BATHING FACILITIES FOR THE AGING: RECEPTIVITY BY RESIDENTS AND MANAGERS IN THREE NURSING HOMES

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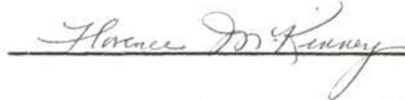

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CHAPTER I

INTRODUCTION

The study of the "unmentionable" room, the bathroom, may seem odd and perhaps even indelicate, but there are several reasons for this study.

Each room in a structure, whether it is in a home, office, business, hospital, or railroad station, is equally important in Housing and Interior Design. The plight of the bathroom has been viewed time and again with a curious and sympathetic concern by the researcher. The bathroom has been designated as the most difficult to clean, unsanitary, ill-planned, tiny room, containing badly designed and antiquated pieces of equipment. This study was concerned with this equipment and a possible improvement of bathing facilities.

During the last seven years, housing for the elderly, such as nursing homes and retirement villages made up of apartment, duplex, and dormitory types of living accommodations and infirmaries, has been of primary concern to the researcher. Much of this time was spent studying and observing all the phases of designing to meet the needs, comforts, and well-being of the elderly occupants.

One outstanding observation both in actual working

experiences and available literature is that little basic research into the underlying problems of human accommodation, comfort, and safety has been done even by the manufacturers of basic bathroom equipment (1). Some of the reasons for this are that public sanitation systems have been improved to a considerable degree and indoor bathrooms are now common; these two forces are responsible for the major significant advances in personal hygiene facilities.

Another observation is that functions of the body are considered "unmentionable" and embarrassing and, therefore, have not been discussed. More modern expressions concerning sex and the body itself are becoming common everyday conversation.

Historical Background

Attitudes toward personal hygiene can be illustrated historically within our culture (1, p. 2). Human regeneration was regarded as a basic social responsibility in the ancient world, Islam and to some extent the Middle Ages. The Renaissance was the beginning of the decline of this concept, but during the 17th century neglect of the body was carried to its lowest state. Culture of earlier ages slowly began to return during the 18th century, but the bath re-appeared about 1830 in the form of medicinal means and rediscovery of nature or new attitudes toward fear of contact with water, fear of nakedness, and of the natural through education. Toward the end of the 19th century, the

shower bath, steam bath, and sun bath appeared, but the tub bath was the popular choice.

The present day bath, the tub, is actually a mechanization of the most primitive type (2). It was found in Crete from around 1800 to 1450 B.C. One of the earliest known was a painted terra cotta tub found in excavations in the queen's apartment in the Place of Knossos. The Minoan age not only had bath tubs, but sewer systems and water closets as well, engineering feats lost to civilization several centuries later demonstrating that social and cultural demands create the necessities or lack of them regardless of technological skills.

The Cretan tub type bath was taken over by the Greeks around 1250 B.C. and the early Roman house contained a bath tub until the 1st century B.C.

The Greeks and Romans practiced a high level of personal hygiene in elaborate and grandiose public bath facilities which are unequalled today. Around the 1st century B.C., immense marble tubs containing warm and cold water were built in hot-air rooms. These baths were abused and later were thought of as brothels and places where veneral diseases and other diseases could be contracted.

The early Christians, on the other hand, believed so strongly that any concern for the pampering of the body, such as bathing and powdering it, was a Satonic act. Beliefs of this kind, plus the lack of facilities resulted in filthy bodies according to today's standards. When the

NOT TRUE!

Crusaders returned they brought back ideas of the Turkish baths and the people began to practice personal hygiene with limitations.

Personal hygiene was a public activity either as a family or community affair from the time of the Roman Empire to the 19th century. It was considered most appropriate to have a portrait painted while bathing in a tub designed for two. Entertainment while bathing was also a common practice during this time. Lawerence Wright (3) points out that defecation was not only not private but often an activity to socialize over. The same can be said about the bidet: "... being first mentioned in 1710 when the Marquis d'Argenson was charmed to be granted audience by Mme. de Prie whilst she sat (3, p. 5).

It was during the 17th and 18th century that furniture designers and craftsman designed handsome decorative furnishings for the care of the body. Such pieces as a velvet covered chair over a portable container for holding waste could be found in the bedroom. A step table made from handsome furniture woods and designed with a hinged door to house a portable body-waste container was placed beside the canopied bed in the Southern Colonial house prior to the early 1900s. This table also served as a necessary step into the extra high bed. Decorated porcelain bowls and water pitchers for "washing-up" were very ornate during the Victorian period and were standard equipment in the bedroom. Lovely woods inlaid with other woods, shells, or metals

were used by such famous craftsmen as Sherton and Hepplewhite for dressing tables. Rooms were necessarily larger during this time and much of the putting of one's self together was done in the bedroom since a bathroom was not part of the architectural plan of the home. Sometimes personal hygiene areas were an alcove of the bedroom and sometimes part of the bedroom itself.

It was not necessary to have a separate room for the bath before running water and sewers became available. The bath cell soon took a standard form and through close concentration of equipment in the room itself as well as with that of the kitchen, installation costs were cut. The architect of today may be inhibited to a great degree by this type of thinking. It appears that economy takes precedent over human comfort and need.

The luxury bathroom of the world with its heavy double-shelled porcelain tub was designed by the English (1880-1910). It was a large room in which the equipment was very ornate. The hooded baths, showers and enclosures were made in wood to match the surroundings of the room. They were regarded as furniture which reflected the taste of the owner. This luxurious bathroom offered a means of impressing one's friends with one's wealth. The equipment was sometimes decorated with flowers (as it is being done again today) or was in the shape of a dolphin but this gave way to more simple forms.

The ideas of the equipment of the Roman and Islamic

baths were again reached about 1915. "There can be no daintification of objects exposed to the daily action of steam and water" (2, p. 692).

In 1869, Catherine Beecher's plan of a city flat had a built-in bedroom, kitchenette, and bath with the bath equipment being built into the bedroom but by 1915 the Americans developed the idea that the bath shall be an appendage to the bedroom. The idea had its origin in the hotel and in time for full mechanization.

Around 1915, the domestic bathtub appears in its now familiar recessed form (2, p. 700). The compact bathroom attained its standard about 1920. The growing popularity of the built-in tub meant passing from the status of furniture to incorporation in the organism of the house. "It may be said the double-shell enameled tub attains a degree of comfort that had been pursued for thousands of years" (2, p. 706).

By 1945, leading fixture companies were trying to assemble plumbing units to cut down costs and satisfy a variety of requirements but engineers, not fixture manufacturers designed a module to be installed as a unit (1931).

Buckminster Fuller designed a prefab bathroom which was all stamped out at one time, but the human problem became lost in the stamping because the construction ran away with the constructor as so often happens in mechanization. His idea of clean, hygienic enamel material, was

changed to thin metal sheeting for easier production by machine.

Water therapy seems to have been a magic activity throughout history, and even today mineral baths, steam baths, sitz baths, and others have their therapeutic values.

It must be pointed out that the societal and psychological attitudes of man make certain treatments for disposing personal hygiene a necessity. As in so many other cases, "necessity is the mother of invention," so as the passing from one type of culture to another down through the ages, the present equipment and methods for personal hygiene came into being.

The equipment is basically the same as it was when it was first invented, a container for holding water. Giedion (2, p. 712) says that even though this century created the bath-cell with complex plumbing, enameled tub, and chromium taps and appended it to the bedroom, the fact cannot be lost from sight that this convenience is no substitute for a social type of regeneration. Regeneration is a part of a broader concept - leisure. Leisure means a concern with things beyond the merely useful. Leisure means to have time. Life can be tasted to the full only when activity and contemplation, doing and not doing, form complementary poles, like those of a magnet. None of the great cultures has failed to support this concept. Perhaps this is what prompted this study of the needs, comfort, and well being of the elderly.

Statement of Problem

The problem studied was types of bathing facilities and the placement of the equipment to determine how the equipment could be improved by new designs to help solve some of the problems of human accommodation, comfort, and safety of the elderly. Realizing that new technological advances are often difficult to impose upon people, particularly the elderly, and particularly those dealing with this subject, the study would be more valid if it included the reactions of elderly occupants at three nursing homes and the managers of the homes who would have to spend a great deal of money to make any major changes.

This study was confined to the design of comfortable, safe, and practical bathing equipment and receptivity by respondents. It included only a limited amount of study of the room itself or the decoration thereof.

Purposes of the Study

The purpose of this study of the bathroom was to make a contribution in the field of housing, especially for the aging, because very little work has been done in this most neglected area in the housing field. The equipment is basically the same as it was when it was first invented. The need for this study seemed long past due. The new concept of fitting the activity or the equipment to man rather than the old idea that the human being should be adapted to things instead of things for people, is a

professional discipline which certainly should apply to the bathroom. This new concept which Kira referred to as "human engineering" was evident in planning the space capsule.

Another purpose of this study was that it was observed that a limited amount of literature is available and perhaps this study could open the way for writing on this subject which has been shunned as mentioned earlier in the introduction.

Hypothesis

Bathing facilities of today do not meet the needs, comfort, and safety of the elderly because they are:

1. Unsafe and uncomfortable due to poor design, size, and height.
2. Difficult to clean and highly unsanitary due to the design of the equipment.

A limited amount of research concerning the human accommodation, comfort, and safety of the elderly has been done.

There is a limited amount of literature available which shows the findings of studies concerning bathing facilities with emphasis on problems of the elderly.

Only if residents and managers of the nursing homes observed are receptive to the new designs for bathing equipment as usable and functional - then only will the study have obtained the desired objective.

Definition of Terms

1. It was of interest to note that the term "personal hygiene" was used in the writing on the subject of the bathroom, therefore, this term will be used in this report. This term does suggest the activity of the bathroom and not the room itself.
2. Health: refers to ailments of the elderly people interviewed.
3. Those interviewed: residents and managers interviewed in three nursing homes.
4. Type I, II, and III: is the numerical name given the designs on the drawings shown those interviewed.

CHAPTER II

REVIEW OF LITERATURE

Geriatrics is a rather complete study in itself and even though studies have been conducted for several centuries, it was not until the period following World War II that real enthusiasm developed. Of course there are many reasons for the activation of this very important phase of sociology.

A very predominate reason for the increased interest in the study of the well-being of the older citizen is the extended life span of people today as compared with those of yester-year. One of the many references to this statistical data is quoted from "Facts on Aging", a report from the U. S. Department of Health, Education, and Welfare, Office of the Aging (4):

> Between 1950 and 1960, the population grew the fastest at the two extremes of the age scale. The number of persons under eighteen and the number of persons sixty-five and over increased almost twice as fast (37% and 35%, respectively) as did the total population. If a theoretical "dependency" ratio is defined as the relation between persons eighteen and sixty-four years old and those both younger and older, the dependency ratio was 155 to 100 in 1950, became 122 to 100 in 1960, and may go to 116 to 100 in 1970. The sixty-five and up population is estimated at twenty million in 1970.

At an American Home Economics Association Workshop on

Aging, Leonard Breen (5) said that by the year 2002 there would be 32,000,000 people sixty-five and over and the number of people age seventy-five and over would triple in the forty year period from 1962.

With the vast number of older populations in western societies, which are being viewed with alarm and apprehension, problems are being created according to Breen (5, pp. 6-7). He thinks one must ask himself what is the significance of these population changes and how may one better understand the problems created? Much concern has been shown by national professional meetings, studies, and recommendations on local, state, and federal levels, and even a White House conference pointing out the increasing seriousness of the matter (6). They have reported not only a short supply, but also inadequate housing situations which are improper to the orderly course of life in later years. Clark Tibbitts (7) says that the concern is how to improve conditions and how to overcome this inadequacy. Cain (8) remarked, "My concern is for society to increase its effectiveness in providing comforts to the aged, not seek ways of avoiding responsibility". This is one of the reasons for this study of one of the many problems of human accommodation, comfort, and safety of the elderly.

Edward Noakes said that to a visitor from another planet, it would be immediately apparent that the only thing permitted to be housed unsuitably is ourselves - with

special emphasis on the stage of life when one is too weak to object.

When one talks of meeting housing needs of one age group as distinct from meeting those of another age group, signs of the relative affluence of the United States are shown, and only a culture which has generally achieved a fairly high economic level would be in a position to be concerned about the housing provisions for older persons as an issue distinct from provisions for younger people in the opinion of McKinney and de Vyver (10).

There is in existence a derth of literature noting an association between the quality and character of housing and the well-being of the residents, but the literature does not seem to call attention to the older population per se. Wilner, Walkley, Pinkerton, and Tayback (9) observe that a dilapidated dwelling in a bad neighborhood is said to have created physical and social pathology but they conclude that it remains an open question whether, without attempting to alter other conditions of life as well, housing betterment itself has the intrinsic seeds of psychological and social amelioration.

Researching problems of human accommodation, comfort, and safety could not be undertaken without appropriately defining aging or aged. What is meant by the term aging or aged? What is thought about and what is true when this term is used? There are many definitions for aging, probably as many as there are persons asked to define the term. Some

writers define it in the following ways: a process of physical deterioration, a continuous process of change, a pathological sequence of events, a psychological response to social situations, and social super-imposition of personality traits upon the natural physiological process of change. The age 65 is the most accepted chronological age for no reason other than the following: In the 1880's, Bismarck in Germany developed the first national system of institutionalized retirement as a reward; shortly after the turn of the century in America, the Carnegie Foundation offered the first broad retirement plan; and in the 1930's the Social Security plan was adopted in America. All of these historical events placed age 65 as the retirement age and so it seems that this age is the turning point in the minds of the majority where "old age" sets in. There is great danger in lumping people of certain ages together in such a category of averages because they are people. Tibbits (7) says it is as wrong to lump people 65 and over as old as it is to lump those 20 or 21 and under as children. There are as many significant changes during the second one-third of ones life as there are during the first twenty. David Riesman (29), in "Some Clinical and Cultural Aspects of the Aging", says one should not expect to find a single thread among all of the various species which will explain biological aging.

With these developments or considerations of the statistical significance of the aging population, some of the

social policies concerning the aging, and the definition of aging, additional concerns for those dealing with the study of and solving of the problems, the relatively new science of geriatrics presents some real challenges. The avenues of study are many, oftentimes baffling, unpredictable, and sometimes almost unsurmountable and at this stage in many instances highly experimental.

There is a limited amount of literature available which deals strictly with the personal hygiene problems of human accommodation, comfort, and safety, particularly with emphasis on problems of the aging as was stated earlier in the introduction. However, problems of personal hygiene have concerned man since the beginning of time. The fundamental problems have been basically the same, and man's attitudes toward them contribute directly to his role in life. Kira (1) says that if a man is bathed and refreshed as a result of washing his body, his behavior, personality, and intelligence are influenced.

Man's attitudes toward personal hygiene are often related directly to the religious and philosophical beliefs found in his culture and others as well. The world's religious ritual practices such as circumcision, washing of feet, annointing with oil and others originally stemmed from these body-hygiene related concepts. Purity of the soul is universally symbolic with cleansing of the body and, thus, the Saturday night bath prepared one for the Sabbath. Giedion (2, p. 628) wrote that the role that bathing plays

within a culture reveals the culture's attitude towards human relaxation. It is a measure of how far individual well-being is regarded as an indispensable part of community life.

The evolution of hygiene was traced by Langston and Isaminger (11) through a number of clearly defined periods; first was characterized by ignorance; second by the establishment of defense mechanisms directed largely toward the control of the environment - the era of sanitation; and third, the modern era, is marked by an agressive attack against the cause of disease. This is the era of positive health. Pasteur disproved filth causes disease. Filth in itself does not cause disease, but it may act as a medium (11).

According to Maurice Le Bosquet (12), the outer skin is constantly shedding its outer layer of horny cells; the salts dissolved in the perspiration are deposited on the surface and in the mouth of the sweat glands, the oily material secreted by the sebaceous glands accumulates, and may stop up the opening, causing pimples; and the secretions contain odorous substances; "so for health and decency bathing is required". He also says the chief use for bath is cleanliness but it may have other hygienic effects.

Giedion (2, p. 682) summed up the development of the present day bath this way:

> ... in tracing the development of the present day bath, one wanders through a maze of quaint stories and anecdotes. The reason for this is invariably

> the same: Inspiration failed when it was needed for human requirements.

The bath tub and/or shower has been observed as inadequate and hazardous fixtures due in part largely to the design itself. The rounded edges inside the fixtures do not allow for sure-footedness, and, therefore, many people fall causing broken bones and sometimes death from striking the head. In every installation observed, it was noticed that the performer had to get inside the tub or shower before operating the water faucets which were separate hot and cold water dispensers. This can be very hazardous, especially for the elderly, because the hot water may be hot enough to scald. It was also observed that the shower heads are almost always too high, causing them to come down on the coiffured head. The elderly people appeared to have a great deal of trouble getting in and out of the tub because they could not raise their feet that much. Grab bars on the wall above the tub were considered necessary by the elderly observed and by the aide. The bars helped stabilize the person getting in or out of the tub or shower. The Guides For Project Design for the Senior Citizens Housing Loan Program of the Department of Housing and Urban Development contains a stipulation that grab bars shall be used as appropriate, to provide additional safety. In his study of the bathroom, "Criteria For Design", Kira (1, p. 75) points out how inherently and potentially dangerous body cleansing is in terms of postures assumed, it becomes apparent that safety should be a primary design

consideration, particularly in view of home accidents. He recommends a total and comprehensive fixture that encompasses more than a properly sized and shaped container. Perhaps the all-in-one piece fiberglass tub, shower, wall, and soap tray which is on the market today comes near his idea.

Proceeding on the premise that socio-economic status, health, surroundings, and habits are important factors in the receptivity of change a study of literature from the various fields thought to make a contribution was made. A Cornell research found elderly people living with their spouse had higher incomes than unattached men while unattached men had higher incomes than unattached women.

Older people themselves use health as a causal factor for most things (13). Wilma Donahue (27) indicates that the chronic disease incidence rates follow a similar trend with age.

Many older people live in a state of loneliness, frustration, despair, and increasing senility because they do not adjust to old age according to Glenn Beyer (14). They can be lonely even though they live in a community situation. As the dependent years approached, fewer senior citizens wanted to live in a nursing home. Marilyn Langford (15) had a great deal to say about receptivity of new designs. She said,

> It is possible to modify design decisions when the public's attitudes toward design are known and essential to the success of any 'bathroom of the future' is whether or not the public

will accept it.

This researcher is in agreement with her statement:

> Until respondents have actually used new pieces of equipment, they cannot express completely valid attitudes concerning them, perhaps because of lack of imagination or influence by fads promoted in advertising.

Cornell University conducted a study of the bathroom which required seven years of research. Some of the results of their study were drawn upon in order to save time and money in this study (1) (15).

Due to lack of research materials, many of the statements contained herein are substantiated by observations, actual experiences in 24 years in the business, and "trial and error" experiments in some cases because it is not always easy to understand the actions of the aging (16). Living conditions, no matter how favorable, do not guarantee successful adjustment to aging (17).

CHAPTER III

METHODOLOGY

A questionnaire, including drawings of three different kinds of equipment for bathing, was used to collect data for this study. A personal interview by the researcher was conducted since observation and studies of geriatrics revealed that many senior citizens had difficulty with reading, comprehending, and writing. This type of interview does require a great deal of time, but it did seem more feasible and useful by this researcher.

Preliminary Planning

The researcher observed bathing equipment in a number of nursing homes to aid in determining in what ways these facilities could be improved to meet the needs, comfort, and well-being of the elderly residents. The type, size, shape, and over-all design and the placement of the equipment was studied.

Various individuals, groups, and government agencies engaged in studies of the concern for the elderly were contacted before and during this study for information on their research and their programs. A review of literature was continued during the entire study.

A pre-test was designed to sample the attitudes and aptitudes of elderly respondents toward this kind of study and to aid in developing the instrument for collecting the data.

Presuming that the receptivity of new designs may be related to certain socio-economic characteristics, the pre-test contained five variables. It was presented personally by the researcher to two types of senior citizens: (1) residents in a retirement village and (2) residents in a nursing home. The interview revealed that residents in a retirement village are usually there by choice and usually own or rent their living quarters; residents in a nursing home usually are people not capable of caring for themselves, who cannot live alone, need guidance or supervision of recreation, eating, sleeping, and living habits. It was assumed that these differences might have some possible direct result on the attitudes of respondents and subsequently alter responses. Since it was necessary to limit the study to one type of senior citizen, nursing homes were selected.

A total of 88 residents in two nursing homes in Norman, Oklahoma and one in Stillwater, Oklahoma were selected for the study.

Development of Questionnaire

After further study of literature, procedures, and the pre-test, the questionnaire used as the instrument for this

study was formulated. The questions were stated as clearly and concisely as possible so as not to confuse the respondents nor cause them verbal duress.

Questions relative to socio-economic status were included in the questionnaire since senior citizens from nursing homes only would be interviewed.

If it is true that the attitudes of people vary not only by their individualism, but also by the conditions of their health, their habits, and their surroundings, then it is necessary to collect these data (6). Thirteen questions dealt with the socio-economic status, five with health, six with surroundings, and six with habits.

Three drawings were made of bathing facility designs: (1) A bathing facility similar to the tub type observed in all three nursing homes and (2) Two new designs developed by the researcher. Each respondent was asked to select the bathing facility he or she preferred. There were three questions pertaining to the attitudes and preferences for the designs.

It was assumed that the managers of the nursing homes who would be concerned with the needs, comfort, and well-being of the residents and might be persuaded to make changes in their facilities if they liked the new designs and the costs would not be prohibitive.

Therefore, the managers were personally interviewed by the researcher, using a modification of the questionnaire (Appendix B) and the three drawings as a means of collecting

additional data for this study.

Approximate costs of the new designs were obtained from a plumbing shop and a tile contractor.

Treatment of data

Tables were formulated according to the basic research patterns set up in designing the questionnaire to determine attitudes of health, surroundings, habits, and the socio-economic variables. A percentage relationship between these characteristics was tabulated to try to determine the validity of the receptivity of the new designs for bathing by the respondents.

The computations from questionnaires were recorded and tabulated.

CHAPTER IV

FINDINGS

This study was undertaken in an effort to help solve some of the problems of human accommodation, comfort, and safety of the elderly by observing types of bathing facilities and the placement of the equipment to determine how the equipment could be improved by new design to meet these needs.

Although the senior citizens interviewed were most co-operative, it was difficult for the researcher to determine the extent or reliability of the attitudes expressed because of their sometimes apparent inability to think or remember. In addition, they may have had limited exposure to technological or scientific advances which have swept the world during their later years when they were no longer involved.

It was difficult for the researcher to determine whether or not the senior citizens were at all interested in the fact that the quality, ease, or comfort of the surroundings could be improved. Therefore, the data collected and recorded in the tables is the expression of the respondents for whatever practical purposes the analysis may serve for this study as well as further studies.

The findings of the data recorded for socio-economic status, surroundings, health, and habits are reported separately.

Socio-Economic Variables

The demographic characteristics of the respondents revealed that, as might be expected in a nursing home, 64% of the respondents were in the 80-89 age group and the remaining percentage was made up of 35% in the 70-79 group leaving 1% above 90- and under 70 years of age. Of these groups, only a small percentage were single; 86% had owned their own home. Fourteen per cent of the homes owned were farm homes.

In the family composition of the total number of respondents, sons out numbered daughters about 2 to 1.

Factors used to determine socio-economic status were education, occupation, and income; these were scored 1, 2, and 3. Table II was designed around the data collected: about 90% of the female responses stating "housewife" as their occupation, had attended or finished high school and these statistics were defined with a score 2. Too few of the respondents could remember the amount of income nor even knew from whence came the money to keep them in the nursing home; therefore, accuracy of these data could be debatable, but it was recorded as stated by respondents. It should be noted that a few more than one-fourth of the respondents went to college while one-half attended the 8th

grade or under, yet over one-third of the total respondents held professional jobs. This fact may be related to the changes in educational requirements between the younger years of the respondents and the present, as was stated often by the respondents. Many of them had begun teaching after finishing grade school while it is necessary now to have a college degree or above to be considered for employment in many professional jobs. Likewise, those few incomes reported by the respondents were below what is known as "low income" today.

Another statistic of comparative interest was that all respondents interviewed reported their religion as Protestant. Could it be that this tells something about the care of and for the elderly citizen? Does one culture employ different attitudes and practices of concern from another? Does a more conservative background or heritage produce different attitudes or receptivity to not only new designs but also to new concepts about housing the senior citizen? What is the influence of a liberal or conservative heritage on his receptivity to the new environment and what are the attempts to make his environment more comfortable, easier to accept, easier to use, and more pleasing? This idea may be developed for other studies concerning housing the senior citizen. It is discussed here because it was stated in the purpose of the study that hopefully a contribution to the field of housing concerning the elderly could be made as well as a contribution for further studies.

Surroundings

Table VIII "Attitudes of the Surroundings" was designed to record the attitudes of the senior citizens toward specific characteristics related to the surroundings. It was felt that these attitudes may have a definite relationship on the responses to questions on the receptivity of new designs for the bathroom. When the data were analyzed, it was found that a large majority of the respondents had lived in the nursing home less than one full year, although some were there as long as four years. This fact directed the analysis of receptivity to the direct attitudes of each respondent toward the drawings of new designs and related questions rather than the respondents' attitudes toward the type of bathing equipment in the nursing home.

The findings about the present living accommodations were observed to be emphatically responsive to "like it very much" by both men and women with women 100% satisfied while 25% of the men stated they "do not like it". Again, the accuracy of the relationship of this data to the rate of receptivity when analyzed with length of residency directs the summation to the direct attitudes of each respondent to the drawings of the new designs and the related questions. Table IX shows that two-thirds of those satisfied "very much" with their surroundings liked the new designs and all of those "fairly well" satisfied and "do not like it" were receptive to the new designs.

One hundred per cent of the women respondents said

they enjoyed house cleaning and did not mind cleaning anything in the bathroom. Twenty-five per cent of the men did not mind house cleaning, but 75% did not mind cleaning anything in the bathroom while 25% disliked cleaning the lavatory. No response was given by men concerning the cleaning of other fixtures in the bathroom. The data on cleaning revealed that difficulty of cleaning and sanitation in the bathroom due to lack of convenience of cleaning were not indicative of the assumption stated earlier in the study.

It was interesting that only three colors, blue, green, and pink, were named as a choice of color. It was of further interest that twice as many respondents liked blue as those liking green. Ten per cent of the females liked pink best.

Health

No physical examinations were given the respondents in this survey, therefore the findings are a compilation of their own attitudes towards their health. There were several very interesting observations made such as, even though the researcher had to shout, not one of the respondents admitted to be hard of hearing.

The largest majority of all ailments, excluding eye sight, reported by both sexes but by more men than women was crippled legs (included in the data as crippled legs was a broken hip, partial lameness or stiffness due to

arthritis, amputation, etc.) and/or arthritis while 30% of women, but no men, had crippled hands.

Only 28% of total respondents and very nearly equal of both sexes had had a stroke which was the second highest ailment reported, followed by 22% each for high blood pressure, nervousness, diabetes, back trouble, and "feel tired all the time".

Fourteen per cent of all respondents had heart trouble and all of these were in the 80-89 age group, but more than two and one-half times more men than women reported this ailment.

No men reported the following: crippled hands, back trouble, high blood pressure, kidney trouble, and "feel tired all the time". Fewer women reported nervousness, diabetes, and other ailments.

No one in the 70-79 age group reported nervousness, kidney trouble, diabetes, heart trouble, and other ailments, while fewer in the 80-89 age group reported crippled arms or legs, back trouble, high blood pressure, and no ailments. The only person in the 90-age group reported his only ailment to be arthritis, otherwise his health "excellent".

Seventy-one per cent of all respondents wore glasses. Wearing of glasses was the only criteria for "eye trouble" since no physical examination was given.

Habits

All men respondents of all age groups visited others in

the nursing home, while two-thirds of the women in the 70-79 age group preferred staying in their rooms to do "busy work" or be alone. Women in the 80-89 age group preferred to visit often. Most of the respondents indicated they preferred staying in their room because they suspected that everyone else in the home was "mentally ill (indicated by tapping their fingers to their head) and they did not want to listen to them talk on and on".

It was not known what type of bathing facilities were available to respondents in their own homes, so the responses may be according to what they were accustomed to.

The number of men preferring a tub or shower bath were equally divided; however, fewer women in the 80-89 age group preferred the tub or shower as much as did the women in the 70-79 age group who were equally divided in their preferences. There was a 100% preference of all respondents reporting heart trouble and an overwhelming majority of those reporting crippled arms and legs, back trouble and arthritis for a shower bath. A tub bath was preferred 3 to 1 by a majority reporting stroke, diabetes, and tired all the time.

When asked "would you prefer taking a bath seated on a chair if the water was deep enough to cover up to your shoulders or partially cover you", a vast majority of all respondents regardless of age or ailment said "yes". Of those not answering "yes" most of them "do not know". Of this latter group, it is not known what the ability to

visualize is or to comprehend an idea foreign to the regular method always used to date.

All men said they did not mind much having someone assist with their bath, but one-half of all age groups of women respondents preferred to be alone.

It will be noted that the habits of the respondents as related to age, sex, surroundings, and health have been discussed.

In order to try to relate the acceptance of change of habits to receptivity of new designs an analysis was made between findings in the study on preference of types of bathing facilities as shown on the three drawings presented to the respondents and acceptance of change. Fifty per cent of those accepting change preferred Type III bathing facility, while 25% "don't know" and 12½% like Type I, and 12½% liked Type II. (See Table VII.) Sixty per cent of those who said they do not like change preferred Type III and 40% preferred Type II. It is of interest to note that the new concept of bathing facility was most acceptable by the respondents, regardless of whether they like or dislike change.

Managers

There was a variance in the income range of the managers because two of the nursing homes visited were owned and operated by the managers themselves and one worked for

someone else. Also, one had been in operation twice as long.

The managers expressed no dislike for cleaning anything in the bathroom, but all had help employed to do this job. Perhaps this was one of the reasons for checking maintenance "important" in the bathroom. The managers were aware that faucets must turn easily and that the bath must be as safe as possible.

Preference for the new design was unanimous and the managers each said they were in favor of change. They would have no objections to installing the new designs, especially when they found the cost to be nominal.

CHAPTER V

SUMMARY

The study was made to determine the receptivity of new designs by senior citizens and managers in two nursing homes in Norman, Oklahoma and one in Stillwater, Oklahoma.

The hypothesis of the study is that characteristics of health, habits, surroundings, and socio-economic status are relevant to receptivity of new designs by senior citizens and managers of nursing homes.

Data were obtained by the researcher by personal interview in nursing homes. The instrument used was a questionnaire and three drawings showing one conventional bathing facility and two of the researcher's designs.

Conclusions

Data collected and analyzed concluded that:

1. New designs are acceptable by senior citizens and managers relative to their backgrounds determined by characteristics of health, habits, surroundings, and certain socio-economic variables.
2. Money matters in the socio-economic category could not be theorized to identify with

specific data on receptivity. This was due largely to the fact that the age of the respondents may have prevented them from remembering specific amounts nor did they seem to know where money came from to pay for their living in the nursing home. Many women in this age group admitted to not ever knowing what their husbands income was or what their estate value is.

Recommendations

As stated in the introduction of the study, there is a limited amount of literature, research, and manufacturing available concerning the need for personal hygiene equipment. So very little has been done since its original invention.

It is recommended that actual test installations of new designs be installed in nursing homes chosen at random so that the senior citizens can give a more accurate appraisal of the benefits since it is so difficult for them to visualize or comprehend from drawings, questions, or descriptions.

There is a definite need for studies, observations, and analysis, but above all there is a genuine need for action in the area of improvement of personal hygiene equipment for the elderly. This neglected field of housing is due new designs to make life more comfortable, easier, and pleasant.

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APPENDIX A

QUESTIONNAIRE

1. Sex

    1. Male.

    2. Female.

2. How old were you on your last birthday?

    ____________ years.

3. In what country were you born?

    ____
    country

4. When did you retire?

    Year _________ Age _________.

5. What was your occupation prior to retirement?

    ____

6. Was your income between one of the following?

    1. $2,000. - 3,000.

    2. 3,000. - 5,000.

    3. 5,000. - 8,000.

    4. 8,000. - 10,000.

    5. Above

7. Would you work now if you could find a job you could do?

    1. Yes

    2. No

8. Did you own your own home?

    1. Yes

    2. No

9. Where was your home located?

    1. In town (what state? ____________________________).

    2. On farm (what state? ____________________________).

10. What is your marital status?

    1. Single

    2. Married.

11. How many persons in your family?

    1. Number of boys ______

    2. Number of girls _____

12. What was the last grade of regular school you finished?

    1. No schooling.

    2. Grade 1 2 3 4 5 6 7 8 9 10 11 12

    3. College 1 2 3 4

    4. Above

    5. Business school

    6. Vocational school

13. Do you visit others in this nursing home?

    1. Sometimes

    2. Often

    3. No _____ Why? ____

14. Which of these statements describes your feelings about your present living quarters?

    1. I like it very much.

    2. I am fairly well satisfied.

    3. I do not like it.

15. Do you enjoy house cleaning?

    1. Yes

    2. No

16. Do you dislike cleaning the following?

    1. The bathroom Lavatory (Why? __________________________)

16. (Continued)

    2. The toilet (Why? ______________________________)

    3. The bath tub or shower (Why? ____________________

    4. The bathroom excluding the fixtures (Why? ________

    ____

    5. I do not mind cleaning anything in the bathroom

17. Does it bother you to bend over to wash your face and hands?

    1. Yes

    2. No

18. How difficult is it for you to turn water faucets off and on?

    1. Slightly difficult - Why? ______________________

    2. Rather difficult - Why? ________________________

    3. Extremely difficult - Why? _____________________

    4. Not difficult at all.

19. Which ailment, if any, do you have?

    1. Crippled hands or arms   2. Poor sight

    3. Crippled legs   4. Hard of hearing

    5. Back trouble   6. Nervousness

    7. Arthritis   8. Kidney trouble

    9. Heart trouble   10. Diabetes

    11. High blood pressure   12. Feel tired all the time

    13. Stroke

    14. No ailment

    15. Other (What? ______________________________)

20. Which of these statements describes your ability to get about?

    1. Can go about with assistance of wheel chair.
    2. Able to go almost any place inside the nursing home.
    3. Confined to your room.
    4. Confined to bed

21. Is the bathroom equipment in this nursing home difficult or taxing for you to use?

    1. Yes (Would you care to say why? ________________)
    2. No

22. Do you enjoy a bath?

    1. A sponge bath some
    2. A sponge bath very much
    3. A shower some
    4. A shower very much
    5. A tub bath some
    6. A tub bath very much
    7. Sometimes a shower and sometimes a tub bath
    8. Not at all

23. Would you prefer taking a bath seated on a chair if the water were deep enough to partially cover you?

    1. Yes
    2. No
    3. Do not know

24. Do you mind taking a bath when someone else is in the room?

24. (Continued)

    1. I do not mind very much

    2. I prefer to be alone

25. What do you think is important in a bathroom?

    1. Privacy

    2. Convenience (space around fixtures)

    3. Convenience (location of bathroom)

    4. Maintenance

    5. Beauty

    6. Other (What? ______________________________)

26. What is your religion?

    1. Protestant

    2. Catholic

    3. Jewish

    4. Other (What? ______________________________)

27. How long have you lived in this nursing home?

    ____________ years

28. Would your present income be one of the following?

    1. Less than $1,000.

    2. $1,000. - 2,500.

    3. $2,500. - 3,500.

    4. Above $3,500.

Showing each of the three bathroom renderings, the viewer was asked the following questions:

1. If you could choose which of these would you choose?

    1. Conventional (Why?____________________________)

    2. Table-type bathing facility (Why? ______________)

1. (Continued)

    3. Easy Chair bathing facility (Why? ________________)

2. Which is prettiest?

    1 2 3

3. What is your favorite color?

    Color ______________________

4. Do you like changes?

    1. Yes

    2. No

APPENDIX B

DRAWINGS

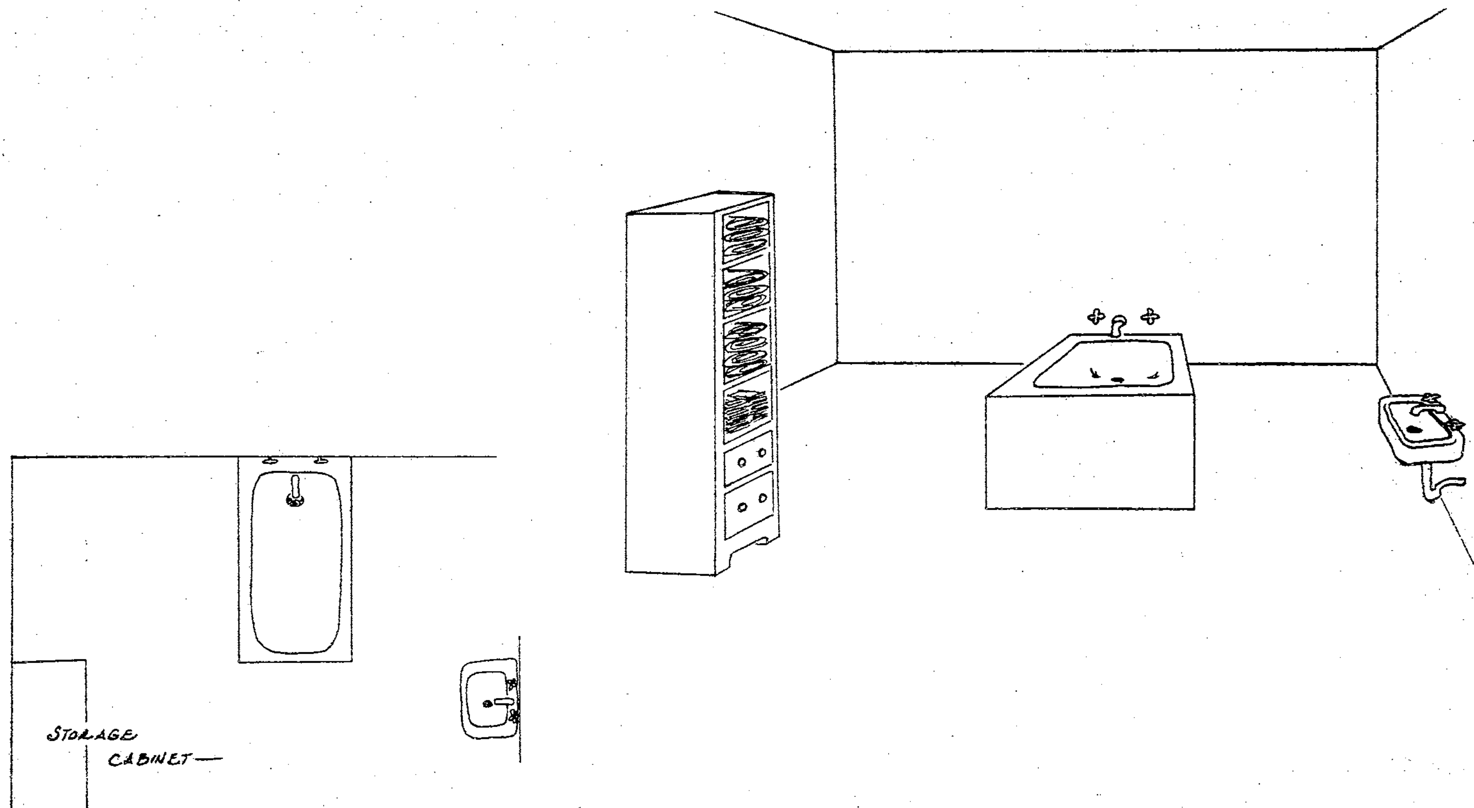

Figure 1. Type I

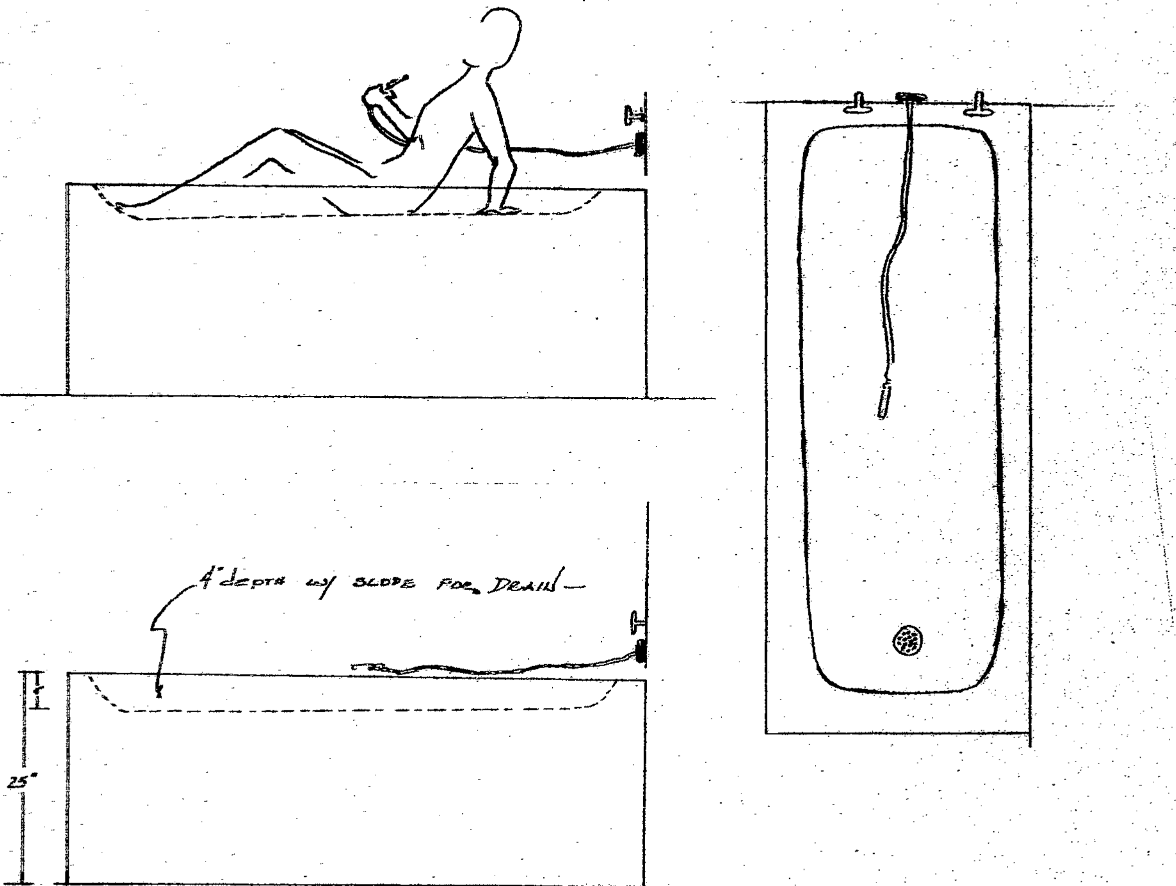

Figure 2. Type II

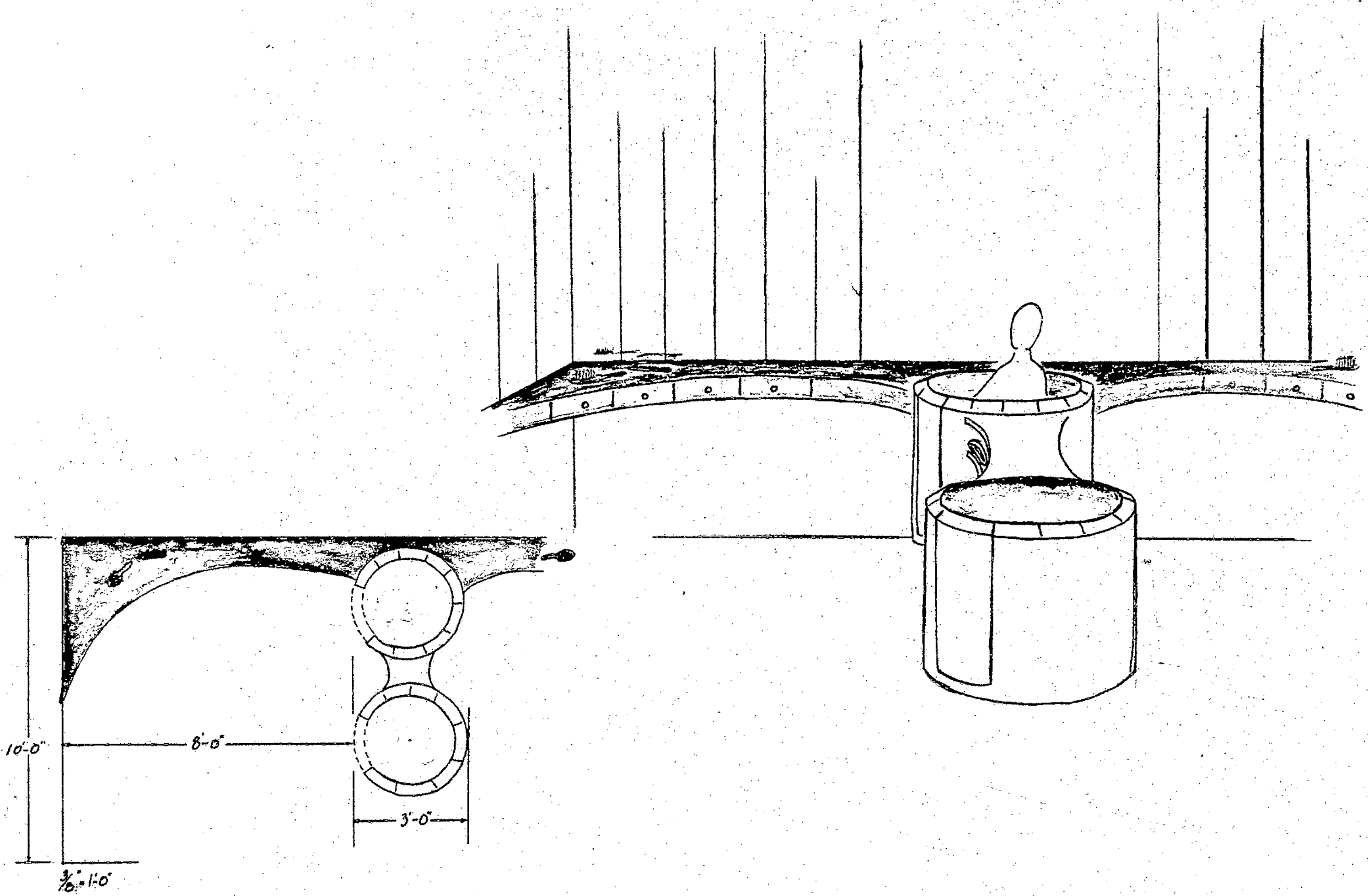

Figure 3. Type III

APPENDIX C

OBSERVATIONS OF THE THREE NURSING HOME FACILITIES AND ATTITUDES OF RESPONDENTS TO CHARACTERISTICS OF EQUIPMENT

TYPES OF LIVING ACCOMMODATIONS IN NURSING HOME "A" VISITED AND TYPES OF BATHROOM FACILITIES

Occupancy	Bathroom Facilities		
	Private	Shared Between Rooms	Down the hall
Single room	T & L		Tub and/or shower
Double room		T & L	Tub and/or shower
Dormitory	No dormitory type accommodations		

T - toilet

L - lavatory

TYPES OF PERSONAL HYGIENE EQUIPMENT AVAILABLE IN NURSING HOME "A" VISITED

Lavatory in room	No
Lavatory and toilet between two bedrooms	Yes
Lavatory, toilet and tub-shower for a private room	No
Lavatory, toilet and tub-shower between two rooms	No
Shower down the hall	Yes
Shower-tub, toilet down the hall	Yes
Tub down the hall	Yes
Dressing Table with lavatory	No
Dressing Table without a lavatory	No
Mirror	No

Urinal	No
Dental Hygiene	No

CHARACTERISTICS OF PERSONAL HYGIENE EQUIPMENT
WHICH MIGHT DETERMINE ITS EFFICIENCY
AS FOUND IN NURSING HOME "A"

Equipment	Too high	Too low	Faucets hard to turn	Faucets in the way	Slippery	Other
Lavatory				Yes		
Toilet						
Shower					Yes	
Tub	Yes				Yes	
Tub-shower						
Toilet Flushing apparatus						
Mirror*						
Dressing Table						

*Many respondents said they really would enjoy a mirror either in the bathroom or their room so they could see to comb their hair. They only had small hand mirrors of their own.

TYPES OF LIVING ACCOMMODATIONS IN NURSING HOME "B" VISITED AND TYPES OF BATHROOM FACILITIES

Occupancy	Bathroom Facilities		
	Private	Shared Between Rooms	Down the hall
Single room			
Double room	L	T	tub and/or shower
Dormitory	No dormitory type accommodations		

L - lavatory

T - toilet

TYPES OF PERSONAL HYGIENE EQUIPMENT AVAILABLE IN NURSING HOME "B" VISITED

Lavatory in room	Yes
Lavatory and toilet between two bedrooms	No
Lavatory, toilet and tub-shower for a private room	No
Lavatory, toilet and tub-shower between two rooms	No
Shower down the hall	Yes
Shower-tub, toilet down the hall	Yes
Tub down the hall	Yes
Dressing Table with lavatory	Yes in the room
Dressing Table without a lavatory	No
Mirror	Yes above dressing table

Urinal	No
Dental Hygiene	No

CHARACTERISTICS OF PERSONAL HYGIENE EQUIPMENT
WHICH MIGHT DETERMINE ITS EFFICIENCY
AS FOUND IN NURSING HOME "B"

Equipment	Too high	Too low	Faucets hard to turn	Faucets in the way	Slippery	Other
Lavatory						
Toilet						
Shower						
Tub						
Tub-shower						
Toilet Flushing apparatus						
Mirror						
Dressing Table						

No one seemed to object to anything except several were suspicious of the dependability of the hydraulic lift which is used to get them in and out of the tub.

TYPES OF LIVING ACCOMMODATIONS IN NURSING HOME "C" VISITED AND TYPES OF BATHROOM FACILITIES

Occupancy	Bathroom Facilities		
	Private	Shared Between Rooms	Down the hall
Single room			
Double room	T & L		Tub and/or shower
Dormitory	No dormitory type accommodations		

L - lavatory

T - toilet

TYPES OF PERSONAL HYGIENE EQUIPMENT AVAILABLE IN NURSING HOME "C" VISITED

Lavatory in room	Lavatory and toilet private for each room
Lavatory and toilet between two bedrooms	
Lavatory, toilet and tub-shower for a private room	
Lavatory, toilet and tub-shower between two rooms	
Shower down the hall	Yes
Shower-tub, toilet down the hall	Yes
Tub down the hall	Yes
Dressing Table with lavatory	No
Dressing Table without a lavatory	Yes in bathroom down hall
Mirror	

Urinal	Yes in men's toilet
Dental Hygiene	No

CHARACTERISTICS OF PERSONAL HYGIENE EQUIPMENT
WHICH MIGHT DETERMINE ITS EFFICIENCY
AS FOUND IN NURSING HOME "C"

Equipment	Too high	Too low	Faucets hard to turn	Faucets in the way	Slippery	Other
Lavatory						
Toilet						
Shower						
Tub	Yes					
Tub-shower						
Toilet Flushing apparatus						
Mirror	None in room but o.k. in bathroom					
Dressing Table	None in room but o.k. in bathroom					

Majority of respondents were very satisfied with all facilities.

APPENDIX D

TABLES

TABLE I

DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Characteristic	Percentage
Age:	
Under 70	Only one person
70 - 79	35
80 - 89	64
90 - Over	Only one person
Marital Status:	
Single	14
Married	86
Education:	
Grade School and under	50
High School	21
College	28
Business or Vocational School	1
Occupation (some had more than one profession):	
Housewife	58
Professional	36
Laborer	14
Income* (before retirement):	
$2,000 - 3,000	50
3,000 - 5,000	17
5,000 - 8,000	16

TABLE I (Continued)

Characteristic	Percentage
Income* (Continued)	
8,000 - 10,000	17
above	0
Home Ownership:	
Own	86
Rent	14
Location of Home:	
Town	86
Farm	14
Persons in Family:	
Boys	63
Girls	37
Religion:	
Protestant	100
Catholic	0
Jewish	0
Other	0

*Do not feel that these figures mean anything since so many respondents were in the 80-90 age group and did not seem to remember that.

TABLE II

SOCIO-ECONOMIC STATUS

Score:	1	2	3
Education	Grade School or under 50%	High School 21%	College 29%
Occupation	Laborer 14%	Housewife 57%	Professional 29%
Income	$2,000-3,000 50%	$3,000-5,000 17%	$5,000-10,000 33%

TABLE III

HEALTH PERCENTAGE BY SEX

Ailment	Total		Sex*	
	Yes	No	Male	Female
Crippled Hands or Arms	22	78	0	30
Crippled Legs	43	57	50	40
Back Trouble	22	78	0	30
Arthritis	43	57	50	30
Heart Trouble	14	86	25	10
High Blood Pressure	22	78	0	30
Stroke	28	72	25	30
Poor Sight	71	29	50	70
Hard of Hearing		100	0	0
Nervousness	22	78	25	20
Kidney Trouble	14	86	0	20
Diabetes	22	78	25	20
Feel tired all the time	22	78	0	30
Other	28	72	25	20
No ailment that you know of	22	78	0	30

*Note: Percentage of total respondents.

TABLE IV

PERCENTAGE OF AILMENTS BY AGE

Ailment	70-79	80-89	90 -	Total
Crippled Hands or Arms	25%	22		22
Crippled Legs	50	44		43
Back Trouble	25	22		22
Arthritis	25	33	less than one*	43
Heart Trouble		22		14
High Blood Pressure	25	22		22
Stroke		33		28
Poor Sight	50	55	less than one*	71
Hard of Hearing	0	0	0	0
Nervousness		33		22
Kidney Trouble		22		14
Diabetes		44		22
Feel Tired all the Time	25	44		22
Other		11		28
No ailment	25	22		22

*Only one person - i.e., less than one per cent.

TABLE V

HABITS

	Age-Male			Age-Female		
	70-79	80-89	90-	70-79	80-89	90-
Visits others in the nursing home:						
1. sometimes			100	66	40	
2. often	100	100		34	60	
3. not at all						
Enjoys bath:						
1. sponge						
2. tub	100			50	40	
3. shower		50		50	30	
4. sometimes tub - sometimes shower		50	100		30	
Mind taking bath when someone is present:						
1. not much	100	100		50	60	
2. prefer to be alone			100	50	40	
Important in bathroom:						
1. privacy		100	100	100	80	
2. convenience (space around fixtures)		100	100	100	80	
3. convenience (location of bathroom)		100	100	100	80	
4. maintenance		100			80	
5. beauty		100			80	
6. other		50			90	

TABLE V (Continued)

	Age-Male			Age-Female		
	70-79	80-89	90-	70-79	80-89	90-
Prefer taking bath seated on a chair under proper conditions*:						
1. yes		100		50	50	
2. no					16	
3. do not know	100		100	50	34	
Likes changes:						
1. yes	100	50		100	60	
2. no		50			40	

*Water deep enough to partially cover.

TABLE VI

PERCENTAGE OF RELATIVITY OF HEALTH TO HABITS

Ailment	Visits Others	Enjoy Bath			Enjoy Bath Seated on Chair		
		Tub	Shower	Tub-Sho.*	Yes	N	Do not know
Crippled hands or arms	25	60	75	75	66⅔		33⅓
Crippled legs	50	60	75		50		50
Back trouble	25	33⅓	66⅔		50	25	25
Arthritis	33⅓	33⅓	66⅔		50		50
Heart trouble	17		100		100		
High Blood pressure	25	66⅔	33⅓		33⅓		66⅔
Stroke	25	50	25	25	50		50
Poor sight	67	50	38	12	33⅓	22	44⅔
Hard of hearing	0	0	0	0	0	0	0
Nervousness	25	33⅓	33⅓	33⅓	66⅔		33⅓
Kidney trouble	17	50	50		50		50
Diabetes	25	66⅔	33⅓		33⅓	33⅓	33⅓
Feel tired all the time	33⅓	66⅔	33⅓		33⅓	33⅓	33⅓
Other	1	50	50		66⅔	33⅓	
No ailment	25		33⅓	66⅔	66⅔	33⅓	

*Tub sometimes - shower sometimes.

TABLE VII

PERCENTAGE OF PREFERENCES FOR TYPES OF BATHING FACILITIES RELATIVE TO HABITS

Like Change	Prefer Type			Don't Know
	I	II	III	
Yes	12½	12½	50	25
No		40	60	
Don't Know				100

TABLE VIII

ATTITUDES OF SURROUNDINGS

	Per Cent	
	Male	Female
Feelings about present living accommodations:		
1. like it very much	75	90
2. fairly well satisifed		10
3. do not like it	25	
Enjoy house cleaning:		
1. yes	25	100
2. no	75	
Dislike cleaning the following:		
1. lavatory	25	0
2. toilet		0
3. bath tub or shower		0
4. bathroom excluding fixtures		0
5. do not mind cleaning anything in the bathroom	75	0
Favorite color	A	B
How long lived in Nursing Home (years)	C	D

A. Only colors named were green, blue, all.

B. Only colors named were green 30%, blue 60%, pink 10%.

C. Majority lived in Nursing Home less than one-full year, although some respondents were there as long as four years.

D. Majority lived in Nursing Home less than one full year; some were there as long as three years.

TABLE IX

PERCENTAGE OF RECEPTIVITY OF NEW DESIGNS SHOWN RESPONDENTS RELATIVE TO SATISFACTION OF SURROUNDINGS

Satisfied With Surroundings	Receptivity of New Design		
	Yes	No	Do Not Know
1. very much	66⅔	8	25
2. fairly well	100		
3. do not like it	100		

TABLE X

MANAGERS

	"A"	"B"	"C"
Sex	M	M	F
Age	36	52	
Marital Status:			
1. married	x	x	x
2. single			
Socio-Economic Status:			
1. Education			
a. High School and under		x	x
b. 4 years college			
c. over 4 years college	x		
2. Occupation			
a. manager (years)	8	3/4	4
3. Income			
a. $5,000-8,000		x	
b. 8,000-12,000			x
c. above	x		
Religion:			
1. Protestant	x	x	x
2. Catholic			
3. Jewish			
4. Other			
Home Ownership:			
1. Own	x	x	x
2. Rent			
Dislike Cleaning Anything in Bathroom:			
1. Yes (Why? ________________)			
2. No	x	x	x
Type Bath Enjoyed Best:			
1. Tub		x	x
2. Shower	x		

TABLE X (CONTINUED)

	"A"	"B"	"C"
Most Important in Bathroom:			
1. Privacy			x
2. Convenience (space around fixture)	x	x	x
3. Convenience (location of bathroom)			x
4. Maintenance	x	x	x
5. Beauty			
6. Other (What? ________)	a.	b.	c.
Preference of Designs on Drawings:			
1. Conventional bathing facility			
2. Table-type bathing facility			
3. Easy chair bathing facility	x	x	x
Like change:			
1. Yes	x	x	x
2. No			

a. Faucets must turn easily
safe

b. Faucets must turn easily
safe

c. Faucets must turn easily
convenvenient for help
safe

VITA

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Master of Science

Thesis: BATHING FACILITIES FOR THE AGING: RECEPTIVITY BY RESIDENTS AND MANAGERS IN THREE NURSING HOMES

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