

Design For The Elderly: Common Sense Or Common Errors?

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The objective of this paper is to help identify common misconceptions of the design needs for the elderly. A questionnaire focusing on home furnishings, structural design, and the social processes related to housing for the elderly was administered to all students enrolled in design courses at one midwestern university. Neither the number of previous design courses, age of respondent, major (interior design, housing, or other), nor contact with elderly (relative, other, or both) accounted for the difference in total number of correct responses.

The design of living environments for the elderly is of considerable interest to a variety of organizations, including federal agencies of the Administration on Aging (AoA), Housing and Urban Development (HUD), National Institute on Aging (NIA), and National Institute of Mental Health (NIMH). One of the nine strategy areas for the Administration on Aging, for example, for 1979 is "Living Environments: Housing and Environment." With so much emphasis on housing for the elderly, it is important that those responsible for decisions be knowledgeable of the design needs of the elderly. The objective of this paper is to help identify common misconceptions of the design

needs for the elderly. Identifying these misconceptions may help housing educators to develop better programs for training those who provide living environments for the elderly.

Interior designers, architects, planners, housers, demographers, gerontologists, and other social scientists have identified a variety of issues which need to be considered in providing housing for the elderly. The ideal recommendations are based upon both experience and empirical research and seem to have a "common sense" quality about them. For example, one recommendation states: "recreation and activity spaces should be directly related to the main pattern of pedestrian movement" (Gelwicks, Newcomer, 1974:95). Because of the simplicity of many recommendations there seems to be a breakdown between the body of knowledge and implementation in the design process. Even new housing for the elderly is being built which ignores critical recommendations included in the literature.

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In 1977, E. Palmore developed and published a short quiz in the *Gerontologist* covering the basic goals and frequent misconceptions about aging. Palmore suggested that the test could be used to stimulate group discussions, to measure and compare different groups' levels of information on aging, to identify the most frequently held misconceptions about aging, and to indirectly measure bias toward elderly. Holtzman and Beck (1979) administered Palmore's quiz to health care providers and presented an evaluation of the quiz. The Holtzman and Beck study indicated that there were no substantial differences in misconceptions by age and sex. They did find that better educated groups (dental and medical students, registered nurses, aids and orderlies, dental assistants, technicians, and licensed practical nurses were sampled) have more correct knowledge regarding the aged. The quiz was also given to medical students in the Holtzman, Toewe, and Beck (1979) study and similar findings indicated that there was little difference in the year of students and the total number of items answered incorrectly.

Research Design

An exploratory study was formulated to measure students' understanding of elderly's needs in their housing environment. A questionnaire on perceptions and misconceptions in housing the elderly was administered to all students enrolled in design courses at one midwestern university. The purpose of the test was to learn their certainty or uncertainty of the established recommendations as well as to test the correctness/incorrectness of elderly stereotypes. Responses of design majors were compared with those of nondesign majors.

The instrument focused on four areas: home furnishings for the elderly; structural design in elderly housing; the social process in housing the elderly; and elderly stereotypes. Questions in each of the four areas were derived from various design, housing, and gerontological research sources. Those questions asked in the area of elderly stereotypes were derived from Palmore's quiz (1977). Appendix 1 includes a complete listing of the questions asked and the research sources upon which each question is based.

Students were asked to give some information on themselves (e.g., age, major, previous design courses taken, and contact with the elderly). They were then asked to mark two pages of statements as "certainly true", "probably true", "probably false", or "certainly false". After completing the thirty-six statements appropriately, they were asked, "What do you consider elderly?" The open-ended question generated numerous responses which were coded into several categories as follows: chronological age, individual variation, physiological criterion, sociological criterion, and/or psychological criterion.

Results

The number of previous design courses, age of respondent, major (interior design, housing, or other), and contact with elderly (i.e., relative, other, or both) were examined to determine their relationship to the accuracy of responses. This was done by chi-square tests performed on cross tabulations of the variables by the number of correct and incorrect responses. These variables were not found to be significantly related to the total number of correct responses. Students' backgrounds as measured by these variables did not explain differences between questions answered correctly in any of the four question areas. When certainty of responses (i.e., certainly true, probably true, and so on) was examined with the students' background, again there were no clear and significant trends as a function of students' age, major or contact with the elderly.

In answering the question "What do you consider elderly?", 68 percent specified a chronological age. Twenty-five percent gave a physiological response such as "disabled, not being able to take care of oneself, grey hair, frail, poor health, declining senses, limited activity possible, and requiring special accommodations". Eighteen percent gave a sociological response such as "socially withdrawn, poor finances, no employment, religiousness, dependence, and retirement". Eighteen percent gave a psychological response such as "poor mental health, feeling old, lack of spunk, poor attitude in life, living in the past, and having an elderly state of mind". Eighteen percent felt that being elderly depended upon the individual and it

is unclear what is elderly. (Many students gave more than one response to this question and those multiple responses were coded in each category to which they belonged.)

Approximately one-third of the housing related questions were answered incorrectly by more than half of the students. Those questions and the percent answering them correctly are as follows.

Home furnishings for the elderly:

A bad place for a medicine cabinet is in easy reach of the bedside. (T) (34.8%)

— The elderly should have ceiling fixtures in all rooms since portable lamps are difficult for arthritic hands. (F) (20.9%)

— Roller shades should not be provided at windows in apartments for the elderly. (T) (30.8%)

— The best type of lighting to install in a stairwell is along the baseboard. (F) (25.9%)

Structural design in elderly housing:

— Elderly homes should be designed with lots of direct bright sunlight (F) (27.7%)

— Window sill heights shouldn't be any lower than 36" to prevent disorientation. (F) (31.9%)

— Acoustical privacy is more important in apartments for the elderly than in apartments for those at other stages of the life cycle. (T) (30.8%)

The social process in housing the elderly:

— A large one story complex encourages more social interaction among elderly residents than a high-rise housing complex. (F) (33.9%)

— If the community room in a highrise for the elderly is well designed and there is good leadership by the management there will be active participation in events by all residents (F) (35.0%)

— Most elderly prefer age-integrated housing where they can interact with people of all ages. (F) (30.3%)

Elderly stereotypes:

— All five senses tend to decline in old age. (T) (44.1%)

— At least one-tenth of the aged are living in long-stay institutions (i.e., nursing homes, mental hospitals, homes for the aged, etc.) (F) (15.8%)

— The majority of older people have incomes below the poverty level (as defined by the Federal Government). (F) (21.7%)

Summary and Discussion

From the test of students' perceptions and misconceptions in housing the elderly it was found that their age, major, contact, and number of previous courses had little influence on the correctness of answers to questions pertaining to home furnishings, structural design, housing, and elderly stereotypes. Furthermore, the educational background of the students did not influence the certainty of responses in any of the four areas.

The results were consistent with the research findings of Holtzman and Beck (1979). There were no substantial differences by age or sex in correctly answering questions on the elderly. Also supporting the finding of Holtzman, Toewe, and Beck (1979) the correlation between the total number of items missed and class (year of schooling) is relatively small.

The large number of questions answered incorrectly suggests that the design issues dealing with the elderly should be explicitly included in design training. This examination of housing perceptions and misconceptions for the elderly may help housing and design educators to better understand the misconceptions they have to overcome in developing courses dealing with these topics. In a society where the elderly constitute an important segment of the population there is a definite need to directly and effectively address their needs for appropriate housing and interiors.

Notes

1. The sources used in developing the questions and correct answers appear in Appendix I.

References

- Botwinick, Jack, 1973. *Aging and Behavior*. New York: Springer Publication Co., Inc.
- Brotman, Herman B., 1976. "Every Tenth American: The 'Problem' of Aging", in Lawton, M. Powell, Robert J. Newcomer, Thomas O. Byerts, eds., *Community Planning for an Aging Society*. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, Inc.

- Carp, Frances M., 1976. "Urban Life Style and Life-Cycle Factors", in Lawton, M. Powell, Robert J. Newcomer, Thomas O. Byerts, eds., *Community Planning for an Aging Society*. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, Inc., 1976.
- Cary, Jane Randolph, 1978. *How To Create Interiors For The Disabled*. New York: Pantheon Books.
- Gelwicks, Louis E., Robert J. Newcomer, 1974. *Planning Housing Environments For The Elderly*. Washington, D.C.: National Council on the Aging, Inc.
- Ginthner, Delores A., 1973. "Selected Physical Features in Apartments for the Elderly and How They Encourage Social Interaction". Masters Thesis, University of Minnesota.
- Green, Isaac, Bernard E. Fedewa, Charles A. Johnston, William M. Jackson, Howard L. Deardorff, 1975. *Housing For The Elderly: The Development And Design Process*. New York: Van Nostrand, Reinhold Co.
- Holtzman, Joseph M. and James D. Beck. "Palmore's Facts on Aging Quiz: A Reappraisal." *The Gerontologist*. Vol. 19 #1, Feb., 1979.
- Holtzman, Joseph M., Clinton H. Toewe, James D. Beck, 1979. "Specialty Preference and Attitudes Toward the Aged" Department of Family Practice, Southern Illinois University School of Medicine, Springfield, IL (Mimeo).
- Koncelik, Joseph A., 1976. *Designing the Open Nursing Home*. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, Inc.
- Laging, Barbara, 1974. "Who Are the Elderly?" *The Designer*, 16, no. 180.
- Lawton, M. Powell, 1975. *Planning and Managing Housing for the Elderly*. New York: John Wiley and Sons.
- Lawton, M. Powell, 1976. "Homogeneity and Heterogeneity in Housing for the Elderly", in Lawton, M. Powell, Robert J. Newcomer, Thomas O. Byerts, eds., *Community Planning For An Aging Society*. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, Inc.
- Michelson, William, 1970. *Man and His Urban Environment: A Sociological Approach*. Reading, Massachusetts: Addison-Wesley Publishing Co.
- Miller, Benjamin F. and Galton, Lawrence, 1971. *The Family Book of Preventive Medicine: How To Stay Well All The Time*. New York: Weathervane Books.
- Newcomer, Robert J., 1976. "Meeting the Housing Needs of Older People", in Lawton, M. Powell, Robert J. Newcomer, Thomas O. Byerts, eds., *Community Planning for An Aging Society*. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, Inc.
- Palmore, Erdman, 1977. *The Gerontologist*, vol. 17, No. 4.
- Parker, W. Russel, 1973. "Housing for the Aged" in Callender, John Hancock, Joseph De Chiara, eds., *Time-Saver Standards For Building Types*. New York: McGraw Hill.
- VIM, "Vigor in Maturity". *NRTA and AARP Health Guide for Older Americans*, Washington, D.C.

APPENDIX 1 — Questionnaire on Perceptions and Misconceptions in Housing the Elderly.

- (F) 1. Elderly homes should be designed with lots of direct bright sunlight. (Lawton, 1975:155).
- (T) 2. When selecting upholstery for furnishings in public spaces it is important to choose colors that contrast with floor materials. (Carp, 1976:22; Botwinick, 1973: 120-23).
- (F) 3. If there are no rails in the bathroom it is better for an elderly person to have a bathtub rather than a shower. (Lawton, 1975:147; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:151).
- (T) 4. All five senses tend to decline in old age. (Carp, 1976:22; Gelwicks, Newcomer, 1974:42; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:46; Palmore, 1977:316).
- (T) 5. A bad place for a medicine cabinet is in easy reach of the bedside. (VIM; Miller, Galton, 1971:43).
- (T) 6. In public spaces for elderly waxed floors are not recommended. (Parker, 1973:92).
- (T) 7. Electrical outlets should be placed higher than normal on the wall. (Parker, 1973:92; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:161).
- (T) 8. A good arrangement of public spaces in building a highrise for the elderly will have entrances, mailboxes, and elevators in near proximity with visual access to each other. (Lawton, 1975:193; Ginthner, 1973:119).

- (F) 9. A large one story complex encourages more social interaction among elderly residents than a highrise housing complex. (Green, Fedewa, Johnston, Jackson, Deardorff, 1975:114; Lawton, 1975:142-143, 188-189; Michelson, 1970: 193-195).
- (T) 10. Rough textures on hall walls are not recommended in apartments for the elderly. (Green, Fedewa, Johnston, Jackson, Deardorff, 1975:147).
- (F) 11. In designing base kitchen cabinets, doors with interior shelves make better storage than drawers or sliding shelves. (Lawton, 1975:151; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:150).
- (F) 12. The elderly should have ceiling fixtures in all rooms since portable lamps are difficult for arthritic hands. (Lawton, 1975:124; Parker, 1973:93; Green Fedewa, Johnston, Jackson, Deardorff, 1975:160).
- (F) 13. To brighten up a foyer and to color-code a floor of a high-rise for elderly, a good color combination would be an intense yellow-green number against an intense royal blue background. (Botwinick, 1973:122; Koncelik, 1976:152).
- (F) 14. At least one-tenth of the aged are living in long-stay institutions (i.e., nursing homes, mental hospitals, homes for the aged, etc.). (Lawton, 1975:4; Newcomer, 1976:64; Palmore, 1977:316).
- (F) 15. It is recommended that a small area rug be placed at the top of the stairs so an elderly person will know when he/she has reached the last step. (Parker, 1973:92; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:147).
- (T) 16. Doors should have levers, instead of door knobs. (Gelwicks, Newcomer, 1974:113; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:147).
- (F) 17. In apartments for the elderly, high-pile carpeting is a good choice for a floor material because of standing comfort. (Parker, 1973:92; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:147).
- (T) 18. About 80% of the aged are healthy enough to carry out their normal activities. (Palmore, 1977:317).
- (F) 19. Window sill heights shouldn't be any lower than 36" to prevent disorientation. (Lawton, 1975:214; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:143).
- (F) 20. It is better to have the management regulate temperature in a high-rise for the elderly rather than to plan individual thermostats for apartments. (Green, Fedewa, Johnston, Jackson, Deardorff, 1975:156).
- (T) 21. Roller shades should not be provided at windows in apartments for elderly. (Parker, 1973:93).
- (T) 22. The reaction time of most old people tends to be slower than the reaction time of younger people. (Carp, 1976:22, Palmore, 1977:317).
- (F) 23. If the community room in a highrise for the elderly is well designed and there is good leadership by the management there will be active participation in events by all residents. (Lawton, 1975:170; Ginthner, 1973:119).
- (T) 24. Thermostatic controlled water temperatures for tubs or showers are a desirable feature for the elderly. (Green, Fedewa, Johnston, Jackson, Deardorff, 1975:152; Lawton, 1975:123, Parker, 1973:89).
- (T) 25. The best width for doorways in planning housing for the elderly is 36". (Parker, 1973:92).
- (T) 26. Accoustical privacy is more important in apartments for the elderly than in apartments for those at other stages of the life cycle. (Parker, 1973:94; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:144).
- (F) 27. The majority of old people are socially isolated and lonely. (Palmore, 1977:317).
- (T) 28. The length of time an elevator door stays open should be longer in housing for the elderly than in an office building. (Lawton, 1975:124; Green, Fedewa, Johnston, Jackson, Deardorff, 1975:141).
- (F) 29. A dark brown would be a good color to select for a counter top because of light/dark contrast. (Green, Fedewa, Johnston, Jackson, Deardorff, 1975:147).
- (F) 30. The best type of lighting to install in a stairwell is along the baseboard. (Green, Fedewa, Johnston, Jackson, Deardorff, 1975:160).
- (F) 31. Most elderly prefer age-integrated housing where they can interact with people of all ages. (Lawton, 1975:114; Lawton, 1976:177).
- (T) 32. In deciding which furniture to take from a home when an elderly person is moving to a smaller apartment, personal preference is most important. (Lawton, 1975:145-146; Gelwicks, Newcomer, 1974:92).
- (F) 33. The majority of older people have incomes below the poverty level (as defined by the Federal Government). (Carp, 1976:27; Gelwicks, Newcomer, 1974:3, 96).
- (T) 34. The corridor width between apartments in a highrise for the elderly should be at least five feet wide. (Green, Fedewa, Johnston, Jackson, Deardorff, 1975:139).
- (T) 35. In locating where older people should live, the most salient social aspect is the crime level of the neighborhood. (Lawton, 1975:91; Lawton, 1976:177).
- (F) 36. A good upholstered living room chair would have a 14" seat height. (Cary, 1978:63; Laging, 1972:4).
37. What do you consider elderly? _____