REACTIONS OF HOMEMAKERS TO THEIR MOBILE HOME KITCHENS IN MIDWEST CITY, OKLAHOMA

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REACTIONS OF HOMEMAKERS TO THEIR MOBILE HOME KITCHENS IN MIDWEST CITY, OKLAHOMA

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PREFACE

The study was designed to determine selected homemakers' satisfactions and dissatisfactions with their mobile home kitchen arrangement and storage facilities.

The author wishes to express her appreciation to Dr. Ilse H. Wolf, Professor and Head of Home Management, Equipment, and Family Economics Department, for her valuable aid and guidance. An expression of graditude is extended to Mrs. Vera Gardner, Assistant Professor of Home Management, Equipment, and Family Economics Department, for her interest and assistance, and to Miss Gertrude McAllister, Assistant Professor of the same department, for reading the thesis. Indebtedness is also acknowledged to Dr. Carl Marshall, Professor and Director of the Statistics Laboratory, for his assistance in developing the questionnaire; to Miss Donna Eaton for her assistance in processing the data; to the homemakers in the Midwest City mobile home parks who cooperated in the study; and to Mrs. Judy Roach for typing the thesis.

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CHAPTER I

INTRODUCTION

The increasing mobility of families in this country during the last twenty-five years has contributed to mobile home living becoming an increasing part of the United States scene. Each year manufacturers add improvements and refinements to mobile homes and their furnishings to make them more elegant and comfortable. Although over-all architectural design of mobile homes tends to be limited, consumers apparently demand that mobile homes become more like stationary homes. This may be part of an over-all trend of an affluent society where families demand luxury and convenience in their homes.

People who buy and live in these mobile homes come from all socio-economic, occupational, and age groups; therefore, the needs and wants of the mobile home dwellers tend to vary widely.

The purpose of any house is to provide for the well-being and happiness of family members by giving protection against the elements and providing space and facilities for the essentials of family life such as rest, relaxation, personal care, provision of food and clothing for the family, extending hospitality, and providing aesthetic satisfactions. Often the house also serves as a symbol of prestige and self-respect.

Because of the influence of the house and its furnishings on the activities of the family in the home, family housing may contribute to or hamper satisfactions of home living. The house and its furnishings

can provide comfort and convenience for work as well as for other activities in the home. Among the many factors that influence the satisfactions relating to family living and the performance of household chores are the appropriateness and adequacy of space and its arrangement, as well as, the placement of furnishings and equipment and temperature control of the work areas.

In the United States the kitchen has received much attention and emphasis as a major work area in the home. Not only is the kitchen the place where food is prepared, but also the place where the majority of people eat and where the family spends much leisure time, both alone and with friends. It is the major workshop of the home where the homemaker spends more working time than in any other area of the house. A 1954 study of time spent in homemaking activities by 250 homemakers, both urban and rural, revealed women spent from 1.9 to 3.9 hours in the kitchen daily or a total weekly time of 13.3 to 27.3 hours[1].

Homemakers seem to continue to use more time in food work than in any other housekeeping responsibility as shown by a 1960 study of 190 women. The data of the study revealed 29 per cent or 49 hours of the part-time employed and 19 per cent or 31 hours of the full-time employed homemaker's week was devoted to household production which "included all food work, house care, clothing care, outside work, and shopping"[2] (exclusive of work for pay). Somewhat less than half of

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[1]Elizabeth Wiegand, Use of Time by Full-time and Part-time Homemakers in Relation to Home Management, Ithaca, New York: Cornell University Agr. Expt. Station Bul. 330 (July, 1954), p. 13.

[2]Ella S. Anderson and Cleo Fitzsimmons, "Use of Time and Money by Employed Homemakers", Journal of Home Economics, 52 (June, 1960), p. 453.

the household production time was spent on food work by both groups.

Since the kitchen is the area in which the homemaker spends the major part of her work time, this seems to be the logical area in which she might find herself most conscious of the convenience, adequacy, and effectiveness of the arrangement, furnishings, and storage.

Statement of Problems

Purposes

Due to the increasing number of families living in mobile homes and the lack of research and information dealing with mobile homes, this study was conducted in an Oklahoma community to explore some of the reactions of homemakers with regard to their mobile home kitchens, and to obtain information about possible problems inherent in these kitchens. More specifically the sub-purposes were:

(1) To determine whether mobile home kitchens provide the arrangement and convenience features that stationary home kitchen research shows are desirable.

(2) To obtain opinions from the homemakers living in mobile homes about their satisfactions and dissatisfactions with regard to arrangement of kitchen, storage facilities, and available work surface.

(3) To determine whether mobile home homemakers have tried to improve the convenience of their kitchens by adding convenience devices.

(4) To determine whether certain personal characteristics influence the homemaker's opinions about her kitchen and improvements made in her kitchen.

Assumptions

The study was carried out with the following assumptions:

(1) The questionnaire is an adequate method for obtaining desired information which reveals homemakers' reactions to their mobile home kitchens.

(2) The sampling is representative in a limited way of socio-economic, age, and educational levels of those living in mobile homes.

(3) Size, storage, furnishings, and arrangement of the kitchen influence the homemaker's reactions to her kitchen.

Hypotheses

The following hypotheses underlie the study:

(1) The homemakers will express more dissatisfaction than satisfaction with the space arrangements and storage facilities of their mobile home kitchens.

(2) Though homemakers express dissatisfaction with kitchen storage facilities, they will not have added convenience devices.

(3) The opinions of the homemakers with regard to their kitchens and their efforts at kitchen improvement will be affected by their age, educational status, study of home economics, gainful employment outside the home, number of family members living in the home, and the ownership, age, and value of the mobile home.

Justification of Study

Much research about kitchens in stationary houses has been carried out, but little or no research is available on the mobile home kitchen;

yet in 1960, 103,700 mobile homes were manufactured in the United States alone[3].

Researchers have worked out standards for space requirements in kitchens, have investigated and determined energy costs of working in certain arrangements, and developed principles or guides for storage to conserve time and energy in kitchen work. If these standards are applied to home kitchens, the savings to the homemaker in time and energy can be substantial. Pickett stated:

> Technical guides for space planning and widespread understanding of the principles underlying the formulation of such criteria are essential if families are to acquire efficiently arranged space in their housing. Such guides and understanding benefit both the builders of family dwellings and the consumers who purchase the homes. Using this information, builders might reduce costs and augment profits through simultaneous provision of more essentials and reduction of nonessentials in dwellings for sale, and consumers could enter the housing market with reduced risk and uncertainty[4].

Mobile home kitchens may present special manufacturing problems. The manufacturer must meet certain legal requirements of safety and size limitations; he has to consider the practical problem of narrow roads over which the mobile home must travel; and he has a limited range of locations for the kitchen within the mobile home. Therefore, problems inherent in the kitchen of a mobile home may not be solved in the same way that problems in a stationary home kitchen can be solved. Nevertheless, some of the principles and guides of kitchen planning developed through research can probably be adapted and may have been applied to some extent to the building of mobile home kitchens.

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[3]U. S. Bureau of the Census, Statistical Abstract of the United States: 1964. (Eighty-fifth ed., Washington, D. C.), p. 751.

[4]Mary S. Pickett, "Evaluating Storage and Counter Space", Journal of Home Economics, 52 (January, 1960), p. 35.

The home economist interested in home management and housing needs to know the kind of kitchens builders provide in mobile homes as well as in stationary homes. If the home economist knows some of the satisfactions and dissatisfactions of homemakers in mobile homes in relation to the arrangement, storage, and facilities in the kitchen, she will be better able to plan educational programs in housing and counseling of families. Likewise, the manufacturer may be interested in the opinions of homemakers in regard to his product in order to satisfy the wants of his customers.

Therefore, this study was undertaken to learn more about mobile home kitchens, the homemakers' satisfactions and dissatisfactions with these kitchens, and their efforts to improve them.

CHAPTER II

REVIEW OF LITERATURE

A limited amount of research has been directed toward mobile home living, with most of it pertaining to socio-economic and community aspects rather than to family living. After extensive investigation, limited research was found dealing with the homemaker's reactions to the kitchen both mobile and stationary. However, much research related to convenience features is available for stationary home kitchens, and allowing for special problems of size limitation and kitchen location in the mobile home as compared with the stationary home, the findings of this research can be adapted to the requirements of the mobile home kitchen.

For example, McCordic, Young, and La Rock in an early extension bulletin dealt with space requirements and efficient storage in the kitchen, especially in regard to cabinet space and accessories.[5]

Heiner and McCullough studied sizes and shapes for space requirements of family supplies and equipment and contributed recommendations for heights, widths, and depths for kitchen storage to hold adequately all the equipment and supplies the average family uses in the kitchen.[6]

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[5]Margaret P. McCordic, Louise A. Young, and Max J. La Rock, Plan a Successful Kitchen, Madison: Wisconsin Agr. Ext. Service, Bul. 10 (May, 1941), pp. 1-24.

[6]Mary Koll Heiner and Helen E. McCullough, Functional Kitchen Storage, Ithaca, New York; Cornell University Agr. Expt. Station Bul. 846 (June, 1948), pp. 1-12.

A study by Gross in 1950 on fatigue in relation to house care found that one of the most frequently mentioned fatiguing activities was lifting.[7] This knowledge can be applied to mobile home storage planning to eliminate lifting as much as possible. In the same year, Wiley conducted a study for motion requirements in the kitchen in relation to arrangement of the major appliances: range, sink, and refrigerator.[8] She summarized her specific findings under the recommendation that these major appliances be arranged in the form of a triangle with the sink located between the range and refrigerator.

The primary purpose of research done by Ridder was to provide some information about the layout of farm kitchens. She found that structural limitations or possibilities were not apparent to any significant degree in the total basic distances traveled in the kitchens unless advantage was taken of the possibilities for good arrangement within the limitations imposed by kitchen design. The study also indicated homemakers were unaware of general waste of time and effort that may result when storage and work space are not planned for easy use.[9]

Heiner and Steidl's study of distances in urban family kitchens explored the possibility of time and energy conservation in kitchen work of nine L-shape kitchen arrangements. They found with compact arrangements of work areas, each with adequate storage and counter space, any

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[7]Irma H. Gross, "Fatigue in Relation to House Care", Journal of Home Economics, 42 (December, 1950), pp. 794-796.

[8]Elizabeth Weeks Wiley, A Motion Study of Kitchen Arrangements, Pullman: Washington Agr. Expt. Station, Bul. 518 (September, 1950), pp. 1-16.

[9]Clara Ann Ridder, Basic Distance in 100 Farm Homes for Preparing and Serving Food and Washing Dishes, Ithaca, New York: Cornell University Agr. Expt. Station Bul. 879 (September, 1952), pp. 1-78.

of the nine L-shape kitchens were satisfactory in terms of travel distance required for meal preparation and clean-up.[10]

The Cornell Kitchen research established a set of criteria for the design of kitchen cabinets that takes into account both human and technological requirements. Researchers found that certain physical factors in the kitchen which have a psychological influence on kitchen design are:

1. beauty, attractiveness, and visual appeal
2. ventilation
3. noise
4. touch
5. illumination
6. social significance of materials used
7. flexibility and adaptability
8. safety[11]

Standards for kitchen design are: (1) need for compact arrangements, (2) flexibility, (3) low cost, and (4) self-help in cabinet construction and assembly. Detailed and technical descriptions of units with instructions for building are presented in this study along with suggested basic measurements for kitchen cabinet units.[12]

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[10]Mary Koll Heiner and Rose E. Steidl, Guides for Arrangement of Urban Family Kitchens, Ithaca, New York: Cornell University Agr. Expt. Station, Bul. 878 (October, 1951), pp. 1-95.

[11]Cornell Kitchen, Product Design Through Research, ed. by Glenn H. Beyer and Frank Weise, Ithaca, New York: Cornell University, 1952, pp. 1-91.

[12]Ibid., pp. 24-28.

Management of kitchen storage and counter space was recommended by Pickett from her study of kitchen storage. She found:

> Homemakers frequently were satisfied with less than optimum amounts of counter and storage space. There are several possible explanations: the kitchen may be more adequate than the one the homemaker had formerly; the total value of the home may not justify more investment in the kitchen; the homemaker may realize that she may spend a relatively small amount of time preparing food; or she may use considerable partially prepared food.[13]

The factors to consider in judging adequacy of counter and storage space are: (1) the amounts of storage space stated in minimum to maximum limits, (2) the amount the family can invest in establishing centers, and (3) adequacy of storage space judged in terms of the design of the space.[14]

Steidl conducted a study of the use of additional storage devices in kitchen storage and found that the addition of such devices not only increased footage of storage space but also convenience of storage which would result in less handling of items. Expenditure for materials for the devices seemed to be less a hindrance in adding them than the cost of planning time and the procedure involved in installing them.[15]

Heiner and McCullough also have studied improvement of storage in kitchen cupboards with the use of adjustable shelves and easily sliding, one-layer deep drawers.[16]

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[13]Mary S. Pickett, "Evaluating Storage and Counter Space", Journal of Home Economics, 52 (January, 1960), p. 35.

[14]Ibid., p. 36.

[15]Rose E. Steidl, Using Kitchen Storage Before and After the Addition of Functional Storage Devices, Ithaca, New York: Cornell University H.E.M. Res. Rept. 5 (April, 1961), pp. 1-18.

[16]Mary Koll Heiner and Helen E. McCullough, Kitchen Cupboards that Simplify Storage, Ithaca, New York: Cornell Ext. Bul. 703 (1954), pp. 1-32.

The results of this study revealed the need for using certain dimensions in the construction of storage cabinets and counter space. This included distance between shelves, width of shelves and size of drawers, and the recommendation that shelves be adjustable in order to adapt them to different sizes of items to be stored.

Based on research in kitchen design carried on in the United States Department of Agriculture, the Beltsville kitchen-workroom has been planned primarily for the older or physically handicapped woman; and its storage design and arrangement of equipment are planned so that work can be done with a minimum of walking and other motions. Pieces of equipment for related jobs are placed close together in a broken-U arrangement, while provision for sitting at work and planning for a minimum of pushing and pulling of drawers and doors reduces or minimizes strain and energy requirements for the homemaker.[17]

A method for measuring effectiveness of organization of kitchen storage and work areas was set up and evaluated in a study by Cowles, Steele, and Kishler. They found that measurable factors, including household size and period of the family cycle, were important in determining the amount of time spent in kitchen activities; but the methods of work used by the homemakers were of equal significance in effectiveness and efficiency of the kitchen activities.[18]

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[17] The Beltsville Kitchen-Workroom, USDA Home and Garden Bul. 60 (November, 1958), pp. 1-13.

[18] Mary Cowles, Sara Steele, and Mary Kishler, "Savings in Distance Walked in Kitchens Through Reorganization of Storage and Work Space", Journal of Home Economics, 50 (March, 1958), pp. 169-174.

In a study with families of three and four members, Steidl compiled data on the movement of family members and visitors into and out of the kitchen in an effort to determine the amount of traffic and congestion in the kitchen during heavy work periods. She found that between 36 to 50 trips were made into the kitchen during a meal and as many as four people were in the kitchen at the same time, with the usual number being one or two persons.[19]

A number of studies are also available on the energy requirements of work in kitchens with different types of storage and space arrangements. Bratton found that, though average values do indicate energy costs to be less for some sitting than for standing positions, yet energy costs are greater for at least one sitting position, namely, when the knees are turned to one side rather than positioned in front of the body.[20] Whether sitting is desirable is also influenced by the type of job, its duration, and the suitability of facilities. The chair must fit and support the worker, including his feet (preferably flat on the floor or other flat surface); it must be of proper height for the worker and work surface; and work must be centered in front of the worker to minimize undue stretching and reaching. Finally, there must be knee room in front of the worker. She concluded that the choice between sitting and standing to work must be made on the basis of some cost other than energy expenditures. She indicated that psychological factors

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[19]Rose E. Steidl, Family in the Kitchen, Ithaca, New York: Cornell University H.E.M. Res. Rept. 6 (April, 1961), pp. 1-25.

[20]Esther Crew Bratton, Some Factors of Cost to the Body in Standing to Work and Sitting to Work Under Different Postural Conditions, Ithaca, New York: Cornell University Agr. Expt. Station Res. Bul. 365 (June, 1959), pp. 1-44.

may be significant.

Richardson and McCracken have made extensive studies of energy expenditures in the performance of household tasks including work in the kitchen. Results of one of their studies determined satisfactory heights for storage of household articles and the energy costs when using storage facilities of different designs.[21] Another of their energy expenditure studies revealed that the assumption that human energy cost is greater for standing to perform household tasks for short periods of time than for sitting to do them is incorrect.[22]

A study of the available literature reviewed revealed some research for stationary home kitchens that may probably be adapted and applied to mobile home kitchens since the problems of such kitchens are fairly similiar to those in stationary homes. The development of the current study is an effort to determine whether some of the recommendations for convenient kitchens established through research have been applied to mobile home kitchens and to determine the reactions of homemakers to their mobile home kitchens.

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[21]Earl C. McCracken and Martha Richardson, "Human Energy Expenditures as Criteria for the Design of Household-Storage Facilities", Journal of Home Economics, 51 (March, 1959), pp. 198-206.

[22]Martha Richardson and Earl C. McCracken, "Energy Expenditures of Women Performing Selected Activities While Sitting and Standing", Journal of the American Medical Women's Association, 16 (November, 1961), pp. 861-865.

CHAPTER III

PROCEDURE

The objectives of this study were to explore available kitchen convenience features, and to determine the reactions to their kitchen and the improvements made in these kitchens by homemakers living in mobile homes.

Selection of the Instrument

A review of literature revealed few or no reports of research studies which had been made with regard to these objectives; therefore, studies related to stationary home kitchens were analyzed before devising the instrument for the study. Also, a review of research methods relating to the securing of opinions and information about the behavior of individuals revealed extensive use of the questionnaire as an instrument for obtaining data in survey types of studies. Although it is recognized that the questionnaire method has both advantages and disadvantages, it seemed an adequate instrument for this exploratory study. Therefore, an effort was made to become familiar with techniques in developing a questionnaire.

Development of the Instrument

Using questionnaire construction principles developed by Toops[23], Cornell and McLoone[24], and Koos[25], the writer, trying to keep the viewpoint of the respondent in mind as recommended by Huffman's guide[26], developed the questionnaire used for this study.

From the findings of studies made of stationary kitchens guides were set up for a convenient, efficient kitchen which could be adapted to mobile homes. Not all the studies gave apecific guides and many of them were limited to one aspect of kitchen planning, so the author reviewed the studies and developed guides from the conclusions presented.

The research reviewed seemed to support the belief that the following features are helpful for making the kitchen a convenient work area; one that is generally conducive to conserving time and energy in the preparation of meals, the related cleaning and dishwashing, and the storage of equipment and supplies.

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[23]Herbert A. Toops. "Questionnaire." Encyclopedia of Educational Research, ed. Walter S. Monroe, New York: MacMillan Company, 1950, pp. 148-951.

[24]F. G. Cornell and E. P. McLoone, "Design of Sample Surveys in Education", Review of Educational Research, 33 (December, 1963), pp. 566-578.

[25]Leonard V. Koos, "The Special Techniques of Investigation: Observation, Questionnaires, and Rating." The Scientific Movement in Education: National Society for the Study of Education: 37, Part II, Bloomington, Illinois: 1938, pp. 379-385.

[26]Harry Huffman, "Improving the Questionnaire as a Tool of Research", The National Business Education Quarterly, 27 (October, 1948), pp. 17-18.

GUIDES FOR CONVENIENCE IN KITCHEN ARRANGEMENT AND STORAGE FACILITIES

A. General Convenience Features

1. Attractiveness
   Beauty of surroundings tends to promote psychological satisfactions.

2. Shape
   Widely recommended were the U-shape and L-shape kitchens; either one may be combined with an Island - a center counter not connected with wall cabinets.

3. Arrangement into Work Areas
   Generally considered desirable is an organization of the average kitchen into three major work areas centered around the range, sink, and refrigerator with the sink located between the other two appliances and the range near the dining areas. These kitchen areas should not be separated by doors and passageways.

4. Counter Space
   Next to each of the three major appliances (range, sink, and refrigerator), a certain amount of work space on which to set equipment and supplies is essential.

5. Storage Space
   Each work area requires adequate and appropriate storage facilities that will permit the portable equipment and supplies needed in that area to be stored close to each other and at the place of first use.

When recommendation number three, four, and five have been observed, the kitchen facilitates working in one direction--from right to left for the right-handed worker, and thereby minimizes the necessity for retracing steps in all work in the kitchen. Moreover the kitchen, in order to help conserve the time and energy of the worker, needs to be furnished and arranged to minimize the need for excessive stooping, stepping up or reaching, pulling, pushing, and carrying. Efficient performance of different jobs in the kitchen is aided by having different counter heights. This is particularly important if the homemaker is to sit while doing some of the tasks in the kitchen.

6. Use of Space
   Since the cost of housing is based on the square foot, space is generally limited; therefore, all space must be well used. This applies to over-all kitchen arrangement as well as arrangement of details for storage facilities.

7. Ease of Cleaning
   To use materials throughout the kitchen that minimize the need for cleaning and are easy to clean reduces the time and energy required to keep the kitchen sanitary and attractive.

B. Convenience Features for Storage

In order to minimize body motions in getting and putting away portable equipment and supplies, these storage practices are necessary:

1. Provide an appropriate place for all necessary appliances and materials.

2. Store items where used first.

3. Store items one row and one layer deep or one stack high except for identical objects.

4. Provide space for the most frequently used items at the most readily accessible places. Often used, heavy, or hard to grasp items should also be placed in easy to reach space.

5. Make storage flexible in order to adjust it to varying sizes, amounts, and kinds of groceries, other supplies, and equipment. Adjustable shelves are essential for this flexibility.

6. Store items used together in an effectively organized center.

7. Stress over-all convenience. Open storage is most convenient for accessibility but offers no protection for items stored, hence, closed storage with shelves and drawers is widely used. Here drawers must not only be of right size and depth for items to be stored, but also be easy to open and close.

Although these guides were used as a basis for formulating the questionnaire, each guide was developed into several questions. In the analysis of the data the information related to the convenience of the kitchens was organized into two main categories; namely, (1) availability of over-all convenience features, and (2) opinions of homemakers expressing satisfaction or dissatisfaction with general or

storage convenience features. This answered the two major types of questions; (1) did the kitchens include certain features and (2) what were the homemakers' opinions about different convenience aspects of their kitchens.

A statistician with experience in the survey type of research was consulted. He assisted in the formulation of the individual questions and selection of the population to be included. Then a questionnaire was compiled with an effort made to keep it as brief, simple, and clear as possible while getting desired information. At the same time, tentative plans were made for tables in which to record the data and present the findings.

After the questionnaire in its formative stages had been revised several times, it was tested by being given to the homemakers in a small mobile home park. The group was similar to those who participated in the final study. These homemakers were asked for any suggestions and comments they might have about the instrument. After revisions prompted by the results of pre-testing, the questionnaire was given to the selected sample.

Selection of the Sample

The geographic area seemed representative of mobile home parks in Oklahoma and was confined to one community because of limitations of time and money. Since the total number of mobile homes in the community represented a very small portion of the total dwellings and the number was limited, the total mobile home population was included in the study to obtain more reliable information.

Collection of the Data

In order to enlist the cooperation of the owners of the parks, the manager of each mobile home park was consulted first by telephone and then in person to obtain permission to call on the homemakers living in the park and explain the purpose of the study.

Each mobile home dweller was visited during the spring of 1964. The homemaker was asked to participate in the study and, when willing, was given a questionnaire. Mention was made that there were no right and wrong answers and only the opinions of the respondents were required. The respondents were asked to seek clarification on any point they did not understand.

Treatment of the Data

The questionnaires were coded and the data recorded on IBM cards. The data were tabulated by computer and analyzed arithmetically for each of the following variables: age, education, study of home economics, family size, and employment of the respondent plus ownership, age, and value of the mobile home.

Age as a variable was treated in group ranges of ten years. Educational status was comprised of eight groupings: less than eighth grade, completed eighth grade, some high school, completed high school, some college, completed college, college graduate study, and vocational schools. Family size was listed as total number of people living in the mobile home. Women who had studied and those who had not studied home economics were divided into respective groups. Occupational groupings were listed as full-time homemakers, part-time employed homemakers, and full-time employed homemakers. Ownership as a variable

was classified as ownership or renting. The age and price of the mobile home models were set up as ranges. Age was specified as: 1949-52, 1953-56, 1957-60, and 1961-64. Price was listed as below $3,999, $4,000-6,999, above $7,000, and not known. The question asked for the original price of the mobile home.

CHAPTER IV

PRESENTATION OF DATA RESULTS AND ANALYSIS OF FINDINGS

Analysis of Data

This exploratory study was undertaken as a means of securing answers to the following questions: Are homemakers satisfied or dissatisfied with their mobile home kitchens with regard to arrangement of equipment and available storage facilities? Do mobile home kitchens provide the convenience features that stationary home kitchen research has shown as desirable? Have homemakers tried to improve the convenience of their kitchens by adding storage convenience devices? Are selected personal characteristics related to the opinions of the mobile home homemakers regarding their kitchens?

Of the 110 mobile home dwellers, only 70 provided data for this study. Two of those called upon were foreign and could not speak English, eight were bachelors who ate out or prepared only snacks, two were on leave from their job and out of town, and 28 refused to participate in the study. The managers explained that due to recent unpleasant experiences with house-to-house selling some of the mobile home residents did not want to answer any more questionnaires. The returned questionnaires had been completely checked as all questions except the one related to income were answered.

The data in Table I show the distribution of the 70 respondents according to characteristics used as variables in the analysis of the data of the study.

TABLE I

CHARACTERISTICS OF 70 HOMEMAKERS LIVING IN MOBILE HOMES

Characteristics	Respondents Number	Per Cent
A. Age		
Under 25	31	44.3
25-34	20	28.6
35-44	15	21.4
45 and over	4	5.7
B. Number of Family Members at Home		
One	4	5.7
Two	22	31.4
Three	15	21.4
Four	16	22.9
Five	11	15.7
Six	2	2.9
Seven	0	0.0
C. Employment		
Full-time homemaker	50	71.4
Part-time employed homemaker	16	22.9
Full-time employed homemaker	4	5.7
D. Education		
Less than eighth grade	4	5.7
Completed eighth grade	0	0.0
Some high school	21	30.0
Completed high school	25	35.7
Some college	11	15.7
Completed college	3	4.3
Graduate work	2	2.9
Other, such as business college	4	5.7
E. Study of Home Economics		
None	15	21.4
High school	54	77.2
Home demonstration club	0	0.0
College	1	1.4
F. Study of Kitchen Planning*		
None	41	58.6
High School	27	38.6
Club work	1	1.4
Other	1	1.4

*Not included in the variables for the analysis of data.

Over 40 per cent of the respondents were under 25 years of age; whereas, 50 per cent were in the 25 to 44 year age range.

The majority (65.7 per cent) had some high school education or completed high school, but less than a fourth of them had any college education. Although over three-fourths of the respondents had studied home economics, all but one of these studied this subject only in high school. None had participated in home demonstration club work. Even though 77.2 per cent of the respondents reported they had studied home economics in high school, only 38.6 per cent of the respondents had studied kitchen planning in high school.

Slightly over one-fourth of these homemakers were employed outside the home with only about six per cent having full-time employment. This is considerably less than for the country as a whole where one-third of all women over 14 years of age work away from home.

The number of family members living at home ranged from one to six, with about one-third of the families having two members and somewhat over one-fifth having three and four members respectively. Eleven families (15.7 per cent) had five and two (2.9 per cent) had six members living at home.

Although the majority (68.5 per cent) of the respondents owned their mobile homes, one-fifth of the homemakers did not know the approximate value or cost of their homes. Further analysis of the monetary values revealed that prices range from below $4,000 to above $7,000, with over 50 per cent in the above $4,000 range. Classification of home age as reported by the homemakers showed that the majority of the mobile homes were relatively new with nearly three-fourths of the homes being less than 10 years old.

TABLE II

CHARACTERISTICS OF MOBILE HOMES AS REPORTED BY 70 HOMEMAKERS

Characteristics	Respondents Number	Per Cent
A. Ownership		
Owned	48	68.6
Rented	22	31.4
B. Value of Mobile Home		
Unknown	14	20.0
Below $3,999	20	28.6
$4,000-6,999	32	45.7
Above $7,000	4	5.7
C. Mobile Home Model		
1949-52	11	15.7
1953-56	7	10.0
1957-60	23	32.9
1961-64	29	41.4

Table III shows classification of major kitchen plans in the mobile homes and the major appliances included in these kitchens as well as the reactions of homemakers to them. Of the 70 kitchens included in the study, 13 were U-shape and 41 L-shape; 13 had a corridor or two wall plan, and three island arrangements. Only one kitchen included more than two major appliances--the range and refrigerator; one island kitchen had a garbage disposal in addition to the range and refrigerator found in all the kitchens.

The majority of the homemakers indicated that they enjoyed working in their kitchens and that they considered their appliances of good quality. Over one-third of the homemakers believed their kitchens facilitated cleaning. More of the homemakers with L-shape kitchens than those with other arrangements were satisfied with their appliances.

The fact that almost three-fourths of the homemakers reported they enjoyed working in their kitchens may be supported by their opinions that their appliances were of good quality. It may also indicate that they liked cooking. In a study of 120 homemakers by Maloch[27], she found more liked cooking than any other household task.

Since the question related to the homemakers' reactions to their kitchens included limited explanations of terms used, it may be that the homemakers' lack of understanding of the question contributed to the small number of responses to some parts of it.

The questionnaire was designed to reveal opinions of homemakers in regard to their mobile home kitchens. These opinions are presented

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[27]Francile Maloch, "Characteristics of Most and Least Liked Household Tasks", Journal of Home Economics, 15 (June, 1963), pp. 413-416.

TABLE III

REACTIONS OF 70 HOMEMAKERS TO THEIR KITCHEN

PLANS AND MAJOR APPLIANCES

Plan and Appliances	Total	Reactions of Homemakers						
		Enjoy Working	Causes Fatigue	Frustrating	Facilitates Family Togetherness	Facilitates Cleaning	Appliances Good Quality	Appliances Do A Good Job
Range-refrigerator								
U-shape	13	5	0	2	0	5	6	5
L-shape	41	37	1	7	4	15	37	37
Corridor	13	6	1	4	4	3	8	6
Island	2	1	1	1	1	1	1	1
Range-garbage disposal-refrigerator								
U-shape	-	-	-	-	-	-	-	-
L-shape	-	-	-	-	-	-	-	-
Corridor	-	-	-	-	-	-	-	-
Island	1	-	-	1	1	-	-	1

in the data of Tables IV, V, VI as total findings for the 70 respondents without regard to the variables included in the study. These responses were later analyzed according to the variables listed in Tables I and II.

Table IV presents convenience features available in the kitchens. The homemakers reported that the majority of their kitchens had nine of the 15 features listed. The extent to which each of the 15 features was available in the 70 mobile home kitchens is shown in the following listing, arranged in descending order of frequency: adequate storage for canned goods, adequate storage for cooking utensils, counter space beside range, adequate storage for staple foods and small electrical kitchen appliances, kitchen arrangement does not require frequent retracing of steps, adequate storage for china and glassware, storage for dishwashing equipment at sink, arrangement permits working in one direction, dish towel rack, counter space beside refrigerator, adequate storage for a step stool, two counter work levels, wall cabinet shelves of different depths, and all space well used.

In spite of the fact that 81.4 per cent reported that their kitchen arrangement did not require frequent retracing of steps, only 67.1 per cent believed the arrangement permitted working in one direction. Apparently the builders of the majority of the mobile homes have supplied adequate storage space, according to the opinions of these homemakers, for equipment, tableware, and supplies except for dish towels and a step stool. In the majority of homes, counter space was provided for the range, but not for the refrigerator.

Although three-fourths of the respondents thought their kitchens had wasted space (Table IV), less than one-half of the homemakers had

TABLE IV

OVER-ALL CONVENIENCE FEATURES AVAILABLE IN KITCHENS AS REPORTED BY 70 HOMEMAKERS

Convenience Features	Yes		No	
	Number	Per Cent	Number	Per Cent
Counter space beside range	61	87.1	9	12.9
Counter space beside refrigerator	29	41.4	41	58.6
Two counter work levels	17	24.3	53	75.7
Dish towel rack	34	48.6	36	51.4
Storage for dishwashing equipment at sink	57	81.4	13	18.6
Adequate storage for:				
Canned goods	65	92.9	5	7.1
Kitchen utensils	61	87.1	9	12.9
China and glassware	53	75.7	17	24.3
Staple foods	58	82.9	12	17.1
Small electrical kitchen appliances	58	82.9	12	17.1
Step stool	21	30.0	49	70.0
No frequent retracing of steps required	57	81.4	13	18.6
One depth for all wall cabinet shelves	53	75.7	17	24.3
Arrangement permits working in one direction	47	67.1	23	32.9
All space well used	17	24.3	53	75.7

TABLE V

DESIRE FOR MOBILE HOME KITCHEN IMPROVEMENTS AS EXPRESSED BY 70 HOMEMAKERS

Kitchen Improvements	Yes		No	
	Number	Per Cent	Number	Per Cent
A. Willingness to Make Changes				
Willingness to use some other space for added kitchen storage	13	18.6	57	81.4
Willingness to use other space for more kitchen wall cabinets	16	22.9	54	77.1
Willingness to pay extra for adjustable shelves	26	37.1	44	62.9
B. Storage Convenience Devices Added				
Paper products holder	33	47.1	37	52.9
Step shelves	8	11.4	62	88.6
Extra shelves	12	17.1	58	82.9
Dish storage racks	6	8.6	64	91.4
Partitions in drawers	9	12.9	61	87.1
Spice racks	15	21.4	55	78.6
Pots and lids storage units	2	2.9	68	97.1
Extra cabinet space	3	4.3	67	95.7

TABLE VI

OPINIONS WITH REGARD TO CONVENIENCE FEATURES OF MOBILE HOME KITCHENS AS EXPRESSED BY 70 HOMEMAKERS

Convenience Features	Yes		No	
	Number	Per Cent	Number	Per Cent
A. General Features				
More convenient arrangement of major appliances possible	5	7.1	65	92.9
Adequate work surface	35	50.0	35	50.0
Adequate light for all work areas	58	82.9	12	17.1
Kitchen storage areas readily accessible	63	90.0	7	10.0
Under sink storage convenient to use	52	74.3	18	25.7
Adequate number of drawers	44	62.9	26	37.1
Right depth of drawers	45	64.3	25	35.7
Over-all space satisfactory	51	72.9	19	27.1
Convenient kitchen arrangement	61	87.1	9	12.9
Sufficient kitchen equipment	57	81.4	13	18.6
Attractiveness of kitchen	58	82.9	12	17.1
Facilitation of meal preparation and clean-up through alternate kitchen arrangement	19	27.1	51	72.9
Kitchen shelves either too far apart or too close together	16	22.9	54	77.1
B. Storage Features				
Equipment and supplies used together are stored near each other	58	82.9	12	17.1
Equipment and supplies are kept where they are used first	63	90.0	7	10.0
Most frequently used materials are kept in readily accessible space	65	92.9	5	7.1
Materials are stored so they can be obtained without moving others	40	57.1	30	42.9
Frequently used heavy appliances are stored at waist level as nearly as possible	26	37.1	44	62.9
Excessive stooping, stretching, and lifting can be minimized	28	40.0	42	60.0

added any convenience devices or expressed any opinion about changing wasted space (Table V).

Figures in Table VI-A show that the majority of homemakers (ranging from 62.9 per cent to 92.9 per cent) were satisfied with all but two of the thirteen convenience features listed in this table. The only feature with which 50.0 per cent of the 70 homemakers were dissatisfied was adequacy of work surface. Less than 10 per cent believed that the major appliances could be more conveniently located. Based on percentages of homemakers expressing satisfaction with convenience features in descending order were: major appliances conveniently located, kitchen storage areas readily accessible, convenient over-all kitchen arrangement, attractiveness of kitchen, adequate light for all work areas, sufficient kitchen equipment, shelves neither too far apart or too close together, under sink storage convenient to use, over-all space satisfactory, facilitation of meal preparation and clean-up through alternate kitchen arrangement, drawers are right depth, adequate number of drawers, and adequate work surface.

Not only did the majority of homemakers express satisfaction with most of the general convenience features of space, arrangement, lighting, and attractiveness of the kitchen, but also with four of the six convenience features related to storage. The number of respondents who expressed satisfaction with these six storage convenience features ranged from 92.9 per cent for readily accessible storage space for most frequently used items to 37.1 per cent for convenient storage for heavy appliances. A second feature with which less than one-half of the respondents were satisfied was that storage minimized stooping, stretching, and lifting. Opinions expressing satisfaction

and dissatisfaction with storage convenience features are shown in Table VI-B.

Age of Mobile Home and Convenience Features Available in Kitchen

Table VII presents data analysis showing the relationship between the age of the mobile home and the availability of the 15 general kitchen convenience features listed in Table IV. The age of the mobile home was determined by dividing all responses into ranges of four years each. Ranges reported were 1949-52, 1953-56, 1957-60, and 1961-64.

None of the respondents reported fewer than three of the 15 features, even in the older mobile homes. Moreover, no respondent reported a mobile home with more than 13 of the 15 listed features, and only one, built in 1961-64, had these 13 features.

Of the 11 mobile homes built in 1949-52, the greatest number (36.3 per cent) had 10 convenience features. The 1953-56 homes ranged from five to 11 features. The greatest range of total number of features, three to 12, was found in the 1957-60 mobile homes, and the greatest number of these homes had nine features. The largest group of homes, those built in 1961-64, ranged from four to 13 features with about one-third having 10 or two-thirds of these features.

Price of Mobile Home and Convenience Features Available in Kitchen

Table VIII presents a compilation of data to determine if there is a relationship between the price or cost of a mobile home and the total number of convenience features found in the kitchen. The conven-

TABLE VII

OVER-ALL CONVENIENCE FEATURES AVAILABLE IN KITCHENS

AS RELATED TO AGE OF MOBILE HOME

Total Number of Features	Year of Model 1949-52 Number	1949-52 Per Cent	1953-56 Number	1953-56 Per Cent	1957-60 Number	1957-60 Per Cent	1961-64 Number	1961-64 Per Cent	Total Number
1	-	-	-	-	-	-	-	-	0
2	-	-	-	-	-	-	-	-	0
3	-	-	-	-	1	4.4	-	-	1
4	-	-	-	-	1	4.4	2	6.9	3
5	1	9.1	1	14.3	-	-	4	13.8	6
6	-	-	-	-	-	-	3	10.3	3
7	1	9.1	1	14.3	3	13.0	1	3.5	6
8	1	9.1	1	14.3	3	13.0	2	6.9	7
9	3	27.3	2	28.5	7	30.4	-	-	12
10	4	36.3	1	14.3	2	8.7	9	31.0	16
11	1	9.1	1	14.3	2	8.7	2	6.9	6
12	-	-	-	-	4	17.4	5	17.2	9
13	-	-	-	-	-	-	1	3.5	1
14	-	-	-	-	-	-	-	-	0
15	-	-	-	-	-	-	-	-	0
Total Number of Homes	11	100.0	7	100.0	23	100.0	29	100.0	70

TABLE VIII

OVER-ALL CONVENIENCE FEATURES AVAILABLE IN KITCHENS

AS RELATED TO PRICE OF MOBILE HOME

Total Number of Features	Price of Model: Unknown Number	Unknown Per Cent	Below $3,999 Number	Below $3,999 Per Cent	$4,000-6,999 Number	$4,000-6,999 Per Cent	Above $7,000 Number	Above $7,000 Per Cent	Total Number
1	-	-	-	-	-	-	-	-	0
2	-	-	-	-	-	-	-	-	0
3	-	-	1	5.0	-	-	-	-	1
4	-	-	1	5.0	2	6.3	-	-	3
5	-	-	1	5.0	4	12.5	1	25.0	6
6	1	7.1	-	-	2	6.3	-	-	3
7	1	7.1	2	10.0	2	6.3	1	25.0	6
8	2	14.3	4	20.0	1	3.1	-	-	7
9	2	14.3	6	30.0	4	12.5	-	-	12
10	6	43.0	-	-	10	31.2	-	-	16
11	1	7.1	2	10.0	2	6.2	1	25.0	6
12	1	7.1	3	15.0	5	15.6	-	-	9
13	-	-	-	-	-	-	1	25.0	1
14	-	-	-	-	-	-	-	-	0
15	-	-	-	-	-	-	-	-	0
Total Number of Mobile Homes	14	100.0	20	100.0	32	100.0	4	100.0	70

convenience features listed in Table IV were used in compiling this table and the price or cost of the home was set in the price ranges shown in Table II. This represents the price range the respondents gave to an open-end question in the questionnaire.

Several of the respondents did not know the approximate cost of their mobile home. Of the 14 mobile homes in the unknown price category, the greatest number (six) had 10 features each. The 20 homes in the below $3,999 price range varied from three to 12 features, with the greatest number also having 10 features. The most expensive mobile homes in the above $7,000 category (only four in number) had a range of five to 13 features.

Age of Mobile Home and Storage Convenience Features

The convenience features of storage are listed in Table VI-B. The data concerning these convenience features were analyzed to determine if there was a possible relationship between age and price of the mobile home and the total number of storage convenience features in the kitchen.

The same ranges for age as used in Table VII were used in this analysis of data. The six storage convenience features listed on the questionnaire were used for the relationship study.

An analysis of the data in Table IX reveals the 11 mobile homes built in 1949-52 had a range of three to six storage features. A range of one to five features was found among the seven mobile homes built in 1953-56. The 23 homes built in 1957-60 had a range of one to six features in the kitchens, with the greatest number having four. The twenty-nine 1961-64 mobile homes ranged from two to six features,

TABLE IX

OPINIONS ABOUT CONVENIENCE FEATURES OF KITCHEN STORAGE ACCORDING TO AGE OF MOBILE HOMES AS EXPRESSED BY 70 HOMEMAKERS

Number of Features	Year of Model 1949-52 Number	1949-52 Per Cent	1953-56 Number	1953-56 Per Cent	1957-60 Number	1957-60 Per Cent	1961-64 Number	1961-64 Per Cent	Total Number
1	-	-	1	14.3	2	8.7	-	-	3
2	-	-	1	14.3	1	4.4	3	10.4	5
3	1	9.1	3	42.8	4	17.4	7	24.1	15
4	4	36.4	1	14.3	8	34.8	6	20.7	19
5	4	36.4	1	14.3	3	13.0	8	27.6	16
6	2	18.1	-	-	5	21.7	5	17.2	12
Total Number	11	100.0	7	100.0	23	100.0	29	100.0	70

with the greatest number having five.

The majority of the mobile homes had three or more of these features, with over half of them having four or five of the six included in the study.

Price of Mobile Home and Storage Convenience Features

The data in Table X show the relationship of price of the mobile home to the total number of the kitchen storage convenience features listed in Table V.

Of the 14 mobile homes in the unknown price category, the greatest number of homemakers reported five storage convenience features. The least variation in number of features is found in the unknown price category, while the most variation is among the below $3,999 and above $7,000 homes which ranged from one to six convenience features for storage.

Age of Respondent and Opinions Regarding Over-All Kitchen Features

It was hypothesized that the age of homemakers would influence their opinion with regard to their mobile home kitchen arrangements. The homemakers were divided into four age groups; it was found 44.3 per cent were under 25 years of age, 28.6 per cent were 25 to 34 years of age, 21.4 per cent were 35 to 44 years of age, and 5.7 per cent were 45 years of age and older.

The data in Table XI reveal a composite of the findings related to satisfaction with over-all kitchen features according to the age of the respondents. Satisfaction with over-all features refers to the

TABLE X

OPINIONS ABOUT CONVENIENCE FEATURES OF KITCHEN STORAGE ACCORDING TO PRICE OF MOBILE HOMES AS EXPRESSED BY 70 HOMEMAKERS

Number of Features	Price of Model: Unknown Number	Unknown Per Cent	Below $3,999 Number	Below $3,999 Per Cent	$4,000-6,999 Number	$4,000-6,999 Per Cent	Above $7,000 Number	Above $7,000 Per Cent	Total Number
1	-	-	2	10.0	-	-	1	25.0	3
2	-	-	2	10.0	3	9.4	-	-	5
3	3	21.4	5	25.0	6	18.7	1	25.0	15
4	4	28.6	7	35.0	8	25.0	-	-	19
5	5	35.7	3	15.0	8	25.0	-	-	16
6	2	14.3	1	5.0	7	21.9	2	50.0	12
Total Number	14	100.0	20	100.0	32	100.0	4	100.0	70

TABLE XI

SATISFACTION AND DISSATISFACTION WITH KITCHEN CONVENIENCE FEATURES

AS EXPRESSED BY 70 HOMEMAKERS ACCORDING TO THEIR AGE

Features	Age Groups: Under 25 S[1]	Under 25 D[2]	25-34 S	25-34 D	34-44 S	34-44 D	Over 45 S	Over 45 D	Total S	Total D
Location of major appliances	96.8	3.2	85.0	15.0	100.0	-	100.0	-	92.9	7.1
Adequacy of work surfaces	58.1	41.9	35.0	65.0	53.3	46.7	75.0	25.0	51.4	48.6
Adequacy of work area lighting	67.7	32.3	100.0	-	86.7	13.3	100.0	-	82.9	17.1
Accessibility of kitchen storage	96.8	3.2	95.0	5.0	80.0	20.0	100.0	-	91.4	8.6
Convenience of storage space under sink	77.4	22.6	65.0	35.0	80.0	20.0	75.0	25.0	74.3	25.7
Adequacy of storage drawers	58.1	41.9	60.0	40.0	66.7	33.3	100.0	-	62.2	37.8
Depth of storage drawers	64.5	35.5	45.0	55.0	86.7	13.3	75.0	25.0	66.2	33.8
Adequacy of over-all space	80.7	19.3	45.0	55.0	93.3	6.7	75.0	25.0	72.9	27.1
Convenient kitchen arrangement	80.6	19.4	90.0	10.0	93.3	6.7	100.0	-	88.4	11.6
Sufficiency of kitchen equipment	77.4	22.6	80.0	20.0	93.3	6.7	75.0	25.0	82.6	17.4
Attractiveness	80.7	19.3	75.0	25.0	93.3	6.7	100.0	-	84.1	15.9
Over-all plan	64.5	35.5	70.0	30.0	80.0	20.0	100.0	-	73.1	26.9
Space between kitchen shelves	71.0	29.0	85.0	15.0	80.0	20.0	75.0	25.0	77.1	22.9
Total Number in Age Group	31		20		15		4		70	

[1]S is Satisfaction
[2]D is Dissatisfaction

homemaker's positive opinions regarding certain areas of kitchen arrangement. From a study of the data in Table XI, the following analysis was formulated.

Over half of the homemakers under 25 years of age expressed satisfaction with all of the 13 general kitchen features. These features are listed in descending order of satisfaction, from 92.9 to 58.1 per cent: location of major appliances; accessibility of kitchen storage; convenience, attractiveness, and space; convenience of storage space under sink; sufficiency of kitchen equipment; spaces between kitchen shelves; adequacy of work area lighting; depth of storage drawers; over-all arrangement; and number of storage drawers and adequacy of work surface..

All the homemakers 25 to 34 years of age expressed satisfaction with adequacy of work area lighting. Their satisfaction with other arrangement features in descending order are: accessibility of kitchen storage; convenience; space between kitchen shelves; location of major appliances; sufficiency of equipment; attractiveness; over-all arrangement; convenience of storage area under sink; number of storage drawers; adequacy of kitchen space; storage drawer depth; and adequacy of work surfaces. Less than half of the women of this age group were satisfied with the last three items listed.

Location of major appliances satisfied all the homemakers 35 to 44 years of age while 93.3 per cent of them expressed satisfaction with adequacy of kitchen space, convenience, attractiveness, and equipment. In descending order of homemaker satisfaction other features were: storage drawer depth, lighting of work areas, over-all kitchen plan, convenience of storage space under sink, accessibility of kitchen storage, space between kitchen shelves, adequacy of storage drawers and of

work surface.

All of the respondents 45 years of age and older were satisfied with over half the features of kitchen arrangement; and two-thirds expressed satisfaction with kitchen space and equipment, depth of storage drawers, adequacy of work surface , convenience of storage space under sink, and space between kitchen shelves.

As a whole, fewer of the 25 to 34 year old group than the under 25 year old group expressed satisfaction with their kitchens. More homemakers in all age groups expressed dissatisfaction with work surface adequacy, number of drawers, and storage drawer depth than with any other features.

Gainful Employment of Respondent and Opinions Regarding Over-All Kitchen Features

The gainful employment of the homemaker was believed to influence opinions regarding mobile home kitchens; therefore, the responses were analyzed according to the three classifications presented in Table II. Approximately 71 per cent were full-time homemakers, 23 per cent part-time employed homemakers, and 6 per cent full-time employed homemakers.

Full-time homemakers expressed satisfaction with over-all kitchen features listed in descending order as follows: location of major appliances, accessibility of storage areas, sufficiency of equipment, attractiveness, over-all plan, space between shelves, convenience of storage space under sink, adequacy of space, depth of storage drawers, adequacy of storage drawers, and work surfaces. Less than one-half of these respondents believed they had adequate work surface in their kitchens.

All the part-time employed homemakers expressed satisfaction with the location of the major appliances in their kitchens. They were satisfied with other aspects of the kitchen arrangement in descending order as follows: accessibility of storage areas, space and convenience, space between shelves, attractiveness of kitchen and convenience of storage space under sink, sufficiency of equipment, adequacy of storage drawers and of work surface , adequacy of work area lighting, depth of storage drawers, and over-all kitchen plan.

The four respondents who were full-time employed homemakers were satisfied with lighting of work areas, accessibility of storage areas, convenience of storage space under sink, space between shelves, and attractiveness; three of the four expressed satisfaction with location of major appliances, space, and convenience.

According to the data of Table XII, over half of the 50 full-time homemakers expressed dissatisfaction with adequacy of work surface and half of the full-time employed homemakers agreed with them. More of the 70 homemakers, regardless of whether they were gainfully employed or not, expressed satisfaction with accessibility of storage areas and location of major appliances than with any other features. The greatest range of opinion was with regard to satisfaction with the adequacy of kitchen equipment. While less than one-fifth of the part-time employed homemakers and full-time homemakers were dissatisfied, half of the full-time employed homemakers stated their kitchens had insufficient equipment. The next largest range was found in satisfaction with adequacy of work surface. In this sample, less than half of the full-time homemakers and full-time employed homemakers gave a positive response to having adequate work surface, but over three-fourths of the part-time employed homemakers reported their work surface was adequate. It is

TABLE XII

SATISFACTION AND DISSATISFACTION WITH KITCHEN CONVENIENCE FEATURES

AS EXPRESSED BY 70 HOMEMAKERS ACCORDING TO THEIR EMPLOYMENT

Features	Gainful Employment: Full-time Homemaker S	D	Part-time Employed S	D	Full-time Employed S	D	Total S	D
Location of major appliances	92.0	8.0	100.0	-	75.0	25.0	92.9	7.1
Adquacy of work surfaces	44.0	56.0	75.0	25.0	50.0	50.0	51.4	48.6
Adequacy of work area lighting	84.0	16.0	75.0	25.0	100.0	-	82.9	17.1
Accessibility of kitchen storage	90.0	10.0	93.8	6.2	100.0	-	91.4	8.6
Convenience of storage space under sink	68.0	32.0	87.5	12.5	100.0	-	74.3	25.7
Adequacy of storage drawers	60.0	40.0	75.0	25.0	50.0	50.0	62.2	37.8
Depth of storage drawers	64.0	36.0	68.8	31.2	50.0	50.0	66.2	33.8
Adequacy of over-all space	66.0	34.0	92.8	6.2	75.0	25.0	72.9	27.1
Convenient kitchen arrangement	86.0	12.0	93.8	6.2	75.0	25.0	88.4	11.6
Sufficiency of kitchen equipment	84.0	14.0	81.2	18.8	50.0	50.0	82.6	17.4
Attractiveness	80.0	20.0	87.5	12.5	100.0	-	84.1	15.9
Over-all plan	78.0	22.0	50.0	50.0	50.0	50.0	73.1	26.9
Space between kitchen shelves	70.0	30.0	93.8	6.2	100.0	-	77.1	22.9
Total Number in Employment Groups	50		16		4		70	

interesting to note that the responses to adequacy of work surface by the full-time homemakers and the full-time employed homemakers are similar.

Number of Family Members at Home and Opinions Regarding Over-All Kitchen Features

To determine if an association existed between satisfaction with kitchen features and the number of family members living in the home, the responses were analyzed accordingly. The largest number of members in the family in this study was six. The majority of respondents had two members in their families, while the next largest number had either three or four members.

An analysis of the data presented in Table XIII shows that the four homemakers who lived alone were satisfied with location of major appliances, depth of storage drawers, space, attractiveness, and sufficiency of kitchen equipment.

Respondents with two persons living in the mobile home reported satisfaction with their over-all kitchen features as listed in descending order: location of major appliances and accessibility of storage, convenience of storage space under sink, and space between shelves. Lighting of work areas, space and attractiveness, and sufficiency of equipment showed an equal response; then there followed: adequacy of work surface, depth of storage drawers, adequacy of storage drawers, and over-all kitchen plan.

Of 22 homemakers (31.4 per cent) with a family group of three members, over nine-tenths reported satisfaction with location of major appliances, accessibility of storage areas, sufficiency of equipment,

TABLE XIII

SATISFACTION AND DISSATISFACTION IN PERCENTAGES WITH KITCHEN CONVENIENCE FEATURES AS EXPRESSED BY 70 HOMEMAKERS ACCORDING TO THE NUMBER OF FAMILY MEMBERS

Features	Number of Family Members at Home: One S	One D	Two S	Two D	Three S	Three D	Four S	Four D	Five S	Five D	Six S	Six D	Total S	Total D
Location of major appliances	100.0	-	90.0	9.1	93.3	6.7	87.5	12.5	100.0	-	100.0	-	92.9	7.1
Adequacy of work surface	75.0	25.0	63.6	36.4	46.7	53.3	43.8	56.2	45.4	54.5	-	100.0	51.4	48.6
Adequacy of work area lighting	75.0	25.0	72.7	27.3	86.7	13.3	81.2	18.8	100.0	-	100.0	-	82.9	17.1
Accessibility of kitchen storage	75.0	25.0	90.9	9.1	93.3	6.7	93.8	6.2	90.9	9.1	100.0	-	91.4	8.6
Convenience of storage space under sink	75.0	25.0	77.3	22.7	86.7	13.3	68.7	31.3	72.7	27.3	-	100.0	74.3	25.7
Adequacy of storage drawers	75.0	25.0	50.0	50.0	86.7	13.3	62.5	37.5	54.5	45.4	50.0	50.0	62.2	37.8
Depth of storage drawers	100.0	-	54.5	45.4	73.3	26.7	68.7	31.3	63.6	36.4	-	100.0	66.2	33.8
Adequacy of over-all space	100.0	-	72.7	27.3	100.0	-	50.0	50.0	63.6	36.4	50.0	50.0	72.9	27.1
Convenient kitchen arrangement	75.0	25.0	77.3	22.7	100.0	-	87.5	12.5	90.9	9.1	100.0	-	88.4	11.6
Sufficiency of kitchen equipment	100.0	-	72.7	27.3	93.3	6.7	81.2	18.8	81.8	18.2	50.0	50.0	82.6	17.4
Attractiveness	100.0	-	72.7	27.3	93.3	6.7	81.2	18.8	81.8	18.2	100.0	-	84.1	15.9
Over-all plan	50.0	50.0	45.4	54.5	80.0	20.0	87.5	12.5	81.8	18.2	100.0	-	73.1	26.9
Space between kitchen shelves	75.0	25.0	77.3	22.7	93.3	6.7	62.5	37.5	81.8	18.2	50.0	50.0	77.1	22.9
Total Number of Respondents	4		22		15		16		11		2		70	

space between shelves, and attractiveness. All of these respondents expressed satisfaction with kitchen space and convenience. Over four-fifths of these respondents were satisfied with lighting of work areas, convenience of storage space under sink, adequacy of storage drawers, and over-all kitchen plan. Seven-tenths reported that depth of storage drawers was satisfactory, while less than half of the homemakers reported satisfaction with adequacy of work surface.

Nine-tenths of the 16 respondents with four family members expressed satisfaction with accessibility of storage areas, while over four-fifths expressed satisfaction with lighting of work area, location of major appliances, convenience and attractiveness, sufficiency of equipment, and over-all kitchen plan. Over half of these respondents found the following features satisfactory: convenience of storage space under sink, adequacy of storage drawers, over-all space, and space between shelves. Less than half of the homemakers with four members at home believed they had adequate work surface within their kitchens.

All the 11 homemakers with five family members living at home reported satisfaction with location of major appliances and lighting of work areas. Nine-tenths reported that accessibility of storage areas and convenience were satisfactory. Over four-fifths of these respondents reported they were satisfied with attractiveness, sufficiency of equipment, space between shelves, and over-all kitchen plan. Of these respondents, over half checked satisfaction with convenience of storage space under sink, depth of storage drawers, over-all space, and adequacy of storage drawers. Less than half of the women with five family members at home expressed satisfaction with adequacy of

work surface.

Only two of the respondents in this study had six family members living at home. Neither was satisfied with adequacy of work surface, convenience of storage space under sink, or depth of storage drawers.

According to the evidence in Table XIII, more of the respondents living alone than those with more family members reported satisfaction with their mobile home kitchens. There is disagreement between those with two family members and those with three or more as to the area of dissatisfaction. More of those with two family members reported dissatisfaction with over-all kitchen plan and adequacy of storage drawers; whereas, more of those with three to six family members expressed dissatisfaction with adequacy of work surface , over-all space, and depth of storage drawers. Those with three family members at home agreed closely with respondents who lived alone. More of the respondents with four or more family members seemed to be dissatisfied with their kitchens. The greatest degree of variation in satisfaction and dissatisfaction was shown in responses to over-all kitchen plan.

Ownership of Mobile Home and Opinions Regarding Over-all Kitchen Features

Ownership of the home was conceived to be a factor associated with the homemaker's satisfaction with her mobile home kitchen. To determine if a relationship existed between those who owned and those who rented their mobile homes and their satisfaction with their kitchens, the data were analyzed accordingly. Of the 70 respondents in the study, 48 owned and 22 rented their mobile homes.

An analysis of the data presented in Table XIV, shows that over four-fifths of the respondents who own their homes were satisfied with location of major appliances, accessibility of storage areas, convenience, attractiveness, and sufficiency of kitchen equipment. Of these respondents, over three-fourths gave affirmative responses to lighting of work areas and space between shelves. Over half of the homemaker-owners reported satisfaction with over-all kitchen plan, over-all space, depth and adequacy of storage drawers, and accessibility of storage areas. Only 50 per cent believed they had adequate work surface.

All of those who rented their homes were satisfied with the location of major appliances. Moreover, more than nine-tenths of these homemakers indicated satisfaction with lighting of work areas, accessibility of storage, over-all space and convenience, and convenience of storage space under sink. Over four-fifths reported satisfaction with attractiveness, space between shelves, and sufficiency of equipment. Approximately three-fourths of these homemakers were satisfied with depth of kitchen storage drawers.

About three-fifths of the homemaker-renters reported satisfaction with adequacy of storage drawers and over-all kitchen plan.

The evidence of Table XIV indicates that more of the owners than renters of mobile homes were dissatisfied with their kitchens. More of both owners and renters were dissatisfied with adequacy of work surface and storage drawers than with other features. The greatest difference in satisfaction between owners and renters was shown with regard to kitchen space and convenience of storage space under sink. The owners and renters agreed as to their satisfaction with kitchen

TABLE XIV

SATISFACTION AND DISSATISFACTION WITH KITCHEN CONVENIENCE FEATURES AS EXPRESSED BY 70 HOMEMAKERS ACCORDING TO OWNERSHIP OF MOBILE HOME

Features	Ownership of Mobile Home: Own S	Own D	Rent S	Rent D	Total S	Total D
Location of major appliances	87.5	12.5	100.0	-	92.9	7.1
Adequacy of work surface	50.0	50.0	54.5	45.5	51.4	48.6
Adequacy of work area lighting	79.2	20.8	90.9	9.1	82.9	17.1
Accessibility of kitchen storage	89.6	10.4	95.5	4.5	91.4	8.6
Convenience of storage space under sink	66.7	33.3	90.9	9.1	74.3	25.7
Adequacy of storage drawers	64.6	35.4	59.1	40.9	62.2	37.8
Depth of storage drawers	58.3	41.7	77.3	22.7	66.2	33.8
Adequacy of over-all space	64.6	35.4	90.9	9.1	72.9	27.1
Convenient kitchen arrangement	85.4	14.6	90.9	9.1	88.4	11.6
Sufficiency of kitchen equipment	81.3	18.7	81.9	18.1	82.6	17.4
Attractiveness	80.3	19.7	81.8	18.2	84.1	15.9
Over-all plan	70.8	29.2	68.2	31.8	73.1	26.9
Space between kitchen shelves	75.0	25.0	81.8	18.2	77.1	22.9
Total Number of Respondents	48		22		70	

attractiveness and sufficiency of equipment.

Ownership of Mobile Home and Willingness to Make Kitchen Improvements

To determine the relationship between the personal characteristics of the respondents and their willingness to use other space or additional money for kitchen storage improvements, Tables XV, XVI, XVII, and XVIII were developed. These tables compare willingness of respondents to make improvements with the variables of ownership or renting of mobile homes, respondent's gainful employment, respondent's age, and number of family members living at home respectively.

Of the 70 respondents, 72.9 per cent reported satisfaction with their kitchen space and 87.1 per cent reported satisfaction with the convenience of their kitchens, but 27.1 per cent expressed dissatisfaction with space and 12.9 per cent dissatisfaction with convenience.

It seemed possible that ownership of the home would have an effect on the willingness to use other space or additional money for kitchen improvements. Table XV data, when analyzed, indicated that owners were less satisfied than renters with space and convenience of their mobile home kitchens.

Of those who were satisfied with these aspects of their kitchens, the larger number of both owners and renters would be willing to pay extra to have adjustable shelves, but not to use other space for added kitchen storage. More owners, who expressed satisfaction with convenience of the kitchen would like added storage than those who were satisfied with kitchen space; in contrast, more renters who expressed satisfaction with kitchen space wanted added storage than those who

TABLE XV

WILLINGNESS TO USE OTHER SPACE OR ADDITIONAL MONEY FOR KITCHEN IMPROVEMENTS AS REPORTED BY 70 HOMEMAKERS ACCORDING TO OWNERSHIP OF MOBILE HOME

	Space		Convenience	
Own-48 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	12.9	29.4	14.6	42.9
Willingness to use other space for more kitchen wall cabinets	22.6	29.4	22.0	42.9
Willingness to pay extra to have adjustable shelves	29.0	47.1	31.7	57.1
Total Number of Group	31	17	41	7

	Space		Convenience	
Rent-22 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	25.0	50.0	15.0	100.0
Willingness to use other space for more kitchen wall cabinets	25.0	-	15.0	50.0
Willingness to pay extra to have adjustable shelves	30.0	50.0	30.0	50.0
Total Number of Group	20	2	20	2

TABLE XVI

WILLINGNESS TO USE OTHER SPACE OR ADDITIONAL MONEY FOR KITCHEN IMPROVEMENTS AS REPORTED BY 70 HOMEMAKERS ACCORDING TO EMPLOYMENT

Full-time Homemaker 50 respondents	Space S	Space D	Convenience S	Convenience D
Willingness to use some of space for added kitchen storage	12.1	29.4	14.0	41.9
Willingness to use other space for more kitchen wall cabinets	24.2	23.5	23.3	28.6
Willingness to pay extra to have adjustable shelves	27.3	41.2	30.2	41.9
Total Number of Group	33	17	43	7
Part-time Employed 16 Respondents	**Space S**	**Space D**	**Convenience S**	**Convenience D**
Willingness to use some of space for added kitchen storage	13.3	100.0	6.7	100.0
Willingness to use other space for more kitchen wall cabinets	6.7	100.0	6.7	100.0
Willingness to pay extra to have adjustable shelves	26.7	100.0	6.7	100.0
Total Number of Group	15	1	15	1
Full-time Employed 4 Respondents	**Space S**	**Space D**	**Convenience S**	**Convenience D**
Willingness to use some of space for added kitchen storage	100.0	-	33.3	100.0
Willingness to use other space for more kitchen wall cabinets	100.0	-	33.3	100.0
Willingness to pay extra to have adjustable shelves	100.0	50.0	66.7	100.0
Total Number of Group	2	2	3	1

TABLE XVII

WILLINGNESS TO USE OTHER SPACE OR ADDITIONAL MONEY FOR KITCHEN IMPROVEMENTS AS REPORTED BY 70 HOMEMAKERS ACCORDING TO THEIR AGE

Under 25	Space		Convenience	
31 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	32.0	33.3	20.0	83.3
Willingness to use other space for more kitchen wall cabinets	28.0	16.7	16.0	66.7
Willingness to pay extra to have adjustable shelves	32.0	66.7	32.0	66.7
Total Number of Group	25	6	25	6

25 to 34	Space		Convenience	
20 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	-	27.3	16.7	-
Willingness to use other space for more kitchen wall cabinets	33.3	27.3	33.3	-
Willingness to pay extra to have adjustable shelves	33.3	27.3	44.5	-
Total Number of Group	9	18	11	2

35 to 44	Space		Convenience	
15 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	-	-	-	-
Willingness to use other space for more kitchen wall cabinets	7.1	-	7.1	-
Willingness to pay extra to have adjustable shelves	28.5	100.0	28.5	100.0
Total Number of Group	14	1	14	1

45 and Over	Space		Convenience	
4 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	-	100.0	25.0	-
Willingness to use other space for more kitchen wall cabinets	-	100.0	25.0	-
Willingness to pay extra to have adjustable shelves	-	100.0	25.0	-
Total Number of Group	3	1	4	0

TABLE XVIII

WILLINGNESS TO USE OTHER SPACE OR ADDITIONAL MONEY FOR KITCHEN IMPROVEMENTS AS REPORTED BY 70 HOMEMAKERS ACCORDING TO NUMBER OF FAMILY MEMBERS AT HOME

One Member at Home	Space		Convenience	
4 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	-	-	-	-
Willingness to use other space for more kitchen wall cabinets	-	-	-	-
Willingness to pay extra to have adjustable shelves	25.0	-	-	100.0
Total Number of Group	4	0	3	1
Two Members at Home	**Space**		**Convenience**	
22 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	43.8	33.3	29.4	80.0
Willingness to use other space for more kitchen wall cabinets	18.8	16.0	16.7	60.0
Willingness to pay extra to have adjustable shelves	31.3	33.3	23.5	60.0
Total Number of Group	16	6	17	5
Three Members at Home	**Space**		**Convenience**	
15 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	-	-	-	-
Willingness to use other space for more kitchen wall cabinets	26.7	-	26.7	-
Willingness to pay extra to have adjustable shelves	33.3	-	33.3	-
Total Number of Group	15	0	15	0
Four Members at Home	**Space**		**Convenience**	
16 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	12.5	12.5	7.1	50.0
Willingness to use other space for more kitchen wall cabinets	37.5	25.0	28.5	50.0
Willingness to pay extra to have adjustable shelves	37.5	62.5	50.0	50.0
Total Number of Group	8	14	8	2
Five Members at Home	**Space**		**Convenience**	
11 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	-	75.0	20.0	-
Willingness to use other space for more kitchen wall cabinets	14.3	75.0	20.0	-
Willingness to pay extra to have adjustable shelves	28.6	75.0	50.0	-
Total Number of Group	7	4	10	1
Six Members at Home	**Space**		**Convenience**	
2 Respondents	S	D	S	D
Willingness to use some of space for added kitchen storage	-	-	-	-
Willingness to use other space for more kitchen wall cabinets	-	100.0	50.0	-
Willingness to pay extra to have adjustable shelves	-	-	-	-
Total Number of Group	1	1	2	0

were satisfied with kitchen convenience. Comparatively, more renters than owners were willing to use other space or additional money for improvements they wanted, except in one case in which owners who were satisfied with their kitchen convenience were more willing to pay extra for adjustable shelves than renters who were satisfied with convenience.

The respondents who were dissatisfied with the space and convenience of their kitchens had different opinions from those who were satisfied. Of the owners, the majority were willing to pay extra for adjustable shelves, while the majority of renters were willing to use some of their other space for added kitchen storage.

Respondent's Gainful Employment and Willingness to Make Kitchen Improvements

When the homemakers' responses regarding willingness to use other space or additional money for kitchen improvements were compared with gainful employment and analyzed, as shown in Table XVI, the findings indicate that more of those who were full-time employed homemakers were willing to use other space and additional money for improving kitchen storage.

More of the full-time homemakers were willing to pay extra money to have adjustable shelves than to make other storage improvements, this was true for both those who were satisfied and those who were dissatisfied with their kitchen space and convenience. More of those dissatisfied with convenience were willing to use other space and additional money for improving kitchen storage than those who were dissatisfied with space.

More of the part-time homemakers who were satisfied than those who were dissatisfied with space were willing to use other space and additional money for storage improvements.

The four full-time employed homemakers were willing to pay extra for adjustable shelves.

Age of Respondent and Willingness to Make Kitchen Improvements

Age seemed to be a possibility in determining whether a respondent would be willing to use other space or additional money for improved kitchen storage; therefore, a comparison was made in Table XVII.

When these data were analyzed, there was evidence that all the age groups, both those who were dissatisfied and those who were satisfied with kitchen space and convenience, were willing to pay extra to have adjustable shelves in their kitchen cabinets.

An analysis of the data seemed to indicate that age did have some influence on the homemakers' opinions about kitchen improvements. This was true regardless of their expressed satisfaction and dissatisfaction with their kitchens.

Number of Family Members and Willingness to Make Kitchen Improvements

A possibility of association between the number of family members living in the mobile home and the respondent's willingness to use other space and additional money for kitchen storage improvements was explored.

A study of the data in Table XVIII reveals that more of the women having four or more family members in the home were willing to use other space and additional money for improving kitchen storage than those four who had only one person in the home. Of the homemakers with four family members, more of those who were dissatisfied with kitchen convenience were willing to use both space and money to acquire improvements than those who were satisfied. Of the 15 respondents with three family members living in the mobile home, none reported being dissatisfied with the space and convenience of their kitchens. However, over one-third of these homemakers wanted adjustable shelves and more kitchen wall space.

Homemakers with four family members at home were willing to pay extra to have adjustable shelves. Generally, those who were dissatisfied with kitchen space and convenience were willing to use other space and additional money for improved storage.

Of those with five family members at home, none indicated dissatisfaction with the convenience of their kitchens. Six of the eight who were dissatisfied with kitchen space were willing to use other space and additional money to gain kitchen storage improvements. More of those who declared themselves satisfied with kitchen convenience were willing to use other space and additional money to improve their kitchens than those who reported they were satisfied with kitchen space.

The two respondents with six family members did not express dissatisfaction with kitchen convenience, but they expressed a desire for more kitchen wall cabinets.

Educational Status and Addition of Storage Convenience Devices

It was hypothesized that education would be a factor associated with the total number of convenience devices a homemaker would have added to her kitchen storage. Six devices were identified in the questionnaire in an open-end question so that the respondents could add others. The devices listed were extra shelves, dish storage racks, partitions in drawers, spice racks, pots and lids storage units, and extra cabinet space.

Educational status was divided into four categories: eighth grade and less--three respondents, high school graduates or less--46 respondents, college and graduate work--16 respondents, and other schooling such as beauty or business school--four respondents.

The data in Table XIX reveal that no more than four of the convenience devices were added to their kitchens by any of the respondents. All of the three with an eighth grade education or less had added at least one convenience device. The respondents with some college education revealed the widest variation with nine having added no devices and one having added four devices. Those who had completed some high school or graduated had added approximately the same number of devices as those respondents who had some college education.

Study of Home Economics and Addition of Storage Convenience Devices

A possible association between the study of home economics and the total number of convenience devices added by the respondent was

TABLE XIX

NUMBER OF CONVENIENCE DEVICES ADDED AS REPORTED BY 70 HOMEMAKERS ACCORDING TO EDUCATION

Educational Status	Total Respondents	Number of Devices Added 0	1	2	3	4	5
A. Amount of Education							
8th grade or less	3	-	1	1	1	-	-
High school and less	46	28	12	4	2	-	-
College and graduate work	16	9	3	3	2	1	-
Other schooling	4	2	1	1	-	-	-
B. Study of Home Economics							
None	14	6	3	4	1	-	-
High School	54	34	14	5	1	-	-
Home Demonstration Club	0	-	-	-	-	-	-
College	1	-	-	-	-	1	-

explored in Table XIX-B. The study of home economics was divided into four categories: none, high school, home demonstration, and college.

Of the 14 women having no formal home economics study, six reported they had added no convenience storage devices, three had added one device, four had added two, and one had added three. Of the 54 respondents who had studied home economics in high school, 34 had added no storage devices, 14 had added one, five had added two, and one had added three. The one homemaker who had studied home economics in college had added four storage devices--more than any of the other homemakers.

Ownership of Home and Addition of Storage Convenience Devices

A possibility of association between ownership of the mobile home and installation of convenience devices was explored in Table XX.

TABLE XX

NUMBER OF CONVENIENCE DEVICES ADDED AS REPORTED BY 70 HOMEMAKERS ACCORDING TO OWNERSHIP OF MOBILE HOME

Ownership	Total Respondents	0	1	2	3	4	5
Own	48	24	12	9	2	1	-
Rent	22	16	5	1	-	-	-

As a whole, there appears to be some relationship between ownership and addition of storage devices. Fifty per cent of the owners, but

only 27.3 per cent of the renters had added any convenience devices.

Summary of Findings

The summary is organized under four major categories.

Over-All Convenience Features Available in Kitchens

Of the 15 over-all convenience features listed in the questionnaire, the largest number reported for any one kitchen was 13, the smallest number was three. The lower priced homes seemed to average slightly fewer convenience features; the under $3,999 homes averaged 7.3 features as compared with an average of 8.8 in the $4,000-6,999 and 9.0 in the over $7,000 homes.

The greater number of convenience features were in homes built after 1956. All the respondents reported at least three convenience features in their kitchens.

Satisfaction and Dissatisfaction with Kitchen Arrangements

Over half of the homemakers under 25 expressed satisfaction with their kitchens; whereas in some areas, over half of the 25 to 34 year old group expressed dissatisfaction with their kitchens. More women of all age groups were dissatisfied with adequacy of work surface, number of storage drawers, and the depth of kitchen storage drawers than with any other features.

Analyzed according to gainful employment, full-time homemakers and full-time employed homemakers generally agreed about features with which they were satisfied and disagreed about features with which they were dissatisfied. More of the part-time employed homemakers expressed dissatisfaction with sufficiency of kitchen equipment than did the other

two groups. More of all employment groups were satisfied with accessibility of storage areas and location of major appliances than with other convenience features.

More of the women living alone expressed satisfaction with their kitchens than those with four or more family members at home. More of those with two family members were dissatisfied with over-all kitchen plan and number of kitchen drawers, whereas more respondents with three to six family members were dissatisfied with adequcy of work surface, kitchen space, and depth of storage drawers.

More renters expressed satisfaction with their kitchen convenience features than did owners, but approximately half of each group believed they had inadequate work surface. The majority of both were satisfied with kitchen attractiveness and sufficiency of kitchen equipment.

Willingness to Use Other Space or Money for Storage Improvements

The majority of both owners and renters were willing to pay extra for adjustable shelves. This applied to both those who were satisfied and those who were dissatisfied with their kitchen space and convenience. Of the respondents who expressed satisfaction with their kitchen space and convenience, more renters (one-fourth) than owners (slightly less than one-fourth) were willing to use other space or additional money for kitchen storage improvements. Of those who were dissatisfied with kitchen space and convenience, owners (two-fifths) were willing to pay extra for adjustable shelves, while renters (one-half) were willing to use other space and additional money for more storage space. In the over-all analysis, more renters were willing than owners to use other space and additional money for storage improvements.

It was found that over 50 per cent of the full-time employed homemakers, approximately 30 per cent of the full time homemakers, and less than 20 per cent of the part-time employed homemakers were willing to use other space or additional money for improved storage. More of the respondents, regardless of employment, were willing to pay extra for adjustable shelves than for other storage improvements.

Data revealed that almost half of those in the under 25 age group and almost two-fifths of the 45 and over age group were willing to use other space and additional money for storage improvements. More of those under 25 years of age who were not satisfied with kitchen space and convenience were willing to use other space and money for improving storage than the other age groups.

More of the homemakers with four or more family members than those with smaller families at home were willing to use other space and additional money for storage improvements, ranging from one-eighth to three-fourths on different items. The homemakers least interested in making storage improvements were those living alone.

Generally, those who were dissatisfied with their kitchen space and convenience were more willing to use other space and additional money for improving storage than those who were satisfied. More respondents (37.1 per cent) were willing to pay for adjustable shelves than any other item included in the questionnaire.

Total Number of Convenience Devices Added

Though 77.2 per cent of the respondents had studied home economics in high school, only 38.6 had studied kitchen planning and only 37 per cent had made storage improvements. Only 42.9 per cent of the total

number of respondents had added any convenience devices. Only one respondent had studied home economics in college; she had added more of the convenience devices thany anyone else. Half of the owners, but less than one-fourth of the renters, had added any convenience devices.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study was designed to determine what convenience features were available in mobile home kitchens, whether women living in mobile homes in a selected community were satisfied or dissatisfied with the kitchens in their homes, and whether they had improved the storage facilities. It was hypothesized (1) that the homemakers would express more dissatisfaction than satisfaction with the space, arrangement, and storage of their mobile home kitchens; (2) that even though homemakers might find themselves dissatisfied with their kitchen facilities, they would not have added convenience devices; and (3) that the opinions of the homemakers with regard to their kitchens and their efforts at kitchen improvement would be affected by their age, education, study of home economics, gainful employment outside the home, and the ownership, age, and value of the mobile home.

According to the data of this study, it seems that mobile home kitchens are similar in the over-all plan, arrangement of equipment and cabinets, and storage facilities to the kitchens in stationary homes. Nevertheless, when these kitchens were analyzed with regard to the number of recommended convenience features each included, the number of such features is relatively small. Manufacturers appear to be

incorporating more of the recommendations of kitchen planning research now than in the past since the mobile homes built after 1956 tend generally to include more of the convenience features studied. Some relationship seems to exist between price and the number of convenience features included in the kitchen. The average number of features increased slightly with the higher cost of the mobile home.

Although the number of convenience features of the majority of kitchens was rather small, generally less than 50 per cent of the total included in the study, the majority of homemakers expressed satisfaction with almost all aspects of the arrangement and storage facilities of their mobile home kitchens with the exception of adequacy of work surface and the number of storage drawers. This may mean that when homemakers are not aware of the characteristics of a well-planned kitchen with adequate and appropriate storage facilities, they do not miss them.

For this study, the influence of the variables seemed small; probably a larger population and statistical analysis will be needed to determine the significance of the possible relationships between the variables of age, employment, and number of family members and the corresponding satisfaction and dissatisfaction of the homemakers with various features of their kitchens, as well as the improvements they have made in kitchen storage.

However, data appeared to give some support to several conclusions. Age seemed to influence homemakers' satisfaction and dissatisfaction with their kitchens. More of the two groups of women ranging to 34 years of age expressed dissatisfaction with their kitchens than did those of the two older age groups. Possibly this occurs because

younger women may look upon their mobile home as a temporary residence until they can move into a stationary house. Also, these women may have more younger children at home.

More homemakers with three or more family members living at home expressed dissatisfaction with their kitchens than did those with fewer family members at home. As a factor influencing satisfaction, family size might affect the space and facilities needed for food preparation, cleaning up, and storage as well as the amount of time and effort required for working in the kitchen.

Ownership of the home seemed to be an influencing factor on satisfaction with the kitchen and storage facilities. In this study, fewer owners than renters tended to be satisfied.

Willingness to use other space and additional money for storage improvements seemed to be affected by the age of the respondent and ownership of the mobile home. More of the two younger age groups than the two older age groups wanted storage improvements even at the cost of other space and additional money. Renters were more willing than owners to improve storage even at the cost of other space and additional money. This may be influenced by the owner's knowledge that such costs must be made by himself rather than by the landlord.

The study of high school home economics did not seem to influence homemakers to make improvements in their kitchen storage facilities nor did it assure their having studied kitchen planning.

Recommendations

On the basis of the summary of data and conclusions drawn, the following recommendations for further study seem justified.

(1) To determine if this population was representative of the total mobile home population. For example, in this study, some sample groups of the population, such as the one respondent who had studied home economics in college, were too small to form conclusions. Also more detailed information may be helpful. For instance, this study did not determine how much home economics had been studied in high school by the respondents nor did it explore all aspects of convenience features in the kitchens.

(2) To learn more about the understanding of homemakers with regard to the requirements of a convenient kitchen, the thought they give to the relative convenience and inconvenience of the kitchens with their facilities, and whether they try to find reasons for inconveniences and make improvements. The homemakers of this study seem to do few of these. Since so many homemakers expressed satisfaction with kitchens that lacked many of the recommended convenience features, possibly a more intensive study is needed to determine how important these convenience features are in the opinion of the homemaker. Home economists may need to stimulate among high school students and adult homemakers more interest in and understanding of the meaning and value of convenient kitchens and how to make related improvements.

(3) To learn how much energy and time the homemaker spends in the kitchen today. Perhaps the homemaker likes the physical activities connected with work in the kitchen, or her meal preparation and cleaning may have been greatly simplified through the use of ready-prepared foods and eating meals away from home.

(4) To identify what home economists know and teach--at least at high school level--with regard to planning convenient, comfortable,

and attractive work areas for the home, especially in the kitchen. In this study, even though a relatively large number of homemakers expressed dissatisfaction with kitchen storage facilities, a very small percentage of the homemakers had added convenience devices to improve storage. This in spite of the fact that over 78 per cent of the respondents had studied home economics in high school. Extension teachers have found evidence that once homemakers become aware, they make many improvements in their kitchens.

(5) To determine how much real difference research-based recommendations for efficient kitchens put into effect make in the efficiency and pleasure of working in the kitchen. Is it possible that some of the recommendations make such a minor difference that the effects are hardly noticeable? Also, the cost in time and money of carrying out the recommendations might outweigh the benefits.

From the results of this exploratory study, it is recommended that if further study in this area is carried out, perhaps an in-depth interview with open-end questions would give more comprehensive information. A questionnaire such as used in this study tended to limit responses.

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APPENDIX

APPENDIX

STUDY OF MOBILE HOME KITCHENS

What major appliances does your kitchen have?

_____a. range
_____b. refrigerator
_____c. dish washer
_____d. garbage disposal
_____e. others

What is your major kitchen plan?

_____a.	u - shape	⊔	arranged on 3 walls
_____b.	l - shape	L	arranged on 2 walls at right angles
_____c.	corridor	=	arranged on 2 walls, like hall
_____d.	island	⊑	

Please check the appropriate answer;

Yes	No		
_____	_____	1.	Could your major appliances (stove, refrigerator, etc.) be rearranged in your kitchen so they would be more convenient to use?
_____	_____	2.	Does your range have counter space beside it?
_____	_____	3.	Does your refrigerator have counter space beside it?
_____	_____	4.	Does your kitchen have two levels of counter space? One for mixing and one for other work?
_____	_____	5.	Do you think you have enough work surface for mixing, beating, kneading, and rolling doughs when cooking?
_____	_____	6.	Do you have adequate light at all the work areas in your kitchen?
_____	_____	7.	Do you have a rack for hanging dish towels and dish clothes?
_____	_____	8.	Have you added a paper products (towels, wax paper, etc.) holder?
_____	_____	9.	Would you be willing to use some of your space for added kitchen storage?
_____	_____	10.	Are your kitchen storage areas readily accessible?
_____	_____	11.	Do you consider storage space under your sink convenient to use?
_____	_____	12.	Can dishwashing supplies and equipment (dish pan, drain basket, soap, towels, dishcloth) all to be stored at the sink?
		13.	Do you have adequate space to store the following items in your kitchen?
_____	_____		a. Canned goods
_____	_____		b. cooking and baking utensils

_____ _____ c. chinaware and glassware
_____ _____ d. staple foods (Ex. four - potatoes)
_____ _____ e. small electrical kitchen appliances
_____ _____ f. stepping stool
_____ _____ 14. Do you consider that your kitchen storage space has enough drawers?
_____ _____ 15. Considering the kitchen tools stored in drawers, do you think your storage drawers are the right depth.
_____ _____ 16. Would you be willing to use other space for more wall cabinets in your kitchen.
17. Does your kitchen arrangement allow you to do the following-
_____ _____ a. Equipment and supplies used together are stored near each other.
_____ _____ b. Equipment and supplies are kept where they are most often used first.
_____ _____ c. Most frequently used materials are kept in the most readily accessible spaces.
_____ _____ d. Materials are stored so they can be obtained without moving others.
_____ _____ e. Frequently used heavy appliances are stored at waist level as desirable.
_____ _____ f. Excessive stooping, stretching, and lifting can be minimized.
_____ _____ 18. Would you pay more to have shelves that could be adjusted so the space between would suit your needs?
_____ _____ 19. Have you added "step shelves" to your shelves so you don't have to remove the first row of items to reach something in the back?
20. Have you added the following storage devices to your kitchen storage?
_____ _____ a. extra shelves
_____ _____ b. dish storage racks
_____ _____ c. partitions in drawers
_____ _____ d. spice racks
_____ _____ e. pots and lids storage units
_____ _____ f. extra cabinet space
_____ _____ g. others (list)
21. Are you satisfied with these aspects of your kitchen?
_____ _____ a. space
_____ _____ b. convenience
_____ _____ c. sufficient equipment
_____ _____ d. attractiveness
_____ _____ 22. Do you generally prepare and eat all three daily meals at home?
_____ _____ 23. Do you think that there is an alternate arrangement of your kitchen that would facilitate your meal preparation and meal clean-up?
_____ _____ 24. Does your kitchen arrangement require frequent retracing of steps?
_____ _____ 25. Does your kitchen arrangement permit working in one direction (Ex. left to right)?
_____ _____ 26. Do you think that the spaces between your kitchen shelves are either too far apart or too close together?
_____ _____ 27. Are your wall cabinet shelves all one depth?

Please check the answers that you think would apply in your case.

28. Does the major kitchen equipment, arrangements, storage facilities, and work surfaces contribute to

_____a. enjoyment of working in the kitchen
_____b. causing physical fatigue
_____c. frustrations
_____d. encouraging family members to work together
_____e. facilitate cleaning

29. Do you consider your major appliances

_____a. of good quality
_____b. require too much repair and service
_____c. do a good job

30. Does your kitchen storage have waste areas that you can't use?

_____a. corners in base and wall cabinets
_____b. under sink
_____c. above range
_____d. above refrigerator
_____e. list any others you have found

GENERAL INFORMATION

1. Check your age group

_____a. under 25
_____b. 25 to 34
_____c. 35 to 44
_____d. 45 to 54
_____e. 55 to 64
_____f. 65 and over

2. Check your education status

_____a. Less than 8th grade
_____b. Completed 8th grade
_____c. Some high school
_____d. Completed high school
_____e. Some college
_____f. Completed college
_____g. Had graduate work
_____h. Other such as business college, beauty school, etc.

3. Study of Home Economics

_____a. None
_____b. High school
_____c. Home Demonstration Club
_____d. College

4. Study of Kitchen Planning

_____a. No
_____b. School
_____c. Club work
_____d. Others

5. Are you employed outside of your home?

_____a. No. _____b. Yes, part-time _____c. Yes, full-time

6. Check your total annual income range

_____a. $1,000 - 3,000
_____b. $4,000 - 6,000
_____c. $7,000 - 9,000
_____d. $10,000 - 12,000
_____e. $12,000 - 15,000
_____f. over $15,000

7. Please list number of family members of each group living in your mobile home.

_____a.	Under 5 years	_____e.	21 - 25 years
_____b.	6 - 10 "	_____f.	over 25 "
_____c.	11 - 15 "	_____g.	others
_____d.	16 - 20 "		

8. What is your marital status: _____a. Single _____b. Widowed _____c. Divorced _____d. Married. If married, please list number of years_____.

9. Do you _____a. own _____b. rent your mobile home?

10. List the approximate value of your mobile home. $_____

11. List _____a. number of rooms other than bathroom?
_____b. number of bathrooms?
_____c. size of home _____feet X _____feet.

12. What model and year is your mobile home?_____

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