

THE RELATIONSHIP BETWEEN THE PERFORMANCE OF CERTAIN HOUSEHOLD BENDING
ACTIVITIES AND THE AGE AND PHYSICAL LIMITATIONS OF SIXTY AGED HOMEMAKERS
IN MANHATTAN, KANSAS

by

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INTRODUCTION

Americans are increasingly becoming more aware of the implications of the large increase in the proportion of the population who are over 65 years of age. In a 1960 report of the Congressional Committee on Labor and Public Welfare (18) it was pointed out that approximately 9 percent or 16 million persons are over 65 years of age. It is expected that the number of Americans who are now over 65 will become 20 million just 15 years from now.

There are many problems which those aged persons are facing as they advance in years. Adjustments are necessary for the aged in relation to retirement, finances, and housing. Physical limitations increase with age, often requiring special adjustments.

Although the husband may retire from industry, his profession, or business, a homemaker never really "retires" but continues to be responsible for the household activities. There has been little research concerning the performance of household activities by aged homemakers. This study aims to investigate the extent to which age and physical limitations of aged homemakers affect their performance of household activities, especially those which require bending.

Objectives of the study:

1. To investigate the practices, limitations, and difficulties of aged homemakers in performing certain household activities which require bending.
2. To determine whether age and physical limitations affect the performance of household activities which require bending.

REVIEW OF LITERATURE

Increasingly Americans are becoming aware of the implications of the large increase in the proportion of the population who are over 65 years of age. This review of literature summarizes the general situation concerning the aged in this country, studies related to biomechanics, and to household activities of both younger and older homemakers.

Studies of Old Age

The Congressional Committee on Labor and Public Welfare in a 1960 report (18) stated that approximately 9 percent of the population is over 65 years of age. The report continues by stating:

The population 65 and over is not homogeneous in age structure. In a truly aging population, there are sufficient numbers in age brackets beyond the age of 65 to warrant separate analysis and consideration. Concretely, there are already nearly 6 million Americans over the age of 75, most of them women. In only 20 years, in 1980, there will be more than 9 million Americans over the age of 75. Twenty years after that, in the year 2000, more than 13 million will be in that upper age category. The problems of the aged are intensified in this group.

Aging has been defined in a number of ways by different authorities. Stieglitz (17) in discussing aging said:

Aging is a part of living. All living matter ages and as it ages changes. Aging involves every one of the innumerable aspects of life. Gerontology is the science of aging in its broadest sense. The aged and aging are the same; the aged are people, aging is a process. Geriatrics is but a part of a subdivision of the broader field of gerontology.

Old age was defined by Havighurst and Albrecht (11) when they stated:

Old age is many diverse things wrapped up in one phrase. It covers vigorous healthy people as well as those so feeble that all their bodily needs must be cared for. Chronological age is not indicative of the physical or mental age of anyone. Each person is his own time clock, some going much faster than others.

According to Dublin (7), three things have happened since the turn of the century to increase the number and proportion of the aging in our population. First, millions of the young immigrants of pre-World War I are now old people. Secondly, our birth rates over the past century have declined rapidly, and in spite of resurgence since World War II, may possibly continue to decrease in the population as a whole. Thirdly, vastly improved survival has radically changed our age distribution from a relatively young population to one that is aging rapidly.

The Congressional report (18) on The Aged and Aging in the United States lists the changes now considered as a normal part of the aging process as including reduced vigor, slowing of responses, poorer hearing and sight, and a lessened ability to withstand stress because of decreased physiological reserves. In addition to these changes, heart disease, strokes, arthritis, diabetes, glaucoma, cancer, and mental illness affect many of the aged.

Duvall (8) writes that many diseases of old age tend to be chronic and may seriously handicap the person over many months or even years. Since women live longer than men, on the average, it is usually the woman who nurses her husband through illnesses that affect him in the later years of life. Because of her husband's illness she must one by one take over responsibilities new to her.

There are a disproportionate number of elderly people reported to be affected by one or more chronic ailments. From data collected by household interviews in the National Health Survey (12) during the period July 1957-June 1959, it is estimated that 77 percent of the persons in the civilian noninstitutionalized population 65 years of age or older had one or more chronic conditions.

Youmans (21) found that increased chronological age and poor health appeared to bring a slight reduction in the weekly hours worked by the women in Kentucky who considered themselves full-time workers. In this study full-time women workers, 60-64, estimated they worked an average of 39 hours each week. In contrast, full-time women workers, 65 and over, estimated they worked an average of 34 hours each week. Full-time women workers who reported one or more chronic ailments estimated they worked an average of 34 hours per week. Full-time women workers with no chronic ailments estimated they worked an average of 41 hours each week.

Studies Related to Body Mechanics

This study was made to determine the household activities requiring bending which aged women are able to perform. Body mechanics is a broad field and only those phases related to this study will be discussed.

Body mechanics, according to Grady (10), is a term gradually replacing posture because it includes the body in motion as well as in standing and sitting. The word, "mechanic", suggests a relationship to the functioning of the body.

With regard to bending, Bielawski (14) said, the homemaker should recognize that when she rises after bending she is lifting half the weight of her body.

According to Lee and Wagner (15) it is necessary to understand the fundamental principles governing posture and movements common to all tasks and occupations if a person is to determine the most effective way of performing a task. They state:

The human body presents a problem of weights, levers, supports, and devices for producing motion. The body mass structure is the weights; the joints, the levers; the bones, the support; and the muscles, the devices for producing motion. The study of body mechanics is therefore the task of determining how the body weights can be handled with the least strain and least expenditure of energy so as to maintain stability when at rest or in motion.

Lee and Wagner (15) list the basic principles of correct body mechanics

as:

1. Correct body mechanics are those that produce the best results with the least effort.
2. Opposing forces are constantly at work on the body so that there is ever present the task of holding these opposing forces in equilibrium.
3. An object at rest tends to remain at rest and an object moving tends to continue moving in the same direction and at the same speed unless some external force intervenes.
4. Gravity acts upon the body in a vertical downward pull.
5. When the body is to be put in motion, force should be applied through the center of gravity in the direction of the desired movement.
6. When lifting, supporting, or carrying an object, that object becomes a part of the body weight in so far as forces that maintain balance are concerned.
7. In moving a load less energy is expended if the force is applied through the center of gravity of the load in the direction of the desired movement.
8. It requires many repetitions of a desired action before the reflex arcs of the nervous system are effectively "conditioned" and the action is done with conscious control.

According to Grady (10) maintaining the correct alignment of the body segments affects the functioning of all the body organs. When the chest sags because of a bowed back the heart and lungs may be crowded and only partially effective. If there is unbalanced weight distribution painful reactions may be produced in the feet, legs, and back. If the body weights

are not well balanced, the muscles must work against the pull of gravity to maintain an upright position. This then results in wasted energy and muscle strain.

Langworthy (14) found that the expenditure of energy in the performance of any task varies with the nature of the task and with the rate at which it is performed. Sweeping the floor, when compared with such tasks as knitting, sewing, would be classified as hard labor. The energy expenditure is 40.1 calories per hour for sweeping the floor, being four or five times as great as knitting or sewing.

Grady (10) reports that correct body mechanics in stooping require that the body be lowered to the task by bending at the hips, knees, and ankles, while maintaining an erect posture of the trunk and head. There are homemaking tasks which require stooping or bending for long periods, such as washing baseboards or working in the garden. These tasks may be fatiguing if a stoop or squat position is maintained for a long period of time. She states that for such tasks it is essential to lower the body to a base of support which enables the worker to maintain an extended trunk posture. Kneeling on one knee may facilitate moving as the work progresses. On the other hand, kneeling on both knees, keeping the back straight, and using one hand for balance may be easier for some. Sitting on a low stool may lower the body sufficiently for some tasks.

According to Bonde (5) correct posture directly affects energy output so that every possible effort should be made to control working conditions so that they are conducive to proper positions. Factors contributing to good or poor posture in the home include the height of the table top or work surface, sink, stove, ironing board, or desk; the height of drawers and shelves, handles of vacuum cleaner, mop, broom, hoe or rake; the height and

type of chairs and stools, and the construction of beds.

For older people with lessened energy who do their own housework, Rabinovitz in the Proceedings of the Charles Fisher Memorial Institute on Aging (19) suggested that homes must be more efficient to enable the aged to take part in activities which can make their lives meaningful.

Studies Related to Household Activities

Few studies have been made which relate directly to the household activities of aged homemakers. Various studies have been made relating to young homemakers and the household activities which they perform. Studies relating to both young and aged homemakers will be discussed.

Studies confirm that as homemakers advance in years they make changes in the performance of their household activities. In a study of the socio-economic problems of older persons, Youmans (21) reported that women made substantial changes in their work status between the age of 50 and age 60 and over. At age 50, 98 percent of the women were engaged in full-time work activity, whereas only 37 percent of those 60 years or over said they worked full-time.

Of the aged women interviewed by Youmans (21) 19 percent said they were fully retired and 39 percent said they were partly retired. To these rural women retirement meant withdrawal from housework, rather than from paid employment. The percentages of women who reported themselves fully retired or unable to work were reported in four age groups: age 60-64, 11 percent; age 65-69, 20 percent; age 70-74, 20 percent; and age 75 and over, 45 percent. Those who considered themselves full-time workers worked a median of 37 hours each week, while those who considered themselves only partly retired worked

a median of 22 hours each week.

The Kansas Agricultural Experiment Station Project 288, Housing the Rural Aged in Kansas (1), showed that as the women grew older there was a decrease in the extent of their performance of household activities. At age 65-69, 97.8 percent prepared meals and performed most of the other activities, as compared to 66.7 percent of those aged 80 years or older. However, some were unable to do any household activities and the proportion of these increased with age. At the age 65-69 less than 2 percent did no household activities as compared to about 20 percent at age 80 or older. As age increased the heavier household tasks, such as laundry, were done by proportionately fewer women. At age 80 or older nearly 40 percent did no laundry, but did most of the other household tasks, as compared to only 13 percent at age 65-69.

Retirement is not the problem for the wife that it often is for the husband. According to Duvall (8) the wife, in a sense, "retired" some years ago when the last child was launched. In another sense she never really "retires" as long as there are meals to prepare, beds to make, and other household routines. It may be necessary for her to get some additional equipment to carry some of the load that now is too burdensome for her failing strength, or it may be necessary to hire some of the heavy work done on a regular or seasonal basis.

Other studies have been made which related to the care of the house, although the studies are not related directly to the aged. Bevacqua (3) studied 31 cardiac homemakers in central Pennsylvania to secure information regarding the housecleaning practices, physical limitations and difficulties encountered by this special group of homemakers. She developed a cleaning

cart, which would help with conservation of time and energy when cleaning.

Factors affecting the amount of time used in the care of the house were reported by Warren (20), in 1936, who found the most important factor in the amount of time used for the care of the house was the number of rooms in the house. In 1953, Cowles and Dietz (6) reported that house size as measured by the number of rooms and the number of stories, and the possession of a vacuum cleaner seemed to be of importance in determining the amount of time used. McCandless (16) in 1959 interviewed 107 Ithaca homemakers concerning their "day-to-day" care of the house. She said:

When homemakers were asked what factors made care of their home easier, about one fourth of them mentioned the vacuum cleaner, equipment other than the vacuum cleaner, and house arrangement, which included storage and surroundings.

As people grow older they have decreased strength with which to perform tasks. Warren (20) found that the care of the house was a disagreeable and fatiguing homemaking activity, as one third of the homemakers listed cleaning and keeping the house in order as the most fatiguing homemaking activity. In a post-card questionnaire of 532 homemakers in New York in 1937, Knowles (13) found mopping floors and general cleaning to be first and second among the five most tiring tasks.

Describing the present situation concerning the maintenance of the house, Rabinovitz reported by Tibbitts (19) in the Proceedings of the Charles Fisher Memorial Institute on Aging, states:

Many people are trying to live without household help in the manner that a few people used to live with the help of many servants. Strength is used getting the dirt out of the rugs and draperies, climbing ladders, crawling under beds, and waxing and polishing endlessly in an effort to maintain the standard of appearance of a home that was originally designed to be maintained by a whole staff of servants.

Cowles and Dietz (6) found that the homemakers' standards of orderliness of the house was also important in relation to the amount of time used for the care of the house. Slightly over seven tenths of the homes visited by Youmans (21) were rated as clean, neat, and furnished tastefully and adequately. The remainder of the homes were rated as somewhat unclean or unkept with rather unattractive furniture. This study found that socioeconomic status and marital status, rather than the advancing age of the respondents, appeared to be related to the upkeep of the home.

METHOD OF PROCEDURE

This study was made to determine the extent to which age and physical limitation of homemakers, age 70-79, affect the extent of their performance of household activities and especially those activities requiring bending.

In this study the age range of 70-79 years was chosen as it represents a period of 10 years when a decrease in activities is believed likely to occur. The Kansas Agricultural Experimental Station Project 288 (1) Housing the Rural Aged in Kansas, showed that as age increased the household activities of the women decreased. During the years 70-79, 18 percent of the women did none of the household activities; at 80 years or older, 20 percent did none; as compared to 2 percent at ages 65-69.

A location of an area having a high density of aged population and also being conveniently accessible to the university campus was desirable. Wards 3 and 4 of the city of Manhattan, Kansas were near the university. In 1950 Anderson (2) found a high density of age population in these wards. Examination of the 1960 List of Residents and Enumeration books prepared annually by the county assessors showed a continuing high density of aged population,

and so this area was chosen.

Only homemakers who maintained independent living arrangements and thus could be regarded as responsible for the management of the household activities of their dwelling unit were chosen as respondents. There were 178 such women between the age of 70-79 listed in Wards 3 and 4. They were arranged by name, age, place of residence and ward number.

In order to obtain a representative sample for interview, a statistician from Kansas State University drew 60 numbers between 1 and 178 from Statistical Tables for Biological, Agricultural, and Medical Research by Fischer and Yates (9). These numbers were matched with the names of the women as numbered on the list. This sample constituted approximately one third of the aged homemakers eligible for interview in these two wards and was regarded as an adequate sample for this study.

Substitutes were drawn to maintain the sample at 60 aged homemakers in case of refusals, or being found ineligible; such as having moved from the area, having a dependent living arrangement, or having been deceased. The person on the substitute list living nearest the chosen respondent was selected for interview. Substitutes were used for three of the selected homemakers who refused an interview, for two who had moved from the ward, for six who were not at home, for one deceased, and for five who were ineligible because of not having an independent living arrangement. A map of Wards 3 and 4 (Fig. 1, Appendix) shows the location of the selected homemakers in red and their substitutes in blue.

The interview-schedule, a copy of which appears in the Appendix, contains questions to determine the extent of household activities requiring bending performed by aged homemakers and the changes made in the extent or method because of age and physical limitations.

During the month of June, 1960, personal interviews were made with the homemakers. The writer was assisted with 30 of the interviews by Mrs. Elinor Anderson, a Kansas State University staff member in the Department of Family Economics. The interviewers read the questions and checked the answers in the blanks provided in the schedule. Subject matter was arranged to establish rapport between the interviewer and respondent rather than by a logical order. The data obtained from these interviews were tabulated and tables made.

For purposes of tabulating and analyzing the data, the homemakers were divided into two groups, the younger group, 70-74 years, and the older group, 75-79 years. They were also divided according to those having physical limitations and those not having physical limitations. The Chi Square statistical test was applied to these two variables. A summary of the methods of performing household activities was made.

FINDINGS AND DISCUSSION

Data are presented describing the aged homemakers studied, their physical limitations, and the household activities requiring bending which they performed.

The Homemakers

Sixty respondents, including the 17 substitutes, were interviewed. Only women responsible for the management of the household activities were included. The determining age for selection of respondents for interview was a minimum of 70 years and a maximum age of 79 years. Of those interviewed 27 women, or 45 percent were in the age group 70-74, and 33 women, or

55 percent, were in the age group 75-79 (Table 1).

Table 1. Age of homemakers interviewed.

Age	No.	%
70-74 years	27	45
75-79 years	33	55
Total	60	100

Most of them lived in households with persons 65 years of age or older only. The other aged persons included husbands, relatives or women friends. Twenty-eight widows or unmarried persons lived alone in a household, while others lived in two- or three-person households. Nineteen lived in two-person households, with only one living in a three-person household.

A person under 65 years of age lived in 15 of the households. These underaged persons usually were the son or daughter of the aged mother (Table 2).

Housing

In this study the single family dwelling was the most prevalent, as 44 of those interviewed lived in this type housing. The remaining lived either in duplexes or apartments. The dwelling unit consisted of three or four rooms for 26 of the homemakers. The remainder had larger dwellings with as many as nine or more rooms as shown in Table 3.

As Manhattan is a college city, many of the larger homes have been used for student or other housing. In this study 15 of the aged homemakers were responsible for the care of rooms other than those which they occupied (Table 4).

Table 2. Number and age of persons in household by all women, by age groups and by physical limitations.

No. of persons in household	All		70-74		75-79		Physical limitations		No physical limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
Over 65 years										
1	40	67	15	56	25	76	32	73	8	50
2	19	31	12	44	7	21	12	27	7	44
3 or more	1	2	-	-	1	3	-	-	1	6
Total	60	100	27	100	33	100	44	100	16	100
Under 65 years										
1	11	74	4	100	7	64	9	69	2	100
2	4	26	-	-	4	36	4	31	-	-
Total	15	100	4	100	11	100	13	100	2	100

Table 3. Type of dwelling and number of rooms in which homemakers resided by all women, by age and by physical limitations.

Item	: <u>All</u>		: <u>70-74</u>		: <u>75-79</u>		: Physical		: No physical	
	: <u>No.</u>		: <u>No.</u>		: <u>No.</u>		: <u>limitations</u>		: <u>limitations</u>	
	No.	%	No.	%	No.	%	No.	%	No.	%
Type of dwelling unit										
Single family	44	74	19	71	25	76	33	75	11	69
Duplex	2	3	2	7	-	-	2	5	-	-
Apartment	14	23	6	22	8	24	9	20	5	31
Total	60	100	27	100	33	100	44	100	16	100
No. of rooms in dwelling										
3-4	26	43	14	52	12	37	21	48	5	31
5-6	19	32	9	33	10	30	14	32	5	31
7-8	10	17	4	15	6	18	6	14	4	26
9 or more	3	5	-	-	3	9	2	4	1	6
No information	2	3	-	-	2	6	1	2	1	6
Total	60	100	27	100	33	100	44	100	16	100

Table 4. Number of rooms other than their own which homemakers cared for, by all women, by age groups and by physical limitations.

No. of rooms	: <u>All</u>		: <u>70-74</u>		: <u>75-79</u>		: Physical		: No physical	
	: <u>No.</u>		: <u>No.</u>		: <u>No.</u>		: <u>limitations</u>		: <u>limitations</u>	
	No.	%	No.	%	No.	%	No.	%	No.	%
1-2	7	47	1	14	6	76	7	53	-	-
3-4	5	33	4	58	1	12	3	23	2	100
5 or more	1	7	-	-	1	12	1	8	-	-
No information	2	13	2	28	-	-	2	16	-	-
Total	15	100	7	100	8	100	13	100	2	100

Extent of Physical Limitations of Homemakers

Chronic illness is common among people over 65 years of age. According to the National Health Survey (12), July 1957-June 1959, 77 percent of the persons in the civilian noninstitutionalized population 65 years of age or older had one or more chronic conditions. The homemakers in this study were also handicapped by a chronic disability but to a lesser degree than those in the National Health Survey, as only 73 percent claimed any physical limitations.

Arthritis was the most prevalent physical limitation among these aged homemakers. Of those with physical limitations 43 percent had arthritis. Of the others with physical limitations 30 percent had heart disorders. High blood pressure, eye conditions, rheumatism and neuritis followed to a lesser extent. The length of time they had had a physical limitation varied from a few months to 10 or more years as shown in Table 5.

Assistance with Household Activities

A homemaker never really "retires", but it is often necessary for her to have assistance with some of the household activities. The homemakers interviewed were in charge of the management of the household activities but some required assistance on either a regular or seasonal basis. They received help from family members, friends, or employed persons. Nearly one half of the 60 women received some help with their work. Family members living with their mother or in another household gave assistance to 22 women. Ten received assistance from employed help, while only three were assisted by friends. Assistance was given with cleaning, general housework, ironing and washing, in that order as shown in Table 6.

Table 5. Physical limitations by all women and by age groups.

Physical limitation	: All		: 70-74		: 75-79	
	: No.	%	: No.	%	: No.	%
Have	44	73	19	70	25	76
Do not have	16	27	8	30	8	24
Total	60	100	27	100	33	100
Type						
Arthritis	19	43	10	53	9	36
Heart	13	30	5	26	8	32
High blood pressure	4	10	2	11	2	8
Eye condition	4	10	1	5	3	12
Rheumatism	4	10	1	5	3	12
Neuritis	4	10	-	-	4	16
Soreness from injury	3	7	1	5	2	8
Diabetes	2	4	1	5	1	4
Length of time						
1-4 years	15	34	7	37	8	32
5-9 years	11	25	5	26	6	24
10 or more years	18	41	7	37	11	44
Total	44	100	19	100	25	100

Table 6. Assistance with household activities by all women, by age and by physical limitations.

Item	: All		: 70-74		: 75-79		: Physical limitations		: No physical limitations	
	: No.		: No.		: No.		: No.		: No.	
	%		%		%		%		%	
Number women assisted	29	48	12	44	17	52	23	52	6	37
Assisted by										
Family	22	76	7	58	15	88	19	83	3	50
Employed help	10	35	7	58	3	18	8	35	2	33
Friends	3	10	1	8	2	12	2	9	1	17
Type assistance										
Cleaning	22	76	7	58	15	88	18	78	4	62
Gen. housework	23	79	9	75	14	83	18	78	5	83
Washing	18	62	6	50	12	71	15	65	3	50
Ironing	16	55	6	50	10	59	14	61	2	33

The upkeep of the homes in which these women lived was rated subjectively by the interviewers on an ascending numerical scale of 1 to 5. In this study slightly over eight tenths of the homes were rated as 3 or better, which was regarded as average, clean and very clean. This compared to the seven tenths rated as clean by Youmans (21). The rating of the cleanliness of the homes is shown in Table 7.

Table 7. Rating of the cleanliness of aged homemaker's dwelling by all women, by age, and by physical limitations.

Scale	: All		: 70-74		: 75-79		: Physical limitations		: No physical limitations	
	: No.		: No.		: No.		: No.		: No.	
	%		%		%		%		%	
1 Poor	-	-	-	-	-	-	-	-	-	-
2 Fair	6	10	2	7	4	12	4	9	2	12
3 Average	7	12	2	7	5	15	6	13	1	6
4 Clean	31	52	14	52	17	52	25	58	6	38
5 Very clean	12	20	6	23	6	18	6	13	6	38
No information	4	6	3	11	1	3	3	7	1	6
Total	60	100	27	100	33	100	44	100	16	100

Household Activities

This study was conducted to find out which of the household activities requiring bending the aged homemakers were able to continue to perform and the ways they found to help them continue. Questions were directed to the care of the floors, the baseboards, low furniture and the bathroom.

Care of the Floors. Women have found a variety of ways to maintain the care of floors in a home, ranging from hand cleaning to the use of mechanical devices.

Vacuum cleaning of floors was the method most widely used to care for floors, followed by wet mopping, and hand cleaning. Fifty-one of all the women used a vacuum cleaner on some of the floors or floor coverings in their house. Of all the women interviewed, 41 cleaned the floors with a wet mop, 30 hand cleaned the floors, and 36 applied wax to some or all the floors.

The women were asked if they had ever vacuumed cleaned, wet mopped, hand cleaned or waxed the floors in their house even though they did not presently do one or more of these activities. Of the nine women who did not vacuum clean the floors, six had never done it, while three had discontinued. Five women did not own a vacuum cleaner.

Among the 18 women who did not wet mop any floors at the time of the study, 6 had never and 12 had discontinued the practice.

Of the 25 women who did not wax the floors, 4 had never, 19 had discontinued waxing, and there was no response from 2 (Table 8).

One half, or 30 of the women did not hand clean floors. Three of these 30 had never hand cleaned floors, with 93 percent or 27 discontinuing the use of this method.

Table 8. Method of caring for floors by all women, by age groups, and by physical limitations.

	All		70-74		75-79		Physical : limitations		No physical : limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Vacuum Clean</u>										
<u>Presently do</u>										
Yes	51	85	25	93	26	79	35	80	16	100
No	9	15	2	7	7	21	9	20	-	-
Total	60	100	27	100	33	100	44	100	16	100
<u>Past record</u>										
Once did	3	33	-	-	3	43	3	33	-	-
Never did	6	67	2	100	4	57	6	67	-	-
Total	9	100	2	100	7	100	9	100	-	-
<u>Wet Mop</u>										
<u>Presently do</u>										
Yes	42	70	20	74	22	67	30	68	12	75
No	18	30	7	26	11	33	14	32	4	25
Total	60	100	27	100	33	100	44	100	16	100
<u>Past record</u>										
Once did	12	67	3	43	9	82	10	71	2	50
Never did	6	33	4	57	2	18	4	29	2	50
Total	18	100	7	100	11	100	14	100	4	100

Table 8. (concl.)

	All		70-74		75-79		Physical limitations		No physical limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Wax Floors</u>										
Presently do										
Yes	35	58	18	67	17	48	27	59	8	50
No	25	42	9	33	16	52	17	41	8	50
Total	60	100	27	100	33	100	44	100	16	100
Past record										
Once did	19	83	7	87	12	80	12	75	7	100
Never did	4	17	1	13	3	20	4	25	-	-
Total	23 ^a	100	8 ^a	100	15 ^a	100	16 ^a	100	7 ^a	100
<u>Hand Clean</u>										
Presently do										
Yes	30	50	14	52	16	48	20	45	10	63
No	30	50	13	48	17	52	24	55	6	37
Total	60	100	27	100	33	100	44	100	16	100
Past record										
Once did	27	93	12	92	15	88	21	92	6	100
Never did	3	7	1	8	2	12	3	8	-	-
Total	30	100	13	100	17	100	24	100	6	100

^a No response from 2.

The frequency of caring for the floors depended largely on the method of care used on the floors. Most of the women vacuumed some of the floors or floor coverings once or twice a week, whereas waxing was done on many of the floors only once or twice a year as shown in Table 9.

The Use of a Vacuum Cleaner. The use of a vacuum cleaner on floors and floor coverings is a method of cleaning which requires, in most cases, less effort than hand cleaning or wet mopping. Of the 51 women who vacuum cleaned the floor area, 49 cleaned the living room by this method. The dining room floors were vacuum cleaned by 35, the bedroom by 29, the kitchen by 10 and the bathroom by 6.

Only three of all the women interviewed reported they had discontinued the use of a vacuum cleaner. Twenty-six of the 51 women thought they did the same amount now as at age 65; 21 thought they did less, and 4 did more vacuum cleaning.

No bending was necessary when using the vacuum cleaner for 48 of the 51 women. Only three found it necessary to bend or stoop their body when using this method.

None of the women who used a vacuum cleaner had changed their method of using the cleaner. Some had only had a vacuum cleaner for a few years, having previously used a broom to clean floor coverings.

Even though vacuum cleaning requires little or no bending, 2 of the 51 women thought their problems connected with vacuum cleaning floors were serious, 10 thought they were moderately serious, and 39 thought they were not serious (Table 10).

The Use of a Wet Mop. There were 42 women who used a wet mop on some or all the floors in their house. The rooms most frequently wet mopped were

Table 9. Frequency and type of floor care of rooms by all women.

: Rooms cleaned											
: All women											
Frequency of cleaning			: Kitchen			: Dining room			: Living room		
			No.	%		No.	%		No.	%	
			: Bedroom			: Bathroom					
			No.	%		No.	%		No.	%	
<u>Vacuum cleaning</u>											
Daily											
1-2 per week			1	10	-	2	4	2	7	1	16
1-2 per month			7	70	68	32	67	22	76	5	84
1-2 per year			1	10	26	12	25	3	10	-	-
1-2 per year			1	10	6	2	4	2	7	-	-
Total			10	100	100	48	100	29	100	6	100
<u>Wet mopping</u>											
1-2 per week											
1-2 per week			22	57	37.5	1	14	2	20	16	62
1-2 per month			15	40	37.5	2	29	3	30	9	35
1-2 per year			1	3	25	4	57	5	50	1	3
Total			38	100	100	7	100	10	100	26	100
<u>Hand cleaning</u>											
1-2 per week											
1-2 per week			8	42	-	-	-	-	-	16	55
1-2 per month			5	26	50	2	40	-	-	6	21
1-2 per year			6	32	50	3	60	4	100	7	24
Total			19	100	100	5	100	4	100	29	100
<u>Waxing by hand</u>											
1-2 per week											
1-2 per week			2	17	-	-	-	-	-	1	6
1-2 per month			4	33	13	1	10	1	8	5	31
1-2 per year			6	50	87	9	90	11	92	10	63
Total			12	100	100	10	100	12	100	16	100
<u>Waxing by applicator</u>											
1-2 per week											
1-2 per week			2	10	-	-	-	-	-	2	11
1-2 per month			10	53	56	2	33	5	42	10	53
1-2 per year			7	37	44	4	67	7	58	7	36
Total			19	100	100	6	100	12	100	19	100

Table 10. Vacuum cleaning of floors or floor coverings by all women, by age groups, and by physical limitations.

Item	N=51			N=25			N=26			N=35			N=16		
	No.	%	All	No.	%	70-74	No.	%	75-79	No.	%	Physical limitations	No.	%	No physical limitations
Rooms cleaned															
Living room	49	96		25	100		24	92	34	98	15	94			
Dining room	35	69		16	64		19	73	25	72	10	63			
Bedroom	29	57		14	56		15	58	20	58	9	56			
Kitchen	10	19		6	24		4	15	9	26	1	6			
Bathroom	6	12		5	20		1	4	6	17	-	-			
Frequency changed (since age 65)															
Less	21	41		10	40		11	42	14	40	7	44			
More	4	8		3	12		1	4	4	11	-	-			
Same	26	51		12	48		14	54	17	49	9	56			
Total	51	100		25	100		26	100	35	100	16	100			
Method changed															
Yes	-	-		-	-		-	-	-	-	-	-			
No	51	100		25	100		26	100	35	100	16	100			
Total	51	100		25	100		26	100	35	100	16	100			
Body position															
No bending necessary	48	94		24	96		24	92	32	92	16	100			
Bending necessary	3	6		1	4		2	8	3	8	-	-			
Total	51	100		25	100		26	100	35	100	16	100			
Rank of problems ^a															
Serious	2	4		1	4		1	4	2	6	-	-			
Moderately serious	10	19		5	20		5	19	10	28	-	-			
Not serious	39	77		19	76		20	77	23	66	16	100			
Total	51	100		25	100		26	100	35	100	16	100			

^a χ^2 significant difference at the 5% level in reference to whether or not they have physical limitations.

the kitchen by 39 women and the bathroom by 26. Other rooms cleaned with a wet mop were the bedroom by 10, and the dining and living rooms by 8 each.

Since they had become 65 years of age, 25 of these women thought they used a wet mop less than they had previously. Physical limitations and a smaller family group were the prevalent reasons given for discontinuing the practice by these women. The same amount of wet mopping as at 65 years of age was done by nine women while eight did more wet mopping.

Although the use of a mechanical device, such as a mop, would tend to eliminate extreme bending as is necessary in cleaning by hand, 31 of these women had to stoop to move the water container and/or to wring the mop. However, 11 had devised a method which required no stooping when wet mopping floors.

Of the 42 women, 29 had never changed their method of wet mopping the floor. Thirteen of these women had changed their method by using a different body position, using different equipment, or both.

When these women were asked how serious they thought their problem or problems were when using a wet mop, only one woman thought they were serious. Moderately serious were the problems of 15 women and not serious were the problems of 26 when wet mopping floors (Table 11).

Hand Cleaning of Floors. Hand cleaning the floors is an activity which requires more bending than wet mopping. All of the women who hand cleaned some floors cleaned the bathroom by this method. Two thirds also hand cleaned the kitchen floor. Other rooms hand cleaned were the dining room by six, the living room by five, and bedroom by four.

Although 27 of the 60 women had discontinued hand cleaning floors, 16 of the 30 who continued to hand clean thought they did less now than at 65

Table 11. Wet mopping of floors or floor coverings by all women, by age groups, and by physical limitations.

Item	N=42			N=20			N=22			N=30			N=12		
	All No.	%	:	70-74 No.	%	:	75-79 No.	%	:	Physical limitations	%	:	No physical limitations	%	:
Rooms cleaned															
Kitchen	39	93	:	20	100	:	19	87	:	28	94	:	11	92	:
Dining room	8	19	:	2	10	:	6	27	:	8	27	:	-	-	:
Living room	8	19	:	4	20	:	3	14	:	5	17	:	2	17	:
Bedroom	10	24	:	4	20	:	6	27	:	8	27	:	2	17	:
Bathroom	26	62	:	13	65	:	13	59	:	19	63	:	7	58	:
Frequency changed (since age 65)															
Less	25	60	:	12	60	:	13	59	:	17	57	:	8	67	:
More	8	19	:	3	15	:	5	23	:	7	23	:	1	8	:
Same	9	21	:	5	25	:	4	18	:	6	20	:	3	25	:
Total	42	100	:	20	100	:	22	100	:	30	100	:	12	100	:
Method changed															
Yes	13	31	:	5	25	:	8	36	:	11	37	:	2	17	:
No	29	69	:	15	75	:	14	64	:	19	63	:	10	83	:
Total	42	100	:	20	100	:	22	100	:	30	100	:	12	100	:
Body position															
No bending necessary	11	26	:	3	15	:	8	36	:	9	30	:	2	17	:
Bending necessary	31	74	:	17	85	:	14	64	:	21	70	:	10	83	:
Total	42	100	:	20	100	:	22	100	:	30	100	:	12	100	:
Rank of problems ^a															
Serious	1	2	:	-	-	:	1	4	:	1	3	:	-	-	:
Moderately serious	15	36	:	6	30	:	9	41	:	15	50	:	-	-	:
Not serious	26	62	:	14	70	:	12	55	:	14	47	:	12	100	:
Total	42	100	:	20	100	:	22	100	:	30	100	:	12	100	:

^a χ^2 significant difference at the 1% level in reference to whether or not they have physical limitations.

years of age. The most prevalent reasons given for discontinuing were physical limitations and a smaller family group. Twelve of the women thought that they did about the same amount of hand cleaning as they had done at 65 years of age, while the remaining two respondents did more hand cleaning.

Crawling on their hands and knees was the method used by 16 of the 30 women. Bending from the waist was preferred by 11 women.

Only 6 of the 30 women who hand cleaned their floors had changed their method. These changes were frequently in body position due to some physical limitation. These women were asked how serious they thought their problem or problems were in connection with hand cleaning floors. Fifteen thought they were only moderately serious (Table 12).

The Use of Wax on Floors. The waxing of the floors had been discontinued in many of the aged persons' homes due to the fear of slipping or falling on the polished surface. Also many of the modern floor coverings are treated with a permanent glossy finish requiring no attention.

Application of the wax was either by hand or the use of an applicator. Some of these women used both methods depending on the floor area. Of the 35 women who waxed floors, 18 used an applicator for the kitchen and bathroom, 12 for the bedroom, 9 for the dining room and 6 for the living room.

Hand application of the wax was preferred by 16 of the 35 women for the bathroom, 12 for the kitchen and dining room, 10 for the living room and 8 for the dining room.

Although 20 of all the women had discontinued waxing floors, 16 of the 35 who waxed floors thought they did less now than at 65 years of age, 16 did the same amount, while 3 did more.

Table 12. Hand cleaning of floors with water by all women, by age groups, and by physical limitations

Item	N=30			N=14			N=16			N=20			N=10		
	No.	%		No.	%		No.	%		No.	%		No.	%	
Rooms cleaned															
Kitchen	20	67		10	71		10	63		13	65		7	70	
Dining room	6	20		3	21		3	19		4	20		2	20	
Living room	5	17		3	21		2	12		4	20		1	10	
Bedroom	4	13		2	14		2	12		2	10		2	20	
Bathroom	30	100		14	100		16	100		20	100		10	100	
Frequency changed (since age 65)															
Less	16	53		7	50		9	56		9	45		7	70	
More	2	7		1	7		1	6		1	5		1	10	
Same	12	40		6	43		6	38		10	50		2	20	
Total	30	100		14	100		16	100		20	100		10	100	
Method changed															
Yes	6	20		4	29		2	12		6	30		-	-	
No	24	80		10	71		14	88		14	70		10	100	
Total	30	100		14	100		16	100		20	100		10	100	
Body position															
Sit on floor	4	13		2	14		2	12		4	20		-	-	
On hands and knees	16	53		8	57		8	50		10	50		6	60	
Bend from waist	11	37		5	36		6	38		4	20		7	70	
Squat	2	7		-	-		2	12		2	10		-	-	
Rank of problems															
Serious	3	10		3	21		-	-		3	15		-	-	
Moderately serious	15	50		8	58		7	44		11	55		4	40	
Not serious	12	40		3	21		9	56		6	30		6	60	
Total	30	100		14	100		16	100		20	100		10	100	

A long handled applicator which required no bending was used by 23 of the women while 13 preferred crawling on their hands and knees to apply the wax. If the bathroom area was small, hand application was often necessary, whereas an applicator could be used in large areas such as the kitchen. A change of the method of applying wax, such as using an applicator, had been made by 18 of the 35 women.

When these women were asked how serious they thought their problem or problems were when waxing floors, of the 35 who waxed floors, 20 thought their problems were not serious while 15 thought they were moderately serious (Table 13).

Cleaning of Furniture and Baseboards. Dusting low surfaces such as furniture and baseboards often entail much bending. Fifty-seven women cleaned their furniture and three had discontinued this practice. Of the 57 women who cleaned the furniture, 33 did less than at 65 years of age, 21 did the same amount and 3 did more. They now had less dust because the house was closed up more, had less motivation and energy, or physical limitations had caused them to do less work.

Little or no bending was necessary when dusting for 14 of these women. Some tilted the small furniture such as chairs, while some used a handled dusting tool.

No change in method had been made over the years for 40 of the women, although 17 had changed their method. All used a different position and nine used different equipment.

Only one thought the problem or problems encountered in cleaning furniture were serious, while 25 thought they were moderately serious and 31 thought they were not serious (Table 14).

Table 13. Waxing of floors by all women, by age groups, and by physical limitations.

Item	N=35		N=18		N=17		N=27		N=8	
	No.	%	No.	%	No.	%	No.	%	No.	%
Rooms waxed by hand*										
Kitchen	12	34	7	39	5	30	8	30	4	50
Dining room	8	23	4	22	4	24	6	22	2	25
Living room	10	29	6	33	4	24	8	30	2	25
Bedroom	12	34	6	33	6	35	9	33	3	38
Bathroom	16	46	8	44	8	47	12	45	4	50
Rooms waxed by applicator*										
Kitchen	18	52	11	61	7	41	14	52	4	50
Dining room	9	26	4	22	5	30	8	30	1	12
Living room	6	17	4	22	2	12	5	18	1	12
Bedroom	12	34	9	50	3	18	9	33	3	38
Bathroom	18	52	11	61	7	41	14	52	4	50
Frequency changed (since age 65)										
Less	16	46	7	39	9	53	14	52	2	25
More	3	8	2	11	1	6	3	11	-	-
Same	16	46	9	50	7	41	10	37	6	75
Total	35	100	18	100	17	100	27	100	8	100
Method changed										
No	17	48	6	33	11	65	12	45	5	62
Yes	18	52	12	77	6	35	15	55	3	38
Total	35	100	18	100	17	100	27	100	8	100

Table 13. (concl.)

Item	N=35		N=18		N=17		N=27		N=8	
	No.	%	No.	%	No.	%	No.	%	No.	%
Body position										
No bending necessary	23	66	14	78	9	53	18	67	4	50
Bending necessary	14	40	6	33	8	47	11	41	3	38
No information									1	12
Rank of problems										
Serious	-	-	-	-	-	-	-	-	-	-
Moderately serious	15	43	10	56	5	30	13	48	2	25
Not serious	20	57	8	44	12	70	14	52	6	75
Total	35	100	18	100	17	100	27	100	8	100

* Some women use both methods of wax application.

Table 14. Cleaning of furniture by all women, by age groups, and by physical limitations.

Item	All		70-74		75-79		Physical limitations		No physical limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
Clean furniture										
Yes	57	95	26	96	31	94	41	93	16	100
No	3	5	1	4	2	6	3	7	-	-
Total	60	100	27	100	33	100	44	100	16	100
Frequency changed (since age 65)										
Less	33	58	15	58	18	58	25	61	8	50
More	3	5	1	4	2	7	3	7	-	-
Same	21	37	10	38	11	35	13	32	8	50
Total	57	100	26	100	31	100	41	100	16	100
Method changed										
No	40	70	18	69	22	71	28	68	12	75
Yes	17	30	8	31	9	29	13	32	4	25
Total	57	100	26	100	31	100	41	100	16	100
Body position										
No bending necessary	14	25	7	27	7	23	12	29	2	13
Bending necessary	42	74	18	69	24	77	28	69	14	87
No information	1	1	1	4	-	-	1	2	-	-
Total	57	100	26	100	31	100	41	100	16	100
Rank of problems ^a										
Serious	1	1	-	-	1	3	1	2	-	-
Moderately serious	25	44	15	58	10	32	22	54	3	19
Not serious	31	55	11	42	20	65	18	44	13	81
Total	57	100	26	100	31	100	41	100	16	100

^a χ^2 significant difference at the 5% level in reference to whether or not have physical limitations.

Although 54 women cleaned the baseboards, 4 had discontinued. Less cleaning of baseboards was done by 33 of the women, 20 did the same amount, and 1 did more cleaning.

Vacuum cleaning, wet washing and dry dusting were the methods of cleaning baseboards used by these women. Dry dusting was the most prevalent, with 33 women using this method, vacuum cleaning and wet washing were each used by 16 women. With tools such as the vacuum cleaner or dust mop, 33 of the women did not have to bend to clean baseboards, although 21 of the 54 women did bend or stoop.

The method of cleaning baseboards had not changed for 39 of the women. A change in method had been made by 14 women, all had changed body position and 13 had changed equipment. Moderately serious were the problems of 24 of these women, while 30 thought their problems were not serious (Table 15).

Care of the Bathroom Fixtures. As the care of the bathroom floor has been discussed in a previous section, this section includes only a discussion of the care of the bathroom fixtures. Caring for the bathroom fixtures requires reaching and cleaning the lavatory, bathtub and stool surfaces. Everyone had a bathroom, with 5 homes having shower facilities. Of the 60 women interviewed, all cleaned the stool, 55 cleaned the lavatory, 55 cleaned the bathtub and 5 cared for shower facilities. Most of these women cleaned the fixtures once or twice a week as shown in Table 16.

Forty-three of the women thought they did the same amount of cleaning in the bathroom as at the age of 65 years. Less care of the bathroom was done by 15 women, with 2 women doing more.

No bending was necessary to clean the lavatory for 46 of the women, with a slight amount of bending done by 9. The bending necessary to clean

Table 15. Cleaning of baseboards by all women, by age groups, and by physical limitations.

Item	All		70-74		75-79		Physical limitations		No physical limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
Clean baseboards										
Yes	54	90	24	89	30	91	40	91	14	88
No	6	10	3	11	3	9	4	9	2	12
Total	60	100	27	100	33	100	44	100	16	100
Frequency changed (since age 65)										
Less	33	61	14	58	19	64	26	65	7	50
More	1	2	-	-	1	3	1	3	-	-
Same	20	37	10	42	10	33	13	32	7	50
Total	54	100	24	100	30	100	40	100	14	100
Method cleaned										
Vacuum cleaned	16	30	11	46	5	17	10	25	6	43
Wet washed	16	30	7	29	9	30	15	37	1	7
Dry dusted	33	61	13	54	20	67	24	60	9	64
Method changed										
No	39	72	18	75	21	70	28	70	11	79
Yes	14	26	5	21	9	30	12	30	2	14
No information	1	2	1	4	-	-	-	-	1	7
Total	54	100	24	100	30	100	40	100	14	100
Body position										
No bending necessary	33	61	16	67	17	57	25	63	8	57
Bending necessary	21	39	8	33	13	43	15	37	6	43
Total	54	100	24	100	30	100	40	100	14	100
Rank of problems ^a										
Serious	-	-	-	-	-	-	-	-	-	-
Moderately serious	24	44	11	46	13	43	22	55	2	14
Not serious	30	56	13	54	17	57	18	45	12	86
Total	54	100	24	100	30	100	40	100	14	100

^a X² significant difference at the 5% level in reference to whether or not have physical limitations.

Table 16. Frequency of cleaning bathroom fixtures by all women, by age groups, and by physical limitations.

Frequency	All		70-74		75-79		Physical limitations		No physical limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
Lavatory										
Daily	11	20	6	23	5	17	8	20	3	22
1-2 per week	38	69	18	69	20	69	27	66	11	78
1-2 per month	5	9	2	8	3	10	5	12	-	-
No information	1	2	-	-	1	4	1	2	-	-
Total	55	100	26	100	29	100	41	100	14	100
Stool										
Daily	4	7	3	11	1	3	3	7	1	6
1-2 per week	47	78	21	78	26	79	34	77	13	81
1-2 per month	5	8	1	4	4	12	5	11	-	-
No information	4	7	2	7	2	6	2	5	2	13
Total	60	100	27	100	33	100	44	100	16	100
Bathtub										
Daily	11	20	5	20	6	20	9	22	2	13
1-2 per week	37	67	17	68	20	67	26	65	11	73
1-2 per month	5	9	2	8	3	10	4	10	1	7
No information	2	4	1	4	1	3	1	3	1	7
Total	55	100	25	100	30	100	40	100	15	100
Shower										
Daily	1	20	1	25	-	-	1	25	-	-
1-2 per week	3	60	2	50	1	100	2	50	1	100
No information	1	20	1	25	-	-	1	25	-	-
Total	5	100	4	100	1	100	4	100	1	100

the stool depended on how thoroughly the area was cleaned. If the base of the stool was cleaned more bending was necessary. No bending was necessary for 55 of the women, 5 did only a slight amount, while 16 were required to do much bending.

As the bathtub is a low surface, 39 of the 55 women found it necessary to do much bending to clean this area. By use of a handled tool or by cleaning the bathtub while sitting in the bathtub, 14 of the women did not need to bend. Slight bending was necessary for seven of the women.

The method of cleaning the bathroom fixtures had remained the same for 48 of the women, although 9 had changed methods. Physical limitations made a change of method necessary for some.

Thirty-nine women thought they had problems when cleaning the bathroom fixtures. The problem of being able to clean the tub and the lower outside stool area was mentioned most frequently. No problems were encountered by 19 of the women. When ranking their problems, 26 thought they were moderately serious, 26 thought they were not serious, and 8 considered them serious (Table 17).

Household Activities by Age and Physical Limitations

It was hypothesized that there was an association between the performance of the various activities and the age attained, and whether or not there were physical limitations. The Chi Square test showed no significant differences for the age variable.

Some of the differences in activities between those having or not having physical limitations were statistically significant. These differences are noted:

Table 17. Care of the bathroom fixtures by all women, by age groups and by physical limitations.

Item	All		70-74		75-79		Physical limitations		No physical limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Clean lavatory</u>										
Yes	55	92	26	96	29	88	41	93	14	88
No	4	7	-	-	4	12	3	7	1	6
No information	1	1	1	4	-	-	-	-	1	6
Total	60	100	27	100	33	100	44	100	16	100
No bending	46	84	20	77	26	90	34	83	12	86
Slight bending	9	16	6	23	3	10	7	17	2	14
Total	55	100	26	100	29	100	41	100	14	100
<u>Clean stool</u>										
Yes	60	100	27	100	33	100	44	100	16	100
No	-	-	-	-	-	-	-	-	-	-
Total	60	100	27	100	33	100	44	100	16	100
No bending ^a	55	92	23	85	32	97	40	91	15	94
Slight bending	5	8	2	7	3	9	4	9	1	6
Much bending	16	27	10	37	6	18	6	14	10	63
Total*	76	127	35	129	41	124	50	114	26	163
<u>Clean bathtub</u>										
Yes	55	92	25	93	30	91	40	91	15	94
No	5	8	2	7	3	9	4	9	1	6
Total	60	100	27	100	33	100	44	100	16	100
No bending	14	23	7	26	7	21	14	32	-	-
Slight bending	7	12	1	4	6	18	4	9	3	19
Much bending	39	65	19	70	20	61	26	59	13	81
Total	60	100	27	100	33	100	44	100	16	100

Table 17. (cont.)

Item	All	70-74	75-79	Physical limitations	No physical limitations
	No.	No.	No.	No.	No.
	%	%	%	%	%
<u>Clean shower</u>					
Yes	5	8	15	4	9
No	55	92	85	23	91
Total	60	100	100	27	100
<u>Method changed</u>					
Yes	9	15	15	4	18
No	48	80	85	23	77
No information	3	5	-	-	5
Total	60	100	100	27	100
<u>Frequency changed</u> (since age 65)					
Less	15	25	30	8	27
More	2	3	-	-	5
Same	43	72	70	19	68
Total	60	100	100	27	100
<u>Cleaning problems</u> ^b					
Yes	39	65	63	17	75
No	19	32	33	9	20
No information	2	3	4	1	5
Total	60	100	100	27	100

Table 17. (concl.)

Item	All		70-74		75-79		Physical limitations		No physical limitations	
	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Rank of problems</u> ^c										
Serious	8	14	3	11	5	15	7	16	1	6
Moderately serious	26	43	11	41	15	45	22	50	4	25
Not serious	26	43	13	48	13	39	15	34	11	69
Total	60	100	27	100	33	100	44	100	16	100

* Amount of bending varies with thoroughness of cleaning.

a χ^2 significant difference at the 5% level in reference to physical limitations.

b χ^2 significant difference at the 1% level in reference to physical limitations.

c χ^2 significant difference at the 5% level in reference to physical limitations.

1. Whether or not they vacuum clean floors is associated with having physical limitations. Having physical limitations tends to reduce the number doing vacuum cleaning below expectation.
2. The number of serious problems with vacuum cleaning is somewhat dependent on whether or not they have physical limitations.
3. More people with physical limitations have moderately serious problems with wet mopping than expected from their numbers in the sample.
4. The number of serious problems with dusting furniture is somewhat dependent on whether or not they have physical limitations.
5. The number of serious problems with cleaning baseboards is somewhat dependent on whether or not they have physical limitations.
6. The degree of bending when cleaning bathroom fixtures is somewhat dependent on physical limitations.
7. Having problems with the cleaning of bathroom fixtures is related to having physical limitations.
8. The seriousness of cleaning problems is related to physical limitations.

SUMMARY

The Women

This study of 60 randomly selected women living in Wards 3 and 4 of Manhattan, Kansas, between the ages of 70-79 was made to determine the extent to which age and physical limitations affect their performance of household activities which require bending. Of the respondents, 27 women or 45 percent, were in the age group, 70-74 years, and 33 women or 55 percent were in the age group, 75-79 years. Most of them, 28, lived alone in a household. Nearly three fourths lived in a single family dwelling and the remainder lived in either duplexes or apartments. About one half lived in dwelling units consisting of three or four rooms, with the rest of the homemakers living in dwelling units with as many as nine or more rooms. About

one fourth of the women were responsible for the care of rooms other than those which they occupied.

About three fourths of these women had some physical limitation. Arthritis was the most prevalent, with heart disorders, high blood pressure, eye conditions, rheumatism and neuritis following in that order.

Although the homemakers were in charge of the management of the household activities, half of them received some help with their performance. This assistance came mostly from family members, but friends and employed help were also used for cleaning, general housework, ironing, and washing. The upkeep of the homes in which these women lived was rated subjectively by the interviewers as average or better for eight tenths of the homes.

Household Activities

Care of the Floors. Vacuum cleaning was the method most widely used to care for floors, followed by wet mopping, hand cleaning, and application of wax. The room most commonly vacuum cleaned was the living room. None of the women had changed her method of using a vacuum cleaner, although one third thought they did less now than at 65 years. Although no bending was necessary when using the vacuum cleaner, a few thought its use was a serious problem.

A wet mop was used by two thirds of the women on some or all the floors in the house. The rooms most frequently wet mopped were the kitchen and the bathroom. Physical limitations and a smaller family group caused most of these women to wet mop less now than at the age of 65 years. Of the third who did not wet mop floors, most had discontinued. When wet mopping floors nearly three fourths of these women had to bend to move the water container

and to wring the mop. Of the 42 women, 13 of them had changed their method of using a wet mop by using a different body position, by using different equipment, or both.

All of the women who hand cleaned some floors in their house cleaned the bathroom floors by this method. One half of the women did not hand clean floors, although ninety percent had hand cleaned floors at one time but had discontinued the practice. With some having physical limitations and a smaller family group, one half of those who hand cleaned floors did less now than at 65 years. Fifty percent of the women who hand cleaned floors crawled on their hands and knees.

Two thirds of the women waxed floors using an applicator or applying the wax by hand. The rooms most commonly waxed were the kitchen and bathroom. A change in the method, such as the use of a long-handled applicator, had been made by over one half of the women.

Care of Furniture and Baseboards. The cleaning or dusting of low furniture and cleaning of baseboards, which often entail much bending, were activities performed by nearly all the women. Some did little or no bending when dusting furniture or cleaning baseboards by using a handled dusting tool, by tilting the small furniture, or by using vacuum cleaner attachments.

Care of Bathroom Fixtures. The bathroom fixtures were cleaned by nearly all of the women, although one fourth thought they did less now than at 65 years of age. No bending was necessary by most of the women when cleaning the lavatory. The bending necessary to clean the stool depended on how thoroughly the area was cleaned, as more bending was necessary if the base of the stool was cleaned. The bathtub being a low surface required much bending to clean for nearly three fourths of the women. One fourth of the women

did not need to bend by using a handled tool or by cleaning the bathtub while sitting in the tub. Three fourths of the women thought they had problems when cleaning the bathroom fixtures, with cleaning the bathtub and the lower outside stool as being mentioned most frequently.

Household Activities by Ages and Physical Limitations. The Chi Square test was applied to data on the basis of the two age groups, 70-74 years and 75-79 years, and physical limitations or no physical limitations. No significant differences were found for the age variable, although some significant differences were found for those having physical limitations or not having physical limitations. Whether or not they vacuum floors is associated with having physical limitations. More people with physical limitations have moderately serious problems with wet mopping than expected. The number of serious problems with vacuum cleaning, dusting furniture and cleaning baseboards is somewhat dependent on whether or not they have physical limitations. When cleaning the bathroom, the degree of bending is somewhat dependent on physical limitations.

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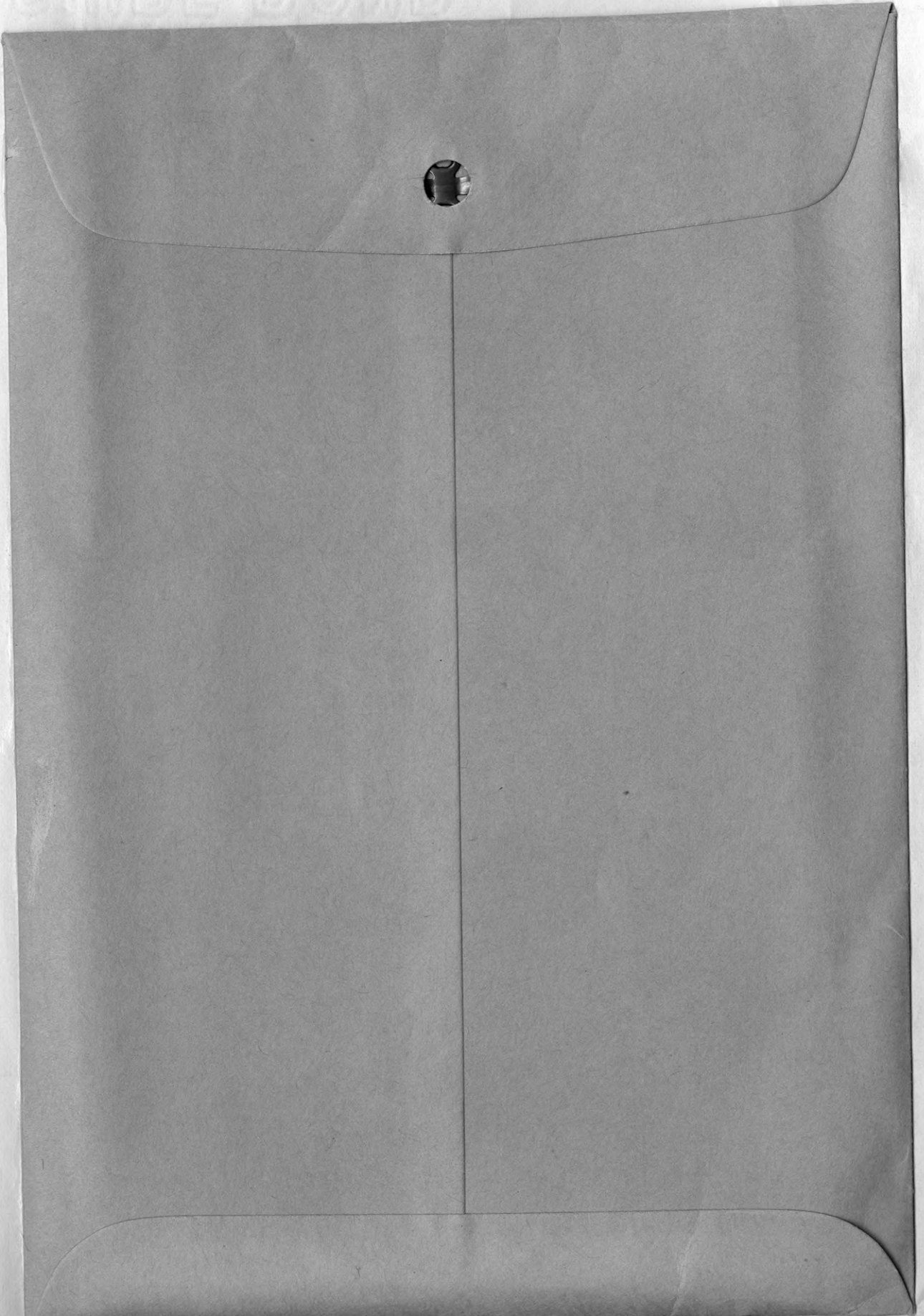
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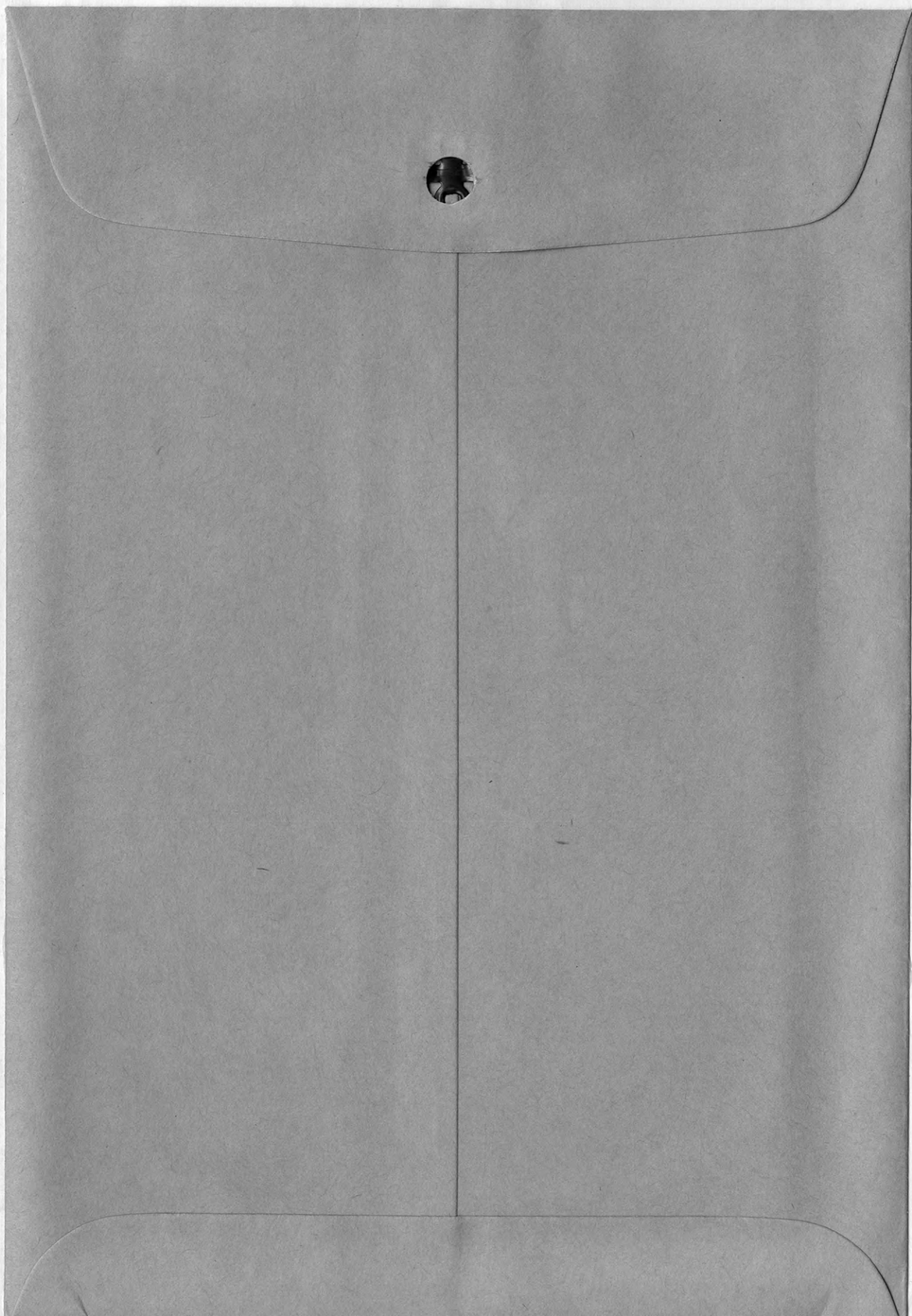
APPENDIX



MANHATTAN

KANSAS





Interview Number _____
Date _____
Ward _____
Name _____
Age _____
Time Begun _____
Time Ended _____
Interviewer _____

SCHEDULE FOR AGED HOMEMAKERS

THE RELATIONSHIP BETWEEN THE PERFORMANCE OF CERTAIN
HOUSEHOLD BENDING ACTIVITIES AND THE SPECIAL BODY
FEATURES OF SIXTY AGED HOMEMAKERS IN MANHATTAN, KANSAS

INTRODUCTION

We are studying some of the problems of the aged people in Kansas. With the increased number of aged people they are a very important part of our population. Most of these aged homemakers continue with their housework for many years past the industrial retirement age of 65 years of age. So we are interested in finding out what housework these aged women do, and also the ways they have found to help with their household activities. Today I would like to ask you about the ways in which you care for the floors, how you clean baseboards and furniture, and lastly, how you care for the bathroom.

I. CARE OF FLOORS.

A. First, I would like to know how you have cared for the floors in your home during the past year. Do you: (Check one or more.)

1. Hand clean with water (hands and knees)? Yes ☐ No ☐ If no, did you ever? _____

2. Wet mop, using a mop? Yes ☐ No ☐ If no, did you ever? _____

3. Use a vacuum cleaner on floors? Yes ☐ No ☐ If no, did you ever? _____

4. Wax floors? Yes ☐ No ☐ If no, did you ever? _____

B. Hand cleaning with water:

1. In what rooms do you hand clean the floors with water? How often? (Circle room, write in room letter in frequency column.)

K	Daily	_____
DR	1-2/wk.	_____
LR	1-2/mo.	_____
BR	1-2/yr.	_____
BATH		_____

Other: _____

Room _____

Frequency _____

2. Is this about as much as you did it at 65 years? Less ☐ More ☐ Same ☐
If less or more, why? _____

3. a. How do you do it? _____

b. Is this about the way you have always done it? _____

c. Interviewer rank problems: Serious ☐ Mod. serious ☐ Not serious ☐

C. Wet mopping by use of handled tool:

1. In what rooms do you clean the floors with a wet mop? How often?
(Circle room, write in room letter in frequency column.)

K Daily _____
 DR 1-2/wk. _____
 LR 1-2/mo. _____
 BR 1-2/yr. _____
 BATH

Other: _____

Room _____

Frequency _____

2. Is this about as much as you did it at 65 years? Less ☐ More ☐ Same ☐
 If less or more, why? _____

3. a. How do you do it? _____

- b. Is this about the way you have always done it? _____

- c. Interviewer rank problems: Serious ☐ Mod. Serious ☐ Not Serious ☐

D. Using the vacuum cleaner:

1. In what rooms do you clean the floors with vacuum cleaner? How often?
(Circle room, write in room letter in frequency column.)

K Daily _____
 DR 1-2/wk. _____
 LR 1-2/mo. _____
 BR 1-2/yr. _____
 BATH

Other: _____

Room _____

Frequency _____

2. Is this about as much as you did it at 65 years? Less ☐ More ☐ Same ☐
 If less or more, why? _____

3. a. How do you do it? _____

- b. Is this about the way you have always done it? _____

- c. Interviewer rank problems: Serious ☐ Mod. Serious ☐ Not Serious ☐

3 of # _____
Waxing - Dusting

E. Waxing floors:

1. Do you wax the floors by hand or with an applicator? Which rooms? How often?
(Circle room, write in room letter in frequency column.)

Hand:

K Daily _____
DR 1-2/wk. _____
LR 1-2/mo. _____
BR 1-2/yr. _____
BATH 1-2/yr. _____

Other:

Room _____
Frequency _____

Applicator:

K Daily _____
DR 1-2/wk. _____
LR 1-2/mo. _____
BR 1-2/yr. _____
BATH 1-2/yr. _____

Other:

Room _____
Frequency _____

2. Is this about as much as you did it at 65 years? Less ☐ More ☐ Same ☐
If less or more, why? _____

3. a. How do you do it? _____

- b. Is this about the way you have always done it? _____

- c. Interviewer rank problems: Serious ☐ Mod. Serious ☐ Not Serious ☐

II. CLEANING FURNITURE AND BASEBOARDS.

A. Furniture:

1. Do you clean or dust low surfaces, such as chair legs? Yes ☐ No ☐
If no, did you ever? _____

2. Is this about as much as you did it at 65 years? Less ☐ More ☐ Same ☐
If less or more, why? _____

3. a. How do you do it? _____

- b. Is this about the way you have always done it? _____

- c. Interviewer rank problems: Serious ☐ Mod. Serious ☐ Not Serious ☐

B. Cleaning baseboards:

1. Do you clean the baseboards in your home? Yes ☐ No ☐ If no, did you ever?

If yes, how: vacuum clean _____ dry dust _____
wet wash _____ other _____

2. Is this about as much as you did it at 65 years? Less ☐ More ☐ Same ☐
If less or more, why? _____

3. a. How do you do it? _____

- b. Is this about the way you have always done it? _____

- c. Interviewer rank problems: Serious ☐ Mod. Serious ☐ Not Serious ☐

III. CARE OF THE BATHROOM.

A. General information:

1. Which of these do you clean? How often? (Check the fixture; and then write in frequency column.)

Lavoratory	_____	Daily	_____	Other:
Stool	_____	1-2/wk.	_____	Room
Bath tub	_____	1-2/mo.	_____	Frequency
Shower	_____	1-2/yr.	_____	_____

2. Is this about as much as you did it at 65 years of age? Less ☐ More ☐ Same ☐ If less or more, why? _____

3. How do you clean the:

a. Lavoratory _____

b. Stool _____

c. Bath tub _____

d. Shower _____

4. Is this about the way you have always done it? _____

5. Do you think you have any difficulties or problems? _____

6. Interviewer rank problems: Serious ☐ Mod. Serious ☐ Not Serious ☐

IV. GENERAL INFORMATION.

A. Physical limitations:

1. At the present time do you have any ailments or other physical conditions that have continued for a long time, even though they do not bother you all of the time? Yes ☐ No ☐ If yes, would you mind telling me what they are?

2. How long have you had these ailments or conditions?

1-4 years _____ 5-9 years _____ 10 or more years _____

B. Housing and household:

1. Is this a single family dwelling ☐ duplex ☐ apartment ☐
 2. How many rooms are there in your dwelling unit?
 3. Are you responsible for any other rooms in this house? Yes ☐ No ☐
 If yes, how many? _____
 4. How many aged person (over 65) are in this household? _____
 5. How many underaged persons (under 65) are in this household? _____

V. ASSISTANCE WITH HOUSEHOLD ACTIVITIES:

1. Do you have anyone to assist you with the household activities?
 Yes ☐ No ☐ If yes,

a. Family _____ b. Friends _____ c. Employed _____

2. What type of work is done?

How often?

Cleaning _____
 Washing _____
 Ironing _____
 General Housework _____
 Other _____

Daily _____
 2/wk. _____
 1/wk. _____
 1-2/wk. _____
 1/mo. _____
 1-2/yr. _____
 Other _____

VI. SCALE OF STANDARDS: 1 2 3 4 5

VII. MEASUREMENTS.

Height _____	Short	Average	Tall
Weight _____	Underweight	Average	Overweight

THE RELATIONSHIP BETWEEN THE PERFORMANCE OF CERTAIN HOUSEHOLD BENDING
ACTIVITIES AND THE AGE AND PHYSICAL LIMITATIONS OF SIXTY AGED HOMEMAKERS
IN MANHATTAN, KANSAS

by

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AN ABSTRACT OF A MASTER'S THESIS

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MASTER OF SCIENCE

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Americans are increasingly becoming more aware of the large increase in the proportion of the population who are over 65 years of age. It is expected that the number of Americans who are over 65 years of age will increase from 16 million to 20 million just 15 years from now. Although the husband may retire from industry, a homemaker never really "retires" but continues to be responsible for the household activities. This study investigated the extent to which age and physical limitations of aged homemakers affect their performance of household activities which require bending.

An interview-schedule was used in gathering data during the month of June, 1960, from a randomly selected sample of 60 women between the ages of 70-79 living in Wards 3 and 4 of Manhattan, Kansas. For purposes of comparison the women were divided into age groups, the younger group 70-74, the older group 75-79 and according to the presence or absence of physical limitations. The interview-schedule contained questions to determine the extent of household activities requiring bending performed by aged homemakers and the changes made in the extent or method because of age and physical limitations.

Nearly half of the 60 women lived alone in a household. Almost three fourths lived in a single family dwelling. About half of the 60 women lived in dwelling units of three or four rooms. Nearly one fourth of the women were responsible for the care of rooms other than those they occupied. Physical limitations were claimed by almost three fourths with arthritis being the most prevalent.

Although the homemakers were in charge of the management of the household activities, half of them received some help, mostly from family members.

The upkeep of the homes in which these women lived was rated subjectively by the interviewers as average or better for eight tenths of the homes.

Vacuum cleaning was the method most widely used to care for floors, followed by wet mopping, hand cleaning and application of wax. The room most commonly vacuum cleaned was the living room, while the rooms most commonly wet mopped and hand cleaned were the kitchen and bathroom. None of the women had changed their method of vacuum cleaning floors, although nearly one third of those who wet mopped had changed their method of using a wet mop by using a different body position and/or different equipment. Half of the women did not presently hand clean floors, although 90 percent had hand cleaned floors at one time. Two thirds of the women waxed floors applying the wax by hand or using an applicator. The rooms most commonly waxed were the kitchen and bathroom.

The cleaning of furniture and baseboards were done by nearly all women, with some doing little or no bending by using a handled dusting tool, by tilting the small furniture, or by using vacuum cleaner attachments.

The bathroom fixtures were cleaned by nearly all of the women, although one fourth thought they did less now than at age 65. No bending was necessary for most when cleaning the bathtub or stool. Three fourths of the women thought they had problems when cleaning the bathroom fixtures, with cleaning the bathtub and lower outside stool being mentioned most frequently.

It was hypothesized that age and the presence of physical limitations affect the household activities requiring bending which was done by these aged women. When the Chi Square test was applied, some significant differences were found for the physical limitations variable, but no significant differences were found for the age variable.