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A Research Note on:

*ENVIRONMENTAL ADEQUACY AND ENVIRONMENTAL ADAPTATIONS
OF OLDER ADULTS*

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ABSTRACT

The overall objective of this study is to discover if seventeen older adults selected from an ex-urban area and considered at high risk of institutionalization have already made or need to make adaptations in their homes to stay longer. The findings indicate that adaptations have been made in the past and additional ones could be made in the future that could facilitate staying in the current residence. The data reveal that many of the inadequacies commonly found in these homes could be resolved at a low monetary cost. Recommendations and implications of the study are presented.

AGING AND HOUSING ADEQUACY

The older adult's residence is a dynamic and complex integration of unique environmental and behavioral characteristics. The current design emphasis of this research reflects a broad social and behavioral perspective. Designers are concerned not only with the original shaping of an environment, but the shaping and managing of facilities over time. A designer must not only be knowledgeable in the creation of new highrises for older adults and new health care facilities, but also promote comfortable, safe, efficient, and pleasant environmental supports and surroundings for those who in declining health wish to remain in the current housing.

Irwin Altman (1975) has substantially contributed to the multidisciplinary nature of environment-behavior and offers the "Social Systems, Ecological Study Model of Man" to help grasp the nature of this type of research. Altman's ecological model (1975) was similarly expressed in the work of Carp, Lawton, Havinghurst, and others who developed five important principles that served as basic premises for future environmental research specific to the elderly population.

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Environmental adequacy is articulated as being (1) an outcome of both physical and social aspects of the residential environment; (2) multidimensional, including but not limited to, the physical characteristics of the dwelling; (3) subject to individual variation; and (4) intra-individual variation with the passage of time (Soldo, 1978).

According to a 1980 research report by HUD, there are 1.6 million elderly families, approximately 10 percent of all elderly households, who have inadequate plumbing, faulty heating, or some other physical deficiency (Nathanson, 1980). More specifically, the literature suggests that the elderly persons living in rural areas, who are disabled, who live in rental units, and who are poor and members of a minority are particularly likely to have housing with physical deficiencies (Nachison & Leeds, 1983).

In the older adult population, there is a discrepancy between housing quality and housing satisfaction. O'Bryant (1983) argues that physical housing quality is not an end in itself. Rather, housing serves as a means for psychological well-being (O'Bryant, 1983).

Despite the fact that housing takes a larger share of the older person's income, that it may be substandard, or that it may not be commensurate with their physical needs, satisfaction with housing increases with the age of the occupant and the length of time in that residence (O'Bryant, 1983:32).

AGING AND ADAPTATION

Ironically, as Nachison and Leeds (1983) report, the prime focus of U.S. housing programs since 1970 has been on new construction programs and there is little pressure to adapt, rehabilitate, or assist older adult home-owners who want to stay in the current residence to correct housing deficiencies. O'Bryant (1983) argues that building more modern elderly housing, even if it is at lower cost to them, meets only the needs of the elderly who are either willing to relocate or must relocate.

Much governmental housing policy to date has been based on programs that offer change of residence, when in fact, there appear to be growing numbers of older persons who prefer not to change (O'Bryant, 1983:41).

It has been established that environmental planners and architects might "usefully continue to pursue ways of modifying these dwellings to provide more physically supportive environments" (Windly and Scheidt, 1980).

Although the home may have numerous inadequacies, the home of the older adult is an adaptable place where subtle factors may have dramatic and long-lasting impact. Adaptation of home environments requires a sensitivity towards what is wrong with a setting, and an idea of how to change that setting, and the resources needed to implement a change. Walter Kleeman (1981) writes that some vulnerable persons, such as mental hospital patients, by the very nature of their difficulty, are in no condition to respond, project, demand, evaluate, or fend for themselves. They require a design agent, intercessor, and advocate (Kleeman, 1981). Likewise, the frail

elderly at risk of institutionalization may also be more vulnerable or sensitive to the effects of their environment (Lawton, 1977) and they may need the help of those who can intervene and address inadequacies. Implementing an idea to change a setting may also be problematic because of lack of funds to hire things done, no support group of family or friends to make the changes, or there is not the commitment or strength to pursue the ideal.

METHODS

The methods of data collection included a personal interview, environmental assessment, photographic documentation and qualitative notes. Two instruments were developed by the research team. At all home visits, two researchers were present during the interview. One person administered the interview schedule while the other conducted the environmental assessment. For three interviews, another researcher was present to provide reliability checks on the interview schedule and the environmental assessment items.

The personal interview schedule consisted of both open-ended and closed-ended questions and recorded the Instrumental Activities of Daily Living for physical health status; reported mental health status; and extent of familial and social support. The instrument encompassed respondents' attitudes towards housing problems.

A checklist was used to identify characteristics of the home as the designer conducted observations. The questionnaire schedule allowed the designer to record general comments about each area and to draw floor plans and thumbnail sketches. The designer was usually accompanied by the respondent or a member of the respondent's immediate support group during the tour of the home. Qualitative notes were recorded throughout the time researchers were present in the home. Photographs were taken of the respondents' living environments to document adaptations and supplement the environmental assessment. These photographs were also useful for further environmental analysis.

The preliminary study reported here is for chronically ill older adults over 65 years living in central Missouri. The sample consisted of 17 individuals selected from lists provided by a local family practice physician who makes house calls and by the office of the county public health nurse. All respondents were considered by their health care provider to be "at high risk of institutionalization" and "frail." This group is similar in nature to the "frail pattern of well being" classification in the taxonomy developed by Scheidt (1984) for small town elderly individuals.

FINDINGS

The majority of respondents (10) said they had made adaptations in their homes for safety or ease of maintenance to accommodate their deteriorating health or physical mobility. In some instances the interviewers had to probe to get respondents to mention changes that were observed as existing in their housing which they had forgotten or thought inconsequential. Changes mentioned included 1) moving furniture to widen traffic patterns, 2) putting a hospital bed in the living room, 3) setting up another room in the house as space to be

used when feeling ill, 4) putting up grab bars in the bathroom and/or purchasing a raised seat for the stool and chair to be used in tub, 5) putting a ramp at the primary entrance, and 6) putting lower cabinets in the bathroom. Even with probing, two other respondents did not mention changes even though they had put grab bars in the bathroom for the toilet, moved a hospital bed into the house, and carpeted the living room to make their environment more functional for their needs.

The four individuals who had not made any changes in their homes are all renting and do not feel that they could make changes. In fact, one woman who had lived in the same apartment for 13 years said she had adapted to her apartment.

The respondents were asked if they had received any suggestions from others (e.g., relatives, friends, neighbors, physician, visiting nurse) about adaptations that could be made in their homes. Six reported they had received suggestions from others. In one instance the minister made the ramp for the front porch. These environmental adaptations recommended by others primarily dealt with ways to improve problems with poor access to the bathroom (i.e., bedside commode), or make the bathroom more usable (i.e., rails around toilet), improve or modify the bedroom during recuperation, and make the home safer (i.e., ramps, dead bolt locks, etc.).

Overall, the respondents are very satisfied with their housing (75%). The remainder of the respondents reported being "a little satisfied." Four renters are "only a little satisfied". When asked about the importance of staying in their homes, over 80% of the elderly said it was very important and only 1 of the 4 dissatisfied renters did not feel it was very important. The respondents hoped to live in their homes for "as long as possible", "as long as I live", or "until they carry me out".

For frail older adult respondents, problems in the kitchen and bathroom may be dangerous as well as present restrictions to their movements about their home. The homes visited problems as designated by the actual and desired changes noted by the elderly and observations. When asked about problems in the kitchen, five respondents acknowledged that they did not use the kitchen so it did not pose a problem. Problems mentioned by other respondents included cabinets and sinks that were too high for use by those in wheelchairs or those who are unsteady on foot ladders, the lack of space for maneuvering a wheelchair, the need for more counter space since they had to move certain items from upper shelves of cabinets to make them more accessible, and the problem of not having a garbage disposal so that the garbage had to be taken outside. Only three respondents mentioned that they had no problems with the kitchen and they were using it. Two of these three respondents used canes while the other individual did not use a supportive device. One man was recovering from a stroke and had not fully regained the use of one of his arms, but with his niece and supportive family, he did not need to do much cooking or meal preparation. The two other respondents are, at least sometimes, able to cook meals.

There are eight respondents who say they do not have problems in the bathroom. However, problems mentioned by others included the lack of space for a wheelchair (e.g., no room to turn around, doorway too narrow), lack of heat, shared bath with a neighbor, torn and loose floorcovering, clogged drains, and a window in bath that reduces privacy. Even though eight respondents did not mention any problems, three environmental assessments found that the bathrooms did have problems. One person would have problems using bathroom fixtures if in a wheelchair or using a walker. The doorway would not be wide enough to maneuver the support devices into the room. Two other respondents needed handrails for the bath tub and toilet.

RECOMMENDATIONS

Housing inadequacies and recommendations for adaptations were listed and tallied from all home visits. The following recommendations for environmental adaptations were made to the respondents: Implement bathroom aids, remove or secure small throw rugs, clear traffic patterns, install dead bolt locks, add smoke alarms, install handrails in hallways, specify repairs, install or improve ramp, improve furniture arrangement to be more functional, cover linoleum where holes are present, make adaptations where there are level changes, remove excessive clutter, improve lighting, install carpeting, remove door between rooms, improve bathroom location, create sun screen, engage cleaning service, screen front door glass, remove electrical cords, lower cabinets, and install pegboard. Since at least one design researcher was present during each home visit to conduct the visual assessment by taking photographs and sketching floor plans and elevations of the problem areas, design recommendations were commonly made. The photographs, floor plans and sketches were also analyzed by other designers to make these specific design recommendations.

Recommendations were made in each case based upon the personal interview, environmental assessment, qualitative notes, sketches, and photographs. Letters recommending adaptations were written using a large type and mailed to the participants. An attempt was made to point out both the good and the bad in a friendly, non-threatening discussion.

CONCLUSIONS AND IMPLICATIONS

The findings of this study indicate that older adult respondents at high risk of institutionalization frequently make adaptations in their homes and make use of social support systems to help them as they go about their daily activities. Modifications were made to make their homes safer, physically comfortable, socially comfortable, private, and stimulating. A range of inconveniences, health and safety hazards, and potential problems were found in each home. Although the study found that housing inadequacies did exist, there was another more focused concern. Overriding all other concerns of housing adequacy and adaptations was the attitude that the home is a place where they want to stay as long as possible and the nursing home situation is something that is feared. The elderly respondents cherished their homes despite the insufficient lighting, unsafe locks, interior level changes, steps at the front entrance, leaking roofs, stopped-up plumbing, cracked linoleum flooring, and other dangers

and annoyances.

Most of the inadequacies could be resolved at a low monetary cost. The dead bolt locks, grab bars in the bathroom, ramps at the front entrance, supplemental lighting, smoke alarms, telephone installation, and modifications in floor covering are all relatively inexpensive recommendations that could lower the accident rate and feasibly help them to stay in their own home.

The findings have larger implications that may be addressed. For example, the eventual dollar savings to aid older adults to stay in their own home by supporting "retrofit" projects for their housing are substantial. It costs much less to make these adaptations in comparison to premature institutionalization. More importantly, however, if environmental problems are identified and adaptations made, independent living for the aged becomes less of a struggle and they may more fully enjoy this meaningful setting.

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