OPINIONS EXPRESSED BY ELDERLY WIDOWS REGARDING AGE LEVELS AT WHICH SELECTED HOUSING FEATURES BECOME IMPORTANT, AND CERTAIN FACTORS RELATED TO THE OPINIONS

By

CAROLYN JEAN COMBRINK

Bachelor of Science

Southeastern State College

Durant, Oklahoma

1958

Submitted to the faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the degree of
MASTER OF SCIENCE
May, 1967

OPINIONS EXPRESSED BY ELDERLY WIDOWS REGARDING AGE LEVELS AT WHICH SELECTED HOUSING FEATURES BECOME IMPORTANT, AND CERTAIN FACTORS RELATED TO THE OPINIONS

Thesis Approved:

Marie Nygren
Thesis Adviser

Christine F. Salmon

N N Durham
Dean of the Graduate College

ACKNOWLEDGMENTS

Sincerest appreciation is expressed to Dr. Maie Nygren, Professor and Head, Department of Housing and Interior Design, for inspiration, guidance and understanding throughout the investigation. Indebtedness is also acknowledged to Mrs. Christine Salmon, Associate Professor, Housing and Interior Design, and to Miss Leevera Pepin, Assistant Professor, Housing and Interior Design, for their contributions as members of the Advisory Committee. The writer also is indebted to the following persons for acting as jurors in establishing relationships between housing features and physiological conditions: Dr. Thomas Dean, Associate Professor, Architecture; Dr. Sara Sutker, Associate Professor, Sociology, Mr. Cuthbert Salmon, Professor and Head, School of Architecture; Mrs. Girdie Ware, Associate Professor, Family Relations and Child Development; Mrs. Eleanor Bristow, Instructor, Home Economics Education; Miss Lucille Clark, Extension Housing and Equipment Specialist; and Dr. Thomas Cunningham, Extension Family Life Specialist. Appreciation is also extended to Mr. Charles Escue, Programmer, University Computing Center, for processing the data; to Miss Barbara Miles for conducting several of the interviews; and to the many women who so willingly cooperated in the study. The writer also is appreciative of the encouragement and assistance provided by members of her family. A special word of appreciation is expressed to two beloved grandmothers--Mrs. Ethel Robertson and Mrs. Fred Combrink--concern for whom provided incentive in selection of the topic for study.

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF TABLES

LIST OF TABLES (Continued)

CHAPTER I

INTRODUCTION

In America today nearly 18 million persons are considered to be elderly according to a commonly accepted definition. Of this number, over five million are widows, a figure representing well over one-half of all women past the age of 65.

It has been estimated that, in this nation, one of every four elderly women lives alone. In the state of Oklahoma more than 52,000 women who are past the age of 60 are living alone. This figure represents a group larger than the combined enrollments of all colleges and universities in the state. It includes almost one in every five women between the ages of 60 and 64, and approximately one of every three women more than 65 years of age. A large proportion of these women living alone are widows. When one considers the tremendous problem Oklahoma is facing in providing adequate, ample housing for students in state institutions of higher learning, the scope of the housing problem faced by the older woman living alone comes into sharper focus.

Since the turn of the century, the ratio of older women to older men has been steadily increasing. In the year 1900, there were more older men than women in America; by 1920 the numbers of older men and older women were approximately equal. By mid-century the ratio was reduced to nine men to every ten women; and it has been projected that by 1975 there will be only seven men to every ten women past the age of 65.

One study has even predicted a ratio of two men to every three women by the close of the century.[1]

Tibbitts estimates that only 22 percent of women over the age of 75 are married, compared with 46 percent of those between 65 and 74 years of age and 71 percent of women in the age group 50-64. His assessment of the situation is that:

> ...we have a larger and larger older population and largely a female population of unattached women--widowed or never married. I can't try to say what the dimensions of these facts are in terms of problems--I don't know. But in my judgment, this is one of the major aspects of aging.[2]

Mr. Henry Sheldon, Chief of the Demographic Statistics Branch of the Population and Housing Division, Bureau of the Census, made this comment regarding the problem of the aged widow in our society:

> When to this increasing excess of women at the older ages, which arises from differential mortality, we add the fact that wives on the average are younger than their husbands, and the fact that widowers tend to remarry more frequently than widows, it appears that widowhood may well be one of the major problems in the field of aging.[3]

One of the problems often attendant with widowhood is a struggle to find and/or maintain housing suitable to the needs engendered by a woman's being left alone at a time when advancing age can be expected to create new demands of its own accord. It often becomes quite difficult for the widowed woman to find desirable housing that is safe, comfortable and convenient for the limited amount of money she has

---

[1]Ethel Shanas, The Health of Older People, A Social Survey (Cambridge, Massachusetts, 1962).

[2]Clark Tibbitts, "Economic and Social Adequacy of Older People," Journal of Home Economics, LIV (October, 1962), 699.

[3]Henry Sheldon, "Future Trends in Our Older Population," The New Frontiers of Aging, ed. Wilma Donahue and Clark Tibbitts (Ann Arbor, Michigan, 1957), pp. 72-73.

available to spend.

Most research findings support the assumption that elderly people prefer to maintain independent living arrangements as long as possible. Shanas found that eight of every ten aged persons preferred to live in their own homes.[4] Beyer and Woods reported that 78 percent of widowed and single women preferred to live by themselves when able to take care of themselves, and 35 percent expressed a desire for living in their own homes with nursing care when they became unable to care for themselves.[5]

The housing unit occupied by the elderly widow can assume an important role in enabling her to retain independence in living arrangements, inasmuch as it makes positive contributions to her safety and comfort and aids in conserving dwindling energy reserves. A house which meets the needs related to common conditions and infirmity which beset all people as they grow older provides the best possible environment for maintaining independent living.

Numerous listings of recommendations for housing to be occupied by the elderly are available. They have been compiled by architects and gerontologists as guides for public and private agencies or for individuals interested in this facet of the housing industry. Most of the recommendations contained in these listings are features which would be desirable in any home, regardless of the age of its occupants. As stated by H. A. Steinberg:

The needs of older people are not peculiar to them. They

---

[4]Shanas, The Health of Older People, p. 94.

[5]Glenn Beyer and Margaret Woods, Living and Activity Patterns of the Aged (Ithaca, New York, n.d.), pp. 21-22.

> are simply an intensification of the needs of the general population--that is, convenience becomes a necessity; safety becomes paramount; and standards for comfort become more exacting.[6]

These three factors identified by Steinberg--comfort, convenience and safety--are the criteria by which respondents in this study were asked to evaluate various features on which their opinions were sought.

The features selected for inclusion in this study, as well as most other recommendations regarding housing for the elderly, are based on an awareness of certain physiological conditions which generally accompany the process of aging. These physiological processes and conditions assume major importance in any delineation of what might be termed the environmental needs of older people, and certainly the housing unit occupied by an older person constitutes his most important physical environment.

Guidance and inspiration in the selection of a focus for this study were provided by a statement of research needs formulated by Wilson. She said:

> The designer of a home for the elderly has detailed and comprehensive lists of standards to guide him. But what is he to do when he cannot meet all of the specifications implied in these recommendations? Some of the recommended standards are much more important than others. Some of them should be incorporated in the design, regardless of the effect on costs or type of architecture, while other recommendations are not in the category of "musts". Here is an opportunity for home economists to contribute by making studies of how specific features are evaluated by representative old people of various cultural and income groups. Research with this goal promises some truly

---

[6] H. A. Steinberg, A Check-List for Retirement Houses (Urbana, Illinois, 1958), p. 1.

significant answers to the questions that arise in designing low-cost housing for the aged.[7]

Statement of the Problem

Do older women who live alone assess in a similar manner the needs of the elderly woman who lives alone? Do they perceive her needs for specific housing features as arising at different age levels during the latter part of her life span?

Do women's expressed opinions indicate an awareness of certain physiological conditions listed by gerontologists as being associated with old age? At a given age level, do women express a need for several housing features which are related to the same physiological condition? Do women associate housing features related to different physiological conditions, e.g., hearing and seeing, with different age levels?

Purpose

The study was conducted to discover: 1) the age at which elderly women who live alone express a need for certain housing features; 2) the degree to which expressed needs reflect an awareness of certain physiological needs; and 3) if certain factors are related to women's expressed opinions regarding the age at which a need arises for various housing features.

Assumptions

The following assumptions were made:

---

[7]Maud Wilson, "Living Arrangements for the Fourth Stage of Life," Journal of Home Economics, LII (November, 1960), 728.

1. That elderly widows who live alone comprise a significant proportion of the total elderly population.

2. That the needs of the widow who lives alone are different from those of elderly couples or of the woman who has lived alone throughout her adult life.

3. That these two factors, sheer numbers and differences in recognized needs, together provide ample justification for intensive study concerning housing needs of elderly widows who live alone.

4. That widowhood places a woman in the position of having to seriously reconsider her housing needs and possible alternative solutions, and therefore, the widow may be especially cognizant of her own housing needs and of the housing needs of other women in similar circumstances.

5. That architects' listings of recommendations for housing to be occupied by the elderly are available and can be considered an authoritative source from which features might be selected for inclusion in the study.

6. That a majority of older women desire to maintain their own households and that good housing can contribute to the fulfillment of this desire.

Hypothesis

Opinions expressed by elderly widows who live alone regarding age levels at which need arises for certain selected housing features are related to their own age, socioeconomic status and general physical health.

Sub-hypotheses

Two sub-hypotheses were investigated in the study, although no statistical analysis was attempted with either. Some observations were made, however, based on tabulations made of recorded data.

1. All features related to the same physiological condition or process will be identified with similar age levels by a majority of respondents; by similar is meant within a ten year span.

2. Features with which respondents are most familiar will be regarded as "very, very important" at earlier age levels by a majority of the elderly women interviewed than will the features with which they are least familiar.

Description of Variables

Independent Variables

Three independent variables were investigated in the study: age, general physical health, and socioeconomic status.

1. Age of Respondents: The factor of age plays a major role in this study, since the primary purpose of the investigation is to shed more light on needs perceived by elderly women at different age levels. Limited research findings indicate that people are less likely to make changes in their living arrangements during their sixties than in the years past age seventy. The widow in her sixties has reached a crisis in her life, however, that does not come to many women until a later time but which quite possibly hastens the process of adjustment to old age. The effects of two factors most commonly associated with changes in living arrangements--death of spouse and reduced income--have

probably already become a reality to her.

For purposes of analysis the respondents were classified into five age levels:

a. age 60-64
b. age 65-69
c. age 70-74
d. age 75-79
e. age 80 and above

2. General Physical Health: Vivrett states, "change in physical condition is perhaps the most common and most dreaded cause for change of living arrangements."[8] Certainly it may be observed that many recommendations regarding housing for the elderly are based on an assumption of lessened energy reserves and various conditions associated with poor health and/or physical disability.

In his study of five hundred persons over the age of sixty, Kutner found very little relationship between age and health status. One cannot assume, therefore, that advancing age automatically brings poor health. He reported:

> ...not only is there no great increase in the frequency of illness with advancing age but increase of incapacitation or social handicap due to illness is also slight.[9]

It appears reasonable to assume that among women living alone in their own homes there would be very little relationship between age and physical health. Group living arrangements are more socially acceptable for older women who are in poor health than for younger women; therefore, women at the upper age levels who are maintaining their own homes

---

[8]Walter Vivrett, "Housing and Community Settings for Older People," Handbook of Social Gerontology, ed. Clark Tibbitts (Chicago, 1960), p. 555.

[9]Bernard Kutner, et al., Five Hundred Over Sixty, A Community Survey on Aging (New York, 1956), p. 137.

probably are doing so because their health is sufficiently good to enable them to live independently with relative ease.

Respondents were categorized into five health groups:

a. excellent
b. good
c. fair
d. poor
e. very poor

3. Socioeconomic Status: One of the most widely employed indices by which a person's station in life is approximated is the appearance of the home he occupies. "Where do you live?" is usually one of the first questions asked by an individual attempting to establish the social position of another. It has also been verified by social scientists that human behavior tends to vary somewhat according to status.

On the basis of the two foregoing research supported observations, it appears plausible that socioeconomic position would have some relevance to expressed opinions regarding the importance of selected housing features.

The respondents in this study were classified into four socioeconomic levels:

a. lower upper
b. upper middle
c. lower middle
d. upper lower

Dependent Variables

The dependent variables investigated in this study were the opinions expressed by respondents regarding the ages at which need arises for certain selected features in the housing of the older woman who lives alone.

Age was selected as the criterion on which needs were based for

two reasons:

1. Age is the accepted basis on which studies of developmental needs are based. This concept appears, however, to "break down" after people reach their sixties and everyone within a thirty year or more age span generally is placed in one stereotyped category of "65 and older." It is hoped that this study will contribute some insights into the perceived needs of elderly women at different age levels within this unrealistic generalized age classification.

2. Age is usually the only basis on which one can plan ahead in anticipation of needs. Every person possesses the knowledge that he will someday reach the age of eighty, barring the onset of a fatal illness or accidental death. He has no method of determining in advance, however, other factors which would be likely to influence his needs for housing.

Respondents were given a choice of five age classifications with which each feature could be associated, for example:

This feature is very important:

a. before age 65
b. ages 65-69
c. ages 70-74
d. ages 75-79
e. age 80 and above

A sixth possible classification was as follows:

f. This feature is not important at any age.

Descriptive Variable

Conscious consumer wants are limited by knowledge and experience. An individual can only want what he knows; therefore, a measure of familiarity with each feature was deemed important to the purposes of

this study.[10] Although an income level which does not permit the acquisition of desirable housing does not eliminate the need and desire for housing that at least meets minimum standards, it was expected that some relationship would be found between those features possessed by the respondent and those named as being necessary for a woman living alone.

Although no statistical comparisons were attempted, three levels of familiarity with the features were recorded; some observations were then made regarding features with which respondents were most familiar and those with which they were least familiar, as compared to the features deemed necessary for women living alone. The three levels of familiarity employed in this study were as follows:

a. has the feature in her home
b. is familiar with the feature but does not have it in her home
c. has not heard about the feature before

Definition of Terms

1. Widow: The definition given in Webster's Seventh New Collegiate Dictionary is suitable for the purposes of this study: a woman who has lost her husband by death, and who has not remarried.

2. Living Alone: For purposes of this study the term refers to a woman who has no one else living in the dwelling unit which she occupies. Women who rent rooms or apartments to college students were included in this classification if the student had access to his living quarters other than through the dwelling unit of the respondent and if his use of facilities in her dwelling unit was by invitation only.

---

[10] Wilma Donahue, "Where and How Older People Wish to Live," Housing the Aging, ed. Wilma Donahue (Ann Arbor, Michigan, 1954), p. 24.

3. Dwelling Unit: An adaptation of the definition employed by Beyer was used in this study. A group of rooms or a single room occupied by a person living alone was considered to constitute a dwelling unit if it met one of the following specifications:

a. had separate cooking equipment, or
b. had two or more rooms and a separate entrance[11]

4. Socioeconomic Status: The definition set forth by Chapin appears to have relevance in terms of this study. He defines socioeconomic status as "the position an individual or a family occupies with reference to the prevailing average standards of cultural possessions, and participation in the group activities of the community."[12]

5. Physical Health: A general term which refers to the condition and/or functioning of all body parts; it does not include those conditions related to the mind, intellect or behavior.

---

[11]Glenn H. Beyer, Economic Aspects of Housing for the Aged (Ithaca, New York, n.d.), p. 58.

[12]F. Stuart Chapin, "A Qualitative Scale for Rating the Home and Social Environment of Middle Class Families in an Urban Environment: A First Approximation to the Measurement of Socioeconomic Status," Journal of Educational Psychology, XIX (February, 1928), 99.

CHAPTER II

REVIEW OF LITERATURE

Since the early 1940's, great strides have been made in both number and quality of research investigations concerned with old age and the aging process. In comparison with the area of child development, however, gerontology is an infant in the social science family.

Few studies of older people relate directly to their housing and/or living arrangements. Housing research in the field of aging has been largely confined to studies of relationships between housing and certain social and psychological factors. Some investigators have concerned themselves with types of living arrangements preferred by elderly persons, but very few have studied opinions held by older people regarding specific housing design features. Recommendations for the design of housing units planned for occupancy by the elderly are largely based on non-professional interpretations of needs imputed for aging persons by gerontologists.

One of the most important concepts to emerge from intensive study of the aged has been a growing awareness of the heterogeneity of older people. The aged, in common with all human beings, manifest marked individualism. In housing, as in other areas, their habits, tastes and desires are infinitely varied and diverse. Bader and Hoffman regard as a serious handicap to persons doing aging research the failure to realize that older people are individuals with wide variations

physically, mentally and psychologically.[1]

According to Breen, studies of older people are all too frequently devised to maximize the use of readily available persons and data. As a result, researchers study persons in homes for the aged or in hospitals or those on pension lists. Thus, generalizations about aging persons are too often not accurate reflections of the entire older population. In his opinion, "we know relatively little about the average, healthy older person."[2]

Several research investigations have been devoted to identifying factors related to similarities and/or differences among the older population. Montgomery concluded that socioeconomic status, marital status, sex, age, and number and kind of life disruptions were all significantly related to patterns of response in his study of the social characteristics of 510 elderly persons in Pennsylvania.[3]

Breen questions the use of chronological age alone as a basis for making generalizations concerning housing needs of the elderly. He suggests no criteria, however, by which more accurate approximations might be made. Meanwhile, he recognizes that age is a powerful index with which large amounts of data may be classified.[4]

Gerontologists are in agreement that any definition of old age

---

[1]Iva M. Bader and Adeline M. Hoffman, "Research in Aging," Journal of Home Economics, LVIII (January, 1966), 11.

[2]Leonard Z. Breen, "Some Problems of Research in the Field of Aging," Sociology and Social Research, XLI (July, August, 1957), 416.

[3]James E. Montgomery, Social Characteristics of the Aged in a Small Pennsylvania Community, College of Home Economics Research Publication, p. 233, n.d.

[4]Breen, p. 414.

which is expressed in purely chronological terms is of necessity an arbitrary one. Tibbitts sums up the current thought on the subject by stating: "Age and old age must, then, be defined in terms of a composite of many contributory factors which affect individuals at different times, in different degrees, and, sometimes, in different ways."[5]

People exhibit a tendency to think of old age in terms of "other" people. Nygren and Sutker concluded that older women have no strong perceptions about themselves as being old. In their study of elderly rural Oklahoma homemakers, women's responses to a number of questions carried the implication that "older" referred to anyone 10 or 15 years older than the respondent.[6]

This research team reported that only 16 of the 35 women interviewed referred spontaneously to themselves as "aging". In a more precise attempt at evaluating respondents' self concepts regarding aging, they administered to the homemakers a test which had clearly differentiated between elderly and middle-aged people in a St. Louis study. In the Oklahoma study none of the five statements differentiated the older women with a mean age of 65.7 from their children with a mean age of 38.0.[7]

Lake asserts that care should be exercised in relying upon older people's expressed preferences for type of housing. He concludes that

---

[5]Clark Tibbitts, "The Phenomenon of Aging," The Older Population of the United States, ed. Henry D. Sheldon (New York, 1958), p. 8.

[6]Maie Nygren and Sara Sutker, "A Report on the Study 'Toward Recommendations Becoming Realities in Housing for the Rural Aging'" (Oklahoma City, Oklahoma, 1963), p. 7.

[7]Sara Sutker and Maie Nygren, "The Psychological and Social Relational Context of Older People's Decisions about Housing" (New Orleans, Louisiana, 1966), p. 7.

housing arrangements completely contrary to expressed wants could be satisfactory to older people if the housing satisfies their basic social needs.[8]

Rosow also adheres to Lake's philosophy. He acknowledges the importance of physical aspects of housing but does not consider them the problematic issue. The social consequences of different living arrangements are regarded by Rosow as being the primary concern of those involved in planning housing for older people.[9]

Other studies have produced valuable insights into present living conditions of older Americans. Donahue and Ashley report the most striking characteristic regarding living arrangements of older persons in the United States to be the high percentage of one-or two-person households. They also found nearly three-fifths of the nation's older people living in quarters which contain five or more rooms, whereas, less than one-half of the families headed by persons under the age of 65 occupied dwellings of that size.[10] From all indications, elderly persons who maintain their own households have few problems which are a result of overcrowded living conditions.

Muse found in her study of rural elderly in Vermont that almost one-half of this group lived in houses containing five to seven rooms,

---

[8]Wilfred S. Lake, "Housing Preferences and Social Patterns," Social and Psychological Aspects of Aging, ed. Clark Tibbitts and Wilma Donahue (New York, 1962), pp. 341-347.

[9]Irving Rosow, "Retirement Housing and Social Integration," The Gerontologist, I (June, 1961), 85.

[10]Wilma Donahue and E. Everett Ashley, "Housing and the Social Health of Older People in the United States," Aging and Social Health in the United States and Europe (Ann Arbor, Michigan, 1959), p. 148.

and one-third had eight- to ten-room homes.[11]

Not only are elderly persons' houses often larger than their needs dictate, but these houses are also older than those occupied by younger people. It has been estimated that 80 percent of the elderly people in the United States live in houses constructed more than thirty years ago; of this proportion one-half live in houses built more than fifty years ago.[12]

A major factor which influences living arrangements selected by older people is their money income. Steiner and Dorfman found that the incomes of the aged are typically very low in relation to their minimum needs.[13] The median income received by the 3.8 million single elderly persons who maintain their own households is of special interest: for owners the figure is $1,100; and renters have a median annual income of $1,200. This low income is reflected in a high proportion of deficient units. Nearly 20 percent of the 16 million units occupied by elderly persons are classified by census definition as substandard, compared with 15 percent of the housing units having no elderly occupant being so rated.[14]

In short, much existing housing occupied by older people is "too

---

[11]Marianne Muse, "The Homes of Aging Couples in Rural Vermont," Journal of Home Economics, LIV (October, 1962), 714-715.

[12]"The Aged, A Special Housing Dilemma," Public Health Reports, LXXVII (December, 1962), 1048.

[13]Peter O. Steiner, "Income and Employment: Basic Facts," The New Frontiers of Aging, ed. W. Donahue and C. Tibbitts (Ann Arbor, Michigan, 1957), pp. 89-98.

[14]Senior Citizens and How They Live: An Analysis of 1960 Census Data (Washington, D. C., 1962).

large, too old, too costly or too inefficient and unsafe for the changes which occur with age."[15]

Studies of Preferences in Living Arrangements

The one most dominant concept emerging from studies concerned with housing preferences of older people is an almost universal desire for continued independence in living arrangements.[16] Nygren and Sutker confirmed the findings of other studies when they identified a strong desire among older rural homemakers to remain independent, yet near familiar surroundings. When forced to choose among four alternative living situations, should they have to leave the farm someday, their choice was predominantly for the living situation which permitted them to do both. The most favored choice was going to live in a nearby village; the least favored was going to live with adult children. Other alternatives presented to these women were: going to live in a development of houses designed especially for older people located in a nearby state; and going to a distant state to live in a church-supported home located near their children.[17]

Beyer and Woods concluded that even the onset of poor health does not appear to diminish this desire for independence. They did, however, note a trend by persons in poor health to express a preference for living by themselves, but near relatives. Preference for independent living was found to be lowest among the most elderly and those in

---

[15]"The Aged, A Special Housing Dilemma, " pp. 1048-1054.

[16]Donahue, "Where and How Older People Wish to Live," p. 27.

[17]Nygren and Sutker, p. 10.

poorest health.[18] Data from this study also indicated that the closer aged persons were to the possibility of dependent living, the less favorable they were to the idea of moving to a nursing home.[19]

Lake reports that intangible needs, as well as the desire to preserve and maintain customary patterns of living, overshadow physical requirements for housing. This conclusion was reached after data were analyzed from two studies of housing preferences expressed by elderly people who were being evicted from their apartments because of urban renewal projects.[20]

In one study, 74 older residents of the old Hotel Brunswick, in Boston, were questioned about their preferences for living arrangements. All were single persons and had considered themselves permanent residents of the hotel. The universal response was a desire for housing essentially like their present arrangement. Rank order of features respondents liked best about the hotel were as follows: nearness to shopping center, ability to cook some meals in their rooms, friendly staff, "homey" atmosphere, freedom of movement, and reasonable rent and privacy. A follow-up study conducted several months later showed considerable correlation between stated preferences and actual choices.

The other study was conducted in the West End section of Boston. Residents of these apartments indicated a preference for living near friends and familiar institutions; a slight majority expressed a desire to live near people of the same age and culture group. Nearness to

---

[18] Glenn Beyer and Margaret Woods, Living and Activity Patterns of the Aged (Ithaca, New York, n.d.), p. 21.

[19] Ibid., p. 24.

[20] Lake, pp. 341-347.

family was not deemed important so long as they were close enough for weekend visits; however, respondents did express a desire for accommodations for overnight guests.[21]

Griffin concluded that there is no particular type of living arrangement suitable for all elderly people, but that conditions giving the aged companionship and freedom of choice are preferable. His conclusion stemmed from a 1949 study of 1,900 persons, the entire Old Age Assistance caseload of Sommerville, Massachusetts.[22]

Respondents were not asked to state their preferences in Griffin's study. Rather, his conclusions were based on the type of living arrangement in which the aged person was found at the time of the interview. A high proportion of these older persons were living with close relatives, an observation which supports the conclusion reached by Beyer and Woods that living with their families is often the only alternative available to the low income elderly.[23]

Smith approached his study of housing preferences of the aged in a similar manner. He compared the pattern of housing arrangements actually chosen by elderly persons at three different income levels, his hypothesis being that a specific increase in income would induce some elderly people to change their housing.

Smith's findings show a definite association between very low incomes with high proportions of elderly persons sharing relatives'

---

[21]Ibid.

[22]John J. Griffin, "The Sheltering of the Aged: A Thorough Analysis of the Living Arrangements of 1900 Old Age Assistance Recipients," Journal of Gerontology, V (January, 1950), 30.

[23]Beyer and Woods, p. 23.

households. The proportion of elderly persons sharing homes with relatives was greatly diminished by each rise in income level. He also observed that the proportion of home owners generally rose with income, stabilizing above the $6,000 level. Age was not found to be a significant factor related to findings in this study.[24]

Data from two investigations supported by the Vermont Agricultural Experiment Station indicated that almost all middle-aged couples believe they will continue to maintain their own households and will have no one else living with them as long as both partners are living. Over one-half of the men and women interviewed believe they will live alone in their homes when their spouses are no longer living, although little evidence was found that serious consideration had been given to the matter.[25]

Physiological Conditions Associated with Aging

Even though advancing age does not necessarily imply poor health and disability, it is generally recognized that certain physiological conditions do accompany the process of aging. These processes and conditions must be considered in the establishment of guides and standards for living accommodations to be occupied by older people.[26]

A surprisingly small proportion of elderly people are in very poor

---

[24]Wallace F. Smith, "The Housing Preferences of Older People," Journal of Gerontology, XVI (July, 1961), 261-266.

[25]Marianne Muse, "Homes for Old Age," Journal of Home Economics, LVII (March, 1965), 183-187.

[26]George E. Kassabaum, "Housing for the Elderly--Technical Standards of Design," American Institution of Architects Journal, XXXVIII (September, 1962), 61.

health; yet most persons do experience a general decline in sensory acuity as an accompaniment to the aging process. This deterioration of the senses often produces strain and tension, which has an inevitable effect on the individual's responses to his environment. According to Kassabaum, "it should be the aim of the designer to help compensate for these factors in the spaces that he is asked to create for the older person."[27]

Salmon also recognizes that man responds to his environment through his senses. Even though he may be unaware of his reactions and the reasons underlying them, these factors nevertheless are an essential consideration in the planning of a physical environment.[28]

Decline of Vision

As a rule, advancing years are accompanied by failing eyesight and also a lessening in ability of the eyes to adapt to light or dark.[29] Vivrett states that aging individuals appear to intuitively seek sunlight, and to require intensities of light at least as high as that needed by the student at school.[30] Kassabaum also recognized "a diminishing in the field of vision so that what is seen is that which is immediately in front of the eyes."[31] Elimination of shadows and glare

---

[27] Ibid.

[28] F. Cuthbert Salmon, "Architectural Environment for the Aging," in Michael Dacso, Restorative Medicine in Geriatrics (Springfield, Illinois, 1963), p. 275.

[29] Salmon, p. 283.

[30] Walter F. Vivrett, "Housing and Community Settings for Older People," Handbook of Social Gerontology, ed. Clark Tibbitts (Chicago, 1960), p. 585.

[31] Kassabaum, p. 61.

assumes paramount importance.

Decline of Hearing

Hearing, especially sensitivity to high frequency sounds, generally decreases with age. According to Vivrett, some older people require increased intensity of sound within their homes, but are disturbed by excessive noise not of their own making.[32] Salmon recommends that homes for older people be well insulated to prevent transmission of noise but cautions against over-use of sound absorptive materials within the house, since a degree of acoustical "liveness" is desirable.[33]

Decline of Olfactory Sense

Most authorities assume there is a decline in the sense of smell among older people. Harmful gas fumes or smoke are often unnoticed by the elderly; hence, factors which protect against accidental asphxiation and/or fires assume major importance.[34]

Increased Sensitivity to Extremes of Temperature and Climate

The desire of the older person for greater warmth and freedom from drafts is a generally acknowledged fact. Controls for air pollution and moisture regulation are also thought to be desirable for adapting the environment to the range of toleration of the aging person.[35]

---

[32]Vivrett, p. 586.

[33]Salmon, p. 284.

[34]Ibid.

[35]Committee on Housing, White House Conference on Aging. Background Paper on Housing (Washington, D. C., 1960), p. 13.

Susceptibility to Accidents

Unsureness of gait and sense of balance, increase in tremor, slowed reaction time, vertigo and a memory that is less keen than in former years; all these factors, alone or in combination, make the older person more accident prone. Vivrett states that most accidental deaths occur in the home, with falls the number one killer of persons 65 and older. The next highest killers of older people are fire burns and accidents associated with fire. Not every hazard of daily life can be anticipated, but many precautions can be taken.[36] Salmon reiterates this point of view by noting that many falls are directly related to some environmental factor which could be avoided through careful planning and design.[37]

Extremes of Ill-health and Physical Disability

Many architects feel that, within practical limits, the home and its environment should have maximum adaptability to the less frequently observed conditions of failing health: wheelchair existence, limitations of mobility, blindness, or inability to care for one's self.

Beyer and Wahl found that only a small proportion of the elderly ever reach a stage of chronic illness requiring constant health care.[38] In spite of this, Salmon voices an opinion shared by many planners of homes for the elderly: "If the building is designed for the use of persons in wheelchairs, not only is it possible for these persons to be more self-sufficient, but the building becomes more convenient for those

---

[36] Vivrett, p. 586.

[37] Salmon, p. 281.

[38] Beyer and Wahl, p. 52.

not so severely handicapped."[39]

Dwindling of Energy Reserves

The aging person often has difficulty reaching, lifting, pulling, bending over and getting up and down. While some exercise is beneficial, it is generally felt that facilities of the home and techniques for accomplishing daily routines should be organized for maximum conservation of energy.[40]

Architects' Recommendations Regarding Housing for the Elderly

"The objective of housing for senior citizens is to provide a physical and social environment that will extend the time span during which senior citizens can live independently, in comfort and safety, and with sustained interest in life." This statement by Marie McGuire introduces an architect's check list developed by the Public Housing Administration. It relates very effectively the criteria by which are judged architects' recommendations regarding design features in housing for the elderly.

This guide and others prepared by government agencies, housing authorities, universities or private individuals, list numerous design features recommended by architects for inclusion in homes of older people.

Donahue and Ashley point out that the value of many of the design features in special housing for the elderly have not been tested experimentally. They recommend such investigations be made, especially since

---

[39]Salmon, p. 278.

[40]Vivrett, p. 586.

inclusion of many of these special features increases construction costs.[41] The dearth of such research is one factor contributing to sometimes conflicting recommendations regarding housing for the aged.

Preferences Expressed by Elderly Persons Regarding Specific Design Features

The San Antonio Housing Authority conducted one of the few reported polls regarding older people's opinions about the housing units in which they reside. The purpose of this survey, made in the middle 1950's, was to give direction in planning new public housing projects designed for occupancy by elderly people. Respondents were occupants of one housing project, a two-story structure built in 1940. The average age of occupants interviewed was 76.

Three comments were unanimous: 1) occupants wished for doors on all closets and cabinets; 2) they wanted children kept out of their yards; and 3) they disliked uncovered concrete floors. Other commonly voiced complaints related to ventilation and control of sunlight, noise control between units, steps to the second floor, and inadequate storage at convenient heights. Residents also complained that the rimless bathtubs were hard to get in and out of. Several other suggestions were related to maintenance of desirable health standards (e.g., covers for toilets, a place for garbage containers, and insect control).[42]

In another study, conducted in 1961, researchers from the Clothing and Housing Research Division, Agricultural Research Service, Beltsville,

---

[41] Donahue and Ashley, p. 143.

[42] Marie McGuire, Housing the Elderly (San Antonio, 1957), p. 11.

Maryland, visited twenty apartments in four existing public housing projects. Their purpose in making this study was to obtain information which would aid in planning three new housing projects for Washington, D.C. Specifically, their goal was to translate and apply existing research findings regarding housing requirements of rural families to the design of urban apartments.

The subjects in this study were 12 elderly couples and eight single women. Two of the projects visited were only two years old at the time of the survey.

Again opposition was found to closets and cabinets without doors, and to storage with shelves placed too high for easy reach. More counter space was desired in the kitchen and dining areas. Tenants reacted favorably to grab bars in their bathrooms, but several wished for a shower rather than the tub provided. Several tenants also expressed a need for better lighting and more convenience outlets. Many respondents voiced a desire for more or larger closets, and mentioned, specifically, separate linen closets and larger closets in halls.[43]

Nygren and Sutker studied older farm homemakers' knowledge, perceptions, values and attitudes related to housing, especially housing for the aging. One phase of this study was an attempt to ascertain whether or not the respondents exhibited a "problem awareness" about rural housing and living arrangements and the changes brought about by aging. They found very little awareness of housing problems among these

---

[43]Mildred Howard and W. Russell Parker, Housing for the Elderly: A Report of Recommendations Made to the National Capital Housing Authority for Proposed Apartment Units for Low-income Elderly Occupants (Washington, D. C., 1963), pp. 2-4.

elderly farm women. Only 10 of 35 women interviewed identified even one problem. Of 13 problems mentioned only four could be interpreted as being specifically associated with the aging process. Nearly two-thirds of the respondents could not even identify a feature about their houses which they enjoyed least. Satisfaction with the status quo appeared to be the major deterrent to older people's making improvements in their housing.[44]

These Oklahoma farm women also perceived the house as being a safe place. Twenty-one women took issue with the statement that some safety experts consider the house to be a dangerous place. Eight others gave qualified "yes" answers, saying that although houses could be dangerous, their own were safe.[45] This finding indicates that educational programs designed to encourage older people to improve their housing should not be organized completely around a safety theme. Loss of independence was feared by these women far more than any physical aspect of their housing. This lack of awareness among older women concerning possible dangerous features about their homes might well be reflected in their opinions concerning recommended safety features.

Sutker and Nygren used a technique in which respondents were shown and asked to comment on five photographs illustrating housing features often recommended for older people: a night light, hand rails by stairs, a non-slip bath tub mat and grab bars, a ramp, and a specially designed counter and chair for sitting down to cook.

Two factors emerged: 1) a lack of knowledge concerning some

---

[44]Nygren and Sutker, p. 8.

[45]Sutker and Nygren, p. 6.

features; and 2) an interpretation of recommended features as being desirable for situations other than that of the day-to-day living of the aging person (e.g., night lights were described as being nice to have when grandchildren came to visit). Grab bars were known to only one-half of these older women.[46]

The Nygren-Sutker study also differentiated between "habitual home improvers" and "non-improvers". It was found that significantly more habitual improvers than non-improvers thought the house to be a dangerous place, were less satisfied with their own housing, were aware of the status quo attitude as being a deterrent to making housing improvements, were more observing of kinds of changes made by other elderly people, and named technically competent sources of information for advice and help with housing problems. Age, income, education and participation in group activities of the community were not found to be significant factors in differentiating between "improvers" and "non-improvers."[47]

---

[46] Ibid., p. 5.

[47] Nygren and Sutker, p. 9.

CHAPTER III

METHODOLOGY

A personal interview in the home of the respondent was selected as the most feasible means of obtaining the data for the study. A card-sort technique, which has been widely used in social science research and which has been adapted for housing research by Nygren, Salmon, and Sutker, was felt to be an excellent device for use with older women since it allowed them to work at their own rate and to express opinions without being required to verbalize on them.

The Pre-testing Instrument

Several widowed women who live alone were interviewed during the formative stages of the research. These women were residents of Caddo, Oklahoma, and thus not part of the population from which the sample for the study was obtained. Following this first pre-test, several changes were made in the instrument, including a change in the type of scale to be used in determining the socioeconomic status of the respondent.

Twenty-five housing features were included in the first pre-test. All women in the pre-test sample expressed the opinion that a larger number of features could be used without becoming tiring to them. The time required for these preliminary interviews was approximately one-half hour.

After procedures for obtaining the data were further refined and

a new interview schedule prepared, another limited pre-test was conducted; again the women interviewed were not a part of the population defined for the study. The only changes made following this second pre-test were minor modifications in the schedule designed to simplify the recording process.

Development of the Interview Schedule

In its final form the interview schedule was an instrument for recording three different types of data:

1. Replies to questions asked the respondent and recorded by the interviewer;
2. Observations made of articles found in the living room, condition of the room and its furnishings, and use of the space; and
3. Responses to two card-sorting procedures.

The questions asked the respondent provided a measure of two independent variables, age and health. Several questions were also asked concerning the respondent's possession of items assigned a weighted score in determining socioeconomic status.

The observations recorded by the interviewer all related to the independent variable, socioeconomic status.

Two card-sorting procedures were employed. The first card sorting provided a measure of the dependent variables, women's opinions regarding age levels at which needs arise for various housing features. A measure of the descriptive variable, familiarity with the feature, was obtained in the second card sorting.

The number of questions asked the respondent varied from eleven to fourteen, depending on whether or not certain features were

observed in the living room. Total time required for each interview ranged from less than one-half hour to nearly two hours. Such a wide variance was due to the women's being allowed unlimited time for the two card-sorting procedures. The respondents were encouraged to read the feature cards and make their decisions without discussing them aloud unless clarification was needed. Each feature was described on a separate card, typewritten in very large type; all statements were presented in capital letters for ease in reading.

Prior to the subject's beginning each card-sorting procedure, several upright cards were placed on a table in front of her. Each of these cards described, in abbreviated form, one possible response. She was then instructed to read each feature card carefully and to place it in front of the upright card which bore the caption designating her choice among the possible responses.

In the first sorting procedure, she was asked to give her opinion regarding the age at which having the feature described on the card becomes "very, very important" to the woman who lives alone. Possible responses, as indicated on the upright cards, were: "very, very important," "Before age 65," "Age 65-69," "Age 70-74," "Age 75-79," "Age 80 and above," and "Not Important at Any Age."

The same procedures were employed in the second sorting, except that the criterion by which the cards were sorted was degree of familiarity with the feature. The respondent was instructed to place in one stack the features she had in her own house; in the second stack those features she had seen and with which she was familiar, but did not have in her own house; and in the third stack those features she had not heard about before. Captions on the upright cards

read: "I have this," "I know about this," and "I have not heard about this."

The tendency of women in the pre-test sample to express a need for several related features at approximately the same age level led to a decision to investigate this trend further. It was necessary, therefore, to establish a basis on which relationships could be assumed to exist between selected housing features and various physiological conditions believed by gerontologists to be normal developments in the process of aging.

A panel of seven jurors, all of whom have professional competency in the area of gerontology, architecture and/or housing and interior design, were asked to study a description of 68 housing features, selected from architects' listings of recommendations regarding housing designed for occupancy by older persons. Each juror, working independently of the others, was instructed to designate one of the following physiological conditions to which each design feature is most closely related:

1. Lessening of energy reserves
2. Sensitivity to extremes of temperature and climate
3. Reduced acuity of hearing and loss in sensitivity to high pitched sounds, often accompanied by a lessened tolerance of noise.
4. Special problems of ill health and/or disability
5. Reduced ability to see and a diminishing field of vision.
6. Unsureness of gait and sense of balance, slowing down of reaction time and lapses of memory--all conditions contributing to accidents.

In the process of selecting the features to be included in the study, those associated by the jurors with prevention of accidents were subdivided into two categories, making a total of seven areas in which relationship between feature and physiological condition was to

be studied. These areas were defined as:

1. Features related to conservation of energy
2. Features related to temperature and climate control
3. Features related to hearing and noise control
4. Features related to provisions for living with serious illness and/or disability
5. Features related to seeing
6. Features related to prevention of falls
7. Features related to prevention of accidents -- other than falls.

A total of 40 design features were included in the final listing adopted for the study. Of this number, 33 were established by at least six of the seven jurors as being related to one specific physiological condition associated with the aging process; most were unanimous decisions. The remaining seven features were deemed worthy of inclusion on the basis of the frequency with which they are included in recommendations made by architects for buildings designed to be occupied by the elderly.

Acknowledgment is made to the following persons and/or agencies as professional sources from whose writings a list of design features was formulated for this study:

George Kassabaum, AIA, Chairman, Committee on Housing for the Elderly.

H. A. Steinberg, Small Homes Council, University of Illinois.

Noverre Musson, AIA, Columbus, Ohio.

Marie McGuire, Commissioner of Public Housing, Washington, D.C.

W. Russell Parker, Architect, Agricultural Engineering Research Division, Agricultural Research Service.

Walter K. Vivrett, Associate Professor of Architecture and Planning, Institute of Technology, University of Minnesota, Minneapolis, Minnesota.

Public Housing Administration, Housing and Home Finance Agency.

Douglas Fir Plywood Association, sponsor of the "House of Freedom" retirement home.

Method of Determining Health Status

It was not the purpose of this study to undertake a health survey, per se; however because health has a direct bearing on shelter needs of the aging, the investigator decided to obtain evidence regarding the respondents' general state of health.

Beyer and Wahl's Health Status Index was selected as being the most feasible means for obtaining data by which the respondents' physical health could be assessed. This index, which follows the general character of that formulated by Kutner, et al., in a study of five hundred aging persons in New York, employs four indices of health and its affect on daily life. Each item in the index is assigned a numerical score; the total score determines the respondent's health status.[1]

1. Specific health problems: Each respondent was asked what health or physical problems were bothering her at the time of the interview. No attempt was made to assess the seriousness of various problems mentioned since it was assumed that other questions would take these factors into consideration.

2. Confinement to bed or chair: This question obtained a measure of the length of time the respondent had been confined to her bed, or to a chair or wheelchair, during the year immediately preceding the date of the interview. A total was requested for all illnesses and/or

---

[1]Glenn H. Beyer and Sylvia G. Wahl, The Elderly and Their Housing (New York, 1963), pp. 36-42.

health problems.

3. Amount of help needed with activities: Another method of determining health status as it relates to housing needs is by determining the amount of help required by the older woman in caring for her home. Respondents were asked how their health influenced what they could do from day to day. Four levels were recorded, ranging from "I do everything without help" to "I have help with all activities." The question was confined to care of the house and of the woman herself; yard work was not considered.

4. Activities given up because of health: As another measure for determining the effect of physical health on housing needs, respondents were asked if they had given up any of several activities because of their health. This part of the index was deemed especially important in a study of the elderly since it takes into account general deterioration as well as specific health problems. In addition to four measures used by Beyer: working at a regular job, taking long trips, doing heavy work around the house and going up and down stairs; respondents in this study were asked if they had given up driving a car or leaving the house.

Each respondent was assigned a health rating on the basis of the Health Index Score obtained by the preceding questions. In addition, the woman's own evaluation of her health was recorded. Kutner found a considerable degree of correlation between the elderly person's own judgment as to the state of her health and evaluations based on the health index.

Method of Determining Socioeconomic Status

Several accepted methods for assessing socioeconomic status were reviewed. The "living room" social status scale developed by F. Stuart Chapin in 1928 and revised in 1952 was selected for use on the basis of three factors:

1. It did not necessitate asking questions of a very personal nature;

2. Most of the data on which the respondent's socioeconomic status was approximated could be recorded by observation during the time she was sorting the feature cards; and,

3. This measure of social status bears a closer relationship to housing than did any other index examined.

In this scale, material possessions in the living room as well as the condition of the possessions are the indices used to differentiate between persons or families in terms of socioeconomic status. Status indicated by this scale has been compared with evaluations based on measures of four elements assumed to constitute socioeconomic status: cultural possessions, effective income, material possessions, and participation in group activities of the community. Chapin found that totals of weights assigned to living room equipment bore a close correlation with the combined weights of the four indices and that, therefore, the equipment of the living room could be taken as a fair index of socioeconomic status.[2]

---

[2]Calvin F. Schmid, "Scaling Techniques in Sociological Research," in Pauline V. Young, Scientific Social Surveys and Research (Englewood Cliffs, New Jersey, 1956), p. 345.

Selection of the Sample

Widowed women sixty years of age or older, living alone within the city limits of Stillwater, Oklahoma, constituted the population from which a sample was drawn for this study.

A listing of 350 names was obtained from the most current Stillwater City Directory, which was published in late 1965. Included in this group were women listed as widows who did not have minor children whose addresses were within the city limits of Stillwater. Information regarding each name was recorded on a separate card, and the woman's address plotted on a city map. The city was then divided into fifteen areas for convenience in interviewing and to assure that all sections of Stillwater were represented in the sample.

No attempt was made to obtain a random sample of the population. A method of quota sampling was employed in which fifteen women in each of five age groups were interviewed, making a total of 75 women in the sample. At least one interview was obtained in each of the fifteen areas of the city; the actual number varied from one to eleven, with a median of six interviews per section.

A great majority of the contacts were made by knocking on the woman's door, explaining the study briefly and asking if she was willing to participate in the project. No record was kept of the number of calls made; however, the following information obtained from or about women other than the 75 women interviewed is of interest:

7 pairs of women listed the same address and telephone number, so were automatically excluded;
11 names were omitted because the addresses listed were in predominantly non-white neighborhoods and race was held constant for the study;

10 women refused to cooperate in the study, and 2 others were too ill to participate;
16 women contacted were under 60 years of age, hence too young;
3 women had remarried; and
30 others were not living alone at the time they were contacted by the interviewer;
3 were in nursing homes;
2 were in the hospital; and
4 were deceased.

The ratio of women contacted to women eligible for inclusion in the sample was approximately two to one. Assuming similar proportions would have been found in a total sampling, the investigator estimates that a 25 percent sample was obtained in this study.

Treatment of Data

Age, socioeconomic status and general physical health of the subjects are the independent variables by which all data were analyzed. Socioeconomic status and health status were assigned to respondents on the basis of scoring systems developed by Chapin and Beyer, respectively. These computations were made manually from information gathered during the interview.

Responses for each subject were recorded on IBM Data Cards. Frequencies and percentages for all recorded items were obtained on an electronic high speed computer in the Computing Center at Oklahoma State University.

The responses yielded when the subjects associated each feature with an age level were analyzed according to the subject's age, socioeconomic status and general physical health. The Mann-Whitney U tests for n_2 between 9 and 20 and n_2 larger than 20 were utilized in determining significant differences among responses made by the subjects

when they were classified according to these variables, e.g., the responses made by one age group were compared with the responses made by each other age group; the responses made by each socioeconomic status classification were compared with those made by each other socioeconomic status classification; and the responses made by each health group were compared with those made by each other health group.[3]

The Mann-Whitney U test was also used in determining if there are significant differences in the health status of the various age and socioeconomic classifications.[4]

For those features on which the Mann-Whitney U test revealed a significant difference in the way the various age groups associated the housing feature with a specific age level, frequencies and percentages were also obtained which describe the distribution of responses according to age of the respondent. These frequencies and percentages were obtained by the electronic computer.

To obtain a measure of the correlation of responses made within each age group, each subject's sorting of the forty features was treated as a ranking and Kendall's Coefficient of Concordance: W, test for tied observations was employed.[5] These computations were made manually for each of the five age groups. A Coefficient of Concordance was also calculated for the total sample. For this calculation, the R_is for each age group were ranked from one to forty and the formula for Kendall's Coefficient of Concordance: W, was used to determine the

---

[3] Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York, 1956), pp. 116-127.

[4] Ibid

[5] Ibid., pp. 229-239.

correlation among the five rankings.

The Spearman Rank Correlation Coefficient: r_s, for tied observations and large samples were utilized to determine the correlation between respondents' self-evaluations concerning their health and the ratings assigned to them on the basis of a Physical Health Index score.[6] This calculation was also made manually.

Description of the Sample

The sample, made up of 75 elderly widows who live alone, was selected to include 15 women in each of the five age groups defined for the study. The other two independent variables, general physical health and socioeconomic status, were not controlled; according to these characteristics, therefore, numbers in various groups are not equal. Data showing composition of the sample according to the independent variables are summarized in Table I.

No significant differences in health status were found among the five age groups. Health status, likewise, was not determined to be significantly different among the various socioeconomic classifications. No statistical tests were made for significant differences in socioeconomic status, by age. It may be observed from Table I that all age groups include at least one respondent in each socioeconomic classification, with the exception of the group age 80 and above.

---

[6] Ibid., pp. 202-213.

TABLE I

COMPOSITION OF SAMPLE ACCORDING TO MAJOR VARIABLES

Age	Total Number in Group	*Health Status					**Socioeconomic Status			
		E	G	F	P	VP	U	UM	LM	L
60-64	15	5	9	1			3	3	8	1
65-69	15	3	4	4	4		3	3	5	4
70-74	15	3	7	4		1	1	4	4	6
75-79	15	2	8	3	1	1	2	4	5	4
80 & above	15	2	2	7	2	2	0	2	9	4
		15	30	19	7	4	9	16	31	19

*Health groupings are Excellent, Good, Fair, Poor, Very Poor
**Socioeconomic classes are Upper, Upper Middle, Lower Middle and Lower

The statistical analyses involving health and its relationship to the manner in which respondents view various housing features utilized only one measure of health: the Health Index Score rating. Information presented in Table II was obtained from respondents for the purpose of assigning them a health rating and it is included here for the sole purpose of depicting in greater detail the health characteristics of the elderly women who participated in this study.

A significant correlation was found to exist between respondents' self-evaluations of their health and ratings assigned to them on the basis of their Health Index Score. This correlation is significant at the .001 level. A total of 37.3 percent of all subjects rated themselves at the same level of health assigned to them, 36 percent evaluated their state of health at a higher level than indicated by their index score, and 26.7 percent rated themselves in poorer health than the index score evaluation.

Diabetes and gall bladder and colon ailments are the internal disorders most commonly mentioned by respondents. High blood pressure is the most prevalent circulatory disorder; and spinal conditions or injuries and malfunctioning of limb(s) are the factors causing impairment of mobility. One woman interviewed is partially paralyzed and one uses a walking aid.

Many of the women had never driven a car so the percentage having given up this activity due to bad health is artificially low. The same situation exists in regard to their having for health reasons given up working at a regular job.

Table III presents data summarizing the channels of communication through which respondents keep in touch with the world about them. Such sources of information might well make positive contributions to a subject's knowledge, perceptions and attitudes toward various housing features.

Every women interviewed possessed a radio or television set; 81% had both. Six women had a television set, only; and eight owned a radio, only. Many of the newspapers to which these older women subscribe are weekly papers and a few reported they take only a Sunday paper.

TABLE II

SUMMARY OF RESPONDENTS' PHYSICAL HEALTH CHARACTERISTICS

Health Status		Self-Evaluation	Health Index Score Rating
		Percent	Percent
Excellent		24.0	20.0
Good		36.0	40.0
Fair		36.0	25.3
Poor		2.7	9.3
Very Poor		1.3	5.3
	N=75	100.0	100.0

Health Problems Bothering Respondent at Time of Interview

Number		Percent
None		30.7
One		30.7
Two		21.7
Three		14.7
Four or more		2.7
	N=75	100.0

Health/Physical Problems Voluntarily Identified by Respondents

Problem		Percent
Arthritis or rheumatism	N=75	25.3
Trouble w/internal organs/glands	N=75	19.7
Seeing difficulties	N=75	17.3
Circulatory disorders	N=75	17.3
Heart condition	N=75	12.0
Impairment of mobility	N=75	10.7
Hearing difficulties	N=75	9.3
Nervous disorders	N=75	8.0
Miscellaneous conditions	N=75	6.7

TABLE II (CONTINUED)

Effect of Health on Daily Activities		
Respondent:		Percent
does everything without help		72.0
does most things without help		24.0
has some help with most things		4.0
has help with all activities		0.0
	N=75	100.0

Activities Given up Because of Health		
Activity:		Percent
Working at regular job	N=75	25.3
Taking long trips	N=75	16.0
Doing heavy work around house	N=75	45.3
Climbing stairs	N=75	20.0
Driving a car	N=75	13.3
Leaving the house	N=75	1.3

Confinement to Bed or Chair Within Year Preceding Interview		
Length of Confinement:		Percent
Not at all		69.3
Less than a week		10.7
1-3 weeks		13.3
3 weeks to a month		4.0
More than a month		2.7
	N=75	100.0

TABLE III

MASS MEDIA AND COMMUNICATION CHANNELS AVAILABLE TO RESPONDENTS

Channel		Respondents Reporting Item
Magazines Read Regularly:		Percent
None		12.0
1-2		28.0
3-4		24.0
5 or more		36.0
	N=75	100.0
Newspapers Subscribed to:		
None		14.7
1		58.7
2 or more		26.7
	N=75	100.0
Percentage Who Possessed At Least One of the Following Items:		
Radio	N=75	92.0
Television	N=75	89.3
Telephone	N=75	97.3

CHAPTER IV

INTERPRETATION OF THE DATA

In this chapter are discussed the opinions regarding age levels at which need arises for various housing features that were expressed by 75 elderly widows who live alone. Some conclusions regarding relationships among features associated with the same physiological condition or process are also presented in this chapter; and comparisons are made between features with which respondents are most familiar and those with which they are least familiar.

No relationship was found between age and health or between socioeconomic status and health; differences found, therefore, between age groups and between socioeconomic status groups apparently are not a result of differences in health status among the groups. For many of the features, the opinions expressed by the elderly widows do not differ when the subjects are classified according to the three independent variables--age, general physical health and socioeconomic status. Opinions regarding certain features do, however, appear to be related significantly to one or more of these independent variables.

Opinions Regarding Age Levels at Which Certain Housing Features Become Important

Respondents in the study were asked to determine at what age level, in their opinion, it becomes "very, very important" to the widow who lives alone that she have each of the 40 features in her house. It was

assumed that the women respondents' generalizations concerning "older women" would be indicative of their opinions regarding their own needs.

Opinions differed widely, as evidenced by the fact that responses were recorded at every identified age level for all 40 features. For nearly every feature, there were some who identified it as being a major concern even before the age of 65 and others who said it is "not important at any age." Only four features were not regarded by any of the 75 respondents as being "not important at any age." These four features are:

Easy-to-clean walls
Convenient storage for all items
Extra light for reading or sewing
Slip-resistant floor coverings

In most instances, the same woman did not associate all features with a similar age, although no restrictions were placed on the number of features which might be identified with a given age level. The following illustration is presented to show variations in age levels with which features were associated:

A vented heating system is the feature most often identified by respondents as being important before age 65. A total of 66.7 percent of all women interviewed expressed this opinion, as compared to only 22.0 percent who considered the absence of steps at the entrance to be "very, very important" at this same age level. Almost three times as many subjects associated the absence of steps at the entrance as being "not important at any age" as considered a vented heating system in this classification; and four times as many as similarly rated a vented heating system evaluated this feature as not being important until age 80 and above.

This comparison of age levels with which specific features are associated by the group of elderly widows who participated in the study illustrates extreme differences. A study of data in Appendix A, Table XVIII, however, will show many similar examples of variations in proportion of respondents who associate the different features with the same age level.

Table IV presents a summary of the 40 features, listed by the age level at which a simple majority, i.e., more than 50 percent, of all respondents described the feature as being "very, very important" for the widow living alone. The percentage presented for each feature description is cumulative, e.g., the percentage listed for features at the age level 70-74 includes the proportion of responses identified with the "under 65" and "age 65-69" levels. Nine features were evaluated as being of major concern before the age of 65, sixteen were deemed important at the age level 65-69, eleven at the 70-74 age level and four at the age level 75-79. A majority of all respondents considered each of the features important by the time a woman reaches her late seventies.

The Independent Variables as Factors Related to Expressed Opinions

In a majority of instances, age level with which respondents associate various housing features is related significantly to one or more of the independent variables. No one variable emerged, however, as being a significant factor related to the opinions expressed in regard to as many as one-half of the features. Significant differences appear in relation to 18 of the 40 features when the opinions expressed by the elderly widows were analyzed according to the respondents' socioeconomic status. Health status appears to be related to evaluations of age level

TABLE IV

AGE LEVELS AT WHICH FEATURES ARE REGARDED IMPORTANT
BY A MAJORITY OF RESPONDENTS

Feature Number	*Description of Feature	Total Responses at this Age Level
		Cumulative Percent
	AGE LEVEL: BEFORE 65	N=75 100%
29.	Vented heating system	66.7
33.	Ample number of electric outlets	65.3
22.	Lights inside all closets	64.0
2.	Easily accessible electric outlets	60.0
5.	Convenient storage for all items	57.3
21.	Extra light for reading or sewing	57.3
19.	Extra light at work areas	56.0
26.	Slip-resistant floor coverings	54.7
4.	Easy-to-clean walls	53.3
	AGE LEVEL: 65-69	
3.	Easy-to-clean floors	70.7
30.	"Burn-proof" room heaters	70.6
20.	Light bulbs shielded to prevent glare	65.4
23.	Pull-down luminaires to eliminate climbing	65.3
39.	Hand rails both sides of stairs	65.3
18.	Light colored walls and ceilings	64.0
38.	All rooms on same floor level	64.0
1.	One sit-down work area in kitchen	61.3
8.	Uniform heat distribution throughout house	61.3
6.	Well sealed windows	57.4
27.	Grab bars in bathroom	57.3
11.	Openings to outdoors to admit nature sounds	56.0
24.	Night lights in bedroom/bath area	56.0
32.	Range w/special safety features	53.3
25.	No throw rugs on floor	52.0
31.	Safety catch on all drawers	52.0
	AGE LEVEL: 70-74	
13.	Loudness and pitch control for telephone and/or doorbell	66.7
7.	Draperies for control of drafts	65.3
36.	Telephone by the bed	64.1
9.	Draft-free ventilation system	64.0
35.	Illuminated light switches	62.6
37.	Dressing seat in bathroom	61.4
12.	Noise-free place for sleeping	61.3
10.	Walls which keep out noises	60.0
15.	Bathroom fixtures usable from wheelchair	53.4
28.	No thresholds at any door	53.3

TABLE IV (Continued)

Feature Number	*Description of Feature	Total Responses at this Age Level
	AGE LEVEL: 70-74 (Continued)	
16.	Space around bed on three sides	50.7
	AGE LEVEL: 75-79	
14.	Space in bathroom for wheelchair	73.3
17.	Extra wide halls and doorways	69.4
40.	Switch by bed which controls several lights	65.3
34.	No steps at entrance	64.0

*Abbreviated description used for table. See Appendix B for complete description of features.

at which 11 of the 40 features become "very, very important;" and age emerges as a significant factor for 10 features.

Table V presents a summary of significant differences of opinion among the respondents when they are classified according to the independent variables. For this table, the significant differences which emerge are summarized according to the physiological condition with which the features were identified.

It is interesting to note that health status of the respondents is not related significantly to their expressed opinions regarding groups of features closely associated with health: seeing and serious illness and/or disability. The analysis according to the respondents' ages yielded no differences in opinions regarding features related to serious illness and/or disability, nor does age appear to be related to opinions regarding features associated with conservation of energy. Socioeconomic status is the only variable which emerges as being significantly related to the opinions of elderly widows regarding all six groups of features, as well as those features which were not specifically classified with a physiological condition.

A summary of specific features on which opinions differ according to one or more of the independent variables is presented in Table VI. This table also summarizes the classifications within each independent variable between which significant differences of opinion emerge.

On only two features--"Night lights in bedroom/bath area" and "Illuminated light switches"--did significant differences of opinion appear when respondents were classified according to all three independent variables. Opinions regarding nine features differ significantly according to two variables, and for 15 features only one variable seems

to have a significant relationship to the opinions expressed by the elderly widows.

TABLE V

SUMMARY BY CLASSES OF RELATED FEATURES: SIGNIFICANT DIFFERENCES OF OPINION ACCORDING TO MAJOR VARIABLES

Physiological Condition to which Features are Related	Independent Variables			Number of Features in Group
	Age	Socioeconomic Status	Health	
	N=40	N=40	N=40	
Conservation of Energy	0	2	2	5
Temperature and Climate Control	1	2	1	4
Hearing and Noise Control	1	2	1	4
Serious Illness and/or Disability	0	2	0	4
Seeing	4	3	0	5
Prevention of Falls	1	3	3	6
Accident Prevention-- other than Falls	1	1	1	5
Features not Classified	2	3	3	7
Total number of features on which opinions differed	10	18	11	40

Age of the Respondent

In analyzing the extent to which age of the respondents affects their expressed opinions regarding housing features, the responses relating to each feature which were made by each age group were compared with those of every other age group, making a total of 400 such comparisons. For 25 comparisons significant differences emerge in the opinions expressed by women of different age levels.

As one might expect, the two extremes--the youngest and oldest groups--differ in their opinions more often than do any other age groups. These women differ from one another and from other age groups. In contrast, the middle group, age 70-74, differ in their expressed opinions from women of other ages fewer times than does any other age group.

It is of interest that no significant differences emerge between women in their early sixties and those in their late sixties, or between those in their early seventies and subjects in their late seventies. In 22 of the 25 instances where age of respondents is related to expressed opinions, the differences are between women in their sixties and women in their seventies or their eighties. Women in only one age group--80 and above--differ significantly from women of every other age in their evaluation regarding one or more features.

The 25 differences in expressed opinions which were referred to earlier emerge in relation to ten features. The features on which responses differ and the age levels between which differences occur are identified in Table VI.

The statistical test applied to the data reveals difference in opinion only, with no indication regarding direction of difference. A summary of responses for each of these features, by age of the subjects, which might yield insights concerning the direction in which opinions differ among age groups, is included in Appendix A, Table XIX.

In every age comparison for which the Mann-Whitney U test indicated significant differences, more women at the younger than at the older of the two age levels associated features with the youngest age level (before 65). In not one instance did more women in the older of two age groups identify the feature with the youngest age level. The

TABLE VI

SIGNIFICANT DIFFERENCES OF OPINION REGARDING AGE LEVELS AT WHICH CERTAIN HOUSING FEATURES BECOME IMPORTANT, ACCORDING TO THREE INDEPENDENT VARIABLES

Feature Number	*Description of Feature	Significant Differences According to Major Variables		
		Age	Socioeconomic Status	Health
2.	Easily accessible electric outlets		Upper/Lower Middle Upper/Lower U. Middle/L. Middle Upper Middle/Lower	
3.	Easy-to-clean floors			Excellent/Good Excellent/Fair
4.	Easy-to-clean walls		Upper/Lower Middle	Good/Fair
6.	Well sealed windows		Upper/Lower Middle	Excellent/Poor Good/Poor Fair/Poor
7.	Draperies for control of drafts	Before 65/70-74 65-69/70-74 65-69/80 & above 75-79/80 & above		
8.	Uniform heat throughout house		Upper/Lower Middle Upper/Lower U. Middle/L. Middle Upper Middle/Lower	
10.	Walls which keep out noises		U. Middle/L. Middle	Excellent/Poor Good/Poor Good/Very Poor Fair/Poor

TABLE VI (Continued)

Feature Number	*Description of Feature	Significant Differences According to Major Variables		
		Age	Socioeconomic Status	Health
13.	Loudness and pitch control for telephone and/or doorbell	Before 65/80 & above	Upper/Lower Middle U. Middle/L. Middle Upper Middle/Lower	
15.	Bathroom fixtures usable from wheelchair		U. Middle/L. Middle	
16.	Space around the bed on three sides		U. Middle/L. Middle	
18.	Light colored walls and ceilings	Before 65/80 & above 65-69/80 & above 70-74/80 & above		
19.	Extra light at work areas	Before 65/75-79 65-69/75-79 65-69/80 & above	U. Middle/L. Middle	
21.	Extra light for reading or sewing	Before 65/70-74 Before 65/75-79 Before 65/80 & above 65-69/75-79	Upper/Lower Middle	
22.	Lights inside all closets	Before 65/80 & above	Lower Middle/Lower	
23.	Pull-down luminaires to eliminate climbing		U. Middle/L. Middle	

TABLE VI (Continued)

Feature Number	*Description of Feature	Significant Differences According to Major Variables		
		Age	Socioeconomic Status	Health
24.	Night lights in bedroom/bath area	Before 65/ 80 & above 65-69/80 & above	Upper/Lower Lower Middle/Lower	Excellent/Fair
25.	No throw rugs on floor		Lower Middle/Lower	
26.	Slip-resistant floor coverings			Good/Fair
28.	No thresholds at any door			Good/Fair
29.	Vented heating system	Before 65/80 & above		
30.	"Burn-proof" room heaters		U. Middle/L. Middle	Good/Poor
35.	Illuminated light switches	Before 65/ 80 & above 65-69/80 & above	Upper/Lower Middle	Good/Poor
36.	Telephone by the bed	Before 65/ 80 & above 65-69/70-74 65-69/80 & above 75-79/80 & above	Upper/Lower Middle U. Middle/L. Middle	
37.	Dressing seat in bathroom			Good/Fair
38.	All rooms on same floor level			Good/Fair

TABLE VI (Continued)

Feature Number	*Description of Feature	Significant Differences According to Major Variables		
		Age	Socioeconomic Status	Health
40.	Switch by bed which controls several lights		Lower Middle/Lower	

*Abbreviated description used for table. See Appendix B for complete description of features.

most common pattern which emerged in the comparisons of the responses made by the various age groups is that the younger women associated the feature with the first two age levels more frequently than did the older women. In several instances these relative positions reversed at the age level 65-69 rather than at age 70-74 or age level 75-79. In every case where this pattern occurred, the younger of the two groups were women in their sixties, most of whom had associated the feature with the age level under 65.

TABLE VII

NUMBER OF SIGNIFICANT DIFFERENCES ACCORDING TO AGE OF RESPONDENTS

Age Comparisons	*Number of Significant Differences	Number of Features on which Responses were Compared
1. 60-64/65-69	0	40
2. 60-64/70-74	2	40
3. 60-64/75-79	2	40
4. 60-64/80 & Above	8	40
5. 65-69/70-74	2	40
6. 65-69/75-79	2	40
7. 65-69/80 & Above	6	40
8. 70-74/75-79	0	40
9. 70-74/80 & Above	1	40
10. 75-79/80 & Above	2	40

*Differences significant at the .05 level.

The majority of "not important at any age" responses regarding the ten features on which responses differ according to age of the

respondent were in every case made by women past the age of 70. "Not important at any age" responses were recorded for nine of the ten features, and in seven instances a majority of such responses were made by women past 75.

The significant differences in the opinions of elderly widows who participated in this study have thus far pertained to the manner in which different age groups associated various features with an age level. The Mann-Whitney U test which revealed these differences gives no indication of the degree to which the opinions of women within each age group are similar.

In order to gain some insights into this aspect of the variable, each age group was considered separately and the responses of every subject within each age group were assumed to constitute a ranking of features. After ties were resolved, the coefficient of concordance test was used to determine correlation of responses, i.e., of the relative position in which subjects within each age grouping ranked each feature. Table VIII presents the findings of this test. Had there occurred perfect agreement among respondents with regard to ranking of features, the Coefficient of Concordance: W, would have been 1.0. The closer the actual W value is to 1.0, the greater is the correlation among opinions of respondents of the same age level.

The investigator concludes that agreement among the 15 subjects in each age group is higher than it would be by chance. Siegel indicates that a significant value of W may be interpreted as meaning that respondents are applying essentially the same standard in ranking the 40 features. "Often," he states, "their pooled ordering may serve as a 'standard,' especially when there is no relevant external criterion for

ordering the subjects."[1]

When rank orders were obtained for each of the age levels, and these five rank orderings of features were analyzed in the same manner as were the 15 orderings of relative importance within each age group, a much higher W value was obtained (See Table VIII). This finding appears to suggest that there is a greater degree of correlation among the average rankings determined for each age group than exists within any age group when every respondent's opinions are evaluated. This procedure comparing average rankings for various age groups has the effect of minimizing extremes of opinion within the group. It might be expected, therefore, that comparisons among averages would be more closely correlated than would a similar comparison which considers all cases.

TABLE VIII

CORRELATIONS AMONG RANKINGS OF FEATURES WITHIN AGE GROUPS

Age Group	W: Coefficient of Concordance	Level at Which W Value is Significant
60-64	.334	.001
65-69	.222	.001
70-74	.191	.001
75-79	.100	.025
80 and above	.151	.001
*All Age Groups	.719	.001

*This value was obtained by rank ordering the features by age group and analyzing the five rankings for correlation

[1]Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York, 1956), p. 237.

Socioeconomic Status:

Responses made by women in each socioeconomic status classification were compared with those made by subjects in every other socioeconomic status grouping to determine the extent to which this variable is related to their expressed opinions regarding 40 housing features. Comparisons were made for all features, thus making a total of 240 comparisons. For 28 comparisons there appear to be significant differences when women are classified according to socioeconomic status. The age groupings between which the differences emerge are summarized in Table IX.

Women in the lower-middle socioeconomic classification differ significantly in their responses from some other group a total of 22 times; a majority of these differences were in comparison with women at a higher socioeconomic level than their own. Women in the upper and upper-middle classes did not appear to differ significantly in their opinions on any feature. Differences were recorded between lower-middle and lower classes and all other groups in three or more instances.

It is interesting to note that the two divisions of "middle-class" expressed differing opinions in a larger number of instances than did any other two groups.

The summary presented in Table V shows socioeconomic status to be related to at least one of the features associated with each of the physiological conditions or processes selected for scrutiny in this study. The 18 specific features on which these significant differences of opinion emerge are listed in Table VI.

General Physical Health

In the same manner as previously described for the other two

independent variables, for every possible combination of two health groups comparisons were made between the responses. A total of 400 such comparisons were made, and a summary is presented in Table X of the 17 instances in which the elderly women's opinions differ significantly when they are classified according to health status.

TABLE IX

NUMBER OF SIGNIFICANT DIFFERENCES ACCORDING TO SOCIOECONOMIC STATUS OF RESPONDENT

Comparison Made	Number of Significant Differences	Number of Features on Which Responses Were Compared
1. Upper/Upper Middle	0	40
2. Upper/Lower Middle	8	40
3. Upper/Lower	3	40
4. Upper Middle/Lower Middle	10	40
5. Upper Middle/Lower	3	40
6. Lower Middle/Lower	4	40

*Differences significant at the .05 level.

These differences of opinion emerge in relation to 11 of the 40 features, as described in Table VI. For a summary of these features on which differing opinions were expressed, according to the physiological condition with which the features are associated, see Table V.

The pattern of responses when subjects were classified according to health is atypical in that the two extremes--the "excellent" and the "very poor" groups--did not differ significantly in their expressed opinions. Neither did women in these two health classifications differ often with respondents in any other groups; in only one instance did

the "very poor" grouping profess opinions significantly different from those of any other group and only five such differences emerge when the "excellent" health group is compared with other groups.

Women in the three poorest health groups differ significantly from one another in only two instances--both between the "fair" and the "poor" classifications. In all other cases where differences emerge the comparisons were between one of these three poorest health groups and either the "excellent" or the "good" group.

TABLE X

NUMBER OF SIGNIFICANT DIFFERENCES ACCORDING TO HEALTH STATUS OF RESPONDENTS

Health Groups Compared	Number of Significant Differences	Number of Features on Which Responses Were Compared
1. Excellent/Good	1	40
2. Excellent/Fair	2	50
3. Excellent/Poor	2	40
4. Excellent/Very Poor	0	40
5. Good/Fair	5	40
6. Good/Poor	4	40
7. Good/Very Poor	1	40
8. Fair/Poor	2	40
9. Fair/Very Poor	0	40
10. Poor/Very Poor	0	40

*Differences significant at the .05 level.

Respondents' Opinions As Indices Regarding Certain Physiological Conditions

The investigator believes that by studying expressed opinions regarding features related to various physiological conditions or processes insights can be obtained regarding the relative importance attached by elderly widows to these various physiological conditions or processes. An average of the percentages of respondents who associated features related to the same physiological condition or need with the same age level was obtained to facilitate making comparisons among groups of related features.

Table XI presents these findings as cumulative average percentages of respondents who associated groups of features with each age level. It is assumed that a feature identified by a woman with one age level would also be considered important by this person at all older age levels; the percentage given, therefore, includes those who identified the feature with all younger age levels. For a presentation of this same data with percentages listed by the age level with which they were associated by respondents, see Appendix A, Table XVIII.

Over 50 percent of the women who participated in this study indicated by their sorting of the cards that features which facilitate seeing and features related to conservation of energy and to prevention of accidents--other than falls, are "very, very important" prior to their reaching the age of 65. In contrast to their concern regarding these features, at this same age level only 20 percent of the respondents indicated that features associated with serious illness and/or disability are a major concern.

At every age level past 65 years, features related to conservation

of energy are considered "very, very important" by the largest proportion of respondents. When the cumulative averages of percentages are ranked, features associated with seeing are consistently second until the age level 80 and above, when they drop to third place. Following a similar pattern, features related to prevention of accident other than falls are consistently in third place until age level 80 and above, when they drop to fifth ranking. It is only at this advanced age that features related to prevention of falls emerge as a major concern for a larger cumulative percentage of respondents than the cumulative proportion who consider features associated with prevention of accidents--other than falls, "very, very important" at age level 80 and above.

TABLE XI

AGE LEVELS BY WHICH CLASSES OF RELATED FEATURES ARE CONSIDERED BY RESPONDENTS AS IMPORTANT (CUMULATIVE)

Groups of Features	Under 65	65-69	70-75	75-79	80 & Above
Features Related to:	Cumulative Percent N=75 100%				
Conservation of Energy	51.7	72.0	83.5	90.4	97.6
Temperature and Climate Control	37.7	51.7	68.4	79.5	87.8
Hearing and Noise Control	30.3	46.3	65.0	77.3	88.0
Serious Illness and/or Disability	20.0	34.0	50.0	73.0	95.3
Seeing	53.3	71.4	81.0	87.9	95.1
Prevention of Falls	37.8	56.7	73.1	82.7	94.0
Prevention of Accidents--Other than Falls	51.7	66.9	76.2	83.9	91.9

It is of interest that features related to serious illness and/or disability rank second at the age level 80 and above, but are in last position at every other age level. This is especially meaningful in light of the fact that percentages listed under the heading "age 80 and above" represent the total percentage of respondents who deemed the features "important to me now" or as features "I expect to ever become important." Women often appeared to be saying, as they evaluated each of these features: "I know this may be important someday, but not for several years." Even women in the age group 80 and above often expressed this opinion as they placed cards in the age grouping which embraced their own age. Their placing a feature with the age range 80 and above was not always an indication by this oldest age group that they consider the features to be important to them "now." Had they had an option of placing features with age ranges 85-89, 90-94, 95-100, etc., some features probably would have been associated with one of these older age ranges.

The cumulative percentage of respondents who consider a given feature "very, very important" by age 80 and above is assumed to represent the opinions of the older women participating in this study in regard to whether or not the feature ever becomes essential for elderly widows who live alone.

This information can easily be determined for each feature by adding together percentages listed under the five age levels, including the "80 and above" classification. (See Appendix A, Table XVIII.)

Averages of the cumulative percentages at age level 80 and above, as summarized in Table XI, may similarly be assumed to constitute a ranking of physiological conditions or processes associated with aging

as they generate needs for housing features. The investigator recognizes that fewer than 10 percentage points separate the first- and last-place groupings of features; in spite of this narrow span of difference, however, it is believed that the ranking presents a general viewpoint held by the 75 participants in the study regarding kinds of needs "ever important" to elderly women who live alone. This ranking, in descending order of importance, includes features related to:

Conservation of energy
Serious illness and/or disability
Seeing
Prevention of falls
Prevention of accidents--other than falls
Hearing and noise control
Temperature and climate control

When averages of cumulative percentages are used in making comparisons, at the age levels from 65 to 79 there is perfect agreement among respondents as to the relative importance associated with groups of features. Since most of the responses at the age level 80 and above represent statements of anticipated need rather than current need, this ranking perhaps depicts more accurately the subjects' evaluation of their own needs "right now." In the three age levels encompassed in this age span, rankings were as follows:

Conservation of energy
Seeing
Prevention of accidents--other than falls
Prevention of falls
Temperature and climate control
Hearing and noise control
Serious illness and/or disability

As a preliminary step in the interviews respondents were asked this question: "If you could make just one change in your own home to make it a safer or a more comfortable and convenient place for you to live, what change would you make?" Later the responses were classified

according to the seven groups of related features with which the study is concerned. Table XII is a summary of the responses of those elderly women who identified a change they would like to make in their own homes. It is of interest that over 20 percent of the women interviewed could think of no such change.

TABLE XII

CHANGES SUBJECTS WOULD LIKE TO MAKE IN THEIR OWN HOUSES

Classification of Features	Percent of Subjects Identifying Need
	N=57 100%
Prevention of falls	37.3
Conservation of energy	25.4
Serious illness and/or disability	10.2
Temperature and climate control	10.2
Seeing	13.4
Accident prevention--other than falls	1.7
Hearing and noise control	0.0
Desired changes not elsewhere classified	11.9

Of the seven responses included in the category "desired changes not elsewhere classified," three related to maintenance of recognized healthful housing standards, e.g., "a new roof;" and the remaining four were features included in the 40 listed for inclusion in the study, but were among those not definitely associated with any one physiological condition, e.g., "a telephone by the bed."

It is interesting that most of the changes listed which relate to temperature and climate control were expressed as a desire for air

conditioning, especially since this is a feature which some planners do not feel is important to older people.

It was hypothesized that a majority of respondents would consider all features related to the same physiological condition as becoming important at similar age levels. Similar in this case was defined as "within a ten year age span."

In six of the seven classes of features with which a relationship has been established between features and recognized physiological conditions associated with the aging process, the subjects' responses support this hypothesis. In the feature-condition relationship regarding "prevention of falls," five of six features were placed in the 65-74 age span, with one feature, "slip-resistant floor covering," being deemed important before age 65. This class of features is the only one which contains as many as six features.

The features which had not been identified with a specific type of physiological condition were associated with a wider age span than were any of the seven groups of features listed in Table XIII.

Table XIII is a summary of the age span encompassed in the responses given by a majority of elderly widows who participated in the study.

Respondents' Familiarity with Certain Housing Features

Respondents identified by their responses on the second card-sorting procedure one of three levels of familiarity for each feature. "I have this feature in my house" indicated the highest degree of familiarity. Successively lesser degrees of familiarity are represented in the statements: "I know about this feature but do not have it

in my house" and "I have not heard about this feature before." Table XIV presents a summary of the 40 features, with the percentage of respondents who admitted to each of the three levels of familiarity.

TABLE XIII

AGE LEVELS BY WHICH A MAJORITY OF RESPONDENTS REGARD AS IMPORTANT HOUSING FEATURES CLASSIFIED ACCORDING TO PHYSIOLOGICAL CONDITION

Physiological Condition to Which Features are Related	Age Span Encompassed in Responses of a Majority of Subjects	Number of Features in Group
Conservation of Energy	Before 65-69	5
Seeing	Before 65-69	5
Prevention of Accidents other than Falls	Before 65-69	5
Temperature and Climate Control	65-74	4
Hearing and Noise Control	65-74	4
Prevention of Falls	*65-74	6
Serious Illness and/or Disability	70-79	4

*Five of six features so rated.

It was hypothesized that features with which respondents are most familiar would be considered "very, very important" at younger age levels by a majority of respondents than would those features with which the subjects are least familiar.

Fifteen features were identified by a majority of respondents as being items which they had in their own houses. Table XV is a summary of these features, in descending order of frequency with which they were named as features presently existing in the respondents' homes. For each of these features the percentage of all respondents who

TABLE XIV

RESPONDENTS' FAMILIARITY WITH HOUSING FEATURES

Feature Number	*Description of Feature	Has in Her House	Knows About	Has Not Heard About
		Percent	N=75	100%
1.	One sit-down work area in kitchen	57.3	40.0	2.7
2.	Easily accessible electric outlets	65.3	33.3	1.3
3.	Easy-to-clean floors	78.7	20.0	1.3
4.	Easy-to-clean walls	65.3	34.7	0.0
5.	Convenient storage for all items	61.3	38.7	0.0
6.	Well sealed windows	46.7	50.7	2.7
7.	Draperies for control of drafts	41.3	57.3	1.3
8.	Uniform heat distribution throughout house	40.0	57.3	2.7
9.	Draft-free ventilation system	25.3	65.3	9.3
10.	Walls which keep out noises	38.7	52.0	9.3
11.	Openings to outdoors to admit nature sounds	72.0	22.7	5.3
12.	Noise-free place for sleeping	60.0	34.7	5.3
13.	Loudness and pitch control for telephone and/or doorbell	37.3	46.7	16.0
14.	Space in bathroom for wheelchair	29.3	65.3	5.3
15.	Bathroom fixtures usable from wheelchair	12.0	76.0	12.0
16.	Space around bed on three sides	52.0	41.3	6.7
17.	Extra wide halls and doorways	25.3	70.7	4.0
18.	Light colored walls and ceilings	77.3	22.7	0.0
19.	Extra light at work areas	68.0	29.3	2.7
20.	Light bulbs shielded to prevent glare	48.0	46.7	5.3
21.	Extra light for reading or sewing	65.3	33.3	1.3
22.	Lights inside all closets	52.0	46.7	1.3
23.	Pull-down luminaries to eliminate climbing	8.0	76.0	16.0
24.	Night lights in bedroom/bath area	48.0	52.0	0.0
25.	No throw rugs on floor	41.3	57.3	1.3
26.	Slip-resistant floor coverings	40.0	57.3	2.7
27.	Grab bars in bathroom	12.0	81.3	6.7
28.	No thresholds at any door	32.0	57.3	10.7
29.	Vented heating system	65.3	28.0	6.7
30.	"Burn-proof" room heaters	50.7	48.0	1.3
31.	Safety catch on all drawers	16.0	61.3	22.7
32.	Range w/special safety features	34.7	41.3	24.0
33.	Ample number of electrical outlets	45.3	54.7	0.0
34.	No steps at entrance	12.0	77.3	10.7

TABLE XIV (Continued)

Feature Number	*Description of Feature	Has in Her House	Knows About	Has Not Heard About
35.	Illuminated light switches	4.0	80.0	16.0
36.	Telephone by the bed	34.7	65.3	0.0
37.	Dressing seat in bathroom	17.3	77.3	5.3
38.	All rooms on same floor level	70.7	29.3	0.0
39.	Hand rails both sides of stairs	16.0	80.0	4.0
40.	Switch by bed which controls several lights	8.0	60.0	32.0

*Abbreviated description used for table. See Appendix B for complete description of features.

associated the feature with each age level is summarized. These data are presented as cumulative percentages; i.e., the percent listed at each age level includes that proportion of respondents who identified the feature with an earlier age.

Table XVI presents a similar summary regarding the 11 features with which respondents indicated the lowest level of familiarity. Features included in this table are listed in descending order of frequency with which the subjects indicated they had not heard about the feature before, e.g., "a switch by the bed which turns on several lights throughout the house" is the feature which the largest proportion of respondents admitted they did not know about.

Of the 15 features a majority of the elderly women interviewed have in their houses, a majority of respondents consider 31 to be important by the age level 65-69. The remaining two features are regarded as a major concern by age level 70-74. In contrast to this, features to which the response was most frequently given "I have not heard about this before" were not regarded as being "very, very important" by a majority of the respondents until a later age. Of the 11 features on this "most unfamiliar" list, nine are considered important by a majority of the women interviewed by the age level 70-74. The remaining two housing features did not satisfy the 50 percent sample majority until age level 75-79.

A listing of the 12 features most frequently identified as "not important at any age" is of interest primarily because it includes many of the same features with which respondents were found to be least familiar. Table XVII describes those housing features recommended for elderly people which subjects in the study identified as those of

TABLE XV

SUMMARY OF FEATURES MOST OFTEN FOUND IN RESPONDENTS' HOMES, AND AGE BY WHICH THE FEATURE IS REGARDED AS IMPORTANT

Feature Number	*Description of Feature	Percent Who Have the Feature	Under 65	65-69	70-74	75-79	80 & Above
			**Cumulative Percent N=75 100%				
3.	Easy-to-clean floors	78.7	48.0	70.7	84.0	92.0	98.7
18.	Light colored walls and ceilings	77.3	42.7	64.0	74.7	84.0	94.7
11.	Openings to outdoors to admit nature sounds	72.0	38.7	56.0	72.0	78.7	89.4
38.	All rooms on same floor level	70.7	41.3	64.0	81.3	89.3	96.0
19.	Extra light at work areas	68.0	56.0	77.3	85.3	90.6	97.3
2.	Easily accessible electric outlets	65.3	60.0	77.3	82.6	87.9	98.6
4.	Easy-to-clean walls	65.3	53.3	69.0	82.3	93.0	100.0
21.	Extra light for reading or sewing	65.3	57.3	77.3	84.0	90.7	100.0
29.	Vented heating system	65.3	66.7	78.7	82.7	89.4	94.7
5.	Convenient storage for all items	61.3	57.3	81.3	88.0	94.7	100.0
12.	Noise-free place for sleeping	60.0	26.7	40.0	61.3	74.6	90.6
1.	One sit-down work area in kitchen	57.3	40.0	61.3	80.0	84.0	90.7

TABLE XV (Continued)

Feature Number	*Description of Feature	Percent Who Have the Feature	Under 65	65-69	70-74	75-79	80 & Above
16.	Space around bed on three sides	52.0	24.0	38.7	50.7	76.0	98.7
22.	Lights inside all closets	52.0	64.0	73.3	82.6	91.9	95.9
30.	"Burn-proof" room heaters	50.7	49.3	70.6	79.9	85.2	87.2

*Abbreviated description used for table. See Appendix B for complete description of features.

**Percentages given in this table were derived by adding to each age classification the responses for all previous age groupings, e.g., the percentage given for age 75-79 includes the responses for under 65, 65-69 and 70-74.

TABLE XVI

SUMMARY OF FEATURES WITH WHICH RESPONDENTS ARE LEAST FAMILIAR, AND AGE BY WHICH THE FEATURE IS REGARDED AS IMPORTANT

Feature Number	*Description of Feature	Percent Unfamiliar with Feature	Under 65	65-69	70-74	75-79	80 & Above
			Cumulative Percent N = 75 100%				
40.	Switch by bed which controls several lights	32.0**	17.3	34.6	49.3	65.3	82.6
32.	Range w/special safety features	24.0**	40.0	53.3	69.3	80.0	86.7
31.	Safety catch on all drawers	22.7**	37.3	52.0	62.7	76.0	82.7
35.	Illuminated light switches	16.0**	29.3	42.6	62.6	78.6	87.9
23.	Pull-down luminaries to eliminate climbing	16.0	37.3	65.0	82.3	91.6	96.9
13.	Loudness and pitch control for telephone and/or doorbell	16.0**	24.0	44.0	66.7	74.7	88.0
15.	Bathroom fixtures usable from wheelchair	12.0	18.7	34.7	53.4	73.4	92.1
28.	No thresholds at any door	10.7**	28.0	41.3	53.3	65.3	84.0
34.	No steps at entrance	10.7**	14.7	32.0	48.0	64.0	85.3

TABLE XVI (Continued)

Feature Number	*Description of Feature	Percent Unfamiliar with Feature	Under 65	65-69	70-74	75-79	80 & Above
9.	Draft-free ventilation system	9.3**	36.0	46.7	64.0	73.3	82.6
10.	Walls which keep out noises	9.3**	32.0	45.3	60.0	73.3	84.0

*Abbreviated description used for table. See Appendix B for complete description of features.

**Features which appear on list of 12 features most often identified as "not important at any age."

least importance to them.

TABLE XVII

FEATURES MOST FREQUENTLY IDENTIFIED AS
"NOT IMPORTANT AT ANY AGE"

Number	*Description of Feature	"Not Important" Ratings
		Percent
** 9.	Draft-free ventilation system	17.3
** 31.	Safety catch on all drawers	17.3
** 40.	Switch by bed which controls several lights	17.3
7.	Draperies for control of drafts	16.0
** 10.	Walls which keep out noises	16.0
** 28.	No thresholds at any door	16.0
** 34.	No steps at entrance	14.7
** 32.	Range w/special safety features	13.3
37.	Dressing seat in bathroom	13.3
** 13.	Loudness and pitch control for telephone and/or doorbell	12.0
20.	Light bulbs shielded to prevent glare	12.0
** 35.	Illuminated light switches	12.0

N=75
*Abbreviated description used for table. See Appendix B for complete description of features.
**Features listed in summary of features with which respondents are least familiar.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study was conducted to discover: 1) the age at which elderly widows who live alone express a need for certain housing features; 2) the degree to which expressed needs reflect an awareness of certain physiological needs; and 3) if certain factors are related to women's expressed opinions regarding the age at which a need arises for various housing features. It is based on the assumption that from such an examination guidelines can be developed pertaining to needs for housing features experienced by elderly widows who live alone.

It was hypothesized that opinions expressed by elderly widows who live alone regarding age levels at which need arises for certain selected housing features are related to their own age, socioeconomic status and general physical health.

Two sub-hypotheses were considered in this study: 1) Features related to the same physiological condition or process will be identified with similar age levels by a majority of respondents. 2) Features with which respondents are most familiar will be regarded as "very, very important" at earlier age levels by a majority of the elderly women as will the features with which they are least familiar.

Widows over the age of 60 living within the City of Stillwater, Oklahoma, were chosen as the population. Names of widowed women were

obtained from the latest Stillwater City Directory, and 75 of these women were included in the sample.

An interview schedule was devised for obtaining data pertaining to the three independent variables--age, socioeconomic status, and health. A card-sorting technique was developed for obtaining data related to the dependent variables--expressed opinions regarding 40 housing features--and to the descriptive variable--familiarity with the features. Data were collected from the elderly widows during individual interviews conducted in their homes.

The data were processed by the staff of the Computing Center at Oklahoma State University. The Mann-Whitney U, Kendall Coefficient of Concordance: W, and Spearman Rank Correlation Coefficient: r_s, tests for large samples and tied ranks were utilized in determining significant relationships among and between variables.

Conclusions

From the analysis of data, the following conclusions relating to the hypotheses are drawn:

1. Significant differences in the opinions expressed by elderly widows emerge with regard to 28 of the 40 housing features when respondents are classified according to the independent variables, age, socioeconomic status and health. The hypothesis--that opinions expressed by elderly widows who live alone regarding age levels at which need arises for certain selected housing features are related to their own age, socioeconomic status and general physical health--appears to be credible.

2. It cannot be unconditionally stated, however, that any one of the three independent variables alone is a significant factor related to

expressed opinions regarding the housing features included in this study, in light of the fact that none emerge as being related to expressed opinions where a simple majority of features are concerned, as explained below:

a. Age of the respondent appears to bear a significant relationship to expressed opinions where only ten of the housing features are concerned. In every instance where significant differences of opinion emerge between two age groups the younger group of women consistently regard the features as becoming important at younger age levels than do women in the older of the two groups. The correlation within each age group among women's relative evaluations regarding age levels at which housing features become important is greater than would occur by chance. Although this correlation is significant within all age levels, the opinions expressed by the younger groups of women appear to be more closely correlated than are those opinions expressed by the oldest groups. When averages for each age group are obtained, a higher level of correlation exists among all age groups than occurs within any one single group.

b. Socioeconomic status is found to be significantly related to elderly women's expressed opinions regarding the age level at which a need arises for certain housing features more often than in any other variable. These differences emerge in relation to 18 of the 40 features.

c. Health status of the respondent is found to be significantly related to expressed opinions regarding only 11 of the 40 housing features.

3. A 50 percent simple majority of subjects regard features

related to the same physiological condition as becoming "very, very important" within a ten year age span. In this manner, features related to conservation of energy, seeing and prevention of accidents--other than falls, assume major importance to these women during the years between age 60 and age 69. Features related to temperature and climate control, hearing and noise control, and prevention of falls, become very important in the ten year span between the ages of 65 and 74. Housing features designed to alleviate problems engendered by serious illness and/or disability do not emerge as a major concern to respondents until ages 70-79. In light of these findings, the first sub-hypothesis appears to be a valid one.

4. Of 15 features which more than 50 percent of respondents reported having in their houses, a simple majority of subjects consider 13 to be "very, very important" by the age level 65-69. In contrast, nine of the 11 features most often unknown to respondents are not deemed of major importance to a majority of the elderly women interviewed until the age level 70-74. The second sub-hypothesis--that features with which respondents are most familiar will be regarded as "very, very important" at earlier age levels by a majority of the elderly women interviewed than will the features with which they are least familiar--also appears to be plausible.

Recommendations

The writer submits the following recommendations relative to further investigations into elderly people's needs and wants for housing:

1. That a similar study be conducted, substituting different housing features within each classification pertaining to a specific

physiological condition, to discover if patterns of response support the assumption that responses relative to classes of features actually do reflect needs which stem from certain physiological conditions associated with aging.

2. That more extensive information be obtained regarding respondents' physiological conditions and that categories defined for certain physiological conditions be investigated as independent variables to discover whether or not an individual's own condition is related to his perception regarding a personal need for features related to the condition.

3. That length of widowhood be either held constant or investigated as an independent variable.

4. That all factors on which an individual is asked to voice opinions be stated in a positive manner. Negative statements, e.g., "no throw rugs on floor," sometimes caused confusion among respondents.

A SELECTED BIBLIOGRAPHY

"The Aged, A Special Housing Dilemma." Public Health Reports, LXXVII (December, 1962), 1048-1054.

Bader, Iva M., and Adeline M. Hoffman. "Research in Aging." Journal of Home Economics, LVIII (January, 1966), 9-13.

Beyer, Glenn H. Economic Aspects of Housing for the Aged. Research Report No. 4, Center for Housing and Environmental Studies. Ithaca, New York: Cornell University, n.d.

_____, and Sylvia G. Wahl. The Elderly and Their Housing. Bulletin No. 989. Ithaca: New York State College of Home Economics, 1963.

_____, and Margaret Woods. Living and Activity Patterns of the Aged. Ithaca: New York State College of Home Economics, n.d.

Breen, Leonard Z. "Some Problems of Research in the Field of Aging." Sociology and Social Research, XLI (July, August, 1957), 412-416.

Chapin, F. Stuart, "A Quantitative Scale for Rating the Home and Social Environment of Middle Class Families in an Urban Community: A First Approximation to the Measurement of Socioeconomic Status." The Journal of Educational Psychology, XIX (February, 1928), 99-111.

Committee on Housing, White House Conference on Aging. Background Paper on Housing. Washington, D.C.: U.S. Government Printing Office, 1960.

Cowles, May L., and Clara G. Sweeney. Meeting Housing Needs of Older People in Rural Areas. Circular No. 545. Madison: University of Wisconsin, 1957.

Donahue, Wilma. "Where and How Older People Wish to Live." Housing the Aging: Ann Arbor: University of Michigan Press, 1954, pp. 21-36.

_____, and E. Everett Ashley. "Housing and the Social Health of Older People in the United States." Aging and Social Health in the United States and Europe, Ed. Clark Tibbitts, Ann Arbor: University of Michigan Press, 1959, pp. 141-155.

Good, Carter V., and Douglas E. Scates. "Questionnaire and Interview Techniques." Methods of Research--Education, Psychological, and

Sociological. New York: Appleton-Century-Crofts, Inc., 1954, pp. 604-645.

Griffin, John J. "The Sheltering of the Aged: A Thorough Analysis of the Living Arrangements of 1900 Old Age Assistance Recipients." Journal of Gerontology, V (January, 1950), 30-43.

House of Freedom: The Compact Home for Active Retirement. Tacoma, Washington: Douglas Fir Plywood Association, 1960.

Howard, Mildred, and W. Russell Parker. Housing for the Elderly: A Report of Recommendations Made to the National Capital Housing Authority for Proposed Apartment Units for Low-Income Elderly Occupants. No. ARS 63-1. Washington, D.C.: U.S. Department of Agriculture, 1963.

Kassabaum, George E. "Housing for the Elderly--Technical Standards of Design." American Institute of Architects Journal, XXXVIII (September, 1962), 61-65.

Kutner, Bernard, et al. Five Hundred Over Sixty, A Community Survey on Aging. New York: Russell Sage Foundation, 1956.

Lake, Wilfred S. "Housing Preferences and Social Patterns." Social and Psychological Aspects of Aging. Ed. Clark Tibbitts and Wilma Donahue. New York: Columbia University Press, 1962, pp. 341-347.

McGuire, Carson, and George D. White. The Measurement of Social Status. Research Paper in Human Development No. 3 (revised). Austin: Department of Educational Psychology, The University of Texas, 1955.

McGuire, Marie. Housing the Elderly. San Antonio: San Antonio Housing Authority, 1957.

Montgomery, James E. Social Characteristics of the Aged in a Small Pennsylvania Community. College of Home Economics Research Publication 233, n.d. what school?

Muse, Marianne. "Homes for Old Age." Journal of Home Economics, LVII (March, 1965), 183-187.

_____. "The Homes of Aging Couples in Rural Vermont." Journal of Home Economics, LIV (October, 1962), 714-715.

Musson, Noverre. "Designing Interiors for the Elderly: Furnishings/Lighting/Color." Interiors, CXXII (February, 1963), 95-97.

_____, and Helen Heusinkveld. Buildings for the Elderly. New York: Reinhold Publishing Corporation, 1963.

Nygren, Maie and Sara Sutker. "A Report on the Study 'Toward Recommendations Becoming Realities in Housing for the Rural Aging.'"

Address delivered at Oklahoma Home Economics Association Annual Meeting, Oklahoma City, Oklahoma, 1963.

The Older American. First Annual Report of the President's Council on Aging. Washington, D.C.: U.S. Government Printing Office, 1963.

Parker, W. Russell. Multi-Unit Retirement Housing for Rural Areas: A Guide to Design Considerations for Architects, Engineers, and Builders. Washington, D.C.: U.S. Government Printing Office, 1965.

Public Housing Administration. Architect's Check List: Housing for the Elderly. Washington, D.C.: Housing and Home Finance Agency, 1962.

Rosow, Irving. "Retirement Housing and Social Integration." The Gerontologist, I (June, 1961), 85-91.

Salmon, F. Cuthbert. "Architectural Environment for the Aging." In Restorative Medicine in Geriatrics, by Michael M. Dacso. Springfield, Illinois: Charles C. Thomas Publisher, 1963, pp. 275-289.

Schmid, Calvin F. "Scaling Techniques in Sociological Research." Scientific Social Surveys and Research. Ed. Pauline V. Young. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956, pp. 343-346.

Selltiz, Claire, Marie Jahoda, Morton Deutsch, and Stuart W. Cook. Research Methods in Social Relations. Revised one-volume edition. Chicago: Holt, Rinehart and Winston, 1959, pp. 235-278, 509-587.

Senior Citizens and How They Live: An Analysis of 1960 Census Data. Washington, D.C.: Housing and Home Finance Agency, 1962.

Shanas, Ethel. The Health of Older People, A Social Survey. Cambridge, Massachusetts: Harvard University Press, 1962.

_____. "Living Arrangements of Older People in the United States." Social and Psychological Aspects of Aging. Ed. Clark Tibbitts and Wilma Donahue. New York: Columbia University Press, 1962, pp. 459-463.

Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, Inc., 1956, pp. 116-127, 202-213, 229-239.

Sheldon, Henry D. "Future Trends in Our Older Population." The New Frontiers of Aging. Ed. Wilma Donahue and Clark Tibbitts. Ann Arbor: The University of Michigan Press, 1957, pp. 65-75.

Smith, Wallace F. "The Housing Preferences of Older People." Journal of Gerontology, XVI (July, 1961), 261-266.

Steinberg, H. A. A Check-list for Retirement Houses. Urbana, Illinois Small Homes Council, University of Illinois, 1958.

Steiner, Peter O. "Income and Employment: Basic Facts." The New Frontiers of Aging. Ed. Wilma Donahue and Clark Tibbitts. Ann Arbor: The University of Michigan Press, 1957, pp. 89-98.

Streib, Gordon F., and Wayne E. Thompson. "Personal and Social Adjustment in Retirement." The New Frontiers of Aging. Ed. Wilma Donahue and Clark Tibbitts. Ann Arbor: The University of Michigan Press, 1957, pp. 65-75.

Sutker, Sara and Maie Nygren. "The Psychological and Social Relational Context of Older People's Decisions about Housing." Speech delivered to section on "Problems of Older People." Joint Southern Sociological Association, Southwestern Sociological Association meeting, New Orleans, Louisiana, April 7, 1966.

Tibbitts, Clark. "Economic and Social Adequacy of Older People." Journal of Home Economics, LIV (October, 1962), 695-699.

_____. "The Phenomenon of Aging." The Older Population of the United States. Ed. Henry D. Sheldon. New York: John Wiley and Sons, Inc., 1958, pp. 1-8.

U.S. Bureau of the Census. U.S. Census of Housing, 1960. Vol. VII. Housing of Senior Citizens. Washington, D.C.: U.S. Government Printing Office, 1962.

U.S. Bureau of Census. U.S. Census of Population, 1960. Detailed Characteristics, Oklahoma. Final Report PC(1)-38D. Washington, D.C.: U.S. Government Printing Office, 1962.

Vivrett, Walter. "Housing and Community Settings for Older People." Handbook of Social Gerontology. Ed. Clark Tibbitts. Chicago: University of Chicago Press, 1960, pp. 549-623.

Wilson, Maud. "Living Arrangements for the Fourth Stage of Life." Journal of Home Economics, LII (November, 1960), 727-730.

APPENDIX A

TABLE XVIII

AGE AT WHICH RESPONDENTS REGARD CERTAIN HOUSING FEATURES IMPORTANT

No.	Description of Feature	Under 65	65-69	70-74	75-79	80& Above	Not Imp. Any Age
Features Related to Conservation of Energy:				Percent	N=75	100%	
1.	One sit-down work area in kitchen	40.0	21.3	18.7	4.0	6.7	9.3
2.	Easily accessible electric outlets	60.0	17.3	5.3	5.3	10.7	1.3
3.	Easy-to-clean floors	48.0	22.7	13.3	8.0	6.7	1.3
4.	Easy-to-clean walls	53.3	16.0	13.3	10.7	6.7	0.0
5.	Convenient storage for all items	57.3	24.0	6.7	6.7	5.3	0.0
	Average for Group	51.7	20.3	11.5	6.9	7.2	2.4
Features Related to Temperature and Climate Control:							
6.	Well sealed windows	42.7	14.7	13.3	9.3	10.7	9.3
7.	Draperies for control of drafts	24.0	17.3	24.0	9.3	9.3	16.0
8.	Uniform heat distribution throughout house	48.0	13.3	12.0	17.3	4.0	5.3
9.	Draft-free Ventilation System	36.0	10.7	17.3	9.3	9.3	17.3
	Average for Group	37.7	14.0	16.7	11.1	8.3	12.0

TABLE XVIII (CONTINUED)

No.	Description of Feature	Under 65	65-69	70-74	75-79	80 & Above	Not Imp. Any Age
Features Related to Hearing and Noise Control:				Percent	N=75	100%	
10.	Walls which keep out noises	32.0	13.3	14.7	13.3	10.7	16.0
11.	Openings to outdoors to admit nature sounds	38.7	17.3	16.0	6.7	10.7	10.7
12.	Noise-free place for sleeping	26.7	13.3	21.3	13.3	16.0	9.3
13.	Loudness and pitch control for telephone and/or doorbell	24.0	20.0	22.7	8.0	13.3	12.0
	Average for Group	30.3	16.0	18.7	10.3	12.7	12.0
Features Related to Serious Illness and/or Disability:							
14.	Space in bathroom for wheelchair	21.3	10.7	17.3	24.0	22.7	4.0
15.	Bathroom fixtures usable from wheelchair	18.7	16.0	18.7	20.0	18.7	8.0
16.	Space around bed on three sides	24.0	14.7	12.0	25.3	22.7	1.3
17.	Extra wide halls and doorways	16.0	14.7	16.0	22.7	25.3	5.3
	Average for Group	20.0	14.0	16.0	23.0	22.3	4.7

TABLE XVIII (CONTINUED)

No.	Description of Feature	Under 65	65-69	70-74	75-79	80& Above	Not Imp.. Any Age
Features Related to Seeing:				Percent	N=75	100%	
18.	Light colored walls and ceilings	42.7	21.3	10.7	9.3	10.7	5.3
19.	Extra light at work areas	56.0	21.3	8.0	5.3	6.7	2.7
20.	Light bulbs shielded to prevent glare	46.7	18.7	13.3	4.0	5.3	12.0
21.	Extra light for reading or sewing	57.3	20.0	6.7	6.7	9.3	0.0
22.	Lights inside all closets	64.0	9.3	9.3	9.3	4.0	4.0
	Average for Group	53.3	18.1	9.6	6.9	7.2	4.8
Features Related to Prevention of Falls:							
23.	Pull-down luminaires to eliminate climbing	37.3	28.0	17.3	9.3	5.3	2.7
24.	Night lights in bedroom/bath area	37.3	18.7	13.3	9.3	14.7	6.7
25.	No throw rugs on floor	32.0	20.0	14.7	12.0	12.0	9.3
26.	Slip-resistant floor coverings	54.7	13.3	16.0	9.3	6.7	0.0
27.	Grab bars in bathroom	37.3	20.0	25.3	5.3	10.7	1.3
28.	No thresholds at any door	28.0	13.3	12.0	12.0	18.7	16.0
	Average for Group	37.8	18.9	16.4	9.6	11.3	6.0

TABLE XVIII (CONTINUED)

No.	Description of Feature	Under 65	65-69	70-74	75-79	80& Above	Not Imp. Any Age
Features Related to Prevention of Accidents -- other than Falls:			Percent	N=75	100%		
29.	Vented heating system	66.7	12.0	4.0	6.7	5.3	5.3
30.	"Burn-proof" room heaters	49.3	21.3	9.3	5.3	12.0	2.7
31.	Safety catch on all drawers	37.3	14.7	10.7	13.3	6.7	17.3
32.	Range w/special safety features	40.0	13.3	16.0	10.7	6.7	13.3
33.	Ample number of electric outlets	65.3	14.7	6.7	2.7	9.3	1.3
	Average for Group	51.7	15.2	9.3	7.7	8.0	8.0
Features Related to Other Features Not Classified:							
34.	No steps at entrance	14.7	17.3	16.0	16.0	21.3	14.7
35.	Illuminated light switches	29.3	13.3	20.0	16.0	9.3	12.0
36.	Telephone by the bed	30.7	18.7	14.7	17.3	9.3	9.3
37.	Dressing seat in bathroom	22.7	20.0	18.7	16.0	9.3	13.3
38.	All rooms on same floor level	41.3	22.7	17.3	8.0	6.7	4.0
39.	Hand rails both sides of stairs	36.0	29.3	18.7	4.0	6.7	5.3
40.	Switch by bed which controls several lights	17.3	17.3	14.7	16.0	17.3	17.3
	Average for Group	27.4	19.6	17.1	13.3	11.4	10.9

TABLE XIX

AGE LEVELS AT WHICH SELECTED HOUSING FEATURES ARE CONSIDERED AS IMPORTANT, CLASSIFIED BY AGE OF RESPONDENT

Respondent's Age	Under 65	65-69	70-74	75-79	80 & Above	Not Imp. at Any Age	Number in Age Group
** Feature 7: DRAPERIES FOR CONTROL OF DRAFTS							
60-64	3	4	4	2	0	2	15
65-69	6	4	4	1	0	0	15
70-74	1	0	6	2	2	4	15
75-79	6	4	1	1	1	2	15
80 & above	2	1	3	1	4	4	15
TOTALS	18	13	18	7	7	12	75
**Feature 13: LOUDNESS AND PITCH CONTROL FOR TELEPHONE AND/OR DOORBELL							
60-64	4	4	2	3	2	0	15
65-69	4	2	5	2	1	1	15
70-74	4	2	6	0	2	1	15
75-79	4	6	1	0	1	3	15
80 & above	2	1	3	1	4	4	15
TOTALS	18	15	17	6	10	9	75
** Feature 18: LIGHT COLORED WALLS AND CEILINGS							
60-64	8	5	1	1	0	0	15
65-69	9	3	2	0	1	0	15
70-74	5	5	2	2	1	0	15
75-79	7	2	1	1	2	2	15
80 & above	3	1	2	3	4	2	15
TOTALS	32	16	8	7	8	4	75
**Feature 19: EXTRA LIGHT AT WORK AREAS							
60-64	11	3	0	1	0	0	15
65-69	12	2	1	0	0	0	15
70-74	9	2	3	0	1	0	15
75-79	4	5	2	1	2	1	15
80 & above	6	4	0	2	2	1	15
TOTALS	42	16	6	4	5	2	75

TABLE XIX (Continued)

Respondent's Age	Under 65	65-69	70-74	75-79	80 & Above	Not Imp. at Any Age	Number in Age Group
**Feature 21: EXTRA LIGHT FOR READING OR SEWING							
60-64	14	1	0	0	0	0	15
65-69	11	4	0	0	0	0	15
70-74	7	5	2	0	1	0	15
75-79	4	3	3	2	3	0	15
80 & above	7	2	0	3	3	0	15
TOTALS	43	15	5	5	7	0	75
**Feature 22: LIGHTS INSIDE ALL CLOSETS							
60-64	13	1	1	0	0	0	15
65-69	9	3	1	1	0	1	15
70-74	11	1	2	0	1	0	15
75-79	8	1	2	2	2	0	15
80 & above	7	1	1	4	0	2	15
TOTALS	48	7	7	7	3	3	75
**Feature 24: NIGHT LIGHTS IN BEDROOM/BATH AREA							
60-64	9	2	2	1	0	1	15
65-69	8	5	1	0	1	0	15
70-74	5	1	3	1	3	2	15
75-79	4	3	2	3	2	1	15
80 & above	2	3	2	2	5	1	15
TOTALS	28	14	10	7	11	5	75
**Feature 29: VENTED HEATING SYSTEM							
60-64	13	1	0	1	0	0	15
65-69	12	2	0	0	0	1	15
70-74	9	1	1	1	3	0	15
75-79	10	2	1	1	1	0	15
80 & above	6	3	1	2	0	3	15
TOTALS	50	9	3	5	4	4	75

TABLE XIX (Continued)

Respondent's Age	Under 65	65-69	70-74	75-79	80 & Above	Not Imp. at Any Age	Number in Age Group
**Feature 35: ILLUMINATED LIGHT SWITCHES							
60-64	5	3	5	1	1	0	15
65-69	5	0	6	3	0	1	15
70-74	6	2	2	2	2	1	15
75-79	4	3	1	3	2	2	15
80 & above	2	2	1	3	2	5	15
TOTALS	22	10	15	12	7	9	75
**Feature 36: TELEPHONE BY THE BED							
60-64	6	2	4	2	1	0	15
65-69	7	5	1	1	1	0	15
70-74	4	1	2	4	1	3	15
75-79	5	4	1	3	1	1	15
80 & above	1	2	3	3	3	3	15
TOTALS	23	14	11	13	7	7	75

*Features included in this table are those for which the Mann-Whitney U test showed significant differences of opinion, by age of respondent.

**Abbreviated description used for table. See Appendix B for complete description of features.

APPENDIX B

DESCRIPTION OF FEATURES AS PRESENTED TO PARTICIPANTS IN THE STUDY

FEATURES RELATED TO CONSERVATION OF ENERGY:

1. At least one work surface in the kitchen where one can sit down to work
2. Electrical outlets located where they are easy to use
3. Floor finishes which are easy to clean
4. Wall finishes which are easy to clean
5. Convenient storage for all items at the place where they are used (linens near bedroom and bath, cleaning supplies near where used, etc.)

FEATURES RELATED TO TEMPERATURE AND CLIMATE CONTROL:

6. Well-sealed windows which prevent drafts
7. Draperies that can be pulled across large windows to reduce drafts
8. A heating system which is capable of producing uniform heat distribution in all rooms
9. A system for ventilation in the house which does not produce drafts

FEATURES RELATED TO HEARING AND NOISE CONTROL:

10. Walls which prevent outside noises, such as that from neighbor's television or telephone, from being heard
11. Openings directly to the outdoors which bring in sounds of nature and of other people when wanted, so the house is not "hospital quiet."
12. A place for sleeping or napping which is free from noise
13. A special device for the telephone and/or doorbell for easy adjustment of loudness and pitch

FEATURES RELATED TO SERIOUS ILLNESS AND/OR DISABILITY:

14. A bathroom large enough to accommodate a wheelchair and/or another person when assistance is needed

15. Bathroom fixtures which can be used easily by a person in a wheelchair

16. Space around the bed on three sides wide enough to permit minor nursing care and/or use of wheelchair or walking aid

17. Extra-wide halls and doorways so a wheelchair could pass through easily

FEATURES RELATED TO SEEING:

18. Light colored walls and ceiling to better reflect light into the room

19. Extra lighting at major work areas; dishwashing, food preparation, cooking and hobby work

20. All light bulbs shielded by an enclosing globe or diffusing device to prevent glare

21. Extra lighting of high quality where one reads, sews or studies

22. Lights inside all closets

FEATURES RELATED TO ACCIDENT PREVENTION -- FALLS:

23. Light fixtures which pull down or are mounted low so one can change light bulbs without climbing

24. Night lights in walkway between bedroom and bath

25. No throw rugs on floor

26. Slip resistant floor coverings in all rooms

27. Grab bars in shower stall and/or around bath tub which are easy to grasp and which will support a person's full weight

28. No thresholds at any door

FEATURES RELATED TO ACCIDENT PREVENTION -- OTHER THAN FALLS:

29. A heating system that is vented to the outside of the house

30. If room heaters must be used --- heaters designed to prevent accidental burns and with safety bars in front so clothing can't catch fire

31. A special catch on all drawers to prevent their being pulled completely out and dropped

32. A kitchen range which has these safety features:
If Electric -- burners that glow when hot
If Gas ------- Pilot lights with safety cut-off valve

33. Enough electrical outlets so it is not necessary to use extension cords

OTHER FEATURES NOT CLASSIFIED:

34. No steps at entrance to the house

35. Luminous cover-plates on all wall light switches so they can be seen easily in the dark

36. A telephone or some other communicating device by the bed

37. A dressing seat in the bathroom -- near tub or shower

38. All rooms on the same floor level

39. Continuous hand rails on both sides of stairways

40. A light switch by the bed which turns on several lights throughout the house

APPENDIX C

Name _____ Schedule No. _____

Interviewer _____

Address _____ Date _____

Calls 1 2 3 4

1. If you could make just one change in your OWN house to make it a safer and more comfortable place for you to live, what would it be? (disregarding cost)

_____

_____

FEATURE CARDS

2. On each of these cards is described a feature about the house which architects say is very desirable for older people to have, especially if they live alone.

All of these features are things which would be good for everyone. I would like to have them in my own house, but I don't have them all, and you probably don't either.

Will you read each card carefully and decide at what time for an older woman who lives alone it becomes VERY, VERY IMPORTANT that she have the feature on the card in her house. Not just that it would be nice to have, but that it probably would be essential for her SAFETY, COMFORT and CONTINUED INDEPENDENT LIVING.

INTERVIEWER PLACES SIX CARDS IN FRONT OF RESPONDENT

Stack the cards according to these age groups: before age 65, ages 65-69, ages 70-74, ages 75-79, and age 80 and above. If you honestly feel that the feature described on the card is not important to the safety and comfort of a person at any age, place it in the last stack -- not important at any age.

For example, the first card says -- (Interviewer reads top card, making certain it is not the same card each time.)

Interviewer allows respondent to make her own choice as to where the card should be placed. Remind her that she is to assume in all cases it would be possible for the person to obtain the feature in her home.

INTERVIEWER GIVES RESPONDENT THE FEATURE CARDS

Schedule No. _____ (page 2)

3. FEATURE CARD RECORD: Record responses below, circling the number which corresponds to the appropriate response.

1.	1	2	3	4	5	6
2.	1	2	3	4	5	6
3.	1	2	3	4	5	6
4.	1	2	3	4	5	6
5.	1	2	3	4	5	6
6.	1	2	3	4	5	6
7.	1	2	3	4	5	6
8.	1	2	3	4	5	6
9.	1	2	3	4	5	6
10.	1	2	3	4	5	6
11.	1	2	3	4	5	6
12.	1	2	3	4	5	6
13.	1	2	3	4	5	6
14.	1	2	3	4	5	6
15.	1	2	3	4	5	6
16.	1	2	3	4	5	6
17.	1	2	3	4	5	6
18.	1	2	3	4	5	6
19.	1	2	3	4	5	6
20.	1	2	3	4	5	6
21.	1	2	3	4	5	6
22.	1	2	3	4	5	6
23.	1	2	3	4	5	6
24.	1	2	3	4	5	6
25.	1	2	3	4	5	6
26.	1	2	3	4	5	6
27.	1	2	3	4	5	6
28.	1	2	3	4	5	6
29.	1	2	3	4	5	6
30.	1	2	3	4	5	6
31.	1	2	3	4	5	6
32.	1	2	3	4	5	6
33.	1	2	3	4	5	6
34.	1	2	3	4	5	6
35.	1	2	3	4	5	6
36.	1	2	3	4	5	6
37.	1	2	3	4	5	6
38.	1	2	3	4	5	6
39.	1	2	3	4	5	6
40.	1	2	3	4	5	6

1. Before age 65
2. Ages 65-69
3. Ages 70-74
4. Ages 75-79
5. Age 80 and above
6. Not important at any age

Schedule No. _____ (page 3)

SOCIAL STATUS

Interviewer records the following information while respondent sorts the feature cards.

4. PART I: MATERIAL EQUIPMENT AND CULTURAL EXPRESSION OF THE LIVING ROOM OF THE HOME

Record (1)--has feature, or (0)--does not have feature, in the first blank. Multiply by number in parenthesis to determine the score.

1.	Floor:		
	1. Softwood	_____ (6)	_____
	2. Hardwood	_____ (10)	_____
2.	Large rug	_____ (8)	_____
3.	Fireplace with 3 or more utensils	_____ (8)	_____
4.	Artificial Light:		
	1. Electric	_____ (8)	_____
	2. Kerosene	_____ (-2)	_____
5.	Piano bench	_____ (8)	_____
6.	Desk: personal-social	_____ (8)	_____
7.	Library table	_____ (8)	_____
8.	Sewing machine	_____ (-2)	_____
9.	Alarm clock	_____ (-2)	_____

TOTAL _____

Record the number of each item in the living room in the first blank. Then follow scoring procedure explained above.

10.	Windows with draperies	#_____ (2)	_____
11.	Armchairs	#_____ (8)	_____
12.	Couch pillows	#_____ (2)	_____

TOTAL _____

Record these items if observed in the living room. If not observed, ask questions 14, 15, and 16 (page 7) and record following the interview.

13.	Telephone	_____ (8)	_____
14.	Radio	_____ (2)	_____
15.	Television	_____ (6)	_____

TOTAL _____

(TOTAL THIS PAGE) _____

Schedule No. _____ (page 4)

Record the following data after the interview is completed, using information obtained by asking questions 11, 12 and 13 on page 7.

16.	Bookcases with books (all rooms)	#_____ (8)	_____
17.	Periodicals	#_____ (8)	_____
18.	Newspapers	#_____ (8)	_____
		TOTAL	_____

SCORE ON PART I: _____

5. PART II: CONDITION OF ARTICLES IN LIVING ROOM

Circle the number preceding the phrase which best describes the situation found. More than one may be circled in No. 19 ONLY. Following interview record number in parenthesis for each item circled and add to determine score.

19. Cleanliness of room and furnishings:

1.	Spotted or stained	(-4) _____
2.	Dusty	(-2) _____
3.	Spotless and dustless	(2) _____

20. Orderliness of room and furnishings:

1.	Articles strewn about in disorder	(-2) _____
2.	Articles in place or in usable order	(2) _____

21. Condition of repair of articles and furnishings:

1.	Broken, scratched, frayed, ripped or torn	(-4) _____
2.	Articles or furnishings patched up	(-2) _____
3.	Articles or furnishings in good repair and well kept	(2) _____

22. Interviewer's impression of good taste:

1.	Bizarre, clashing, inharmonious or offensive	(-4) _____
2.	Drab, monotonous, neutral, inoffensive	(-2) _____
3.	Attractive in a positive way, harmonious, quiet and restful	(2) _____

SCORE ON PART II: _____

Schedule No. _____ (page 5)

6. MULTI-USE OF THE LIVING ROOM--DEDUCTIONS

Circle the number preceding the phrase which best describes the use of the living room. (Circle one only)

1.	Used as living room only	(0)
2.	Used as dining room	(-6)
3.	Used as kitchen	(-9)
4.	Used as bedroom or dining room and kitchen combined	(-12)
5.	Used as bedroom, dining room and kitchen combined	(-15)

TOTAL SCORE -- PARTS I AND II _____

DEDUCTIONS (from (6) above) _____

SOCIAL STATUS SCALE SCORE _____

7. CLASS IN WHICH PLACED, on basis of Chapin's Social Status Scale Score:

1. Upper (200 and over)
2. Middle (100 - 199)
3. Lower (0 - 99)

Interviewer should collect the stacks of feature cards when respondent has finished sorting them. They may be recorded while respondent sorts the second set.

INTERVIEWER GIVES RESPONDENT THE SECOND SET OF CARDS

8. Now, will you please take this second set of cards, which are exactly like the ones you have just read, and sort them into three piles:

1. I have this feature in my house.
2. I have seen this feature (perhaps in some other person's house or in a magazine) and am familiar with it, but do not have it in my home.
3. I haven't heard about this feature before.

Schedule No. _____ (page 6)

9. FAMILIARITY WITH FEATURE: Record responses below, circling the number which corresponds to the appropriate response.

1.	1	2	3
2.	1	2	3
3.	1	2	3
4.	1	2	3
5.	1	2	3
6.	1	2	3
7.	1	2	3
8.	1	2	3
9.	1	2	3
10.	1	2	3
11.	1	2	3
12.	1	2	3
13.	1	2	3
14.	1	2	3
15.	1	2	3
16.	1	2	3
17.	1	2	3
18.	1	2	3
19.	1	2	3
20.	1	2	3
21.	1	2	3
22.	1	2	3
23.	1	2	3
24.	1	2	3
25.	1	2	3
26.	1	2	3
27.	1	2	3
28.	1	2	3
29.	1	2	3
30.	1	2	3
31.	1	2	3
32.	1	2	3
33.	1	2	3
34.	1	2	3
35.	1	2	3
36.	1	2	3
37.	1	2	3
38.	1	2	3
39.	1	2	3
40.	1	2	3

1. Have the feature
2. Familiar with feature
3. Not familiar with feature

Schedule No. _____ (page 7)

NOW, WOULD YOU MIND ANSWERING A FEW QUESTIONS ABOUT YOURSELF, MRS._____

10. To which of the age groups we have been discussing do you belong?

    1. 60-64
    2. 65-69
    3. 70-74
    4. 75-79
    5. 80 and above

11. Would you mind telling me what magazines you subscribe to or read regularly? (List) _____

    _____

    _____

    TOTAL NUMBER: _____ (Transfer to page 4, item No. 17)

12. Do you subscribe to any newspapers?

    1. No
    2. Yes How many different ones? _____
       (Transfer total to page 4, item No. 18)

13. Do you have any bookcases in your home? They may be built in or pieces of furniture--just as long as they contain books.

    1. No
    2. Yes How many? _____ (Transfer to page 4, item No. 16)

INTERVIEWER SHOULD ASK THESE QUESTIONS IF THE ANSWER HAS NOT BEEN OBTAINED THROUGH OBSERVATION:

14. Do you have a telephone?

    1. No
    2. Yes

15. Do you have a radio in your home?

    1. No
    2. Yes

16. Do you have a television set?

    1. No
    2. Yes

Schedule No. _____ (page 8)

HEALTH STATUS:

17. This question concerns your health as you see it right now. Would you say your health is:

    1. Excellent
    2. Good
    3. Fair
    4. Poor
    5. Very Poor

18. Would you mind telling me if there are any particular health or physical problems that bother you RIGHT NOW? (LIST)

_____

_____

RECORD FOLLOWING INTERVIEW:

No. of Illnesses	SCORE
0	0
1	1
2	2
3	3
4 or more	4

19. Have you been forced to stay in bed or in a chair or wheelchair during the past year because of your health?

    1. No Circle (1) below -- "Not at all"
    2. Yes Ask question 20

20. Which of the following statements best explains how long, altogether? Remember that this may be a total for several different illnesses.

	SCORE
1. Not at all	0
2. Less than a week	1
3. 1-3 weeks	2
4. 3 weeks to a month	3
5. More than a month	4

Schedule No. _____ (page 9)

21. Would you tell me which of these statements best describes what your health allows you to do from day to day:

	SCORE
1. I do everything without help	0
2. I do most things without help	1
3. I have some help with most things	2
4. I have help with all activities	3
	4

22. Now I am going to list several activities. As I name each one will you please tell me if you have given up this activity <u>because of your health</u>. If you still take part in this activity, or do not do so for reasons other than health, please answer "no."

1. Working at your regular job?
   1. No
   2. Yes
2. Taking long trips?
   1. No
   2. Yes
3. Doing heavy work around the house (like moving furniture or cleaning rugs, etc.) ?
   1. No
   2. Yes
4. Going up and down stairs?
   1. No
   2. Yes
5. Driving a car?
   1. No
   2. Yes
6. Leaving the house?
   1. No
   2. Yes

RECORD FOLLOWING INTERVIEW:

No. of YES answers	SCORE
0	0
1	1
2	2
3	3
4 or more	4

Schedule No. _____ (page 10)

23. ADD SCORES CIRCLED IN THE FOUR SCORE BOXES AND RECORD TOTAL BELOW:

HEALTH INDEX SCORE

0
1
2
3
4
5
6
7
8
9
10 or more

24. Comments of respondent pertinent to study:_____

_____

_____

VITA

Carolyn Jean Combrink

Candidate for the Degree of

Master of Science

Thesis: OPINIONS EXPRESSED BY ELDERLY WIDOWS REGARDING AGE LEVELS AT WHICH SELECTED HOUSING FEATURES BECOME IMPORTANT, AND CERTAIN FACTORS RELATED TO THE OPINIONS

Major Field: Housing and Interior Design

Biographical:

Personal Data: Born at Tonkawa, Oklahoma, July 4, 1937, the daughter of Wilbur E. and Ernestine Combrink.

Education: Attended grade school at Tonkawa; graduated from Caddo High School, Caddo, Oklahoma, in May, 1955; received Bachelor of Science degree in Education from Southeastern State College, Durant, Oklahoma, with a major in Home Economics, July, 1958; completed requirements for the Master of Science degree, May, 1967.

Professional Experience: Employed as Associate Home Demonstration Agent, Choctaw County, Hugo, Oklahoma, 1958-1960; served as Home Demonstration Agent in Okfuskee County, Okemah, Oklahoma, September, 1960 to September, 1965.

Organizations: Kappa Delta Pi, Omicron Nu, Oklahoma Home Demonstration Agents Association, National Association of Extension Home Economists, Oklahoma Home Economics Association, American Home Economics Association.