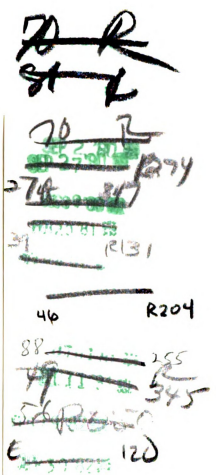
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TIME USE IN FOOD PREPARATION BY MEN AND WOMEN AGE SIXTY-FIVE AND OLDER

By

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ABSTRACT

TIME USE IN FOOD PREPARATION
BY MEN AND WOMEN AGE SIXTY-FIVE AND OLDER

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A sample of 50 homemakers age 65 and older living in one- and two-member independent households was interviewed to determine the amount of time and the variables that influenced time used in food preparation as part of household production. A time-record chart and an interview schedule were used to record time use and gather related data. Housing type and physical health of the homemaker were found to be effective estimators of time use in food preparation work. Age, number of household members, socioeconomic status, level of liking for food preparation activities, and level of satisfaction with food preparation facilities were tested and determined to be ineffective time-use estimators for older homemakers.

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Chapter I

INTRODUCTION

All life and all things exist within boundaries. This is a basic premise of the family ecosystem conceptual approach. The meaning of anything, whether it is an object, a feeling, or a relationship, is defined in part by its boundaries. Life is similarly defined and understood, in part, by conception, birth, and death, and is organized in terms of these time boundaries. The knowledge of the certainty of death influences the planning and organizing of time and alters the meaning of the way in which time is used.

Time possesses unique qualities. It is available to each person in finite quantity. It provides a common frame of reference for structuring life's activities. It is irreversible and irreplaceable. And time is a central and integrative resource; when any other resource is being used, time is also being used.

These qualities make time an advantageous vehicle for research. Time-use research provides a quantitative measure of the temporal distribution of human activity that can, in turn, establish a basis for qualitative understanding of particular social groups. Time-use research also provides a potential measure of social change. Heirich (1964) views

time, as an explanatory factor, a causal link between other variables, a quantitative measure of them, and a qualitative measure of their interplay, as central to models of social change. Studies were conducted during the 1960s by Szalai (1972, 1975), Chapin (1974), and Walker and Woods (1976) that employed time use as an indicator of current economic and social problems of the family. These studies will serve as points for comparison with future findings as indicators of social change.

THE OLDER FAMILY

The family continues to be the basic social unit in America. In recent years the stage in the family life cycle of the older family has become an important area for research. The number of older families is growing. Most older people live in families that consist of married couples (U.S. Department of Commerce, 1976:45). Presently, there are about 23 million Americans over the age of 65. This growing minority is expected to increase to 31 million by the year 2000.

Formal interest in the older family in America did not begin until the 1940s. The enactment of the Social Security Act in 1935 set 65 as the age of eligibility for pensions and established a formal definition of the lower limit of old age. The Committee on Social Adjustments in Old Age was established by Ewald Burgess in 1943, and the Journal of Gerontology began publication in 1946. The relatively new fields of geriatrics and gerontology are

focusing on the problems and needs of older persons and are providing impetus to the creation of policies and programs designed to cope with the personal, social, health, housing, and economic problems of aging and life extension.

INDEPENDENT HOUSEHOLDS

Approximately 75 percent of American men and women aged 65 and older live in independent households. The proportion of older individuals maintaining their own households has increased in the last decade. Such "primary" individuals represented about 15 percent of the men and 37 percent of the women aged 65 and older in 1975, representing increases of 1 percent for men and 7 percent for women from 1965 figures. During the same period there was a considerable decline in the proportion of older persons living with their children or other relatives. About 96 percent of these individuals occupied their own housing entirely alone as "one-person" households in 1975. Contrary to popular view, less than 5 percent of the older population lives in institutions (U.S. Department of Commerce, 1976:49).

HOUSEHOLD PRODUCTION: FOOD PREPARATION

Men and women living in independent households generally assume responsibility for their own household production. Walker and Woods (1976:xx) define household production or household work as "purposeful activities performed in individual households to create the goods and services that make it possible for a family to function as

a family." Using the term "household production" implies a two-part process: production and consumption. The investigator limited this study to those aspects of food preparation relevant to production by the homemaker. Time used for consuming (eating) the food prepared, therefore, was outside the context of food preparation as household production. Also, time used in food preparation was limited to that actually spent preparing food in the household and did not include shopping or menu planning, which were categorized as marketing and management.

Beyer and Woods (1962) found that nine out of ten older persons living alone prepared their own food, regardless of sex or age. Of all respondents aged 65 or older, 99 percent engaged in food preparation. Of all household activities, preparing, eating, and cleaning up after meals used the greatest amount of time; the median number of hours was two and one-half, with 60 percent spending from two to three hours per day. Food preparation is, therefore, a large part of the daily experience of nearly all older men and women.

In the present study, food preparation was composed of three activities: regular meal preparation, special food preparation, and after-meal cleanup. How much time is used by men and women age 65 and older in these activities? What is the variable most closely related to the time of homemakers for all food preparation? What variables are the most effective time-use estimators for older persons in the area of food preparation? Specifically, does time use

increase as the age of the homemaker increases? Does time use increase as level of satisfaction with health increases? Is the socioeconomic level of the homemaker a factor that affects time use? Is satisfaction with food preparation facilities a significant factor? Are housing type or number of household members factors?

RELEVANCE OF DATA

The answers to the questions above are significant. They facilitate the identification of basic characteristics and basic needs in a particular area of a considerable portion of American society. Ethel Shanas (1966), one of the few persons who has surveyed large numbers of older people, has indicated that research on basic characteristics and needs of older persons can have substantial impact on social policy. The absence of data about the characteristics of older people has led to an imbalance in research. Concentration has been upon institutional development rather than upon community services. According to Shanas, to order the allocation of resources in behalf of older people on some logical basis, some research must be directed toward the accumlation of basic information on the characteristics of older people.

From an ecological perspective, the data have human and nonhuman resource-use and resource-allocation implications. The data are useful for identifying the resources being used by older families in food preparation. For example, how many and what appliances are being used? What

human and nonhuman resources are being used? Time is also a resource; these data have value as time-use predictors for this stage in the family life cycle. And a current measure of resource use provides a basis for future comparisons.

How much food preparation will older people be doing in the future? In a study conducted by Lopata (1966:16), the older women mentioned that they were "eating out a lot" at this stage in the life cycle. And the number of opportunities for eating out for older people is increasing. The 1972 Nutrition Program for the Elderly Act provides low-cost nutritious meals daily at conveniently located settings for older people. An estimated five million Americans qualify for this program. Some economists estimate that Americans spend about 29 percent of their total food bill for eating out. The Agriculture Department estimates that 37 percent of the food bill is spent this way. Beyer and Woods (1962) reported that about 90 percent of the older people they interviewed sometimes ate out. Data from the present on the amount of time used in food preparation in the home by older men and women could be useful for future comparisons.

Most people experience a number of role changes at retirement. Through the study of daily food preparation, an activity in which nearly all older people engage, some new insight could be gained regarding any changes in this area that may be occuring in the division of labor or in sex roles. Despite a reduction of gender differences in the occupational world in recent years, the role of the homemaker remains generally feminine. The questions may be

raised as to whether retirement affects this role, or if marriages become more egalitarian in this stage of the family life cycle. Data were collected in this study on the amount of time used by spouses in food preparation as well as in other household work.

And finally, the role of the unpaid household worker has rarely been studied seriously or systematically. A growing body of literature is currently drawing attention to the disadvantaged position of homemakers in society. Americans value that which can be equated in dollars and cents. In this context, many political and economic implications exist regarding household production, particularly as they relate to the older family. Literature is also drawing attention to a growing phenomenon of respectability in old age, with creative performance, with its aspects of personal dignity, with individuals, and with independence. The emphasis is shifting from the decrements of old age and their remedies to the merits and positive qualities of aging. Recognition of the services older people perform for themselves, particularly household production and in this study, food preparation, reinforces the positive image of aging.

OBJECTIVES OF THE STUDY

The overall objective of this investigation was to study time use in food preparation work of men and women age 65 and older living in independent households. The amount of time used in food preparation by 50 homemakers was measured using a time-record chart. An interview schedule was

employed to gather data relative to (1) the variables most closely related to time use by homemakers for all food preparation work and (2) the variables most effective as time-use estimators for older homemakers in food preparation work.

DEFINITION OF TERMS

Household production or household work refers to purposeful activities performed in individual households to create the goods and services that make it possible for a family to function as a family (Walker and Woods, 1976:xx).

Independent household or household refers to the individual or group of adults living alone in an apartment, mobile home, two-family home, or one-family home.

Homemaker is the person, of either sex, for whom household production is the primary responsibility or the person primarily responsible for food preparation in the household.

Older men and women, older person, older homemaker refers to persons age 65 and older.

Total time is the average amount of time used by all household members in food preparation.

Primary, secondary, and travel time refer to the three categories in which time use is measured (Walker and Woods, xx).

> Primary time is the time during which the activity engaged the worker's full attention.

Secondary time is the time during which some work was done on an activity while work on another activity received primary attention.

Travel time is the time used for travel connected with household work.

Food preparation is composed of three activities:

Regular meal preparation refers to the preparation and serving of food for meals eaten at home by any household member on the record days.

Special food preparation refers to nonroutine food preparation activities such as holiday meals or food for other special occasions, parties, and community or group functions.

After-meal cleanup includes time for after-meal care of table, dishes, leftovers, kitchen equipment, and refuse; and returning clean equipment, dishes, and utensils to storage.

OBJECTIVES

The specific objectives of the study were as follows.

Objective 1: To compare the quantity of time used by homemakers with the age-group categories.

Objective 2: To compare the quantity of time used by homemakers with each of the house-type categories.

Objective 3: To compare the quantity of time used by homemakers with the number of household members.

Objective 4: To compare the quantity of time used by homemakers with the homemaker's level of liking for food preparation activities.

Objective 5: To compare the quantity of time used by homemakers with their socioeconomic levels.

Objective 6: To compare the quantity of time used by homemakers with level of satisfaction with physical health.

Objective 7: To compare the quantity of time used by homemakers with level of satisfaction with food preparation facilities.

Objective 8: To determine and compare the quantity of time used by homemakers in all household work activities with the quantity of time used in food preparation activities.

HYPOTHESES

The following hypotheses served as guides for this investigation.

Hypothesis 1: Time use in food preparation increases as the age of the homemaker increases.

Hypothesis 2: Time use in food preparation increases as the complexity of housing type increases.

Hypothesis 3: Time use in food preparation increases as the number of household members increases.

Hypothesis 4: Time use in food preparation increases as the homemaker's level of liking for food preparation activities increases.

Hypothesis 5: Time use in food preparation increases as the socioeconomic level of the homemaker decreases.

Hypothesis 6: Time use in food preparation increases as the homemaker's level of satisfaction with physical health increases.

Hypothesis 7: Time use in food preparation increases as the homemaker's level of satisfaction with food preparation facilities increases.

Hypothesis 8: Time use in food preparation is greater than time use for any other household work activity.

Chapter II

REVIEW OF LITERATURE

The review of relevant literature is presented in the following sections: (1) studies of time use in household work and (2) studies of homemaking work units.

STUDIES OF TIME USE IN HOUSEHOLD WORK

Time use in household production, in varying form and content, has existed from the earliest times in history. Serious, systematic research of household production began in this century, and recently research interest in this subject has increased. Research specifically limited in parameter to time use in food preparation by older persons, according to the literature examined, has not been conducted. Older persons have been included in some studies, but none of the studies examined made a distinction between younger homemakers and older homemakers, or between those respondents who had retired from occupational life and those who had not. This study was limited to older homemakers who were retired from occupational life.

The 1920s and 1930s

Household production research gained impetus at the beginning of this century with the passage of the Purnell Act in 1925. Through state agricultural experiment stations, the Purnell Act provided support for economic and sociological research for the purpose of developing and improving rural homes and rural life.

Farm women, therefore, were the subjects of the majority of time use and household work studies in the 1920s and 1930s. These investigations were sponsored by the Home Economics Bureau of the U.S. Department of Agriculture in experiment stations, and were generally made using chronological records of activities for amounts of time ranging from one day to a week or more. Time use was recorded by means of diaries kept by the homemakers. This method of data collection was dependent upon several factors including recall ability (unless the homemaker recorded time use immediately), intelligence, literacy, cooperativeness, perserverance, and attitude toward the study and toward household work recorded. The method of analysis generally used by the early investigators was to group data into major activity categories for reporting total time units.

The first real attempt to describe the household work load using the methods described above was made by Wilson (1929) in Oregon. Her sample of 513 farm housewives submitted time diaries for one week's activities in a 1926-27 period. Wilson identified homemaking time allocations

of 288 farm, 71 village, and 154 city homemakers. She did not classify subjects by age, according to information available, however, she did identify about 31 percent of her sample as having no children under 19 years with about 50 percent of these homemakers over the age of 48.

Wilson's major finding related to food preparation was that of 51.6 hours per week devoted to homemaking, 47 percent was used in food activities. Factors identified as affecting time use in food preparation were ages of children, number of persons served, and physical facilities of the kitchen.

Three other studies from this period were similar to Wilson's work: Crawford (1927), Kneeland (1928), and Wasson (1930). None gave age classifications. Crawford's 81 respondents kept diaries for 24-hour periods for seven days. Her food preparation time allocation (14.5 percent) was expressed as a proportion of all activities of the homemaker, however, food preparation took the most time of the homemaking activities.

Kneeland's 700 respondents used half of their weekly homemaking time in preparation of meals and dishwashing (25 hours, 51 minutes). Wasson's sample of 100 also kept seven-day diaries in 24-hour segments. She, too, found that food preparation used 50 percent of homemaking time. All three of these investigators identified size of family as a factor that affected time use in food preparation.

Moser (1935) conducted a study specifically related to food consumption and use of time for food work. She used weekly time records in which the record keeper entered daily the number of minutes spent by each worker in the food activities specified. These activities were classified under two headings: household food work and farm work. The household food work activities included preparation of regular meals, lunches and extra meals, clearing away after meals, baking and other quantity cooking, preservation of foods, refreshments for social affairs, and other work not covered in these categories.

Moser, who analyzed her data by race, found that white households used 31.3 and black households used 25.4 hours per week in household food activities. The factors Moser identified as affecting time use were size of household, work and storage facilities available, standards for cooking and meal service, number of variety of foods appearing in the diet list, and the cost of the diet. Some of the limitations of this study, in addition to the data collection and analysis methods used, were lack of control for certain variables such as season of the year and day of the week, and the exlusion of certain food producing activities from the measurement such as raising grain and other field crops for household consumption.

It was during this time period that Warren (1940) collected data on time use in its relation to home management. Warren was interested in measuring the amount and

describing the kinds of work done in homes. Her study of more than 500 farm households determined the activities of the homemakers, the time used for these activities, the causes of variation in the time used, and the work load in different households. An attempt was made to measure the work loads by constructing work units that could then be used in studying other households and could prove useful in studying methods and practices used in accomplishing similar amounts of home work in varying periods of time. Warren obtained her data by personal interview. As "enumerator" she recorded time used by homemakers and helpers for various homemaking activities on the weekday preceding the interview. Her finding in food preparation was that it accounted for about 33 percent of the time spent by the homemakers on homemaking. Factors she identified as affecting time use were number of children, amount of volunteer or paid work or activity outside the home, and the homemaker's like or dislike for the activity.

The 1940s and 1950s

Two studies from the 1940s relevant to food preparation and time use are those that were conducted by Dickens (1943) and Muse (1946).

Dickens used a diary method to study time expenditures during one week by homemakers and by all workers in homemaking activities in 80 white and 80 black town families of Mississippi. Households were classified by the amount of monthly rent paid or the monthly rental value of the

home. These categories were: under $7.50, $7.51 to $20.00, $20.01 to $40.00, and $40.01 and above. Dickens found that more time was spent by all groups (26-27 hours) in food homemaking than all other homemaking activities combined. Time expenditures on meal preparation and clearing away after meals were relatively higher in white families of the $20.01 to $40.00 housing value than other categories for white or black respondents. Black homemakers had more help in care of the house, white homemakers in meal preparation and clearing away. All had more help in clearing away than in food preparation. Dicken's findings were valid for the summer season only.

Muse studied 183 farm homemakers in Vermont. Data were collected, through personal interviews, for the time used on homemaking activities during a summer week. Homemakers were not classified by age, but by number of children. Of the homemaking time, 25 percent was used in food preparation and 15 percent in dishwashing. The hours spent on food preparation increased as the household size increased. Muse attempted to determine whether households with high time expenditures served "better" meals than those with low time expenditures. Muse considered the menus reported by each homemaker when asked what she served for her usual breakfast, lunch, and dinner. These menus were sorted into three classes that represented "poorest," "average," and "best" meals. For each family all three meals were considered as a unit on the basis of their

probable nutritive value and the variety offered. The classification of the menus was based on the standards of the investigator and not on those of the families. Muse found no correlation between the classification of the menus and time expenditure. She did find a relationship between time used in food preparation and the amount of help given the homemaker, the condition of the kitchen and equipment, the like or dislike of the homemaker for food preparation, and the skill level of the homemaker in cooking and management.

During the 1950s interest in time use in the home increased. Concentration shifted from farm to urban households. With automation and technological advancements, lifestyle changes, and development and use of commercial services, urban areas were changing more than rural areas.

Wiegand (1953) was the first to compare time use for household work activities of urban homemakers with rural homemakers. She used an interview method to collect data from 95 farm full-time, 102 city full-time, and 53 employed city homemakers. Time use was recorded for the weekday preceding the interview and for the preceding Saturday or Sunday. Of Wiegand's sample of 250, about 32 were between 60 and 80 years of age. About 25 percent of the homemaker's time was spent in food preparation. The homemakers in all-adult families of three or four persons used the most time for food preparation. She found that as the size of the household increased or if the household included one or more

children under 4 years of age, the amount of time spent in housework increased. Meals were classified by complexity; the average time used for food preparation increased as the number of complex meals increased. Wiegand, in this study, also further developed the work unit, the amount of household work done by an average worker in one hour under average conditions.

Warren, Muse, and Wiegand employed the same classifications for homemaking activities, so that it was possible from Wiegand's study to compare the amounts of time used in each activity to observe any trends that had developed. From the time Warren conducted her study in the same county and township in 1936, Wiegand found great improvement in household equipment. The percentage of farm houses having an electric or gas refrigerator, running hot or cold water, an electric range, and a furnace had greatly increased. In 1952, as in 1936, the largest proportion of homemaking time used by homemakers was for food preparation. The percentage of time used for food preparation decreased from 29 to 24 percent. The percentage of time used for dishwashing remained about the same.

Cowles and Dietz (1956) studied 83 selected Wisconsin farm homemakers in which records of a week's time were kept by the women. Time sheets were used for recording all activities by 5-minute intervals for seven consecutive days. When the women were classified by age (under 35 years, 36-49 years, and 50 years and older), the youngest group used the

most time in household work. Factors Cowles and Dietz determined affected the amount of time spent in food preparation were: (1) necessity of preparing special meals or packing lunches for family members unable to eat with the family at the usual time or place or in need of special food, (2) amount of baking done, and (3) character of the kitchen arrangement.

The 1960s and 1970s

In general, time studies in the late 1950s, in the 1960s and 1970s have followed a trend toward greater depth through analysis of factors associated with time use.

Methods of studying the homemaker's use of time have usually been obtained from the homemaker through records or through recall, often for a very recent period, or by estimate. Data have then been analyzed by associated factors.

Nelson (1963) used a different approach. In Costa Rica, Nelson developed a study of activity patterns as an approach to understanding how time functions in home management. An activity pattern was defined as the ordering of tasks that is characteristic of a person or group of persons during some specified time span. In Nelson's study, activity patterns were organized around meal preparation. She obtained her data by observation, recording each detail of the pattern. Her sample of 19 randomly-selected homemakers was observed during day-long time spans and provided interviews preceding and following each observation.

Beyer and Woods (1962) reported a study conducted between 1958 and 1960 by the Bureau of Old Age and Survivors Insurance on living and activity patterns of the aged. The report was based on interviews with 5202 persons aged 65 and older living in four different regions of the United States. Time use was recorded by the interviewer for the preceding day. The study found two and one-half hours was the median amount of time spent in preparing, eating, and cleaning up after meals, with 60 percent spending from two to three hours per day. This was the largest proportion of time spent on obligated-time activities by the aging. The other activities were: housework, personal care, shopping and related activities, and care of others. Factors affecting time use were not determined.

The UNESCO-sponsored European Coordination Center for Research and Documentation in Social Sciences study is the most comprehensive time-use study ever conducted. This multinational research was conducted in 12 countries including the United States in 1964. Szalai (1972) published the completed study. The research was designed so that the data collected from the 12 countries could be compared. Nonwork time use was the emphasis of the research, however, time-use comparisons were made for paid work, household work, free time, and sleep for employed men and employed women as well as for women not in the labor force. The sample was limited to persons between the ages of 18 and 65, although a few older persons were included because they lived in a house-

hold with a wage earner between those ages. Food preparation, categorized separately as cooking and cleaning up, accounted for the largest proportion of time spent in housework. Associated factors were not discussed in relation to food preparation.

A study conducted by Morgan, Sirageldin and Baerwaldt (1966:109) offered explanatory factors for determining the amount of time family heads and wives together devoted to regular housework. This study did not determine the amount of time spent specifically in food preparation, but did determine that spent in all housework. Factors the investigators found, importance-ordered, are listed below.

*Sex and marital status of head of family
*Number of people in the family
*Age of the youngest child under 18 living at home
Number of rooms in home
Number of automatic home appliances
Age of head of family
Hours of work for money in 1964 by all members of the family
Type of structure in which family lives
Hours lost from work in 1964 by head of family and wife from illness or unemployment
Size of place (town) where family lives
Whether it was difficult to hire outside help for work around the house
*Education of head of family
Number of years lived in present home

Asterisked variables, in order of their importance, explained 33 percent of the variance in this study. Data were obtained through personal interviews with 2214 adults. The number of respondents aged 65 and older was 416.

Walker and Woods (1976) surveyed a random sample of 1296 households drawn from names of families stratified by

32 different combinations of family composition in the Syracuse, New York area in 1967-68. Their primary objective was the further development of a method of measuring the production of services and goods in family households. The sample included 42 families over the age of 55. The major finding was the clear and direct relationship between certain family characteristics and time used to provide major kinds of household services. Family composition related more closely to time use for household work than any other variable.

Housework activities were listed in 13 categories on a time-record chart. Each homemaker recorded time used by each worker in the appropriate category in 10-minute intervals for two 24-hour periods. Two interviews were held with each homemaker to obtain supplementary data.

Three of the 13 household-work categories were related to food preparation; these were regular meal preparation, special food preparation, and after-meal cleanup. Number of children in the household was found to be the variable most closely related to time of all workers for all food preparation. Two other variables, age of youngest child and employment of wives, while significantly related to other activities, were low for regular meal preparation and after-meal cleanup.

An accomplishment of Walker and Woods's study was the development of a means of recording data on time use that is easy to use, provides for accurate reporting, and is economical to administer. This study resulted in the development

of an extensive data bank of household-work information and familial-descriptive data combined with time-use data. The findings are a step toward Walker and Woods's ultimate goal of placing a monetary value on household production.

STUDIES OF HOMEMAKING WORK UNITS

The relationship between time use and household work produced has been studied for many years at Cornell University. The first homemaking work units to provide a basis for comparing time costs in the household were developed there by Warren (1940). Her aim was to find some measure that could be used in comparing the work loads in different households, similar to the productive-man-work unit used in studying farm management. The farm-work unit scaled amounts of widely different kinds of work output into units of time.

Warren found that the amount of time used in each household varied according to such factors as number of family members, age of youngest child, or size of dwelling. Warren's major contribution was to quantify the amount of work in several major activities by isolating the one factor that appeared to have the most effect on the work load in an activity. The work unit showed the average time cost of doing a certain quantity of work. Warren's research provided the basis for the studies made by Wiegand, Walker, and Walker and Woods.

In 1954, Walker (1957) attempted to add to the development of a measure of household production that could be

used by professionals in any field when needed. Walker, utilizing Wiegand's (1953) data on time use, developed six types of quantitative work units. Walker (1957:3) defined a work unit in homemaking as "the amount of household work done in one hour under average conditions by an average worker." The six values were for meal preparation, dishwashing, physical care of family members, washing clothes, ironing clothes, and regular care of the house. Approximately 78 percent of the total time used in homemaking was accounted for by these six tasks. For each activity, various factors were studied to determine the one that had the most decided influence on the total time for a given task. These activities and the variables most closely related to time used for them were listed by Walker as follows.

Meal preparation	complexity of meals served (number of dishes and degree of manipulation required to prepare them)
Regular house care	presence or absence of children
Physical care of family members	number and ages of children
Washing clothes	number of loads of washing
Ironing clothes	number of pieces ironed
Dishwashing	number of persons in the household

The complexity of meals was determined by Walker by the amount of handling required to process the food and the time taken to prepare the meal. On this basis, she defined four categories of meal types, Types 1, 2, 3, and 4, from

least to highest complexity. Walker's (1958:7) definitions were:

Breakfast types

Type 1
Any number of easily prepared foods or one or two items requiring some preparation plus any number of easily prepared foods

Type 2
Three dishes requiring some preparation plus any number of easily prepared foods or one time-consuming dish plus any number of easily prepared foods

Noon and evening meal types

Type 1
Any number of already prepared or quickly prepared foods

Type 2
Leftovers somewhat changed in form plus Type 1 or one time-consuming dish plus one to four already or quickly prepared foods

Type 3
One time-consuming dish plus five or more already or quickly prepared foods or two or three time-consuming dishes plus Type 1

Type 4
Four or more time-consuming dishes plus Type 1

Walker (1957:4) states that work units provide a means for comparing the amount of time used by a particular family with the amount of time used in average households to do a similar amount of work. The work units enable one to measure approximately the amount of work to be done in the home; they do not provide a measure of how well it is done, by whom it is done, nor with what equipment the work is done. "Neither satisfaction nor quality is measured by work units."

Gage (1960) tested the usefulness of the work unit as a means of collecting data for potential use in determining the economic value of household production. Gage interviewed 50 homemakers in Tompkins County, New York, to learn the number of units-of-work produced by each homemaker on one day. Using established work units, she multiplied them by the prevailing wage rates for each type of work. Gage concluded that homemakers chose to perform that part of the workload that had the greatest monetary value.

Maloch (1962) determined the workload and the characteristics of most and least liked household tasks for 120 homemakers in Binghamton, New York. Her study was not concerned with identification of liked or disliked tasks, but with the characteristics that made them most or least liked. Characteristics, according to Maloch, were thought to cut across task lines. She attempted to identify the reasons tasks were most or least liked so that further research could help find ways of altering the characteristics. Of the most liked tasks, the characteristics Maloch found were pride in results, satisfaction, adequate equipment, and results that were appreciated by the family. The characteristics of the least liked tasks were identified as short-term results, monotony, not creative, use of little mental skill, and another adult not generally present. Maloch found no relationship between work-unit value and attitude toward most and least liked tasks.

The study of work units has been carried on at Purdue University by Manning (1968), where she directed a major study on use of all workers' time on household work in 1961-62. This is the most complete investigation of time use and work output in household activities done aside from the work at Cornell.

Manning's research determined work unit values for 111 households in Indiana limited to homemakers under age 70. She did not report food preparation time use by specific age categories. Manning found that variability of time use related to standards of housekeeping more than to any other factor, and a beginning was made in relating attitudes of like or dislike of household tasks toward time used for them.

Walker and Woods (1976) at Cornell University recently completed an extensive study, the primary objective of which was the further development of a method of measuring the production of goods and services in family households. On the basis of Walker's (1957) previous research in which she identified six types of quantitative work units and the variables most closely related to them, Walker and Woods tested and affirmed the hypothesis that the amount of work in the household varied principally in relation to changes in family composition. The most important result of the study was the confirmation of a direct relationship between family composition and time spent on household work, thus allowing the use of amount of time spent on the work to become a measure of household production.

Chapter III

PROCEDURE

This research was based on and employed specifically selected parts of the instruments from the study conducted in 1967-68 by Kathryn E. Walker and Margaret E. Woods (1976): Time Use: A Measure of Household Production of Family Goods and Services. This investigator corresponded with Walker during the initial phase of the study and received Walker's support and encouragement. Walker provided a sufficient quantity of the instruments from the 1967-68 study to be used in this investigation.

The primary objective of the Walker and Woods work was the further development of a method of measuring the production of goods and services in family households. On the basis of previous research, Walker and Woods tested and affirmed the hypothesis that the amount of work in the household varied principally in relation to changes in family compostion.

The overall hypothesis tested in this study was that time used in food preparation work by men and women age 65 and older is a function of the homemaker's age, housing type, number of household members, level of liking for food preparation activities, socioeconomic position, health, and

level of satisfaction with food preparation facilities.

SELECTION OF VARIABLES

Control variables relating to the overall hypothesis were household composition, age of household members, geographical location of residence, season of the year, and day of the week. Household composition was limited to one- and two-member households. Age was limited to 65 and older. Geographical location was an urban-suburban type of area, Lansing, Michigan. Each season of the year has characteristics and special activities that affect the total food preparation work load; this study limited season of the year to winter. Also taken into consideration were the varying amounts of time used on some food preparation activities on different days and on weekends compared with weekdays. An attempt was made to control for this variable, a minor variation was a relatively even distribution for all days except Tuesday, which had a larger distribution, and Saturday, which had a smaller distribution.

Data were collected for selected independent variables related to certain socioeconomic characteristics of the household and physical aspects of the food preparation work environment. Characteristics considered as attributes of the social environment in which the food preparation activities were conducted were: socioeconomic status (education and occupation before retirement), age and sex characteristics of household members, and characteristics of the

household as a unit, such as special family or household situations, and household food preparation practices. Physical characteristics selected as most likely to describe the typical household food preparation environment were: features of the housing (type of housing, age of housing), availability of adequate work and storage space, and other special use spaces, and availability and use of household food preparation equipment.

Data were collected for the dependent variable, amount of time used in food preparation, for two days from each household.

SELECTION OF SAMPLE

The study was conducted in Lansing Michigan and surrounding area where urban-suburban population is predominant and number of persons age 65 and older is large. The 1970 Census Tracts Standard Metropolitan Statistical Area (Clinton, Eaton, and Ingham Counties) figure for persons age 65 and older is 25,998 (U.S. Department of Commerce, 1970). This geographical area was also easily accessible to the researcher.

The non-random sample was drawn from within three senior citizen nutrition program groups: Delta-Waverly 39ers Club, Gier Park Senior Citizens, and Grand Ledge Senior Citizens. These groups were chosen because of the relationship of the investigator to the Delta-Waverly 39ers Club and because of the willingness of each of the groups

to cooperate. Having worked as a volunteer with the Delta-Waverly 39ers Club for several months prior to initiating the study, the investigator had established considerable rapport with the group, facilitating entry into the other two groups for eliciting respondents.

To recruit respondents, a presentation was given by the investigator to each of the groups explaining the purpose of the study and the help needed. A flyer (Appendix B) was prepared and distributed by the investigator that contained further explanation.

Sample size was evenly divided between one- and two-member households giving a total of 75 participants in the study.

A pretest was administered to five persons resulting in the following instrument revisions and additions.

1. A statement of research ethics was prepared to guide the study (Appendix C).
2. Coding numbers were added to the schedule to facilitate the coding process.
3. Division between the questions for the first interview and those for the second was more clearly delineated on the instrument.
4. Four questions were reworded to facilitate coding.

SELECTION OF INSTRUMENTS

The design of the research involved two instruments from the Walker and Woods study: the time-record chart and the interview schedule. The time-record chart was used unmodified. The interview schedule was modified to narrow its scope. While Walker and Woods examined in depth the factors related to the use of time in 13 inclusive areas of household work, the scope of the present study was limited to the food preparation area of household production.

Time-record Chart

The time-record chart was used to collect data for the dependent variable, the amount of time spent on food preparation as part of household production by each household member. All time during a 24-hour period was recorded, permitting comparison of time used in food preparation with time used for other household work. By recalling time use for 24-hour spans, the homemaker may have more accurately estimated time use for each activity than he or she would have had he or she considered the activity out of context. One person, the homemaker, recorded time use for the entire household.

Primary, secondary, and travel time were recorded, in which primary household work time was the time when the activity engaged the worker's full attention. To delineate primary time, secondary and travel time were recorded separately. Secondary time was that spent on an activity in

combination with another (primary) activity that received the worker's main attention. Travel time accounted for a part of the time used for several household activities and was considered an integral part of time use for the activity.

Time was recorded on the chart across the horizontal axis in 10-minute intervals, dividing the intervals in half if a 5-minute interval was appropriate for reporting, so that 5 minutes was the smallest time interval recorded.

Time use was recorded in 13 classifications listed on the vertical axis, which were: regular meal preparation, special food preparation, after-meal cleanup; regular house care, special house care and maintenance, and care of yard and car; washing, ironing, and special care of clothing; physical and nonphysical care of family members; marketing and management. To provide categories for a record of the full 24-hour period, two additional blocks were used to record time spent on nonhousehold activities: (1) other work (work other than household work) including volunteer work, and (2) other activities, including all personal, family, and social activities.

Each worker's time use was coded and identified on the chart by a letter and color:

Female homemaker recorded in red
Male homemaker recorded in blue
Female spouse recorded in brown
Male spouse recorded in black

Written definitions of what work was to be included in each household work classification and written instructions used by the interviewer to explain how to complete the

time-record chart were those as used in the 1967-68 Walker and Woods study. They were read aloud by the interviewer to the respondent and kept by the homemaker to be used when completing the chart.

Interview Schedule

The interview schedule was designed to collect data on the independent variables, the factors hypothesized to affect the amount of time used in food preparation. Parts of the Walker and Woods instrument appropriate to the food preparation area were used and other questions directly related to the hypotheses and objectives of this investigator were added. Additional questions as they appeared on the schedule (Appendix A) were: numbers 3 through 8, which identified the ages and marital state of household members; numbers 38 through 42, which identified certain factors that influence whether or not older persons eat at home or eat out; numbers 47 and 48 asked about desired appliances or changes in kitchen design; and numbers 74 and 75 were added to gather data on health status of the homemaker.

The format of the interview schedule was designed by the investigator to include the coding form and numbers to facilitate the coding process.

An interviewer was hired to conduct some of the interviews; she completed seven. The procedure used to train the interviewer is outlined in Appendix D.

Interviews

Interviews were conducted in the following order.

1. First interview (recall day)
   a. The respondent, who had stated willingness to participate, was contacted and an appointment was arranged.
   b. At the appointed time the investigator began the interview by reading the cover page of the schedule to the participant stating the ethical guidelines to be followed.
   c. The investigator explained the study and the respondent's part in it to the participant.
   d. Data on the household were collected.
   e. Background data on the household activities performed and food preparation equipment used on the preceding day were recorded.
   f. Definitions of activities were read to the homemaker.
   g. Procedure for completing the time chart was explained.
   h. Homemaker's time use for the preceding day was recorded by the investigator.
   i. The completed time chart and a second chart to be filled in the next day were left with the homemaker.
   j. An appointment for the second interview was made.

2. Second interview (record day)

This interview was held two days after the first interview.

a. Time-record charts were collected and carefully reviewed by the investigator for completeness, consistency, and accuracy. Any necessary corrections were made.

b. Background data on food preparation activities performed and equipment used on the preceding day were collected.

c. General supplementary information on activities performed and equipment used for the preceding seven days as well as background information on household members was collected.

3. Follow-up procedure

Each respondent was sent a letter at the completion of the study describing the major findings and giving written appreciation for his or her cooperation.

While the investigator found information available in research methods literature concerning interviewing techniques helpful and incorporated many of the techniques into the procedure outlined above, the experience obtained from actually conducting the interviews provided further insights. These insights together with viewpoints from the literature are combined in Appendix E for the potential benefit of others who may be conducting research with an older population.

VALIDITY AND RELIABILITY

Validity of the time-use data depended on how accurately homemakers and interviewer classified use of time of all household members in the categories on the time-record chart. Walker and Woods set up safeguards by strategic use of questions in the interview schedule to decrease the possibility of incomplete or unusual records. This investigator made certain that each instrument was complete: there were no missing data. Personal interviews insured that homemakers understood the classifications and definitions of terms. Insofar as possible, Walker and Woods, as well as this investigator, attempted to word all questions on the interview schedule to eliminate interviewer bias.

The time-record chart was designed by Walker and Woods to remove the possibility of influencing the homemaker by presenting preconceived ideas of how household work activities should be conducted. By using an open format with only broad household work classifications as opposed to itemized work or routine lists, the homemaker was free to record time as she usually used it, uninfluenced by suggestion. Time-use records for two days increased representativeness, especially for less regularly performed activities. The 24-hour record was intended to decrease the exaggeration of error of recall in recording use of time. Time-record data were checked with data on the interview schedule for consistency and accuracy. Coding transferred to mark-sense forms for both instruments was check coded for accuracy

by a person not involved in the investigation.

CODING THE DATA

Time-record Chart

Use of the 13 classifications facilitated coding. Data were tallied by a coding system for primary time use for each household member for each work activity. The amounts of time were recorded on mark-sense forms and mechanically punched onto data cards.

Interview Schedule

Data from the interview schedules were also mechanically punched directly onto cards from mark-sense forms. Certain questions required hand coding. Complex coding procedures were required for coding types of meals served. Each menu item was coded at the time of the interview as to preparation state (for example, fresh, frozen, or canned) and as to number of cooking and noncooking operations involved in its preparation.

Following check coding of data from both instruments, a codebook was prepared by the investigator.

METHODS OF ANALYSIS

Analysis was made using descriptive and inferential statistical methods.

Descriptive Statistical Analysis

Descriptive analysis was made for both instruments by using the Statistical Package for the Social Sciences

(Nie et al., 1975) V 7.0 program, "Descriptive Statistics and One-Way Frequency Distributions; Subprogram Frequencies: One-Way Frequency Distributions with Descriptive Statistics." This program determined the basic distributional characteristics of each of the variables and was used in the subsequent inferential analysis. Subprogram "Frequencies" computed and presented summary statistics for mean, median, mode, standard deviation, variance, and histograms for each variable, as well as absolute, relative, adjusted and cumulative frequencies.

Descriptive analysis was computed for all variables and for spouses as well as homemakers. This analytical procedure was used to test hypothesis 8: time use in food preparation is greater than time use for any other work activity.

After examining the distribution of the variables, sets of relationships among two or more of the variables were investigated by doing contingency table (crosstabulation) analyses. A crosstabulation is a joint frequency distribution of cases according to two or more classificatory variables (Nie et al., 1975). This kind of analysis facilitates the study of relations by arranging data into tabular frequencies that give clarity to trends and patterns in the relationship. The SPSS program, "Contingency Tables and Related Measures of Association: Subprogram Crosstabs," was used to compute this analysis.

Inferential Statistical Analysis

To determine the degree of statistical relationship between time used by homemakers in food preparation and the independent variables of the study, the nonparametric measure of rank correlation, Kendall Tau (Siegel, 1956) was used. The Kendall Tau correlation coefficient is designed to measure the degree of correlation between the ordinal rankings of two variables and to determine the probability of the occurance of a correlation as large as the one observed in the sample. Hayes (1973) states that the advantage of using Kendall Tau in the test of the hypothesis of independence is the fairly rapid convergence of its sampling distribution to normal form. According to Siegel (1956), with a sample size larger than eight, the sampling distribution of Kendall Tau becomes similar to a normal distribution and the significance of the values may be determined. The Kendall Tau correlation shows whether an association exists between variables and the degree of relationship, but it does not necessarily imply causation. The Kendall Tau correlation statistic is included as an option in the subprogram "Crosstabs," SPSS, the program used to compute this statistic. This analytical procedure was used to test hypotheses one through seven.

Partial rank correlations were determined for the independent variables. A partial correlation involves the relationship between two variables in a situation where three or more variables are present, holding all the

other independent variables, one or more, constant and allowing the two tested variables to vary (Isaac and Michael, 1971). The purpose of partial correlation is to determine the strength of the relationships. Since some of the variables related to time use are likely to be interrelated, it is necessary to determine the effect of a given variable on food preparation work time when a third variable is held constant. The SPSS program, "Crosstabs," computed the partial correlations using the appropriate Kendal Tau statistic.

In using correlational analysis, variables must be ranked. This study used the ranking order determined by Walker and Woods, with the exception of those for age and health that were added to the study and ranked by this investigator. Walker and Woods state that the basis for the rankings varied; some are quantitative, while others do not have meaning on an ordinal scale. The following rankings were used for the variables.

Age ranking: from lowest to highest number of years
1. 65-69
2. 70-74
3. 75-79
4. 80-84
5. 85-89

Type of housing: from least to most complex
1. Apartment
2. Mobile home
3. Two-family home
4. One-family home

Number of persons in the household
1. One-member household
2. Two-member household

Level of liking for food preparation activities: from least to most
1. Dislike very much
2. Dislike
3. Dislike somewhat
4. Like somewhat
5. Like
6. Like very much

Type of meal: from simple to complex
1. Type 1
   Very simple meals that require almost no preparation (three or fewer cooking or noncooking operations)
2. Type 2
   Meals that require easy cooking operations, such as heating or toasting or limited noncooking operations (a total of four to seven operations)
3. Type 3
   Partially prepared foods that largely combine cooking and noncooking operations (a total of eight to fourteen operations)
4. Type 4
   Meals with one or more menu items that require some preparation at home, combining cooking and noncooking operations (a total of 15 to 24)
5. Type 5
   Meals containing at least one totally home-prepared dish, or several items requiring home preparation; all a combination of noncooking and cooking operations (a total of 25 or more)

Socioeconomic level of the household: from highest level (lowest scores) to lowest level (highest scores) based on Hollingshead's Two Factor Index of Social Position
1. 11-17
2. 18-27
3. 28-43
4. 44-60
5. 61-77

Physical health of the homemaker
1. Poor
2. Fair
3. Good
4. Excellent

Satisfaction with food preparation facilities

1. Very unsatisfactory
2. Fairly unsatisfactory
3. Unsatisfactory
4. Satisfactory
5. Fairly satisfactory
6. Very satisfactory

Equipment: from most to least automatic

1. Freezer
2. Oven
3. Broiler
4. Dishwasher
5. Electric fry pan
6. Pressure cooker
7. Kitchen exhaust fan
8. Garbage disposer
9. Electric mixer or blender
10. Vacuum cleaner
11. Carpet sweeper or electric broom
12. Outdoor grill
13. Broom

LIMITATIONS OF STUDY

Correlational Analysis

The purpose of correlational analysis is to investigate the extent to which variations in one factor correspond with variations in one or more other factors based on correlational coefficients. Among the limitations inherent in the correlational method are the following (Isaac and Michael, 1971).

1. It only identifies what correlates with what, not necessarily identifying cause and effect relationships.
2. Because it does not identify cause and effect relationships it is less rigorous than true experimental research which exercises more control over the independent variables.

3. It is prone to identify spurious relational patterns or elements that have little or no reliability or validity. An attempt was made in this study to overcome this limitation by using crosstabulation or joint contingency tables, the purpose of which is to study and test a relationship between two variables while controlling for the effects of a third variable, unmasking "spurious" relationships.

Sample

Characteristics of the subjects and the manner in which they are selected determine how extensively findings can be generalized. In this investigation subjects were volunteer participants from a population of three senior citizen groups. The findings are therefore limited in generalizability.

Socioeconomic Status Measurement

Status measures in general differentiate among persons on the basis of some set of characteristics unevenly distributed in the population and deemed important. Socioeconomic status was considered and was determined in this study by using the Hollingshead (1957) Two Factor Index of Social Position. Generally, this index, based on occupation and education of the head of household, provides an objective and easily applied means of stratifying a sample into social classes.

Socioeconomic status is widely used as a variable in sociological analysis, however, gerontologists contend that the methodology of assigning socioeconomic status fails to capture the current status of older men and women (Kutner et al., 1956). The Hollingshead analysis is appropriate for a certain time span within the life cycle, that of the working years that include breadwinning activities, adult consumption styles, and development and maintenance of social reputation. The current lifestyle of older men and women may include retirement, widowhood, and a variety of physical, mental, and economic decrements, as well as culturally valued attributes such as accrued wisdom.

Bloom (1972) has suggested a procedure for indicating the socioeconomic status of older persons that is more meaningful that methods currently used. He suggests that the major source of income of the older person be added as a qualifying factor to the two factors of Hollingshead's index in order to more nearly approximate the several components of socioeconomic status (power, information, social status, economic status) as set within the time perspective of the human life-span and sensitive to it. He states this may be accomplished by arbitrarily assigning a weight to a major source of income equal to the combined weights that have been allocated to the educational and occupational levels in the Hollingshead index. Since Bloom's method for more accurately measuring current socioeconomic status of older persons is still in the exploratory research stage, it was

not available for use in this study. Socioeconomic status, therefore, has been determined based upon the working years of the life cycle.

Chapter IV

ANALYSIS AND DISCUSSION

The overall hypothesis to be tested was that time use in food preparation by men and women age 65 and older is a function of the homemaker's age, housing type, number of household members, level of liking for food preparation activities, socioeconomic position, health, and level of satisfaction with food preparation facilities.

Descriptive and inferential statistical analyses are presented in this chapter followed by discussion of the findings.

DESCRIPTIVE STATISTICAL ANALYSIS

Descriptive analysis is presented in two parts: (1) characteristics of independent variables and (2) characteristics and content of the work in food preparation. All tables pertinent to descriptive analysis are presented at the end of each part. Measures of central tendency are reported.

Characteristics of Independent Variables

Tables pertinent to characteristics of independent variables are presented on pages 51 through 57.

Age of homemaker. Respondents represented an overall age span of 65 to 89 years. The largest group (42 percent) was in the 65-69 age category (Table 1). The three male homemakers were represented in the 65-69 and 80-84 age categories; the two female spouses were represented in the 75-79 and 80-84 age categories (Table 2).

Housing type. The majority of the sample lived in one-family homes (64 percent). Most of the remainder lived in apartments (26 percent), four families lived in mobile homes, and one lived in a two-family home (Table 3).

Household composition. The sample was evenly divided between one- and two-member households. Female homemakers were present in 94 percent of the households, male homemakers in 6 percent. There were 23 single female homemakers and two single male homemakers. All but two female homemakers had been married at some time during their lives.

Level of liking for food preparation activities. This characteristic was determined for each of the three food preparation categories: regular meal preparation, special food preparation, and after-meal cleanup (Table 4).

Nearly all (98 percent) of the respondents indicated a degree of liking for regular meal preparation. This

tended to be associated with the self-rating of cooking skills by homemakers, in which all homemakers rated themselves in the satisfactory area and 74 percent rated their cooking skills as very satisfactory.

Distribution of responses for special food preparation ranged from 2 percent "dislike very much" to 56 percent "like very much."

After-meal cleanup was liked to some degree by 70 percent of the homemakers, the largest proportion liking it somewhat.

Socioeconomic position. Hollingshead's (1957) Two Factor Index of Social Position was used to estimate the socioeconomic status of the household. This index is based on the occupation and education of the head of household (before occupational retirement). A score was determined for each homemaker and each spouse, including deceased spouses of homemakers who were widows or widowers. The highest position score (lowest number in Hollingshead's index) for each household was chosen for use in analysis.

In Hollingshead's index, the lowest scores have the highest socioeconomic rating. Hollingshead has divided the scores into groups so that individual scores within a range of computed scores are ignored and treated as a unit. Households with scores that fall into a given segment of the range of scores assigned to a particular class are presumed to belong to the class the index predicts for it.

Distribution of socioeconomic position is shown in Table 5. Class 4 accounted for 44 percent of the households. Most heads of household at Class 4 level typically had high school educations (Table 6) and were employed in some type of skilled work (Table 7). Classes 2, 3, and 5 were evenly distributed, but Class 1 represented only 4 percent of the sample. Most heads of household in Class 3 had at least some college or training beyond high school and were in managerial positions. Heads of household in Classes 1 and 2 were nearly all college graduates who were in professional (Class 1), managerial or administrative (Class 2) occupations. Heads of household in Class 5 level usually had less than high school educations and for the most part were in semi-skilled jobs.

Health of homemaker. About half of the homemakers rated their general health as good, 30 percent as fair, and 22 percent as excellent. The majority of homemakers indicated they had no difficulty doing their household work or additional work due to existence of some physical or mental impairment of a family member.

Level of satisfaction with food preparation facilities. Most homemakers were satisfied with their food preparation facilities. Only 6 percent found them unsatisfactory, while 94 percent rated their facilities as satisfactory (48 percent as very satisfactory, 28 percent fairly satisfactory, and 18 percent satisfactory).

TABLE 1. Distribution of Age Categories of Homemakers by Household and Number of Household Members (50 households)

Age category	All households		One-member households			Two-member households		
	Number	Percent	Number	Percent of all households	Percent of age category	Number	Percent of all households	Percent of age category
65-69	21	42	10	20	48	11	22	52
70-74	12	24	5	10	42	7	14	58
75-79	11	22	7	14	64	4	8	36
80-84	5	10	3	6	60	2	4	40
85-89	1	2				1	2	100

TABLE 2. Distribution of Age Categories by Sex, Homemaker and Spouse (50 households)

Age category	Homemaker				Spouse			
	Male		Female		Male		Female	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
65-69	2	4	19	38	8	16		
70-74			12	24	8	16		
75-79			11	22	4	8	1	2
80-84	1	2	4	8	2	4	1	2
85-89			1	2	1	2		

TABLE 3. Distribution of Households by Housing Type
(50 households)

Housing type	All households		One-member households		Two-member households	
	Number	Percent	Number	Percent	Number	Percent
Apartment	13	26	11	22	2	4
Mobile home	4	8	1	2	3	6
Two-family home	1	2	1	2		
One-family home	32	64	12	24	20	40

TABLE 4. Distribution of Homemakers by Level of Liking for Food Preparation Activities
(50 households)

Level of liking	Regular meal preparation		Special food preparation		After-meal cleanup	
	Number	Percent	Number	Percent	Number	Percent
Dislike very much			1	2	2	4
Dislike	1	2	2	4	6	12
Dislike somewhat			5	10	7	14
Like somewhat	12	24	6	12	17	34
Like	16	32	8	16	11	22
Like very much	21	42	28	56	7	14

TABLE 5. Distribution of Levels of Socioeconomic Status
(50 households)

Socioeconomic level	Score range	All households	
		Number	Percent
1 (highest)	11-17	2	4
2	18-27	9	18
3	28-43	8	16
4	44-60	22	44
5 (lowest)	61-77	9	18

TABLE 6. Distribution of Homemakers and Spouses by Educational Level (50 households)

Educational level	Homemakers		[a]Spouses	
	Number	Percent	Number	Percent
Less than 7th grade	2	4	2	4
8th to 9th grade	12	24	15	30
10th to 11th grade	5	10	9	18
High school graduate	17	34	11	22
Post-high school	9	18	4	8
4-year college	4	8	5	10
Graduate work	1	2	2	4
			[b]N=48	

[a]Includes spouses not living

[b]Two homemakers never married

TABLE 7. Distribution of Homemakers and Spouses by Occupational Level (50 households)

Occupational level	Homemakers		[a]Spouses	
	Number	Percent	Number	Percent
Unskilled worker	1	2	1	2
[b]Semi-skilled worker	25	50	15	30
Skilled manual worker	2	4	12	24
Clerical/technical worker	15	30	4	8
Admin./personnel/small business	2	4	5	10
Management and professional	5	10	10	20
Executive and major professional			1	2
			[c]N=48	

[a]Includes spouses not living

[b]Includes "housewife"

[c]Two homemakers never married

Characteristics and Content of the Work

Descriptive analysis of time used for food preparation as well as all household production, of food preparation work space and equipment, and of numbers and types of meals prepared is presented in this section. Tables are presented on pages 64 through 72.

Time used for all household production. The total time used on all household work in one day is the sum of the time spent on the separate activities that make up household work. These activities have been classified into 13 specific kinds of work that, when grouped, constitute five major categories of activities listed below.

Group categories	Individual activities
All food preparation	Regular meal preparation
	Special food preparation
	After-meal cleanup
All house care	Regular house care
	Special house care
	Yard and car care
All clothing care	Washing
	Ironing
	Special clothing care
All family care	Physical care
	Nonphysical care
Marketing and Management	Marketing and shopping
	Management and record keeping

Certain variables, such as day of the week and unusual conditions on record days, could affect the amount of time used in these activities. Representation of days of the week is shown in Table 8. Total time of sample

homemakers represented averages of time use for each of the seven days of the week. Unusual conditions affecting the household could produce atypical patterns of household work. Generally, the occurrence of unusual conditions of any kind was low in the sample, except for health conditions: about one fourth reported diabetes, coronary problems, or handicaps. Unusual family situations reported included family visitors and guests, and one couple who were married the week before the interview. The worst blizzard in Lansing history was cited as an unusual weather condition by three households.

The average daily amount of time used on all household production by all homemakers (47 women, 3 men) was 247 minutes; for spouses (2 women, 23 men) the total was 49 minutes (Table 9).

All food preparation received 44 percent of the total time of homemakers for household work, more than any other grouping of activities. Regular meal preparation time was greater than any other individual activity. Toward all food preparation spouses contributed 38 percent of their total time in household production, with regular meal preparation and after-meal cleanup receiving about equal shares.

All house care expended about one fourth of the daily time for household work; regular house care used the largest proportion of time. Spouses spent about 8 minutes a day in all house care, mostly in care of yard and car.

All clothing care was definitely work done by the homemaker. It accounted for 20 percent of his or her daily time and less than 1 percent of the spouse's time. In special care of clothing and linens, time use included sewing, knitting, and other clothing construction activities.

All family care included care of pets as well as family members. Homemakers averaged 11 minutes and spouses about 6 minutes per day in this category. A large part of this time was used in feeding, walking, and taking pets to veterinarians.

Marketing and management accounted for 23 minutes of the homemaker's daily average time use, and about half that amount of time for spouses.

The above findings affirm Hypothesis 8: time use in food preparation is greater than time use for any other household work activity.

Food preparation work space and equipment. Certain physical characteristics were selected as most likely to describe the typical household food preparation environment. These included availability of adequate work and storage space and availability and use of food preparation equipment.

Work space and storage space. Work spaces are a major part of the components needed to accomplish food preparation tasks. The design of the work place in terms of the requirements of the task and of the worker influences the ease with which the task is accomplished. Data were gathered on the

adequacy of storage (wall and base cabinets) and counter space in terms of location near major work centers and the amount of storage and counter space available.

All homemakers in the sample had at least 36 inches and about eight out of ten had 72 inches of counter space. Nearly all homemakers had work space at the right and left of the sink. About three fourths of the households had counter space by both the range and oven, and about half had work space adjacent to the latch side of the refrigerator (Table 10).

Almost all homemakers had 72 inches or more of wall and base cabinet frontage for kitchen storage space (Table 11). All had storage space by the sink, 82 percent beside the range, and 74 percent along side the refrigerator.

Of the homemakers interviewed, 26 percent indicated that there was something about their kitchens that made meal preparation or cleaning up difficult for them. The most common response was the small size of the kitchen, with difficult access to storage space and difficulty in cleaning the next two most common complaints.

Equipment owned. The appliances on which data were gathered have been on the market for a relatively long time and are commonly found in households.

All homemakers had electric fry pans, pressure cookers, electric mixers, ovens, broilers and vacuum cleaners. Most households had carpet sweepers, brooms, and freezers or

freezer units. About 85 percent had kitchen exhaust fans and garbage disposers or indoor incinerators, with about 30 percent owning dishwashers (Table 12).

Of the homemakers, 34 percent indicated that there was an appliance that they did not own, but would like to own, that would ease their food preparation work. Microwave ovens (35 percent) and food processors or blenders (18 percent) were the most frequently mentioned appliances.

Use of selected kitchen equipment. On record days over half of the homemakers used garbage disposers or indoor incinerators, and 46 percent used ovens (Table 13).

During the previous seven days, ovens (94 percent) and freezers (94 percent) received the most use, followed by disposers (66 percent) and brooms (50 percent) (Table 13).

Types of meals. Meals served in any household vary in complexity. Walker (1955) defined five categories of meal types by number of operations from least complex (Type 1) to most complex (Type 5). Very simple meals that require almost no preparation are all in Type 1. Meals that require easy cooking operations, such as heating and toasting, are Type 2. More complex meals (Types 3, 4, and 5) involve both cooking and noncooking operations. Only meals prepared by the homemaker were included in the analysis.

Number and types of all meals. An average of three meals per record day was prepared by the sample, providing data for 300 meals of which 96 percent were served to one or two

persons. Of the meals, 21 percent were eaten away from home or not at all, the majority of these were lunches provided by nutrition programs. About one fourth of the homemakers preferred eating out to eating at home, most frequently for companionship and pleasure (Table 14).

About one third of the possible 300 meals prepared were Type 2; one third were Type 1. Types 3, 4, and 5 each represented about 7 percent of the possible meals (Table 15).

Number and types of breakfasts, lunches, and dinners. The most common types of breakfast served were Type 2 (55 percent) and Type 1 (44 percent). One-member households prepared about one fourth more Type 1 breakfasts and about one fourth less Type 2 breakfasts (Table 16) than two-member households.

Lunches prepared at home on the record days were most frequently Type 2. Two-member households prepared twice as many Type 1 meals as one-member households.

Dinners are generally more complex than other meals. Type 1, however, ranked highest in this sample as the type of dinner prepared (26 percent). Type 2 and Type 5 each accounted for 20 percent of the total and Types 3 and 4 combined to represent 24 percent. Two-member households prepared two and one-half times as many Type 5 meals as one-member households.

TABLE 8. Distribution of Households by Record Days of the Week
(50 households, 100 days)

Days of the week	All households	One-member households	Two-member households
Sunday	18	13	5
Monday	11	4	7
Tuesday	28	15	13
Wednesday	13	5	8
Thursday	18	7	11
Friday	8	5	3
Saturday	4	1	3

TABLE 9. Average Daily Time for Thirteen Household Work Activities and Percentage of Each in Total Household Work Time

(50 households)

Activities	Homemaker		Spouse	
	Average minutes	Percent	Average minutes	Percent
Regular meal preparation	58	23	7	14
Special food preparation	15	6	4	8
After-meal cleanup	37	15	8	16
Regular house care	36	15	2	4
Special house care	16	7	4	8
Care of yard and car	3	1	5	10
Washing by machine	7	3	.05	.03
Ironing	2	1		
Special care of clothing	39	16	.70	.01
Physical care of family	7	3	5	10
Other care of family	4	2	1	2
Marketing or shopping	16	6	8	16
Management and record keeping	7	3	6	12
All household work	247	100	49	100

TABLE 10. Work Space Available in Kitchens by Selected Variables (50 households)

Household	No. in category	Work Spaces Available: 36" counter space	72" counter space	At right of sink	At left of sink	Beside range	Beside oven	Beside refrigerator
	number of households							
Housing type								
Apartment	13	13	12	13	13	12	12	8
Mobile home	4	4	4	4	4	4	4	4
Two-family home	1	1	1	1	1			
One-family home	32	32	24	27	31	21	21	12
Socioeconomic level								
Class 1	2	2	2	2	2	2	2	2
Class 2	9	9	9	9	9	8	7	7
Class 3	8	8	7	8	8	8	8	6
Class 4	22	22	17	20	21	13	14	9
Class 5	9	9	6	7	9	6	6	3
Satisfaction facilities								
Unsatisfactory	3	3	2	3	3	1	1	1
Satisfactory	9	9	6	9	9	5	5	4
Fairly satisfactory	14	14	11	13	14	11	11	7
Very satisfactory	24	24	22	20	23	20	20	15

TABLE 11. Storage Space Available in Kitchens by Selected Variables
(50 households)

Household	Number in category	Storage Spaces Available: 72" wall cabinet	72" base cabinet	Beside range	Along side sink	Along side refrigerator
		number of households				
Housing type						
Apartment	13	13	13	13	13	12
Mobile home	4	4	4	4	4	4
Two-family home	1	1	1	1	1	1
One-family home	32	27	30	23	32	20
Socioeconomic level						
Class 1	2	2	2	2	2	2
Class 2	9	8	9	8	9	9
Class 3	8	8	8	8	8	7
Class 4	22	21	21	18	22	14
Class 5	9	6	8	5	9	5
Satisfaction facilities						
Unsatisfactory	3	1	1	2	3	2
Satisfactory	9	9	9	7	9	5
Fairly satisfactory	14	14	14	12	14	10
Very satisfactory	24	24	24	20	24	20

TABLE 12. Equipment Available for Food Preparation and After-Meal Cleanup by Selected Variables

(50 households)

Households	Number in category	Equipment Available: Freezer or unit	Electric frypan	Exhaust fan	Pressure cooker	Dish-washer	Dis-poser
			number of households				
Socioeconomic level							
Class 1	2	2	2	2	2	2	2
Class 2	9	9	9	8	9	6	7
Class 3	8	8	8	8	8	4	6
Class 4	22	22	22	13	22	2	8
Class 5	9	8	9	4	8	1	5
Satisfaction facilities							
Unsatisfactory	3	2	3	1	2		
Satisfactory	9	9	9	7	9		6
Fairly satis-factory	14	14	14	10	14	4	7
Very satis-factory	24	24	24	17	24	11	15

TABLE 13. Percentage of Households Using Selected Kitchen Equipment on the Record Days and During the Previous Seven Days

(50 households, 100 record days)

Equipment	All Households	
	On record days Percent	Previous seven days Percent
Carpet sweeper in kitchen	8	24
Vacuum cleaner in kitchen	14	46
Broom in kitchen	38	50
Kitchen exhaust fan	21	48
Garbage disposer/incinerator	60	66
Electric frypan/griddle	10	30
Pressure cooker	5	16
Electric mixer/blender	14	48
Oven	46	94
Broiler	11	24
Dishwasher	12	22
Freezer or freezer unit	79	94

TABLE 14. Distribution of Factors That Determine Eating Out or Eating at Home (50 households)

Factors	All households		One-member households		Two-member households	
	Number	Percent	Number	Percent	Number	Percent
Invitations from family and friends	43	86	21	42	22	44
Senior citizens nutrition program	39	78	21	42	18	36
Prefer eating out to eating at home	14	28	7	14	7	14
Out shopping or traveling	37	74	18	36	19	38
Other reasons	28	56	11	22	17	34

TABLE 15. Types of Breakfasts, Lunches, and Dinners Served on Record Days by Age of Homemaker

(50 households, 100 record days)

Meal types	Age of Homemaker				
	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89
Breakfast					
None	6				
Type 1	16	11	11	4	
Type 2	18	9	15	2	1
Type 3	1	3			
Lunch					
None	24	10	10	1	
Type 1	6	2	6	4	
Type 2	12	6	4	4	
Type 3		3			2
Type 4		2	1		
Type 5		1	2		
Dinner					
None	6	2	2		
Type 1	9	9	8		
Type 2	5	3	6	4	2
Type 3	3	3		4	
Type 4	4	6	4		
Type 5	11	7	2		

TABLE 16. Types of Breakfasts, Lunches, and Dinners Served on Record Days by Number of Household Members (50 households)

Meal types	One-member households	Two-member households
	number of households	
Breakfast		
None	4	2
Type 1	24	18
Type 2	20	28
Type 3	2	2
Lunch		
None	23	22
Type 1	6	12
Type 2	15	11
Type 3	3	2
Type 4	1	2
Type 5	2	1
Dinner		
None	8	2
Type 1	10	18
Type 2	14	6
Type 3	8	6
Type 4	6	8
Type 5	4	10

INFERENTIAL STATISTICAL ANALYSIS BY HYPOTHESES

Inferential statistical analysis is presented by hypotheses. All tables pertinent to inferential analysis are presented at the end of this section, pages 79 to 86.

The Kendall Tau rank correlation statistic, a non-parametric measure of association, was used to identify the variable or variables most closely related to the daily time spent on food preparation activities by homemakers. The Kendall Tau statistic indicates whether an association exists between variables; it does not necessarily imply causation of the relationship. The measure of association does not show how great the increase or decrease in time is, but indicates the general "monotonicity" of the underlying relationship between the variables (Hayes, 1973).

All Kendall Tau values reported were significant at the .05 level. Correlation coefficients were determined for all the major variables; however, only significant relationships are reported and discussed.

Time spent was ranked by the average of the minutes per day of the record and recall days. The times used in analysis and shown in tabular form have truncate values determined by an arithmetical procedure that computes the nearest whole number; in this analysis that number is 10, the unit of measurement used in the data collection. As an example of its use, the function of the truncate value would raise a case value for a household work category of 47 minutes to 50 minutes, and lower a case value of 43 minutes

to 40 minutes. The overall final averages vary little from the original figures, while the use of truncate values enables the size and number of contingency tables generated by the computer to be reduced to more meaningful sizes without impeding the meaning of the research.

The ordering of the ranking of the variables is discussed in the chapter on procedure. To clarify the interpretations of the correlation coefficients, the meaning of the correlation signs for the major variables in relation to time use in food preparation activities is as follows.

Variable	Correlation Meaning
Age of homemaker	A positive correlation indicates an increase in time use as the age of the homemaker increases.
Housing type	A positive correlation signifies an increase in time use from apartments to one-family homes.
Number of household members	A positive correlation indicates an increase in time use as the number of household members increases.
Level of liking for food preparation activties	A positive correlation signifies an increase in use of time as the level of liking for food preparation activities increases.
Socioeconomic level	A positive correlation indicates an increase in use of time as the socioeconomic level decreases. (An increase in time use as level declines as classes are ranked from highest to lowest.)
Satisfaction with facilities	A positive correlation indicates an increase in use of time as the homemaker's level of satisfaction with food preparation facilities increases.

Partial rank correlations for independent variables determined the strength of the relationships between two variables. Only significant relationships are reported and discussed.

Hypothesis 1: Time use in food preparation increases as the age of the homemaker increases (Tables 17, 18).

Although statistically significant, correlation of time use in all food preparation with age of homemaker was very weak (.01). Correlations with time use in regular meal preparation (.07) and after-meal cleanup (.05) were also weak.

Two interrelational effects were evident between age and the other variables: a weak correlation (.07) was observed with level of satisfaction with physical health in all food preparation, and a relatively moderate correlation was evident between age and physical health (.57) with time used for after-meal cleanup.

Actual daily average times did give empirical evidence of a slight increase in time use for all food preparation as age increased up to age 84, but was not consistently evident for the other categories of food preparation.

Hypothesis 2: Time use in food preparation increases as the complexity of housing type increases (Tables 17, 19).

Housing type, while not strongly correlated, had the highest correlation of all the variables with time used for all work related to food preparation activities (.24) and

particularly after-meal cleanup (.34). It was the second highest correlation in regular meal preparation (.20) and special food preparation (.16).

The relationship between housing type and number of household members in time used for all food preparation (.17) remained low when other variables were held constant. The effects of housing type on time use for after-meal cleanup were weakly interrelated with those of number of household members (.34).

Times given in tabular form (Table 19) increase dramatically from apartments to one-family homes, particularly in two-member households. Because of the use of truncate values, low time use, and low respondent number, the average minutes per day for two-family homes is not significant enough to appear.

Hypothesis 3: Time use in food preparation increases as the number of household members increases (Tables 17, 20).

Number of household members correlated weakly with time used for food preparation activities (all food preparation, .10; regular meal preparation, .09; after-meal cleanup, .14; and special food preparation, .07). More time was spent on these activities in two-member households.

The relationship between number of household members and liking for food preparation activities with time use for all food preparation, regular meal preparation, and after-meal cleanup remained weak when other variables were held constant. Relatively stronger partial correlations were

evident between housing types (.34) and physical health (.35) with number of household members.

Hypothesis 4: Time use in food preparation increases as the homemaker's level of liking for food preparation activities increases (Tables 17, 21).

The correlation values for level of liking for food preparation activities were very low (all food preparation, .06; regular meal preparation, .08; after-meal cleanup, .09; and not statistically significant for special food preparation).

There were low correlation interrelationships between level of liking and number of household members, and level of liking and physical health.

While time use did not increase consistently, more time was used in food preparation activities by homemakers who indicated they liked the activities. The largest amount of daily average time used (70 minutes) was by homemakers in two-member households who somewhat disliked after-meal cleanup.

Hypothesis 5: Time use in food preparation increases as the socioeconomic level of the homemaker decreases (Tables 17, 22).

Socioeconomic level had a very weak correlation with all food preparation activities (all food preparation, .04; regular meal preparation, .03; after-meal cleanup, .04; special food preparation, not statistically significant). The positive relationship indicated that a little more time (a few minutes per day) was used by homemakers at lower socioeconomic levels (higher scores on the Hollingshead

index). Socioeconomic level interrelated very weakly (.02) with house type.

Hypothesis 6: Time use in food preparation increases as the homemaker's level of satisfaction with physical health increases (Tables 17, 23).

While low, physical health had the second highest correlation with all food preparation activities (.21), the highest for regular meal preparation (.22) and special food preparation (.27), and third highest for after-meal clean-up (.14). The interrelational effects, except for age (.57), were weak.

Two-member households showed the greatest time increase as level of satisfaction with physical health increased.

Hypothesis 7: Time use in food preparation increases as the homemaker's level of satisfaction with food preparation facilities increases (Tables 17, 24).

Level of satisfaction with food preparation facilities correlated weakly with after-meal cleanup (.24). In this activity category, partial correlation was similar to number of household members (.23), and a low interrelational effect was shown with house type (.10).

A very low correlation value was determined for satisfaction with facilities and time used for all food preparation (.02); there was no statistical significance for special food preparation; and regular meal preparation was negatively correlated (-.17).

TABLE 17. Rank and Partial Rank Correlation Coefficients for Food Preparation Time of Homemakers and Variables

(50 households)

Homemaker's Time in:	[a]Kendall Tau	Partial Rank Correlation with Variables Held Constant						
		Age	House type	Number in household	Liking for	Socio-economic	Physical health	Satisfaction with facilities
All food preparation								
Age	.01						.07	
Housing type	.24			.17				
Number in household	.10	.16			.12			
Liking for activities	.06							
Socioeconomic level	.04		.02					
Physcial health	.21			.35				
Satisfaction with facilities	.02							
Regular meal preparation								
Age	.07							
Housing type	.20							
Number in household	.09				.06			
Liking for activities	.08			.17				
Socioeconomic level	.03							
Physical health	.22							
Satisfaction with facilities	-.17							
After-meal cleanup								
Age	.05						.57	
Housing type	.34			.34				
Number in household	.14	.11			.03			
Liking for activities	.09							
Socioeconomic level	.04							
Physical health	.14				.07			
Satisfaction with facilities	.24		.10	.23				
Special food preparation								
Age	.01							
Housing type	.16							
Number in household	.07							
Health	.27							

[a]All values appearing in this table are significant at the .05 level

TABLE 18. Food Preparation Time of Homemakers by Age and Number of Household Members (50 households)

Activity / Age	Number of households	Time of Homemaker: All households	Time of Homemaker: One-member households	Time of Homemaker: Two-member households
		average minutes per day		
All food preparation				
65-69	21	92	57	125
70-74	12	95	88	101
75-79	11	112	101	123
80-84	5	137	93	180
85-89	1	50		100
Regular meal preparation				
65-69	21	45	35	54
70-74	12	60	46	74
75-79	11	51	40	62
80-84	5	93	56	130
85-89	1	15		30
After-meal cleanup				
65-69	21	33	19	47
70-74	12	29	30	27
75-79	11	35	27	43
80-84	5	34	37	30
85-89	1	30		60
Special food preparation				
65-69	21	14	3	24
70-74	12	6	12	
75-79	11	26	34	18
80-84	5	10		20
85-89	1	5		10

TABLE 19. Food Preparation Time of Homemakers by Housing Type
(50 households)

Activity / House type	Number of households	Time of Homemaker: All households	One-member households	Two-member households
		average minutes per day		
All food preparation				
Apartment	13	65	67	60
Mobile home	4	99	120	77
Two-family home	1			
One-family home	32	112	136	136
Regular meal preparation				
Apartment	13	38	35	40
Mobile home	4	49	40	57
Two-family home	1			
One-family home	32	56	40	72
After-meal cleanup				
Apartment	13	23	25	20
Mobile home	4	20	20	20
Two-family home	1			
One-family home	32	39	32	45
Special food preparation				
Apartment	13	4	7	
Mobile home	4	30	60	
Two-family home	1			
One-family home	32	17	15	19

TABLE 20. Food Preparation Time of Homemakers by Number of Household Members

(50 households)

Activity	All households	One-member households	Two-member households
	average minutes per day		
All food preparation	102	82	122
Regular meal preparation	55	42	67
After-meal cleanup	34	27	40
Special food preparation	14	13	15

TABLE 21. Food Preparation Time of Homemakers by Level of Liking for Food Preparation Activities

(50 households)

Activity Level	Number of households	Time of Homemaker: All households	One-member households	Two-member households
		average minutes per day		
All food preparation				
Dislike very much		15	10	20
Dislike		69	40	74
Dislike somewhat		46	22	133
Like somewhat		104	82	124
Like		133	128	136
Like very much		70	78	60
Regular meal preparation				
Dislike	1	15		30
Like somewhat	12	56	48	63
Like	16	60	40	80
Like very much	21	50	40	60
After-meal cleanup				
Dislike very much	2	15	10	20
Dislike	6	37	40	34
Dislike somewhat	7	46	22	70
Like somewhat	17	34	29	39
Like	11	37	35	38
Like very much	7	14	27	
Special food preparation				
Like somewhat	9	14	5	22
Like	28	36	53	18
Like very much	3	6	11	

TABLE 22. Food Preparation Time of Homemakers by Social Position Classes (50 households)

Activity / Class	Number of households	Time of Homemaker: All households	One-member households	Two-member households
		average minutes per day		
All food preparation				
Class 1	2	85	82	100
Class 2	9	114	92	143
Class 3	8	65	78	60
Class 4	22	115	65	142
Class 5	9	94	93	94
Regular meal preparation				
Class 1	2	45	40	50
Class 2	9	59	40	78
Class 3	8	42	43	40
Class 4	22	58	40	75
Class 5	9	55	53	57
After-meal cleanup				
Class 1	2	30	30	30
Class 2	9	44	32	55
Class 3	8	18	15	20
Class 4	22	35	25	44
Class 5	9	35	40	30
Special food preparation				
Class 1	2	10		20
Class 2	9	11	12	10
Class 3	8	5	10	
Class 4	22	22	20	23
Class 5	9	4		7

TABLE 23. Food Preparation Time of Homemakers by Level of Physical Health (50 households)

Activity / Level	Number of household	Time of Homemaker: All households	One-member households	Two-member households
		average minutes per day		
All food preparation				
Poor				
Fair	15	82	73	89
Good	24	102	90	112
Excellent	11	165	83	245
Regular meal preparation				
Poor				
Fair	15	47	44	50
Good	24	50	37	63
Excellent	11	71	46	95
After-meal cleanup				
Poor				
Fair	15	33	26	39
Good	24	32	26	37
Excellent	11	40	30	50
Special food preparation				
Poor				
Fair	15	2	3	
Good	24	20	27	12
Excellent	11	54	7	100

TABLE 24. Food Preparation Time of Homemakers by Level of Satisfaction with Food Preparation Facilities

(50 households)

Activity Level	Number of households	Time of Homemaker All households	One-member households	Two-member households
		average minutes per day		
All food preparation				
Unsatisfactory	3	48		95
Satisfactory	9	146	150	141
Fairly satisfactory	14	101	40	159
Very satisfactory	24	88	81	93
Regular meal preparation				
Unsatisfactory	3	35		70
Satisfactory	9	63	45	80
Fairly satisfactory	14	42	10	73
Very satisfactory	24	47	43	50
After-meal cleanup				
Unsatisfactory	3	13		25
Satisfactory	9	28	25	31
Fairly satisfactory	14	37	27	46
Very satisfactory	24	36	29	43
Special food preparation				
Unsatisfactory	3			
Satisfactory	9	55	80	30
Fairly satisfactory	14	22	3	40
Very satisfactory	24	5	9	

DISCUSSION

Discussion is presented in three sections: (1) amount of time used, (2) characteristics and content of the work, and (3) findings related to the hypotheses.

Amount of Time Used

All food preparation was comprised of three activities, two of which, regular meal preparation and after-meal cleanup, were time consuming and regularly performed. Special food preparation, the third activity, was less frequently performed and of minor importance (84 percent of the respondents used no time in this category). The proportions of total food preparation time spent on these activities were: regular meal preparation, 53 percent; after-meal cleanup, 34 percent; and special food preparation, 13 percent. All food preparation time use accounted for 45 percent of the daily total for all household production.

These findings concur with those of studies concerned with time use and household work conducted in the past. Although, with the exception of one, none of the studies concerned themselves exclusively with household work done by men and women age 65 and older, the findings are very similar. As far back as 1929 Wilson found that homemakers were using 47 percent of their household work time in food preparation activities. Through the years, Wasson (1930), Warren (1940), Muse (1946), Wiegand (1953), Walker (1955), and Walker and Woods (1976) all found homemakers to be using

nearly half their household work time in food preparation activities. Beyer and Woods (1962) reported the only study that included information on time use in food preparation by older men and women. Given that their food preparation time amounts included time for eating, their findings (180 minutes per day) are comparable with those of this study (110 minutes per day).

Viewing the findings from the perspective of the family life cycle, it would be expected that older families in the last stage of the cycle would use less time for food preparation activities. Comparing the information available from past studies for families in all stages of the life cycle, this expectation has not materialized; older people are using about the same proportion of time.

The effect of the distribution of time between homemaker and spouse in two-member households was that the 25 spouses contributed 38 percent of their total time in household production to food preparation (19 minutes per day). In about half of these households, homemakers did all the household work by themselves without any assistance from their spouses.

Many of the respondents participating in this study regularly attended the community nutrition programs available to them. Average attendance was about once a week at noon. Large meals, nutritionally complete, were served that could have influenced the type of dinner meal and time spent to prepare it by the homemaker in the evening. Also,

there were six respondents who ate only one meal per day who occasionally participated in the program. And some who came to the programs ate little of what was offered because of dietary restrictions or food preferences and therefore prepared their normal evening meal.

Characteristics and Content of the Work

Among the reasons for high expenditure of time in regular meal preparation and after-meal cleanup is that these are highly repetitive and stable activities, a characteristic around which Nelson (1963) constructed and developed her activity pattern approach for Costa Rican homemakers. In other studies, also, regular meal preparation and after-meal cleanup are the most time-consuming and consistently performed household work activities.

Warren, in a personal interview, brought to the attention of this investigator some other factors that could influence the content of the work. She cited the possible effects of (1) the homemaker's standards for food preparation activities and after-meal cleanup; (2) the effect of the affective component of the work (for example, the gourmet cook homemaker for whom food preparation is a creative past-time compared with the reluctant homemaker for whom food preparation work is a necessary evil); (3) the quality of the work, whether it is well or poorly done; and (4) the effect of fast food businesses and convenience foods on food preparation time use. Some support was found in this study for the last effect mentioned by Warren: 35 percent of the

homemakers expressing desire for some appliance they did not own, wished for a microwave oven.

Physical characteristics of older men and women could hamper the normal functions of all food preparation. If the physical design of the food preparation space and facilities does not accomodate these characteristics, food preparation activities could become unpleasant, tedious, and even dangerous. None of the respondents lived in housing designed for older people. Physical characteristics of the sample could account for some of the complaints about the small size of kitchens, about the difficulty of access to storage space, and about the difficulty of cleaning the kitchens. These complaints could influence the amount of time spent in food preparation. Cowles and Dietz (1956) identified the character of the kitchen as having such an effect.

Warren (1938) found that the number of persons served meals was more closely related to time spent on food preparation than were other variables: two-member households in this study spent more time in food preparation than one-member households.

Walker (1959) found that the type of meal prepared was the most important predictor of time use: two-member households in this study prepared more meals that were of higher complexity.

Findings Related to Hypotheses

The findings supported all the hypotheses, however, two, house type and health of homemaker, while weak, were more strongly supported than the others.

Hypothesis 1: Time use in food preparation increases as the age of the homemaker increases.

Time use in food preparation did increase as the age of the homemaker increased. Correlational support for this hypothesis was very weak. A number of factors could account for this, but the most universal one is the fact that the aging segment of the population is the most heterogeneous of all segments. There is more physical and mental disparity in this age group than any other, so that chronological age may not be the best predictor of time use.

Hypothesis 2: Time use in food preparation increases as the complexity of housing type increases.

Housing type had a higher correlation than all other variables with time used for all work related to food preparation (.24).

Walker and Woods (1976) found some relationship between house type and food preparation time, and attributed the effect to number of children or type of family as determinants of the type of housing chosen. Of the 13 respondents in this study who lived in apartments, 11 represented one-member households; and of the 32 respondents living in one-family homes, 24 were two-member households. As in the Walker and Woods study, the effect of house type on food

preparation time may be at least partially attributable to number of household members.

Hypothesis 3: Time use in food preparation increases as the number of household members increases.

Number of household members showed some correlation with time use for food preparation activities. Empirically, two-member households did use more time for food preparation, but statistically the hypothesis was not stongly supported. Variation in number of household members was too slight to produce a significant difference.

Spouses in two-member households gave little support to homemakers in sharing food preparation work. Some possible reasons for this observation may be lack of skill, sex-role socialization, and physical or mental disability.

Hypothesis 4: Time use in food preparation increases as the homemaker's level of liking for food preparation increases.

Correlations for level of liking for food preparation activities were very low.

Several studies have been conducted in the past that examined the relationship between the affective component and the task. Warren (1940) identified like or dislike for a household work activity as a factor affecting time use. Maloch (1963) identified the characteristics of most and least liked tasks. And Manning (1968) attempted to relate attitudes of like and dislike of household tasks to time used for them.

Muse (1946) found that dishwashing was the most disliked task, and the most common reasons for disliking it were the frequency of the job, its monotony, and the fact that it consumed so much time. After-meal cleanup was disliked by 30 percent of the homemakers in the present study. The largest amount of daily average time used (70 minutes) was by homemakers in two-member households who disliked after-meal cleanup.

Hypothesis 5: Time use in food preparation increases as the socioeconomic level of the homemaker decreases.

Socioeconomic level had very low correlations with all food preparation activities.

It was hypothesized that as socioeconomic position declined more time would be used in food preparation. The investigator predicted that time use at higher socioeconomic positions (lower Hollingshead scores) would be less because there may be more opportunities for obtaining meals away from home, more social occasions involving eating out, greater mobility, and easier access via resources and mobility to convenience foods and quick cooking methods.

Dickens (1943) attempted to use socioeconomic status as a predictory factor for time use in a study she conducted in Mississippi. Households were classified by amount of rent paid or monthly rental value. She found that homemakers living in homes of higher value used more time in meal preparation. In the present study, the differences between socioeconomic class levels is a few minutes per day.

Hypothesis 6: Time use in food preparation increases as the homemaker's level of satisfaction with physical health increases.

Homemakers' satisfaction with physical health, while weak, correlated second highest in values.

Chronic illnesses, in addition to the normal debilitating effects of the aging process, have a detrimental effect on the older person's ability to perform household work activities. Studies in the past have assumed, for the most part, that participating homemakers were void of these problems. A number of homemakers in the present study indicated problems with diabetes or hypertension, both demanding special limited diets.

The homemaker's rating of his or her physical health was highly subjective. Some older people have great tolerance for physical pain. Some refuse to consider as handicaps problems others would carry as great burdens; an example is the legally blind homemaker who participated in this study.

In considering this hypothesis, homemakers at higher levels of health satisfaction may have increased motivation to prepare food; appetites may be greater, social occasions more frequent, food preservation activities performed, and the physical ability to use kitchen equipment unhampered. Logic would indicate some support for the reverse hypothesis: more time would be used by homemakers at lower levels of health, the physical state of the homemaker slowing the pace and thereby consuming greater time in food preparation activities.

Hypothesis 7: Time use in food preparation increases as the homemaker's level of satisfaction with food preparation facilities increases.

Correlation of time use in food preparation and level of satisfaction with food preparation facilities was weak.

About half the respondents were very satisfied with their food preparation facilities; only three found them at all unsatisfactory. This finding concurs with that of Walker and Woods (nine tenths of the wives were mainly satisfied with their kitchen for after-meal cleanup).

In considering the findings for all the hypotheses it should be noted that since respondents were selected from three groups similar in constituency, homogeneity of the sample may have contributed to the low predictability of several of the variables. For example, the number of household members investigated was one or two; a larger variation in number may be necessary to produce significant results. Homogeneity may also be a factor in the similarity of characteristics of the kitchen and equipment owned and used among the respondents, having implications for the predictability of the variables level of liking for food preparation activities and satisfaction with food preparation facilities. And homogeneity may have contributed to low predictability for health; all respondents were participants in nutrition programs in which reasonably good health was an intrinsic factor in participation.

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The overall objective was to measure the quantity of time used for food preparation work by homemakers age 65 and older living in independent households and to examine the dependent variable, time use, with respect to several independent variables. It was hypothesized that time used in food preparation was a function of the homemaker's age, housing type, number of household members, level of liking for food preparation activities, socioeconomic position, health, and level of satisfaction with food preparation facilities. It was also hypothesized that more time was used by the homemaker in all food preparation activities than in any other household work activity.

All food preparation was composed of three activities: regular meal preparation, after-meal cleanup, and special food preparation. A homemaker was the person of either sex who had the primary responsibility for food preparation. Household work was defined as the production of goods and services within the household for its use and consumption in five areas: (1) food preparation, (2) house

care, (3) family care, (4) physical care, and (5) marketing and management.

This study was based on one conducted by Kathryn E. Walker and Margaret E. Woods (1976): Time Use: A Measure of Household Production of Family Goods and Services. Many studies through the years have examined the relationship between time use and household work, but none have specifically studied time use in food preparation by older men and women.

The non-random sample was drawn from within three senior citizen nutrition program groups. The amount of time used by 50 homemakers, representing 25 one-member and 25 two-member households, was measured using a time-record chart designed by Walker and Woods. Two interviews, two days apart, were conducted with each respondent in which all time during two 24-hour time spans was recorded on the time-record chart in 10-minute intervals for 13 classifications of household work. An interview schedule was employed to gather data relative to (1) selected variables believed to be most closely related to time use for all food preparation work and (2) selected variables most effective as time-use estimators for older homemakers in the area of food preparation.

Control variables relating to the overall hypothesis were household composition (one- or two-member independent households), age of household members (age 65 and older), geographical location (urban-suburban, Lansing, Michigan), season of the year (winter), and day of the week (each day represented.

Data were collected for independent variables related to certain socioeconomic characteristics of the household and the physical aspects of the food preparation work environment. Characteristics considered as attributes of the social environment were: socioeconomic status (education and occupation before retirement), age and sex characteristics of household members, and characteristics of the household as a unit. Physical characteristics selected as most likely to describe the typical household food preparation environment were features of the housing, availability of adequate work and storage space, and availability and use of household food preparation equipment.

Descriptive analysis was made for both instruments using the Statistical Package for the Social Sciences (Nie et al., 1975) V 7.0 program, "Descriptive Statistics and One-Way Frequency Distributions." This program determined the basic distributional characteristics of each of the variables and was used in the subsequent inferential analysis in which the degree of inferential statistical relationship between time used by homemakers in food preparation and the independent variables was determined by using a nonparametric measure of rank correlation, Kendall Tau. Partial correlations determined the strength of the relationships among the independent variables.

Limitations of the study concerned the sample, the method used to measure socioeconomic status, and the correlational data analysis. The sample was non-random and the

findings are therefore limited in generalizability. Socioeconomic status was measured using Hollingshead's (1957) Two Factor Index of Social Position, an index based on education and occupation of heads of household during their working years. Since the sample consisted of all respondents who were retired from occupational life, it is possible that their true current socioeconomic status was not reflected by the index. Correlational data analysis limitations were those inherent in the correlational method.

The results of statistical analysis showed that two variables, housing type and level of satisfaction with physical health, though weak, were more closely correlated to time use in food preparation than others investigated. Characteristics and content of food preparation work influenced the measurements of the correlation. Regular meal preparation and after-meal cleanup were activities that were highly repetitive and stable; all homemakers had at least the minimum amount of work and storage space; equipment was generally owned and used; and older homemakers most frequently prepared meals that were of lower meal type complexity.

The results of descriptive analysis determined that homemakers spent an average of 247 minutes per day on all household work, of which 110 minutes was spent on all food preparation accounting for 45 percent of all household work time. Homemakers used 58 minutes per day in regular meal preparation, 37 minutes per day in after-meal cleanup and 15 minutes per day in special food preparation. Spouses

contributed an average of 19 minutes per day to food preparation activities.

In conclusion, the focus of the present study was on time spent in food preparation activities by homemakers age 65 and older living in independent households. Certain variables were examined for their predictive ability as time-use estimators. Two, housing type and physical health of the homemaker, were most closely related to time use.

CONCLUSIONS

Few studies have addressed themselves to home managerial concerns of older individuals and families. It has been only recently that the last stage of the family life cycle has gained the attention of researchers.

The overall objective of this study was to measure the amount of time used in one regularly performed, daily and time-consuming activity, food preparation, by older men and women.

This investigator hypothesized that certain variables would be effective predictors of time use in food preparation by older men and women. All variable correlations were low, housing type and physical health correlating somewhat higher than the others. Following are the conclusion and discussion for each variable of its effectiveness as a time-use predictor.

1. Time use in food preparation work by the homemaker did increase as age of the homemaker increased. This relationship, however, was weakly correlated. Age, because the correlation was so weak, is not an effective time-use predictor. Variation in physical and mental faculties appears to be greater than disparity in chronological age.

2. Time use in food preparation work by the homemaker did increase as complexity of housing type increased from apartments to one-family homes.

Housing type, though weak, correlated more strongly than any other variable. Empirical evidence pointed to a relationship between housing type and number of household members that is supported by common observation. At this stage in the life cycle, it is likely that more one-member households will be housed in apartments, while two-member households will reside in the more complex one-family dwellings in which they may have lived for years. If housing type is viewed from this perspective, it may be somewhat effective as a time-use predictor.

3. Time use in food preparation work by the homemaker did increase as the number of household members increased.

Correlation value was low for this relationship. The difference in time used for regular meal preparation and after-meal cleanup between one- and two-member households was not great enough to be significant as a time-use estimator. Spouses contributed a small amount of time toward food preparation activities that may have ameliorated some of the effect of number of household members as a predictor of time use.

4. Time use in food preparation work by the homemaker did increase as the homemaker's level of liking for food preparation activities increased.

This relationship, however, correlated weakly. Most homemakers liked food preparation activities. A number of factors could account for the positive response: (1) food

preparation is an activity that is life-sustaining, so that participation is somewhat obligatory; (2) a tremendous variety of food products is on the market so that the homemaker who dislikes food preparation activities at least has the option of choosing the most appealing product that can be prepared with the least effort; and (3) at the opposite extreme, some homemakers view food preparation activity as an avocation or entertainment. Because of weak correlation, it is concluded that level of liking for food preparation activities is not an effective time-use estimator.

5. Time use in food preparation work by the homemaker did increase as the socioeconomic level of the homemaker increased.

This variable also had a low correlation value with time used in food preparation. It is possible that the Hollingshead index used to measure socioeconomic status did not accurately reflect the true current economic situation of the sample. For socioeconomic position, however, the results of this study concur with the findings of Walker and Woods: socioeconomic level of the household had little effect on time used for food preparation work and is not an effective estimator of time use.

6. Time use in food preparation work by the homemaker did increase as the homemaker's level of satisfaction with physical health increased.

This variable had the second highest correlation of all variables. It is commonly accepted by gerontologists

that as age advances, physical deterioration accelerates and health problems increase. The appetite of the older person in poor health may be low, and the motivation to prepare more complex meals reduced.

The homemaker's satisfaction with his or her level of physical health is a somewhat effective estimator of time use in food preparation.

7. Time use in food preparation work by the homemaker did increase as the homemaker's level of satisfaction with food preparation facilities increased.

Level of satisfaction correlated weakly with time use. Most homemakers were satisfied with their facilities.

The facilities and environment in which food preparation activities take place can have great indirect consequences on the health of the older homemaker. The physical characteristics of advancing age can deter the normal functions of food preparation. If the physical design of the food preparation space and facilities is not appropriate for the physical capacities of the older homemaker, food preparation activities could become difficult. The net effect could be the creation of a psychological barrier that precludes the older homemaker from engaging in adequate food preparation activity.

8. And finally, time use in food preparation by the homemaker was greater than time use for any other household work activity.

This finding reaffirms, with an added dimension, the findings of all the studies conducted since the beginning of this century: older homemakers in the last stage of the family life cycle also use more time in food preparation activities than any other household activity.

RECOMMENDATIONS FOR FURTHER RESEARCH

Human ecology is concerned with all aspects of personal and family living during the entire life cycle. Human ecologists are concerned with family organization, the task of making decisions and guiding the actions of family members as they interact with their environment. And human ecologists are concerned with the management of all resources. It is within this context that the following questions are suggested for additional research.

1. Food preparation activities accounted for 45 percent of the older homemaker's daily time in all household work. Housing type and physical health of the homemaker were found to be somewhat effective estimators of time use in food preparation work. What variables or clusters of variables might be better time-use estimators for food preparation as well as for all household work of older homemakers?

2. Within the confines of this research the statistical analyses were not exhaustive. What additional insights regarding relations between and among the independent and dependent variables might be produced by further analyses?

3. Following retirement from occupational life, is there any evidence of change in the division of household labor in two-member households? Do sex roles change after retirement begins? How do older men and women differ from each other in the way they spend their time during the day?

4. Does the content or character of household work change as people age? Does the pace of the work slow so as to fill the time gap left by changing roles and responsibilities? Do homemakers' standards for household tasks change as they age? Do motivations for performing household work change as the homemaker ages?

5. Does changing socioeconomic status due to retirement influence the amount of time used for household work? Does the isolation of some older persons because of socioeconomic reasons influence their use of time at home?

6. According to Boulding (1977), on a world wide scale decisions about diet, procurement of food and food preparation, manner of serving, and actual quantitative allocation of food (however culturally constrained) rest in the hands of the three fourths or so of women in every society who are engaged in feeding its households. She suggests women are the real food policy makers, even if men in many cultures control the money and voice strong food preferences. How does this concept relate to the older homemaker and the amount of time spent in food preparation? As gatekeepers, do the time-use decisions of homemakers for food preparation activities have implications for the broad view of food systems? How do food preferences influence time-use in food preparation? How do ethnic influences alter food preparation time?

7. What values underlie time use in food preparation? Do values evident in food preparation change over the life

cycle? What implications does the research of Ryff and Baltes (1976) on value transition and adult development in women have for time use in food preparation?

8. The relationship of man to his near environment is a key concept in the ecological systems approach. Focus is placed upon the interfaces of the social-psychological, physical-technological, and biological support systems as they make impact upon man. The conceptual framework can be used as a basis for analysis in the study of human aging; such questions relating to older persons could be asked as: How is life satisfaction influenced by time-use decision making? How is time-use decision making affected by the scarcity or abundance of resources? Does proximity to urban centers influence time-use in the home? How is time used in unusual environments such as nursing homes, institutions, or retirement villages?

Applied research of the type indicated in the questions suggested for further research should aim toward the enhancement of later life. The richness of research material probably is greater in the older age group than in any other because they have lived through more stages of the life cycle and experienced life over a longer span of time. Older people are highly complex human beings and are beginning to receive the research attention they deserve and need to assure quality of life in their later years.

APPENDICES

APPENDIX A

RECORD NUMBER_____

FOOD PREPARATION SURVEY

NAME_____TELEPHONE_____

ADDRESS_____ZIPCODE_____

As you participate in this study:

-the purpose of this study and your part in it will be explained to you in advance.

-you are free to discontinue your participation at any time.

-at your request, you can receive additional explanation of the study after your participation is completed.

-your answers to questions, as well as any conversations we may have during the interview, are strictly confidential. This page, which is the only page with your name on it, will be separated from the other pages and kept in a locked file available only to me.

1 (1,2)RECORD NUMBER_____

FOOD PREPARATION SURVEY

CODING INFORMATION
Numbers in parentheses indicate corresponding data chart coding numbers. Hyphened numbers indicate data coding system on chart.

FIRST INTERVIEW

How many persons age 65 or older are living in your home?_____

Are any persons under age 65 living here?_____ If yes, discontinue interview.

From the age groups I am going to read to you, please tell me the age group to which you belong:

-1.....65 to 69
-2.....70 to 74
-3.....75 to 79
-4.....80 to 84
-5.....85 to 89
-6.....90 to 99

Please tell me what other adults are living here and the age group to which each belongs:

ADULT	AGE GROUP
Homemaker	(3)
Spouse	(4)
Female	(5)
Female	(6)
Male	(7)
Male	(8)

Is your home

	-1 an apartment	-2 mobile home	-3 two-family house	-4 one-family house	-5 other
(9)	____	____	____	____	____

About what year was your home built?

	-1 before 1900	-2 1900-1919	-3 1920-1939	-4 1940-1959	-5 after 1960
(10)	____	____	____	____	____

Were any of the following used yesterday in the kitchen?

	-1 No	-2 Yes		-3 Do not have
(11)	___	___	carpet sweeper	___
(12)	___	___	vacuum cleaner	___
(13)	___	___	broom	___
(14)	___	___	kitchen exhaust fan	___
(15)	___	___	garbage disposer/indoor incinerator	___

2 RECORD NUMBER_____

Were any of the following used yesterday?

	-1 No	-2 Yes		-3 Do not have
(16)	___	___	electric frypan/griddle/deep fat fryer	___
(17)	___	___	pressure cooker	___
(18)	___	___	electric mixer/blender	___
(19)	___	___	oven (for other than broiling)	___
(20)	___	___	broiler (separate or in oven)	___
(21)	___	___	outdoor fireplace/grill	___

Do you have

	-1 No	-2 Yes	
(22)	___	___	dishwasher
(23)	___	___	disposer
(24)	___	___	0° F. freezer unit or freezer

Do you have available work space in your kitchen

	-1 No	-2 Yes	
(25)	___	___	at right of sink
(26)	___	___	at left of sink
(27)	___	___	beside surface units (range or built-in)
(28)	___	___	beside oven (range or built-in)
(29)	___	___	adjacent to latch side of refrigerator
(30)	___	___	36" or more counter frontage for preparing food
(31)	___	___	72" or more of total counter frontage

Do you have

	-1 No	-2 Yes	
(32)	___	___	72" or more of wall cabinet frontage
(33)	___	___	72" or more of base cabinet frontage
(34)	___	___	some storage space along side the range
(35)	___	___	some storage space along side the sink
(36)	___	___	some storage space along side the refrigerator

How satisfactory do you find your kitchen for meal preparation?

	unsatisfactory			satisfactory		
	-1 very	-2 fairly	-3 unsatisfactory	-4 satisfactory	-5 fairly	-6 very
(37)	_____	_____	_____	_____	_____	_____

Do any of the following determine whether you eat out or eat at home?

	-1 No	-2 Yes	
(38)	___	___	invitations from friends or family
(39)	___	___	Senior Citizen nutrition program
(40)	___	___	prefer eating out to eating at home
(41)	___	___	out shopping or traveling
(42)	___	___	other reasons (if yes, what are they?_____)

3 RECORD NUMBER_____

How would you rate your cooking skills?

	-1 very unsatisfactory	-2 fairly unsatisfactory	-3 unsatisfactory	-4 satisfactory	-5 fairly satisfactory	-6 very satisfactory
(43)	____	____	____	____	____	____

How much do you like or dislike each of these activities? Rate each on a 6-point scale.

	-1 dislike very much	-2 dislike	-3 dislike somewhat	-4 like somewhat	-5 like	-6 like very much
(44) meal preparation	____	____	____	____	____	____
(45) special food preparation	____	____	____	____	____	____
(46) after-meal cleanup	____	____	____	____	____	____

Is there any special kitchen appliance which you do not now own, but would like to own, which you think would make meal preparation and/or cleaning up easier for you?

	-1 No	-2 Yes
(47)	___	___

If yes, what appliance is this?

Is there anything in particular about your kitchen which makes meal preparation and/or cleaning-up especially hard for you?

	-1 No	-2 Yes
(48)	___	___

If yes, what is it?

SECOND INTERVIEW

Were any of the following used yesterday in the kitchen?

	-1 No	-2 Yes		-3 Do not have
(49)	___	___	carpet sweeper/electric broom	___
(50)	___	___	vacuum cleaner	___
(51)	___	___	broom	___
(52)	___	___	kitchen exhaust fan	___
(53)	___	___	garbage disposer/indoor incinerator	___

Were any of the following used yesterday?

	-1 No	-2 Yes		-3 Do not have
(54)	___	___	electric frypan/griddle/deep fat fryer	___
(55)	___	___	pressure cooker	___
(56)	___	___	electric mixer/blender	___
(57)	___	___	oven (for other than broiling)	___
(58)	___	___	broiler (separate or in oven)	___
(59)	___	___	outdoor fireplace or grill	___

4 RECORD NUMBER_____

On about how many of the last 7 days were the following used in the kitchen?

	0	1	2	3	4	5	6	7	
(60)	_	_	_	_	_	_	_	_	carpet sweeper/electric broom
(61)	_	_	_	_	_	_	_	_	vacuum cleaner
(62)	_	_	_	_	_	_	_	_	broom
(63)	_	_	_	_	_	_	_	_	kitchen exhaust fan
(64)	_	_	_	_	_	_	_	_	indoor incinerator/garbage disposer

On about how many of the last 7 days were the following used?

	0	1	2	3	4	5	6	7	
(65)	_	_	_	_	_	_	_	_	dishwasher
(66)	_	_	_	_	_	_	_	_	disposer
(67)	_	_	_	_	_	_	_	_	food from 0° F. freezer
(68)	_	_	_	_	_	_	_	_	electric frypan/griddle/deep fat fryer
(69)	_	_	_	_	_	_	_	_	oven (for other than broiling)
(70)	_	_	_	_	_	_	_	_	broiler (separate or in oven)
(71)	_	_	_	_	_	_	_	_	pressure cooker
(72)	_	_	_	_	_	_	_	_	electric mixer/blender
(73)	_	_	_	_	_	_	_	_	outdoor fireplace/grill

Do you have any difficulty doing your household work or is additional work done by you or other household members due to the existance of some physical or mental impairment of a family member?

	-1	-2
	No	Yes
(74)	___	___

How would you describe your general health?

	-1	-2	-3	-4
	poor	fair	good	excellent
(75)	_____	_____	_____	_____

What is the highest grade in school completed by you?_____
your spouse?_____

Coding:	-1 grad. work	-2 4-yr. college	-3 post high school	-4 high school grad.	-5 10th to 11th grade	-6 8th to 9th grade	-7 less than 7th grade
(76) homemaker	____	____	____	____	____	____	____
(77) spouse	____	____	____	____	____	____	____

Before you retired for whom did you work?_____

_____

What kind of business or industry is this?_____

_____

What kind of work were you doing?_____

_____

5 RECORD NUMBER_____

For whom did your spouse work?_____

_____

What kind of business or industry is this?_____

_____

What kind of work was your spouse doing?_____

_____

Coding:	-1 exec. and major prof.	-2 mgmt. and prof.	-3 admin. personnel small bus. owner	-4 clerical tech. worker	-5 skilled manual worker	-6 semi-skilled worker	-7 unskilled worker
(78)homemaker	____	____	____	____	____	____	____
(79)spouse	____	____	____	____	____	____	____

6 RECORD NUMBER_____

CODING

Days of the week:
-1...Sunday -2...Monday -3...Tuesday
-4...Wednesday -5...Thursday -6...Friday -7...Saturday

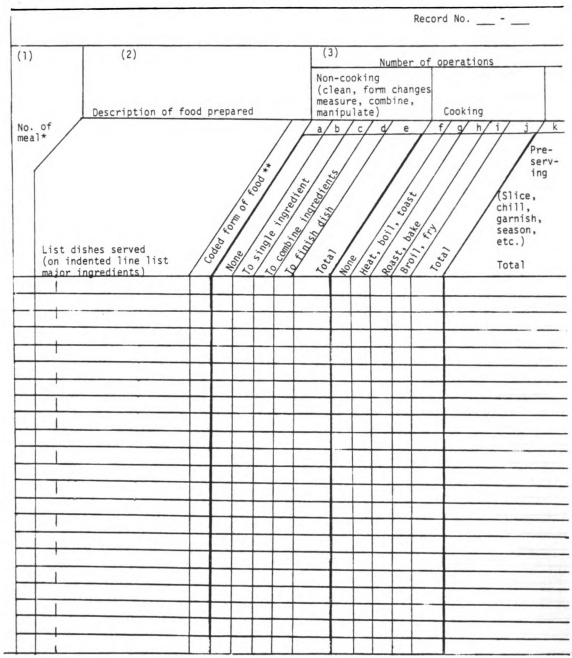
Recall day of the week	-1	-2	-3	-4	-5	-6	-7
(80)	___	___	___	___	___	___	___
Record day of the week							
(81)	___	___	___	___	___	___	___

Number of persons served this meal at the same time

	-1	-2	-3	-4	-5	-6	-7	-8	-9	number of persons
Recall day										
(82)meal 1	___	___	___	___	___	___	___	___	___	
(83)meal 2	___	___	___	___	___	___	___	___	___	
(84)meal 3	___	___	___	___	___	___	___	___	___	
(85)meal 4	___	___	___	___	___	___	___	___	___	
(86)meal 5	___	___	___	___	___	___	___	___	___	
(87)meal 6	___	___	___	___	___	___	___	___	___	
Record day										
(88)meal 1	___	___	___	___	___	___	___	___	___	
(89)meal 2	___	___	___	___	___	___	___	___	___	
(90)meal 3	___	___	___	___	___	___	___	___	___	
(91)meal 4	___	___	___	___	___	___	___	___	___	
(92)meal 5	___	___	___	___	___	___	___	___	___	
(93)meal 6	___	___	___	___	___	___	___	___	___	

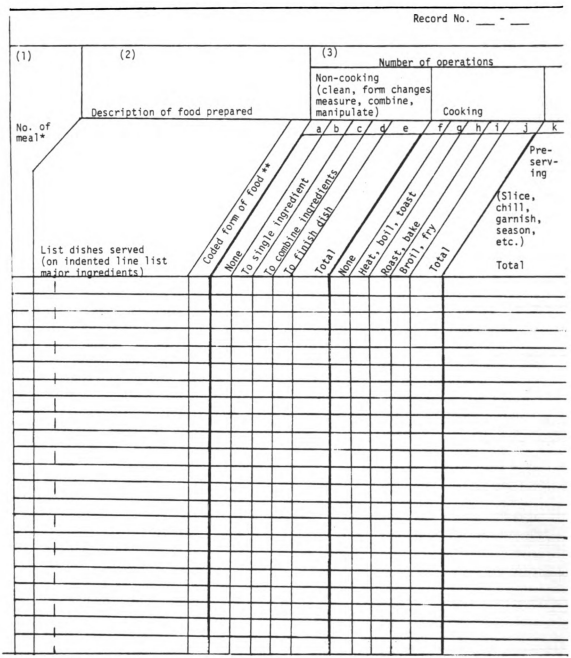
Number and types of meals prepared

	-1	-2	-3	-4	-5	-6	number of meals
Recall day							
(94) Type 1	___	___	___	___	___	___	
(95) Type 2	___	___	___	___	___	___	
(96) Type 3	___	___	___	___	___	___	
(97) Type 4	___	___	___	___	___	___	
(98) Type 5	___	___	___	___	___	___	
Record day							
(99) Type 1	___	___	___	___	___	___	
(100)Type 2	___	___	___	___	___	___	
(101)Type 3	___	___	___	___	___	___	
(102)Type 4	___	___	___	___	___	___	
(103)Type 5	___	___	___	___	___	___	



* Beginning with first meal prepared.

**Form before preparation:
1. Fresh; 2. Canned; 3. Frozen; 4. Dried; 5. Ready-to-serve; 6. Ready-to-bake; 7. Ready-to-mix; 8. Home prepared; 9. Leftovers: (a) ready-to-serve; (b) reheated; (c) completely changed.



* Beginning with first meal prepared.

**Form before preparation:
1. Fresh; 2. Canned; 3. Frozen; 4. Dried; 5. Ready-to-serve; 6. Ready-to-bake;
7. Ready-to-mix; 8. Home prepared; 9. Leftovers: (a) ready-to-serve; (b) reheated;
(c) completely changed.

Record No. ____-____

792A

Recall date:	Meal 1	Meal 2	Meal 3	Meal 4	Meal 5	Meal 6	Meal 7	Meal 8	Meal 9	Meal 10
Number of persons served this meal at the same time										
Meal prepared by (use symbols from time record)										
Approximate time meal preparation started										

1. Was there anything unusual about the day's meals? If yes, for which meal and what was it?

Meal 1: _____ Meal 6: _____

Meal 2: _____ Meal 7: _____

Meal 3: _____ Meal 8: _____

Meal 4: _____ Meal 9: _____

Meal 5: _____ Meal 10: _____

Record date:	Meal 1	Meal 2	Meal 3	Meal 4	Meal 5	Meal 6	Meal 7	Meal 8	Meal 9	Meal 10
Number of persons served this meal at the same time										
Meal prepared by (use symbols from time record)										
Approximate time meal preparation started										

1. Was there anything unusual about the day's meals? If yes, for which meal and what was it:

Meal 1: _____ Meal 6: _____

Meal 2: _____ Meal 7: _____

Meal 3: _____ Meal 8: _____

Meal 4: _____ Meal 9: _____

Meal 5: _____ Meal 10: _____

Record No. -

792A

	Data reported for day of week and date		Date interview taken	Name of interviewer
Recall day				
Record day				

Interviewer: Please note any circumstances that made the days reported different from other days:

1. Unusual weather conditions on recall day _____

   record day _____

   during last 7 days _____

2. Unusual home conditions on recall day _____

   record day _____

   during last 7 days _____

3. Unusual family activities on recall day _____

   record day _____

   during last 7 days _____

4. Special situations in home, such as chronically ill or handicapped person _____

   _____

Office Record Date By Whom

Interview validated _____ _____

Time record completed	H	S	F	F	F	M	M	M	Checked with questionnaire
Recall day									
Record day									

NEW YORK STATE COLLEGE OF HOME ECONOMICS
A Statutory College of the State University
At Cornell University, Ithaca, New York 14850

789A

Department of Household Economics and Management

Use-of-time Research Project
Definition of Household Activities

HOUSEHOLD ACTIVITIES

1. Regular Meal Preparation

Preparation of food for all regular meals served on record days.
- Breakfast, noon and evening meals
- Snacks, packed lunches
- Special foods (baby formula, cocktails, etc.)

Cleanup incidental to meal preparation
Setting the table
Serving the food

2. Special Food Preparation

Preparation of food for future use.
- Food baked or prepared for another day
- Canning and freezing

Preparation of food for guests and special occasions
- Holiday meals
- Party refreshments
- Food gifts and donations of food served at functions outside the home

Cleanup incidental to this preparation

3. After-Meal Cleanup

After-meal care of table, dishes, leftovers, kitchen equipment and refuse. (also include unloading dishwasher or dish drainer for storage.)

****

4. Regular House Care

Daily, semi-weekly, weekly, and biweekly care and cleaning of house and appliances.
- Cleaning tasks, such as
  - mopping
  - dusting
  - vacuuming
- Making beds
- Putting rooms in order
- Tending the house heating system
- Caring for house plants or flowers

789A

5. Special House Care and Maintenance

Occasional or seasonal care and cleaning of house, such as:
- Washing windows
- Cleaning closets
- Waxing floors
- Defrosting and cleaning freezer
- Special cleaning of oven

Repair and upkeep of home, appliances and furnishings, such as:
- Painting and papering
- Repairing furniture
- Repairing equipment
- Reupholstering
- Redecorating

****

6. Care of Yard and Car

Daily and seasonal care and maintenance of yard, garden areas walks, garage car, and equipment used for these activities. (Also include care of garbage and trash.)

****

7. Washing by Machine

Washing clothes and household textiles at home or at laundromat.
- Collecting and sorting soiled things for washing
- Pretreating
- Loading and unloading washer or dryer (do not include time taken by machine)
- Hanging things on line and taking them down
- Cleanup incidental to washing
- Folding and storing unironed clothes

8. Ironing

Ironing and pressing of clothes. Also include:
- Preparing clothes and household linens for ironing
- Getting out and putting away equipment used
- Folding and storing ironed articles

9. Special Care and Construction of Clothing and Household Linens

All activities related to clothing production and upkeep not included in 7. and 8. For example, include:
- Hand washing
- Mending
- Spot removal
- Shoe care
- Dry cleaning
- Seasonal storage
- Construction of clothing and household furnishings

****

10. Physical Care of Family Members 789A

All activities related to physical care, such as:
Bathing, feeding and dressing of family members
Giving bedside care
First aid
Taking family members to dentist or physician, beauty or barber shop

11. Other Care of Family Members

All activities related to social and educational development of family members, such as:
Helping with lessons
Reading to children
Taking children to social and educational functions
Taking care of family pets

****

12. Marketing (or Shopping)

All activities related to shopping, whether or not purchases are made. Include:
Time for shopping in person, by telephone, mail, or home sales or delivery
Time for putting purchases away

13. Management and Record Keeping

All management activities of the household.
Making decisions and planning, such as:
Thinking about and discussing alternatives
Planning menus
Making out market lists
Looking around for ideas
Measuring space for something
Figuring out how much money is available
Checking plans as you carry them out
Supervising work of others
Thinking back to see if plans worked

All record keeping activities, such as:
Paying bills
Making bank deposits
Making and working on records of receipts and expenditures

****

OTHER WORK

14. School, Paid and Volunteer Work
Time for each family member going to and from work or school as well as time at work or school.

****

OTHER ACTIVITIES

15. All Other Personal, Family and Social Activities
All activities not included in 1-14 above. For example:
Personal activities as eating and sleeping
Social activities as letter writing, visiting, recreation and play (individual, family or community)

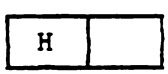
Instructions for Keeping Time Record

We need to have a record of how each member of your family used his time for two days. To show you how to keep the record, we'll record yesterday's use of time while I am here. For the second record we would like you to record your family's use of time for a second day.

On the left side of the time record, household work and other activities are listed; across the top of the record, the twenty-four hours of the day are listed. We are asking that you keep a time record for the entire family, and that you ask each person to look over the charts to check your recording of their use of time. For ease in recalling and recording the time, we have broken each hour into six ten-minute periods.

A combination of colors and letters or numbers is used to record each family member's time. The activity that a family member has done is identified by symbols placed in the appropriate time and activity blocks. All female homemakers will record in red; all male homemakers will record in blue; all female spouses will record in brown; all male spouses will record in black; all other female adults will record in yellow; and all other male adults will record in green.

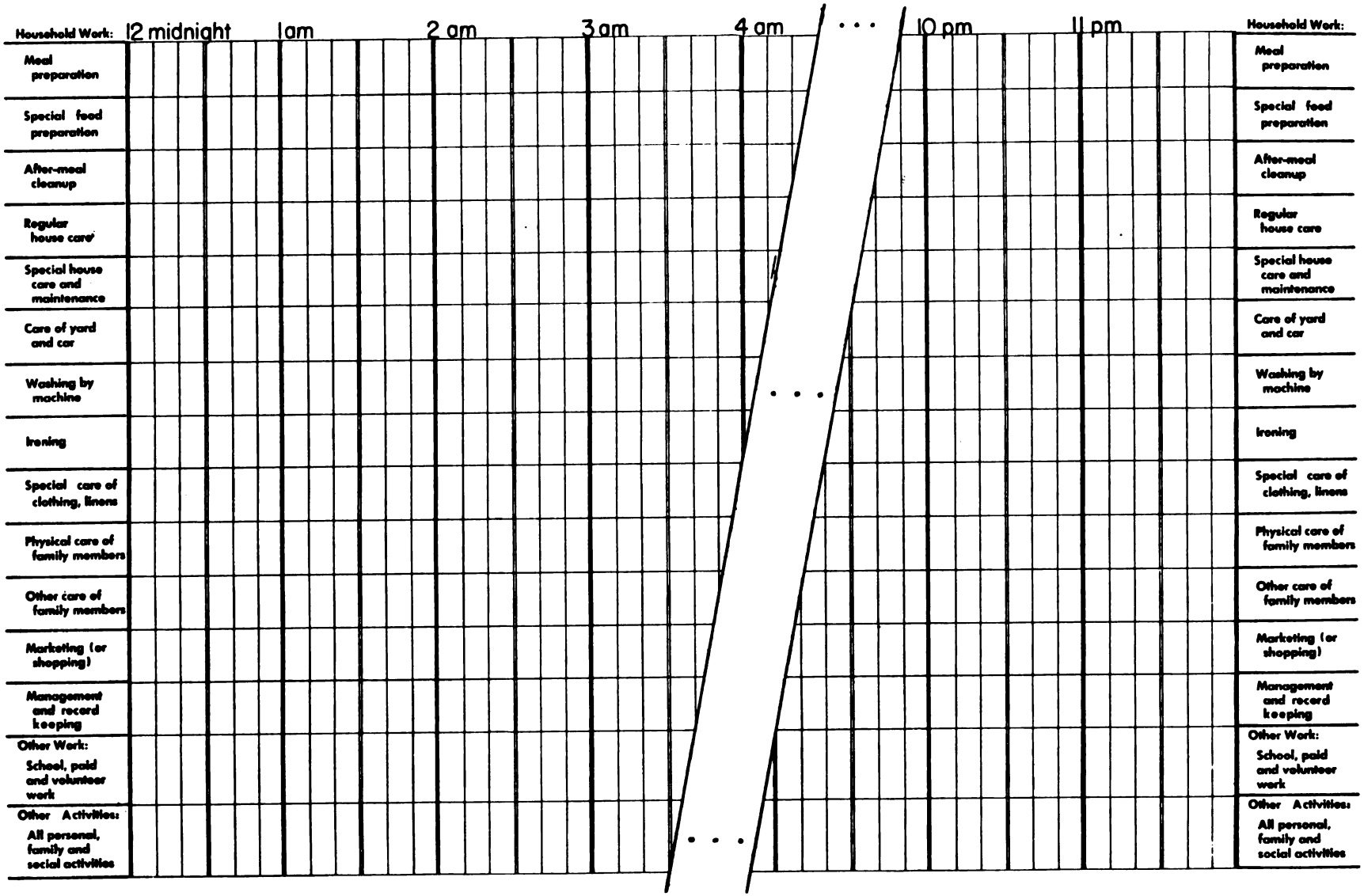
If from 8:00 to 8:10 a.m. you prepared the breakfast, you write a letter in the color appropriate for you in the first block after 8 a.m. in the meal preparation row. If you continued this for another ten minutes, you put another letter in the following block at 8:10. For longer, continuous activities, an arrow and line can be drawn from the time of starting an activity to the time the activity was completed, using the individual's letter at each end. (H ⟷ H) Time recorded is active time use: that is, time involved in getting ready for the job, working at the job and cleaning up after the job, but it does not include the time required for a machine to function without your full attention. If two tasks are done within the 10-minute period, but not simultaneously, draw a line to divide the time block into approximate 5-minute periods and write in the worker's symbol.



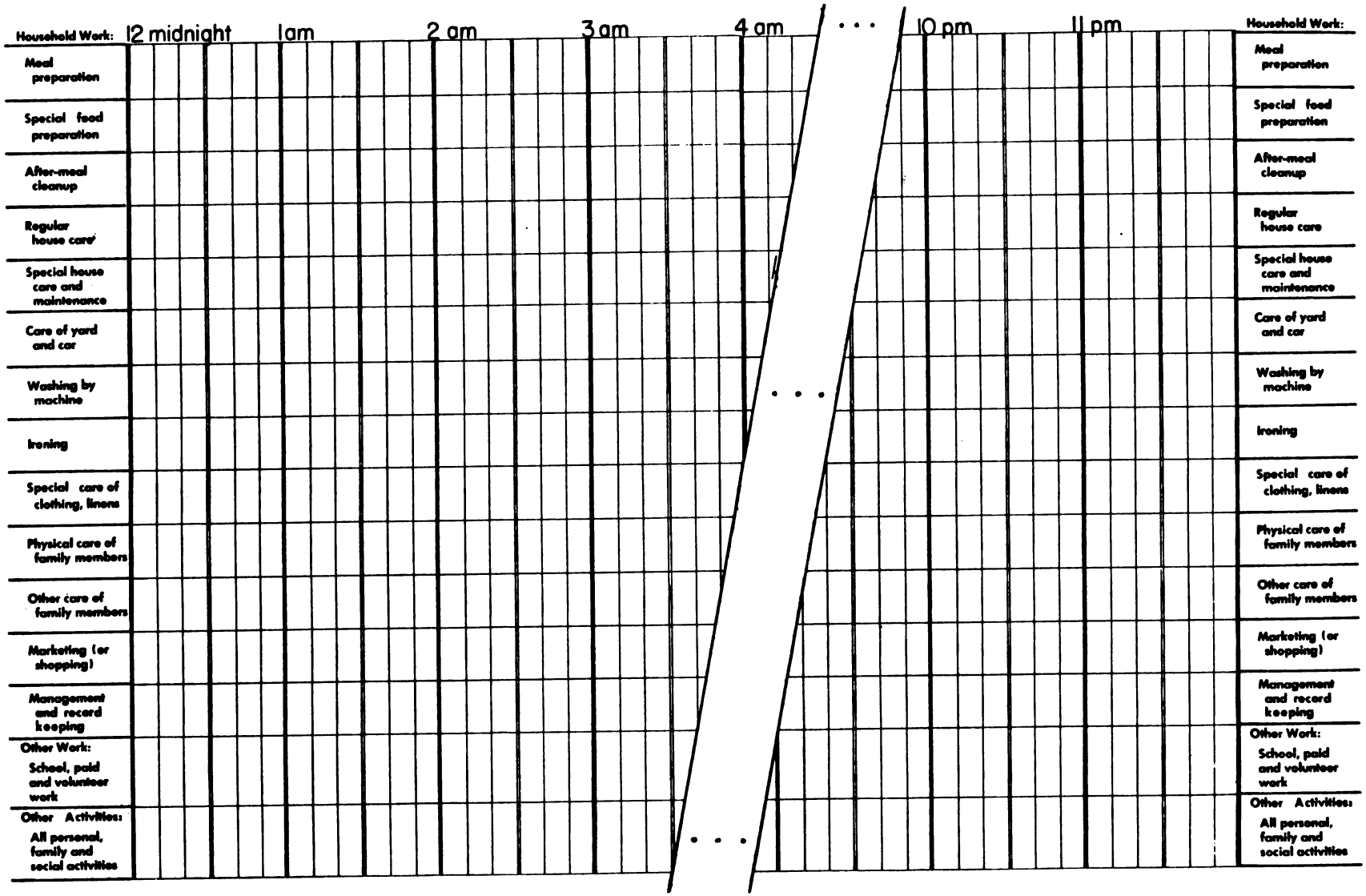
If you or any other worker did two or more things at the same time, record the time in the same manner as above, but circle the letter for the secondary activity. For example, if you were preparing dinner and watching TV, place an H under Meal Preparation and an (H) under Other Activities.

Include transportation time with the activity for which the trip was made, but use a T after the family symbol to indicate time spent in travel (HT). If more than one thing was done on a trip, include the time enroute to the activity of the first stop and assign the time for return trip to the last activity. For example, if you went to the dry cleaners and then did your marketing, include time to dry cleaners under Special Care of Clothing and include the time traveling home under Marketing.

TIME-RECORD CHART



TIME-RECORD CHART



APPENDIX B

YOU ARE INVITED TO PARTICIPATE IN A SPECIAL STUDY
OF TIME USE IN FOOD PREPARATION OF MEN AND WOMEN AGE 65 AND OLDER

conducted by
BETTY OLSON
volunteer worker with the Delta-Waverly 39ers
and
graduate student at Michigan State University

* *

Here are answers to some of your questions about this special study.....

WHY STUDY TIME USE IN FOOD PREPARATION OF MEN AND WOMEN AGE 65 AND OLDER?

*These men and women are a growing and important part of our society.
*Recognition of the value of housework is increasing. You, as older persons, deserve recognition for the work you do at home.
*Some social scientists are trying to put a dollars and cents value on housework. They need to know what is done before a value can be put on it.
*This study will measure the amount of time used in all housework, looking especially at the factors which affect the amount of time used in food preparation.

WHO IS INCLUDED IN THE STUDY?

*50 men and women age 65 and older will be participating.
*You are one of those chosen to participate.

WHY SHOULD I PARTICIPATE?

*Based on past experience, I think you will enjoy the interview and the questionnaire.
*But the main reason is to help me learn about how much time you spend in housework, and to help to improve the quality of life for all retired persons.

DO I HAVE ANY CHOICE ABOUT THIS?

*You certainly do! Participation is STRICTLY VOLUNTARY. After you read more about the study, I think you will agree that it is important and exciting, and that you will be glad to be part of it.

WHAT WILL MY PART IN THE STUDY BE?

*Sometime during the next few weeks either I or an interviewer I have trained will contact you to arrange for a personal interview.

*Sometime after that, one of us will spend about ½ hour with you filling out the questionnaire and a chart which records the time you use in housework. At this time we will ask you to fill out another time chart by yourself the next day. Before we leave we will make an appointment with you to meet again to collect the charts and ask a few more questions.

WHAT KIND OF THINGS DO YOU WANT TO ASK ME?

*The interview and questionnaire ask about your kitchen and about how you feel about preparing food and cleaning up.

*A time-record chart will record all the time you spend doing housework.

I DO VERY LITTLE HOUSEWORK, SO WHY DO YOU WANT TO KNOW HOW MUCH TIME I SPEND DOING IT?

*This is what I want to know! I am interested in <u>you</u> and the housework <u>you</u> do--whatever the amount of time you spend doing it. I <u>need</u> to know if some persons use very little time in housework.

WHO WILL SEE MY ANSWERS?

*Your individual answers are held strictly confidential. The information you give me will be put through a computer at Michigan State University. It is never seen by anyone in the club, or anyone else who knows you.

WHAT HAPPENS TO THE INTERVIEWS AND QUESTIONNAIRES?

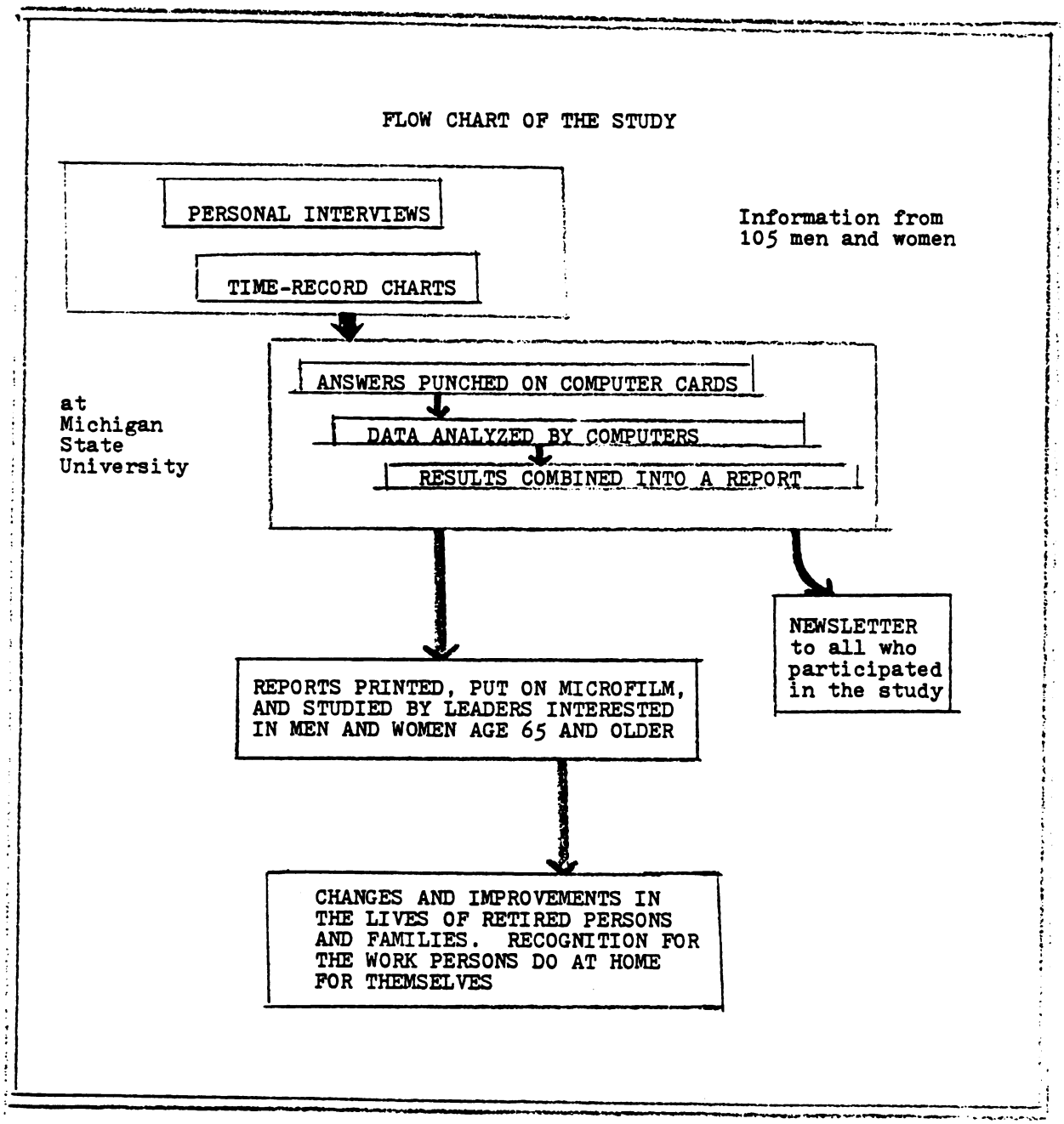
*The diagram on the next page shows what happens. Your answers are punched onto computer cards, and then analyzed by computers. After results are known, a report will be written, printed, put on microfilm and read by leaders interested in older persons.

WILL I GET TO SEE THE RESULTS OF THE STUDY?

*Yes indeed. In fact, you will be among the first to know. I am planning a newsletter to be sent to all those who participate telling them about the results of the study.

WHAT IF I HAVE OTHER QUESTIONS ABOUT THE STUDY?

*You can ask me on Wednesdays at the club meeting, or call me at home at 321-6268.


FLOW CHART OF THE STUDY
PERSONAL INTERVIEWS
TIME-RECORD CHARTS
Information from 105 men and women
ANSWERS PUNCHED ON COMPUTER CARDS
DATA ANALYZED BY COMPUTERS
RESULTS COMBINED INTO A REPORT
at Michigan State University
NEWSLETTER to all who participated in the study
REPORTS PRINTED, PUT ON MICROFILM, AND STUDIED BY LEADERS INTERESTED IN MEN AND WOMEN AGE 65 AND OLDER
CHANGES AND IMPROVEMENTS IN THE LIVES OF RETIRED PERSONS AND FAMILIES. RECOGNITION FOR THE WORK PERSONS DO AT HOME FOR THEMSELVES

APPENDIX C

APPENDIX C

STATEMENT OF RESEARCH ETHICS

The following guidelines were adhered to in conducting this study by the investigator and the interviewer she hired. The purpose of the guidelines was to protect the rights of the respondents.

1. All study procedures were reviewed to assure that the rights of individual respondents were protected at each stage of the research.

2. All information that connected a particular interview with a specific respondent was removed as soon as the second interview was completed.

3. This information was kept in a locked file for the duration of the study and will be destroyed when the study is finished. Interview schedules are identified only by number.

4. All information gained during the conduct of the research was considered privileged information, whether it concerned the interview itself or the extraneous observations of the respondent's home, family, or activities.

5. All subjects gave their cooperation freely.

6. All subjects were informed of the nature of the investigation and the exact form of all procedures before the interview questioning began.

7. All subjects were informed that they were free to discontinue their participation at any time.

8. All subjects were informed that more explanation of or information about the study was available to them at their request after their participation was completed.

9. All subjects were given an opportunity to learn the results of the study.

APPENDIX D

APPENDIX D

INTERVIEWER TRAINING PROCEDURE

An interviewer was hired to conduct some of the interviews. The following outline for procedure was used to train the interviewer.

I. Introduction to the study
   A. Objectives
   B. Justification
   C. Relationship to the Walker and Woods study
   D. Operational definitions

II. Introduction to the procedure
   A. Sample information
   B. Number of interviews with each respondent
   C. Instruments
      1. Time-record chart
         a. Explanation of how to use the chart
         b. Demonstration of coding system
      2. Interview schedule
         a. Demonstration of how each part of the schedule is to be completed
         b. Emphasis on coding for "description of food prepared" by operations

III. Role of the interviewer
   A. Interviewer arranges for appointment for first interview with respondent
   B. First interview
      1. Interviewer arrives at appointed time
      2. Interviewer explains the study to the respondent using the flyer prepared by the investigator
      3. Interviewer collects data indicated on schedule as "first interview"
      4. Interviewer reads the definitions of activities to the homemaker in preparation for completing the time-record chart
      5. Interviewer reads directions for recording time on the time-record chart

6. Interviewer records time-use for the preceding day, making certain respondent understands recording concept. Interviewer may ask probing questions to facilitate recall, such as "and then what did you do?"
7. Interviewer leaves chart to be completed for the next day along with the instruction sheet, definition sheet, and appropriate-color markers
8. Interviewer makes appointment for the second interview

C. Second interview
1. Second interview is held two days after the first
2. Interviewer arrives at appointed time
3. Interviewer collects time-record charts and markers
4. Interviewer carefully reviews the homemaker's record of activities for the preceding day, checking for completeness
5. Interviewer completes schedule for the "second interview"

IV. Interviewer and investigator
A. To handle problems the interviewer may experience in the field, the investigator is called for suggested approach
B. Monetary considerations
1. Pay rate per schedule
2. Reimbursement for mileage (includes mileage for incomplete schedules)
3. Introduction to the form prepared by the investigator for recording this information, and for the convenience of the interviewer in recording appointments and directions for locating residence of respondent
4. Social Security and withholding tax forms if interviewer intends to earn more than $50.00 in a three-month period

FORM FOR INTERVIEWER USE

RECORD NUMBER_____

DATE_____

NAME OF RESPONDENT_____

ADDRESS_____ TELEPHONE_____

Time of 1st appointment_____ a.m. p.m. Recall day_____ a.m. p.m.

Time of 2nd appointment_____ a.m. p.m. Record day_____ a.m. p.m.

Special directions to residence:

Round-trip mileage_____miles X $ .15 = $_____

Completed schedule $_____

Total amount due $_____

Signature of interviewer_____

Interview validated _____
date

APPENDIX E

APPENDIX E

INTERVIEWING OLDER MEN AND WOMEN: SOME CONSIDERATIONS

Betty Ann Olson

Aging is an area of concern that is gaining considerable attention in all social and scientific fields. This concern is justified by the expectation that the number of persons aged 65 and older will increase greatly in the next few decades; by 2000 this group will be the largest and most educated elderly in history. The social and political implications of this phenomenon are tremendous.

Aging is increasingly becoming of interest to researchers. As more research is conducted, more opportunities will arise for researchers to employ the interview method to collect data from older persons; and, in turn, more older men and women will find themselves in the role of interview respondent.

To establish rapport, the personal relationship of confidence and understanding between the interviewer and the respondent, is the goal of the interviewer; rapport provides the foundation for good interviewing (Survey Research Center, 1969). The interview will be more successful for all concerned, and rapport more readily established, if

the interviewer is sensitive to certain considerations unique to older men and women.

Name

In the English language, there is no single, convenient noun commonly used to designate an old person. Comparatives such as "senior," "senior citizen," "aged," "elderly," and "older person" are used. Many older men and women feel uncomfortable with these names; they consider them patronizing and charged with hidden meanings connotating denigrating stereotypes (Schmerl, 1975). In this author's experience, most persons who object to some of the names mentioned do not feel as uncomfortable with the terms "older person," "older men and women," or "men and women over 65." The interviewer who is aware that names given to segments of the population are far more than mere identity tags may be able to secure the cooperation of the respondent and build rapport more quickly. Sensitivity to the implications of the name on the part of the interviewer is one opportunity to contribute to the growing image of respectability in old age.

Hearing Loss

By age 65 the percentage of Americans suffering hearing-impairment is one half of all men and 30 percent of all women (National Center for Health Statistics, 1971). Hearing changes can affect the older person's ability to communicate. Bettinghaus and Bettinghaus (1977) state that communication problems that arise with the hearing-impaired

older person are complicated by attitudes commonly held toward them. They suggest that the hearing-impaired older person may seem to be inattentive or withdrawn, display a strained facial expression, or even answer questions inappropriately; these symptoms are commonly associated with senility. Recognizing this hearing-loss problem, the interviewer can use several techniques to compensate for it (Merriam): 1) speak louder, 2) speak slowly, articulating carefully, 3) use simple words, and 4) face the older person directly when speaking to him or her.

Slower Pace

Senescence is the normal process of biological aging, the important bodily changes that occur as age increases. This slowing down process can be observed by the interviewer in the more cautious, more thoughtful, or more rigid appearance of the older respondent. To compensate for slower pace, the interviewer must adapt his pace to that of the respondent, using care not to rush him or her physically.

It has been observed by this interviewer that some older persons appear to have shorter interest spans than are usually expected in adults. To facilitate obtaining a complete interview, particularly if the schedule is long, it may be helpful to 1) vary the pace or tempo of the interview, or 2) allow interruptions of the interview by briefly changing the topic or sharing an anecdote before continuing.

Environment

The interview is actually a new situation for most older persons. The respondent, when the interview begins, does not know what is expected of him. To help the respondent to feel at ease, the interviewer needs to consider the atmosphere or environment in which the interview takes place. Environment is important to older persons; roles are played in specific places, and older people can become quite attached to places and things in them, taking comfort in familiar surroundings.

In this author's experience, the most successful interviews were conducted at community centers or in the homes of the older persons. At the centers, the author requested the use of small, quiet rooms away from the large groups of older persons but still in familiar surroundings for the respondent. When the interview was held in the respondent's home, the investigator found it helpful to make an appointment for a time of day that did not interfere with the respondent's routine. Some older people find comfort and security in routine; for example, they nap or watch certain television programs at certain times each day, and prefer not to have interruptions at these times. So that the respondent's routine is not rushed or upset, the interviewer should allow sufficient time for the interview.

Need for Recognition

Attitudes toward old age vary widely from culture to culture. The general American culture tends toward the

consideration of the older person as a liability, not as an asset. The idea that old people are senile, showing forgetfulness, confusional episodes and reduced attention is widely accepted. Butler (1975) calls this "the myth of senility" and states that some of what is called senility is the result of physical problems that are treatable and often reversible. Whether or not they actually suffer from physical or mental problems, older persons may respond in certain situations with the response or behavior that they perceive as expected of them, actually acting out the negative role society has given them. This negative behavior can manifest itself as a communication problem in the interview situation. The interviewer who is aware of this can compensate for it by expressing a genuine interest in the respondent and accepting him or her as a person. The interviewer can give assurance to the respondent that no answer is wrong or out of place, and that his or her answers have value.

The interview itself can be esteem-building for the respondent. It is flattering for persons of all ages, and particularly for older persons, to be asked their opinions. In addition, an interview does not necessarily end when the interviewer leaves; the respondent may "live" the interview many times as he relates his experiences to his family, friends or neighbors.

Mental Functioning

Older persons can exhibit apparent memory defects, such as being unable to remember names of persons or objects.

It is commonly believed that all kinds of memory (short-term, recent, remote, and distant) show a decline with advancing age. Studies, however, do not overwhelmingly support this idea (Atchley, 1977). While it is true that there is an age deficit in recall of various types, it is not clear whether this deficit results from declining memory or from declining ability to learn initially. Whichever it is, older persons may have difficulty arranging events into the proper sequence or temporal relationships, as well as the proper spacial relationships. Merriam (1977) suggests that the interviewer structure questions requiring these types of reponses as simply and uncomplicatedly as possible.

Another mental functioning problem can be attributed to aphasia. Aphasia refers to the general inability to communicate through language and to the specific disturbance in receiving or producing spoken language. In adults aphasia is often the result of a cerebral vascular accident (Hutchinson and Beasley, 1977) or some other disease or injury of the brain. Merriam states that this communication problem can be recognized by defective sentence structure, repetition of phrases, difficulty in discussing abstract topics and breaking off in the middle of sentences, unable to finish the thoughts. She suggests that older people often compensate for this problem by using gesture or pantomime, by making a continued attempt to find the desired word, or by using periphrasis or circumlocution. An interviewer working with a person with aphasia can skillfully assist the respondent by providing the right word, restructuring a thought, and

keeping abstract questions to a minimum.

Conclusion

To build rapport with the older respondent, the interviewer needs to be sensitive to certain characteristics of older persons that could cause problems in the interview. The interviewer who is aware of the possible existence of hearing-impairment, slower-paced life style, need for recognition, and problems with mental functioning can adapt his procedures accordingly and make the interview a situation that generates satisfaction for all concerned.

List of References

Atchley, Robert C.
1977 The Social Forces in Later Life, 2d ed. Belmont, Calif.: Wadsworth.

Bettinghaus, Carole O. and Erwin P. Bettinghaus
1977 "Communication considerations in the health care of the aging." Aging and Communication. Herbert J. Oyer and E. Jane Oyer, eds. Baltimore: University Park Press, 129-154.

Butler, Robert
1975 Why Survive? Being Old in America. New York: Harper and Row.

Hutchinson, John M. and Daniel S. Beasley
1977 "Speech and language functioning among the aging." Aging and Communication. Herbert J. Oyer and E. Jane Oyer, eds. Baltimore: University Park Press, 155-174.

Merriam, Sharan
1977 "Interviewing the aged: some considerations for the adult educator." Adult Leadership 32 (March): 215-216.

National Center for Health Statistics
1971 Department of Health, Education, and Welfare. "Health in the later years of life." Washington, D.C.: U.S. Government Printing Office.

Schmerl, E. Fritz
1975 "In the name of the elder--an essay." The Gerontologist 30 (October): 386.

Survey Research Center
1969 Institute for Social Research. Interviewer's Manual. Ann Arbor: The University of Michigan.

LIST OF REFERENCES

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Beyer, Glenn H. and Margaret E. Woods
1962 "Living and activity patterns of the aged." Research Report No. 6. Ithaca, New York: Center for Housing and Environmental Studies, Cornell University.

Bloom, Martin
1972 "Measurement of the socio-economic status of the aged: new thoughts on an old subject." The Gerontologist 27 (Winter): 374-378.

Boulding, Elise
1977 Women in the Twentieth Century World. New York: Wiley.

Chapin, Francis S.
1974 Human Activity Patterns in the City. New York: Wiley.

Cowles, May L. and Ruth P. Dietz
1956 "Time spent in homemaking activities by a selected group of Wisconsin farm homemakers." Journal of Home Economics 48 (January): 29-35.

Crawford, I.Z.
1927 "The use of time by farm women." University of Idaho Agricultural Experiment Station Bulletin No. 146.

Dickens, Dorothy
1945 "Time activities in homemaking." Mississippi Agricultural Experiment Station Bulletin No. 424.

Gage, M.G.
1960 The Work Load and its Value for Fifty Homemakers, Tompkins County, New York. Unpublished Ph.D. dissertation, Cornell University.

Hayes, William L.
1973 Statistics for the Social Sciences. New York: Holt, Rinehart and Winston.

Heirich, M.
1964 "The use of time in the study of social change." American Sociological Review 29: 386-397.

Hollingshead, August B.
1957 "Two factor index of social position." Box 1965, Yale Station, New Haven, Conn. Mimeographed.

Isaac, Stephen and William B. Michael
1971 Handbook in Research and Evaluation. San Diego: Edits.

Kneeland, H.
1929 "Women on farms average sixty-three hours' work weekly, survey of 700 homes." U.S. Department of Agriculture Yearbook. Washington D.C.: U.S. Government Printing Office.

Kutner, B., D. Fanshel, A.M. Togo, and T.S. Langer
1956 Five Hundred over Sixty: A Community Survey of Aging. New York: Russell Sage Foundation.

Lopata, Helena Z.
1966 "The life cycle of the social role of housewife." Sociology and Social Research 51 (October): 5-19.

Maloch, Francille
1963 "Properties, qualities, and characteristics of most and least liked household tasks." Cornell University Agricultural Experiment Station Memoir 384.

Manning, Sarah L.
1968 "Time use in household tasks by Indiana families." Research Bulletin No. 837, Purdue University.

Morgan, James N., Ismail Sirageldin, and Nancy Baerwaldt
1966 Productive Americans: A Study of How Individuals Contribute to Economic Progress. Ann Arbor: Survey Research Center, University of Michigan.

Moser, A.M.
1935 "Food consumption and use of time for food work among farm families in the South Carolina Piedmont." South Carolina Agricultural Experiment Station of Clemson Agricultural College Bulletin No. 300.

Muse, Marianne
1946 "Time expenditures on homemaking activities in 183 Vermont farm homes." Vermont Agricultural Experiment Station Bulletin No. 530.

Nelson, Linda Jean
1963 Daily Activity Patterns of Peasant Homemakers. Unpub-Ph.D. dissertation, Michigan State University.

Nie, Norman H., C. Hadlai Hull, Jean G. Jenkins, Karin Steinbrenner, and Dale H. Bent
1975 Statistical Package for the Social Sciences, 2nd ed. New York: McGraw-Hill.

Ryff, Carol D. and Paul B. Baltes
1976 "Value transition and adult development in women: the instrumentality-terminality sequence hypothesis." Developmental Psychology 12, no. 6: 567-568.

Shanas, Ethel
1966 "Viewpoint and interview with Ethel Shanas." Geriatrics 21, No. 4: 110.

Siegel, S.
1956 Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill.

Szalai, Alexander
1972 The Use of Time. The Hague: Mouton.

Szalai, Alexander
1975 "The situation of women in light of the contemporary time-budget research." United Nations World Conference of the International Women's Year, Mexico City, June 19-July 2, 1975.

U.S. Department of Commerce, Bureau of the Census
1972 "1970 Census of Population and Housing. Census Tracts. Lansing, Michigan." PHC (1)-106.

U.S. Department of Commerce, Bureau of the Census
1976 "Demographic aspects of aging and the older population in the United States." Current Population Reports, Special Studies, Series P-23, No. 59 (May).

Walker, Kathryn E.
1957 "Homemaking work units for New York state households." Cornell University Agricultural Experiment Station Memoir 353.

Walker, Kathryn E. and William Gauger
1973 "Time and its dollar value in household work." Family Economics Review ARS 62-65, (Fall): 8-13.

Walker, Kathryn E. and Margaret E. Woods
1976 Time Use: A Measure of Household Production of Family Goods and Services. Washington, D.C.: AHEA.

Warren, Jean
1940 "Use of time in its relation to home management." Cornell University Agricultural Experiment Station Bulletin No. 734.

Wasson, Grace E.
1930 "Use of time by South Dakota farm homemakers." South Dakota Agricultural Experiment Station Bulletin No. 247.

Wiegand, Elizabeth
1954 "Use of time by full-time and part-time homemakers and its relation to home management." Cornell University Agricultural Experiment Station Memoir 330.

Wilson, Maude
1929 "Use of time by Oregon farm homemakers." Oregon Agricultural Experiment Station Bulletin No. 256.