and farmers often have small cottages or mobile homes where older family members move when operation of the

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business is passed on to the next generation. A separate housing unit for hired help, guests, and relatives is an urban variation.

ECHO units facilitate care-giving between members of one generation and another (Hare, 1982). Since adult children supply one fourth of the home-help services for elderly males and one third of that for elderly females (O'Bryant, 1982), on-premise housing would seem to be an efficient solution. The American Association for Retired Persons (Baldwin and Miller, 1985) suggests that elder cottage housing units be located adjacent to the homes of adult children to maximize the mutual benefits between households. Besides facilitating such benefits as child care assistance, help with tasks in both households, and having somebody on the premises when no one is home at the primary household, it reinforces the self-image and esteem of the elder.

One of the important benefits of ECHO for both the elderly and society as a whole, is avoidance of premature admission to nursing homes (Pitts, 1986). It is estimated that one third of those who live in nursing homes do not need to be there (Guion, 1983/1984). Institutionalizing the elderly is a high-cost response to needed care (Demkovich, 1979). In addition to monetary costs, there are other costs of premature institutionalization. Rush (1981) warned that we should not "unplug" the elderly from productive interchange with the rest of society before their physical capability demands it. Makela (1989) reports that one of the most difficult of retirement decisions is that of moving a spouse, self, or parents to a care facility.

The cost of an ECHO unit was the lowest among those surveyed by Baldwin and Miller (1985). A completely equipped and installed ECHO unit is estimated to cost about \$20,000. In addition, the average yearly cost for taxes, utilities, and maintenance of an elder cottage is about \$1800 compared to \$4000 per year for the average, freestanding home (Baldwin and Miller, 1985). The combined overhead for the primary residence and an ECHO unit, when calculated over a period of three-to-four years, is likely to be less than the cost of maintaining single-family, detached houses for two households.

Five states are known to have legislation permitting ECHO housing: Arizona, California, Maryland, New York, and Pennsylvania (Hare and Hollis, 1985; Pollak, 1987; Pring and Portney, 1985). A special use permit, which does not endanger existing zoning regulations, is the usual prerequisite for such legislation.

In spite of these inducements, there has been no systematic marketing of ECHO, and attempts to amend zoning regulations to permit ECHO units have been few (Hare and Haske, 1986). When ECHO units were included in a plan for affordable housing in Rockville, Maryland, the avalanche of protest was so great that the ECHO unit part of the plan was abandoned (Hubbard, 1984). Local residents feared that property values would be lowered due to the poor aesthetics and quality of the units. Guion (1983/1984) found that the more affluent the community, the higher the resistance. Narrow lots and complicated or distant utility hookups proved a limitation in other areas.

Facilitating Innovation

Facilitating and comprehending the changes that must occur prior to the widespread adoption of an innovation, such as ECHO, can be simplified by examining the step-by-step process outlined in the theory of diffusion. This process is defined as "the acceptance over time of some specific item--an idea or practice by individuals, groups or other adopting units linked to specific channels of communication, to a social structure, and to a given system of values or culture" (Katz, Levin and Hamilton, 1963, p.237). Rogers and Shoemaker (1971) proposed five stages to explain the progression of the adoption process:

1. Awareness--learning of the new idea.
2. Interest--seeking additional information.
3. Evaluation--making mental application of the new idea to one's anticipated future.
4. Trial--applying the idea on a small scale.
5. Adoption--using the idea continuously on a full scale.

The acceptability of ECHO has not yet been established. According to the American Association of Retired Persons (1987), the group most accepting of ECHO are blacks, women 60 to 64, and men and women 70 or older who live alone. This survey also found that of persons 60 and older, 21 percent of the respondents indicated a willingness to consider an ECHO arrangement while 77 percent indicated they would not.

Even in communities where ECHO has been permitted, there has been a lack of interest from home owners. Rogers and Shoemaker (1971) suggested that communication of innovation is essential to those who are potential adapters. For ECHO it is doubly essential because there are two sets of consumers who must agree, the elders and the primary residents. Likewise, the effect of intermediaries on the diffusion of products and ideas is often overlooked (McCray and Weber, 1981). Before an idea can be successfully presented to the consumer, it needs to be adopted by the distributors. These intermediaries face constraints similar to consumers when adopting innovations. Intermediaries, as well as the elderly and the primary residents, must have positive experiences with ECHO before they can feel comfortable in its adoption.

Traditionally the elderly have been considered resistant to change (Gilly and Zeithaml, 1985) and slower to grasp new ideas (John and Cole, 1986). Yet, elderly consumers do accept change and adopt new ideas when innovation meets their needs and is effectively communicated (Gilly and Zeithaml, 1985).

Findings from research in symbolic interaction theory show that people often acquiesce to unpopular ideas when it benefits society. At the same time they may reject application of these ideas in their personal life. This underscores one major assumption of symbolic interaction theory: personal meaning is influenced by society, peers, and one's own beliefs (Burr, Leigh, Day and Constantine, 1979). Hence, acceptance of ECHO may represent an acquiescence to the public good rather than a personal endorsement. On the other hand, it may be unacceptable for the same individual actually to live in an ECHO unit because doing so is considered personally objectionable.

Purpose of Study

The elderly are heterogeneous as to age, physical condition, and economic status. One objective of this study is to profile the characteristics of those who find elder cottages acceptable. This may result in a more widespread acceptance of elder cottages.

The general acceptance of elder cottages is assumed to be an activity beneficial to society. Another objective of this study is to translate the general acceptability of ECHO units into the framework of symbolic interaction theory. Ten statements denoting potential benefits to society were formulated from the literature (Baldwin and Miller, 1985; Guion, 1982, 1983/1984). These statements were used to measure general acceptance for ECHO. Personal acceptance was equated with willingness to accept elder cottage arrangements for oneself; having an ECHO unit in the neighborhood, in the yard, or living in one (Makela, 1989).

Based on the assumptions of interaction theory, persons with fewer resources should perceive ECHO more acceptable than those with greater resources (Burr, Leigh, Day and Constantine, 1979). Therefore, individuals thought to be more accepting of ECHO include females in fair health, employed as staff, 55 years or older, less educated, single, not parents, and of low incomes.

Methodology

This study is based on the Regional Project W-176 "Housing and Locational Decisions of the Maturing Population: Opportunities for the Western Region." The regional questionnaire measured the planning and attitudes of university personnel regarding community and retirement housing. Nevada participants were asked to respond to questions concerning both general and personal acceptance of elder cottage housing. The data were collected from respondents at the University of Nevada-Reno during late fall of 1987.

Ten statements concerning general acceptance of elder cottage housing, as shown in Table 2, were rated on a four-point Likert-like scale. Participants were asked to strongly agree, agree, disagree, or strongly disagree. To discourage bias, half of the statements were stated positively and half negatively. The four measures of personal acceptance were rated as favorable, somewhat favorable, somewhat unfavorable and unfavorable. The questionnaire was administered according to the Dillman Total Design Method (1978).

The survey population consisted of two age groups of University of Nevada-Reno employees both on- and off-campus. One group was a random sample of 300 drawn from 419 employees who were 40 to 49 years of age. The second group included the entire population (N=502) aged 50 years and over. A total of 598 persons of the 802 contacted participated for a response rate of 75 percent.

Analyses

Frequencies were used to define demographic characteristics of the sample. This procedure was also used to indicate if participants supported both general and personal acceptability statements about ECHO. A procedure that calculated the mean, standard deviation, and minimum/maximum for all numeric variables was used to ensure normal data for analyses. The Kolmogorov-Smirnov one-sample test for goodness-of-fit was used to determine if expected responses to general and personal acceptance differed from actual responses. This test was selected because it assured that information was not lost when categories were combined.

Pearson correlations were used to identify relationships among general and personal acceptance of ECHO. Negative responses for general acceptance were recoded prior to execution of Pearson correlations and the one-way analyses of variance (ANOVA) in order to simplify interpretation and discussion of results. A series of ANOVAs were used to assess differences between respondents of different demographic characteristics regarding general and personal acceptance of ECHO. The demographic characteristics were used as subgroups for ANOVAS. These subgroups are: education, occupation, gender, family income, age, employment, health, number of children, and marital status. A series of means were compared using Tukey Highest Significant Differences (HSD) in order to determine which subgroup among the significant characteristics accepted ECHO units on both a general and personal basis. The probability level for all analyses was less than or equal to 0.05.

Findings

Descriptive Statistics

Frequencies for the basic demographics of the sample are shown in Table 1. The demographic characteristics are as follows: About 60 percent were male and considered themselves in excellent health. About 40 percent of the respondents were faculty, had attained a doctorate, and were between the ages of 46 and 55. Almost three-fourths were married, half had two or three children, and two-thirds had an annual family income of more than \$35,000.

More than 50 percent of the respondents agreed to all ten general acceptance statements. This is shown in Table 2. Eighty-five percent agreed that the ECHO unit was economical. Almost as many felt it enabled the elderly to maintain independence and allowed them to share experiences. Questions stated in the positive for general acceptance of ECHO showed more favorable support than those stated negatively. The Kolmogorov-Smirnov test showed that expected response to ECHO differed significantly from the actual level of general acceptance for all demographic variables at the 0.05 level of probability.

Frequencies for personal acceptance of ECHO units showed that acceptability of elder cottage living decreased when the respondent perceived more personal involvement with ECHO units. This is shown in Table 3. Of the respondents, two thirds agreed to allow an elder cottage in the neighborhood. Over half were willing to have a cottage

Table 1. Selected background characteristics of respondents (N=598).

Characteristic	Number	Percent ¹
Gender		
Male	351	58.7
Female	243	40.6
Health		
Excellent	357	59.7
Good	211	35.3
Fair	24	4.0
Poor	1	0.2
Employment		
Full-time	556	93.0
Part-time	30	5.0
Retirement plan	4	0.7
Equal Employment Opportunity Code		
Professional		
Administrative	80	13.4
Faculty	228	38.1
Non-faculty	48	8.0
Staff		
Clerical	129	21.6
Technical	45	7.5
Skilled crafts	16	2.7
Service, maintenance	49	8.2
Age (years)		
40 to 45	118	19.7
46 to 50	124	20.7
51 to 55	135	22.6
56 to 60	111	18.6
61 or more	105	17.6
Education		
High school or less	62	10.4
Past high school, less than 4 year college degree	120	20.1
4 year college degree	63	10.5
Master degree	102	17.1
Doctorate	234	39.1
Marital status		
Single	159	26.6
Married	428	71.6
Children (number)		
0	92	15.4
1	72	12.0
2	172	28.8
3	143	23.9
4 or more	112	18.7
Income (dollars)		
24,999 or less	80	13.4
25,000 to 34,999	79	13.2
35,000 to 49,999	146	24.4
50,000 to 64,999	122	20.4
65,000 or more	154	25.8

¹May not total 100 percent because of missing responses.

in their yard. But only two in five were willing to live in one. Again, the Kolmogorov-Smirnov test showed that expected response to ECHO was significantly different from the actual level of personal acceptance for all demographic variables at the 0.05 level of probability.

Table 2. General acceptance of benefits of ECHO units (N=598).*

General acceptance of elder cottages	Agree ¹ %	Disagree ¹ %
Positive		
Economical for elderly	85.1	7.5
Enable elderly to maintain independence	83.1	10.7
Allow elderly to share experiences	80.3	11.7
Strengthen intergenerational bonds	72.9	17.4
Reduce incidence of latchkey children	64.0	25.3
Negative		
Capture grandparents as unpaid sitters	38.1	52.8
Cause elderly to depend on primary household	37.8	53.5
Strain family relationships	37.1	53.2
Invade privacy of primary household	35.1	56.2
Detract from neighborhood	34.6	56.4

*Kolmogorov-Smirnov showed significance at $p < .01$. for all but "capture grandparents as unpaid sitters" which was significant at $p < .05$.

¹May not total to 100 percent because of missing responses.

Correlations

Strength of relationships among all the "acceptance" variables are shown in Table 4. These Pearson correlations indicated that respondents who accepted one aspect of ECHO units, whether general or personal, also accepted other aspects of elder cottages. Associations were greatest among the three personal acceptance variables. Their correlations were all 0.65 or greater. Positive correlations occurred for all general acceptance variables except for the notion that ECHO units would reduce the incidence of latchkey children and that it would not cause elderly dependency.

Table 3. Personal acceptance for ECHO units (N=598).*

Acceptance of elder cottages	Favorable ¹ %	Unfavorable ¹ %
In your neighborhood	65.9	29.6
In your yard	53.5	42.5
Living in an elder cottage	42.1	54.2

*Kolmogorov-Smirnov showed significance for all at $p < .05$.

¹May not total to 100 percent because of missing responses.

Table 4. Matrix of significant correlation coefficients for general and personal acceptance of ECHO units (N=598)*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
General acceptance													
1 Maintains independence	---												
2 Not detract from neighborhood	.30	---											
3 Economical	.57	.20	---										
4 Not invade privacy	.39	.52	.20	---									
5 Not capture grandparents as sitters	.25	.39	.13	.44	---								
6 Not cause elderly dependence	.35	.43	.21	.52	.52	---							
7 Reduces incidence of latchkey children	.17	---	.20	---	-.18	-.17	---						
8 Allows elderly to share experiences	.37	.14	.34	.12	---	---	.35	---					
9 Not strain family relationships	.31	.46	.12	.58	.46	.51	-.17	---	---				
10 Strengthens intergenerational bonds	.45	.26	.36	.32	.15	.21	.31	.54	.24	---			
Personal acceptance													
11 Having elder cottages in your neighborhood	.46	.61	.36	.46	.25	.34	.16	.32	.38	.43	---		
12 Having an elder cottage in your yard	.45	.48	.32	.43	.24	.31	.12	.33	.37	.39	.75	---	
13 Living in an elder cottage	.44	.40	.30	.38	.20	.29	.10	.27	.32	.33	.65	.71	---

*Significant at p<.05.

Analysis of Variance

To formulate successful policies and marketing strategies for ECHO, the industry needs a well-focused profile of those who find the concept attractive. To this end each acceptance statement was cross-referenced with the demographic characteristics to provide more specific information.

General Acceptance. Results of the ANOVA for general acceptance of elder cottages are shown in Table 5. Findings indicate that significant differences exist among respondents when compared by demographic characteristics, with the exception of marital status. Significant differences were found among respondents of different educational levels when asked to rate whether or not ECHO units helped to maintain independence. Similarly, differences occurred between males and females when asked to rate whether or not elder cottages detracted from the neighborhood.

A series of Tukey HSDs were performed on general acceptance statements which were shown to be significant from ANOVAs. Significant differences between subgroups were observed for all significant ANOVAs in most background categories:

1. Persons with a high school education or less were more supportive of general acceptance statements for ECHO units than were individuals with a doctoral degree.
2. Respondents who held staff positions were more supportive than those who were professional.
3. Females were more accepting of general benefits for ECHO housing than males.
4. Part-time employees were more favorable than full-time employees.
5. Persons in fair health were more supportive than those who were in excellent health.

Support for general acceptance statements were evenly distributed among the demographic categories. Means for the significant Tukey HSDs are shown in Table 6.

Personal Acceptance. Results of ANOVAs for personal acceptance of ECHO are shown in Table 7. Significant differences existed among respondents of the following background characteristic categories: education, gender, family income, occupation, and health. Of these, all but health subgroups differed in rating each degree of personal involvement with ECHO. Health subgroups differed only in regards to living in an elder cottage.

A series of Tukey HSDs were conducted for personal acceptance statements that were found to be significant through the execution of ANOVAs. Significant differences between subgroups in most demographic categories were consistently found for all significant ANOVAs:

1. Individuals with a high school degree or less were significantly more supportive of personal benefits of ECHO units than persons with a masters degree or higher.
2. Females were more supportive than males.
3. Staff were more favorable of ECHO than professionals.
4. Persons with incomes of \$34,999 or less were more supportive than those with incomes of \$65,000 or more.
5. Persons in fair health were more personally accepting of elder cottages than those who were in excellent health.

Means for Tukey HSDs are shown in Table 8.

Summary

Elder cottage housing is one way to promote and extend independence for the elderly. The elder cottage is a removable, separate housing unit located on the lot of a detached, single family house. Currently, the elder cottage has had limited acceptance in the United States. Reasons for nonacceptance noted in the literature are: (1) limited awareness, (2) building codes which prevent use, (3) single purpose zoning, (4) the manner in which the cottage must be added to the lot of the primary household, and (5) the uncertainty of marketability and resale value.

Table 5. One-way analysis of variance for general acceptance of ECHO units by background characteristics (only significant relationships show)

General acceptance	SS	df	MS	F
Education of Respondent				
Maintains independence	13.48	4	3.37	6.48****
Not detract from neighborhood	13.07	4	3.27	4.49***
Economical	7.74	4	1.93	4.57***
Not capture grandparents as sitters	9.09	4	2.27	3.63**
Not cause dependence	10.30	4	2.58	4.84***
Not strain relations	8.74	4	2.18	4.22**
Occupation of Respondent				
Maintains independence	8.51	1	8.51	16.06***
Not detract from neighborhood	10.49	1	10.49	14.23***
Economical	4.77	1	4.77	11.31***
Not invade privacy	3.41	1	3.41	5.48*
Not cause dependence	6.66	1	6.66	12.22***
Not strain relations	3.69	1	3.69	6.89**
Gender of Respondent				
Maintains independence	3.80	1	3.80	7.04**
Not detract from neighborhood	13.92	1	13.92	19.08****
Not invade privacy	3.80	1	3.80	6.11*
Not cause dependence	8.47	1	8.47	15.63***
Family Income				
Not detract from neighborhood	18.03	4	4.51	6.38***
Not cause dependence	9.96	4	2.49	4.64**
Reduces incidence of latchkey children	5.51	4	1.38	2.83*
Age of Respondent				
Economical	5.00	4	1.25	2.92*
Allows elderly to share experiences	3.57	4	.89	2.40*
Employment of Self				
Not capture grandparents as sitters	5.06	2	2.53	4.01*
Reduces incidence of latchkey children	3.39	2	1.70	3.47*
Health of Respondent				
Economical	4.29	3	1.43	3.35*
Number of Children				
Not capture grandparents as sitters	6.44	4	1.61	2.54*

* p<0.05
 ** p<0.01
 *** p<0.001
 **** p<0.0001

Table 6. Means of Tukey HSDs for significant ANOVA for general acceptance of ECHO units by background characteristics *

Background Characteristics	Mean									
	Econ.	Not Cause Depend	Not Detract Nghbrhd	Maint. Indep.	Not Strain Rel.	Not Capt Granprnt as Sitter	Not Invade Privacy	Reduce Litchky Child	Elders Share Expense	
Education										
HS or less	1.4386	2.0714	1.9623	1.2982	2.0702	1.9821				
Past HS, less										
4 yr. college	1.6195	2.2368	2.1681	1.5652	2.3874	2.4107				
4 yr. college	1.7333	2.4000	2.4237	1.6833	2.5000	2.4667				
Master degree	1.7684	2.3478	2.2473	1.6804	2.3043	2.3871				
Doctorate	1.8131	2.4952	2.4360	1.8111	2.4760	2.3780				
Occupation										
Professional	1.7920	2.4560	2.4161	1.7711	2.4577		2.4031			
Staff	1.6027	2.2311	2.1324	1.5198	2.2890		2.2422			
Gender										
Male		2.4682	2.4413	1.7399			2.4108			
Female		2.2149	2.1156	1.5726			2.2412			
Family Income										
24,999 or less	1.6081	2.1757	1.9718					2.2055		
25,000 to 34,999	1.6234	2.1711	2.1733					2.2667		
35,000 to 49,999	1.6692	2.3231	2.2030					2.3256		
50,000 to 64,999	1.7589	2.4324	2.4444					2.0370		
65,000 or more	1.8322	2.5286	2.5000					2.2667		

Age of Respondent			
40 to 45 years	1.6606		1.9434
46 to 50 years	1.8522		1.8684
51 to 55 years	1.7891		2.0547
56 to 60 years	1.6139		1.8713
61 or more years	1.6250		2.0417
Employment			
Full-time		2.3748	2.2419
Part-time		2.0000	1.8889
Retirement Plan		1.7500	2.0000
Health			
Excellent	1.7660		
Good	1.6784		
Fair	1.3500		
Poor	1.0000		
Number of children			
0		2.5250	
1		2.4677	
2		2.2342	
3		2.3955	
4 or more		2.2667	

* $p < .05$; the lower the means, the greater the acceptance on a scale of 1 to 4.

Over 65 percent of the respondents personally accepted ECHO in their neighborhood, but not as a place to live for themselves. This finding is consistent with symbolic interaction theory which suggests that people accept advantages in relation to the general public but reject the same benefits for themselves (Burr, Leigh, Day, and Constantine, 1979).

Table 7. One-way analysis of variance for personal acceptance of ECHO units (only significant relationships shown)

Personal acceptance	SS	df	MS	F
Education of Respondent				
In neighborhood	33.14	4	8.29	8.34**
In yard	42.21	4	10.55	8.87**
Live in	53.69	4	13.42	13.02**
Gender of Respondent				
In neighborhood	17.76	1	17.76	17.34**
In yard	18.63	1	18.63	15.15**
Live in	24.15	1	24.15	22.28**
Family Income				
In neighborhood	26.61	4	6.65	6.66**
In yard	22.97	4	5.74	4.73*
Live in	50.06	4	12.52	12.11**
Occupation of Respondent				
In neighborhood	16.57	1	16.57	16.19**
In yard	18.73	1	18.73	15.27**
Live in	36.75	1	36.75	34.60**
Health of Respondent				
Live in	18.57	3	6.19	5.63*

* p<0.001
 ** p<0.0001

Conclusions and Implications

General benefits and personal acceptance of ECHO have been examined in this study. To date, few parties have chosen elder cottages as a living arrangement. The authors believe the reasons that ECHO units are not more popular, even where governing regulations permit, may be due to several factors: (1) insecurity about the eventual success of this innovation, (2) inadequate communication of the advantages, (3) lack of motivation, and (4) the shortage of leadership among housing authorities.

From these findings it is clear that appropriate marketing strategies would contribute to wider use of ECHO units. One way to communicate the idea of ECHO units is through demonstrations at malls, churches, and meeting halls. In addition, advertisements could be targeted through print media, such as *Modern Maturity*, that are popular among prospective consumers. Demonstration programs should be targeted toward consumers with demographic characteristics that reflect a more positive attitude toward ECHO units. As noted, effective communication strategies are a must. Junk, Junk, and Jones (1987), for example, stress that energy-efficiency information plays an important role in housing decisions among the elderly. Because women usually enjoy viewing model homes, presenting ECHO units might prove fruitful as part of a parade of homes. Similarly, demonstrating that ECHO units do not ruin the aesthetics of the primary property or the neighborhood may help allay resistance. Those with questions might benefit from a session with actual ECHO unit users. Demonstration projects could also help illustrate the safeguards inherent in special use permits as well as the ease with which they are obtained. Some builders and home owners view this process as cumbersome or anticipate resistance from neighbors who fear declining property values. With effec-

tive communication, the standards for approval of special-use permits will be clarified and the process could become simpler and less problematic.

Growing public recognition of the need for older Americans to have both the privacy offered by separate housing and proximity to love, necessary care, and support is indicated by the increasing call for a wide range of housing options for elderly citizens. The results of this study suggest that incentives are needed to motivate elderly parents and their adult children to implement the use of ECHO. Local governments could help by encouraging block grants and approving zone variances. This may require closer cooperation of agencies that govern finance mechanisms (Newman, 1985).

Table 8. Means of Tukey HSDs for significant one-way analysis of variance for personal acceptance of ECHO units by background characteristics¹

Background characteristics	Neighborhood	Yard	Live-in
Education			
HS or less	1.5000	1.7966	2.0339
Past HS, less			
4 yr. college	1.9655	2.2906	2.4569
4 yr. college	2.2258	2.5556	2.7302
Master	2.0612	2.3505	2.7200
Doctorate	2.3018	2.6878	3.0045
Gender			
Male	2.2576	2.5958	2.8832
Female	1.8987	2.2288	2.4664
Income			
24,999 or less	1.8289	2.1392	2.1429
25,000 to 34,999	1.8961	2.1948	2.4026
35,000 to 49,999	1.9718	2.3944	2.6831
50,000 to 64,999	2.1491	2.5391	2.9138
65,000 or more	2.4218	2.6986	3.0067
Occupation			
Professional	2.2440	2.5893	2.9147
Staff	1.8966	2.2213	2.3991
Health			
Excellent			2.8240
Good			2.5942
Fair			2.0909
Poor			1.0000

¹All values significant at p<.05 level; the lower the means, the greater the acceptance on a scale of 1 to 4.

The cost of an ECHO unit is approximately \$20,000 (Baldwin and Miller, 1985). Tax incentives like those that motivate implementation of energy conservation activities (Makela, et al., 1982) might also encourage the use of ECHO. Such an incentive could take the form of a temporary credit, deduction, or deferment rather than adding the cost of the ECHO unit to the tax base of the primary property as is the prevailing practice.

Housing educators should advocate the implementation of ECHO so families can enjoy its positive benefits. These societal benefits should be emphasized. A program to show the economic advantage and how to adjust mutual expenses for the changing demands and costs of health care between households would be very useful. Others might address how an ECHO arrangement benefits its occupant and those in the primary household in terms of improved self-esteem, the strengthening of

intergenerational bonds, and the improved security of having someone home most of the time. If pursued in positive ways, elder cottage housing could become a more widely available option for elders and their families.

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