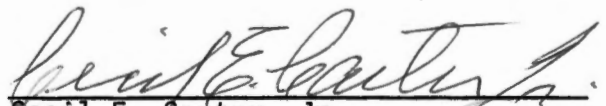


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RELATIONSHIPS BETWEEN SELECTED HOUSING PROBLEMS AND
CHARACTERISTICS OF HOUSES AND HOMEMAKERS

A Thesis
Presented for the
Master of Science
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ABSTRACT

The purpose of this study was to gain knowledge concerning the existence of housing problems in Tennessee and to determine the characteristics that related to selected problems. Data were obtained from 2538 homemakers through group interviews conducted by Extension agents. Analysis of variance and Chi Square were statistics used in the study.

Major findings included:

1. Separated and single homemakers reported a high percentage of housing problems.
2. Age was related to the number of housing problems reported with younger homemakers having storage problems and older homemakers reporting problems with the cost of heating, cooling, maintenance and repair.
3. Families earning less than \$5,000 had a high percentage of housing problems. The problems decreased as income increased.
4. Larger families and those residing in mobile homes had a high number of housing problems.
5. The condition of the house was strongly related to housing problems. As the condition deteriorated, the number of problems increased. Problems also increased with the age of the house.
6. Houses with two or less bedrooms, one or no baths, no separate dining, no recreation room, and no laundry room had a high percentage of problems.

7. In general, housing problems were not related to the number of Extension contacts.

Recommendations for programs were made.

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CHAPTER I

BACKGROUND AND PROBLEM

I. INTRODUCTION

Shelter is a basic human need. In the United States, we consider traditional housing as our shelter (6).^{*} It serves as protection from the elements as well as from other people. Inadequate housing may result in discomfort, illness or even death (5). In addition to the physical aspects, housing is seen by many as a symbol of status, achievement, or social acceptance. A very important observation is that housing affects how a person perceives himself and is perceived by others (6).

In Tennessee, there were 1,737,123 year-round housing units in 1980. Of these, 63.9% were owner occupied while 29.3% were rented. Also, a majority of Tennessee houses were single-detached units, but the percentage of mobile homes had started to rise. In fact, mobile homes made up more than 10% of the housing units in one-third of the counties (7).

There had been little change from 1970 regarding tenure of housing. Central cities had experienced decrease in the proportion of owner-occupied housing units with an increase in the proportion of renters (7).

^{*}Numbers in parentheses refer to alphabetically listed items in the Bibliography.

Housing quality problems were reported more frequently in rural households, minority households, low to moderate income households, and elderly households. In 1970, the rural households reported twice as many problems as the non-rural while minorities reported almost twice as many problems as non-minority (4).

The term "inadequate housing" may reflect a lack of complete plumbing facilities, have a low value, or be over-crowded. In Tennessee, 5.4% of the total housing units in 1984 were evaluated as "inadequate." Many counties, however, had much higher percentages such as Scott County with 21.4% and Campbell County with 18.8% inadequate housing (4).

Since housing affects how a person perceives himself and how others perceive him, it appears important to study housing problems.

The Agricultural Extension Service is an educational institution in Tennessee devoted to developing people through informal instruction. Started in 1914 with the passage of the Smith-Lever Act, it is administered by The University of Tennessee, Institute of Agriculture in cooperation with federal, state and county governments. Through this system, the latest research information is disseminated by the Extension staff in each of Tennessee's 95 counties. Agents plan and implement programs with the ultimate goal of improving the quality of life for their clientele.

In order to better understand the housing situation in Tennessee, the Agricultural Extension Service developed a new program area in 1980, Housing and Equipment. In addition to developing much

needed programs, the specialist in this new area designed a survey for homemakers to use in reporting their various housing problems. It was administered during Fall of 1981.

II. NEED FOR STUDY

The Tennessee Agricultural Extension Service evaluates its programs on a regular basis in order to better meet the needs of its clientele. This is the first study conducted in relation to housing problems since the coming of a new specialist. It is based on the first housing survey to be conducted by Extension agents across the state.

Housing was selected as a study area because all families in Tennessee must live somewhere. This study is needed to reveal the kinds and numbers of housing problems reported by homemakers in Tennessee. In order for Extension agents to be better prepared to address specific housing problems, this study also was designed to investigate certain housing problems in relation to the characteristics of the homemakers, the characteristics of the present home, and the number of contacts with Extension. It is hoped that this study will give agents a broader perspective or base for planning programs concerning housing problems.

III. PURPOSES AND OBJECTIVES OF THE STUDY

The purpose of this study was to gain knowledge concerning the number and kind of housing problems reported by homemakers in

Tennessee. Five major housing problems were identified for study. These were: (1) inadequate kitchen storage, (2) inadequate bedroom storage, (3) inadequate outdoor storage, (4) expensive to heat and cool, and (5) expensive to maintain and repair. Each of these areas was studied to determine the characteristics which contributed to their existence and to evaluate the influence of Extension contacts on their frequency and occurrence.

Specific objectives were:

- I. To determine relationships between housing problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- II. To determine relationships between kitchen storage problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- III. To determine relationships between bedroom storage problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- IV. To determine relationships between outside storage problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- V. To determine relationships between houses that cost too much to heat and cool and characteristics of homemakers,

characteristics of present house, and number of contacts with Extension.

VI. To determine relationships between houses that were expensive to maintain and repair and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.

IV. LIMITATIONS OF STUDY

This study was limited to data obtained from the 1981 Housing Survey conducted by The Tennessee Agricultural Extension Service in all counties except Lake County.

V. METHODS AND PROCEDURES

In this section, the methods and procedures employed to secure and analyze survey data are discussed.

Population and Sample Studied

The population for this study consisted of homemakers from 94 Tennessee counties. At least thirty homemakers from each county were selected by the Extension agents from eight potential audiences: (1) all Home Demonstration Club members, (2) young non-club homemakers, (3) EFNEP participants, (4) housing program participants, (5) all homemakers (general), (6) 4-H parents or leaders, (7) special interest groups, or (8) other homemakers. Three of the eight audiences were chosen from which the agent randomly selected ten homemakers each,

making a total of thirty. Across the state, a total of 2,538 homemakers was surveyed.

Survey Instrument

The instrument (see Appendix) was developed by the Tennessee Agricultural Extension Service Housing Specialist, Maxine McManus. It was designed to reveal personal characteristics, information about the participants' present houses, possible housing problems, and sources used for housing information. Numbers of contacts with Extension was also requested. Surveys covered a one-year period.

In Part I of the survey, general information about the homemaker's and family's characteristics was requested. These included sex, marital status, educational level completed, employment status, total family income, and number of people in the household.

Part II of the survey dealt with information about the present house. Questions included geographic location, type of house, tenure, number of years lived in present house, age of house, and condition of house. Also requested in this section was the number of bedrooms, number of baths, and if the house had separate dining, family or recreation room, utility or laundry room, central heat, central air conditioning, or room air conditioner.

The main part of the survey involved participants indicating if they had possible housing problems. Answer selections included: (1) not a problem, (2) slight problem, or (3) big problem. Eighteen problems were listed. These included: (1) too small - not enough space inside, (2) not enough rooms, (3) not enough bathrooms,

(4) room arrangement does not provide privacy, (5) rooms poorly arranged, (6) kitchen is inconvenient, (7) need more kitchen storage, (8) need more bedroom storage, (9) is poorly insulated, (1) costs too much to heat and cool, (11) badly needs some repairs, (12) maintenance and repairs cost too much, (13) poor outside appearance, (14) need more outside storage, (15) inside is uninteresting, (16) lack of privacy from neighbors, (17) too big - too much space inside, (18) not comfortable or relaxing.

In Part IV, participants indicated sources of their housing information last year. Possible sources included: (1) radio, (2) television, (3) newspaper, (4) magazines, (5) Extension housing publications, and (6) a blank to write in other sources. This section also included areas to check if the participants were interested in receiving further information. On this list were: (1) repairs and maintenance, (2) making home more energy efficient, (3) kitchen remodeling, (4) remodeling, (5) building a house, and (6) buying a house. These areas were answered by no, yes, or no response.

The final section of the survey allowed participants to report contacts with Extension through: (1) meetings, (2) office visits, (3) telephone calls, and (4) newsletters received. Actual number of contacts were recorded.

Interviews

Group interviews were conducted by the agents with the participants completing their own survey forms.

Analysis of Data

Completed survey forms were mailed by agents to their respective district offices and then forwarded to the State Agricultural Extension Education Office at The University of Tennessee. Computer data cards were punched for statistical analysis.

The F test was used to determine the significance of relationships between the mean number of housing problems reported by homemakers and the various characteristics obtained through the survey. To determine relationships between the five most prominent housing problems and the various characteristics, the Chi Square statistical test was used. A probability level of .05 was considered as being statistically significant.

CHAPTER II

RELATED STUDIES

I. INTRODUCTION

Available literature relative to this study was very limited. No Extension studies on housing have previously been done in Tennessee since this is a new program area. One Tennessee study in the home economics discipline was found on housing repairs. A vast amount of literature was found concerning building and financing houses and the role of government in these two areas. This information was not considered useful since the primary concern of this study was to relate housing problems to characteristics of the homemaker and the home.

Several studies in other home economics disciplines revealed how certain personal characteristics influenced the number of contacts with Extension. Although not dealing with how contacts related to housing problems, the studies that seemed most appropriate were utilized.

II. SELECTED FINDINGS

In a 1983 regional study of seven Southern states conducted by the University of Georgia, Shelton reported that 1,894 households were sampled in 28 counties, four per state. Small households consisting of one or two persons constituted 58% of the sampling. Only 8% of the households had five or more persons while 19% were one person households.

When considering the age groups, there were more older participants than younger. Household heads that were over age 55 made up 35% of the study while only 29% were under age 35.

A majority of the participants were married and two-thirds had finished high school. The median income for the group was \$7,500 take home pay (8).

In a Tennessee study, Wimbish interviewed 1,624 households to study low-cost minimum standard housing in rural areas. He found that family income was the most significant factor directly affecting the quality and adequacy of housing. He also found that most of the dwellings contained adequate food and clothing storage space in addition to adequate space for other functional activities.

Concerning education and income levels of this study, he revealed that the level of formal education was positively related to the level of income received. As the level of education increased the income also increased. Age was also related to income with younger households earning higher incomes than the older groups (12).

In looking at characteristics of the structure, the Shelton study reported that all of the 1,804 families surveyed in her seven state project lived in a non-farm residence. Of this sampling, 97% of the housing was single family units. Home ownership predominated as 90% had their home paid for or were buying it. Only 8.8% were renting or leasing a house with the remainder receiving their house rent-free or for services rendered.

When considering the type of units, 88.9% were conventional homes while 4.3% lived in an apartment or other rented dwelling and 6.9% had mobile homes or modular units.

This study also looked at the age of the houses. A total of 57.9% were 20 years old or less having been built since 1962. Only 8.9% were constructed since 1978 making them 5 years old or less at the time of the study. Several of the houses were over 40 years old with 16.9% having been built before 1941.

The study revealed that people move around as 24.8% had lived in their present home under five years, 20.0% for five to nine years, and another 20.4% for ten to fifteen years. This made a total of 65.2% having lived in their present home fifteen years or less. Only 4.4% had remained stationary over 40 years.

Other areas included in Shelton's study were the number of bedrooms and bathrooms in the houses. Of the 1,804 households, over half had three bedrooms with slightly over a fourth having two bedrooms. Another 13.1% had four bedrooms. In looking at the number of bathrooms, a majority had only one bathroom. The next highest response was 25% having two bathrooms.

Some of the other housing characteristics considered in this study were the types of heating and cooling equipment used in the houses. The highest response for cooling equipment was 39.5% having a free standing fan. Only 31.2% had central air conditioning. On the other hand, the highest response for heating equipment was central heating with 39.8% having this system. Other heat sources included 28.1% using wood stoves and 27.4% using space heaters (8).

In a study of 958 households at Kansas State University, Hanna determined the relative importance of various housing characteristics by analyzing the statistical relationships between satisfaction with various components of housing and a measure of overall housing satisfaction. It was inferred that the component having the strongest relationship with overall satisfaction was the most important. His findings showed that satisfaction with structural quality entered first, followed by size of the home, outside appearance, amount of outside storage, inside appearance, and utility costs. These variables accounted for 43% of variation in overall satisfaction (3).

A Southern study consisting of 227 widowed female household heads and 227 married females living with their spouses was conducted in connection with the Shelton project. An analysis was made with selected housing conditions and decision making practices being dependent on marital status. Significant differences were found concerning square footage of the home, family income, number of rooms and bedrooms, condition and energy scores, monthly payments for housing, housing satisfaction, involving children in housing decisions, and the size of household.

The housing characteristics of the two groups were similar with 95.5% of the widows and 99.1% of the marrieds living in single family houses. Most were conventional houses that were owner-occupied. Approximately 35% of the widowed had lived in their present home 30 years or longer compared to 32.1% for the married. Major differences in the houses of the two groups were size, number of rooms, and number

of bedrooms. Forty percent of the widows compared to 19.6% of the marrieds occupied houses containing 1000 or fewer square feet. Seventy-four percent of the widows' houses had three rooms or fewer compared to 64.2% of the married participants. Also, 49.3% of the widows lived in one or two bedroom houses compared to 33.2% of the marrieds (10).

In East Tennessee, the East Tennessee Development District (ETDD) made a study of the housing situation in their 16 county area in 1974. Many houses were considered substandard based on a lack of plumbing facilities, being overcrowded or having a low value. In 1970, they considered 8.0% as definitely substandard and 20.9% as probably substandard using plumbing and value as criteria. The age of the house was also considered an indicator of quality since most older houses will need to be repaired eventually. This also related to inadequate plumbing, lower housing values, and structural deterioration. ETDD reported that 32.1% of the houses were constructed in 1939 or earlier.

Other quality indicators were: (1) source of water, (2) place of sewage disposal, (3) method of heating, and (4) tenure of occupancy.

One trend disclosed for East Tennessee was an increased number of mobile homes. This reflected a gap in the supply of low-cost housing in terms of size, design and quality. In 1970, ETDD reported that 4.6% of the housing units were mobile homes as compared to 4.0% for the state. Most were located in rural areas (4).

Postma revealed the same trend toward increased numbers of mobile homes in Tennessee. She disclosed that single-family detached housing made up a smaller proportion of the total housing in 1980 than in 1970 but that mobile homes represented a larger percentage than before. In Tennessee, the percentage of mobile homes reached 6.2% of the total housing units in 1980 while in over one-third of the counties, they constituted over 10% of their housing units.

Concerning tenure, she reported that 63.9% of the housing units were owner occupied in 1980 while 29.3% were rented occupied (7).

When considering numbers of Extension contacts, Speer found in her study that the number of contacts with Extension was influenced by age, employment status, home ownership and HDC membership. In terms of following interior design practices, she revealed that Extension contacts were significantly related in a positive manner to ten of the seventeen practices (9).

Webb also reported in her study of HDC members, that the number of contacts through Extension meetings was influenced by age with the group over 60 years of age attending significantly more meetings. For contacts through visits and telephone calls, Webb found that the younger HDC members in the 30-39 age group made significantly more contacts than any other age group.

Marital status also affected the number of contacts as those members who were married made more telephone calls to the Extension office than other members. Educational level and employment both

influenced contacts through meetings. Those members who were in the 0-7 grade level and those who were unemployed attended more meetings than other groups (11).

In her study on clothing, Connell revealed that employment outside the home significantly affected the number of Extension meetings attended. Those that worked attended fewer meetings than those that did not work (1).

Concerning specific housing problems, the Shelton study revealed few problems with heating and cooling systems. This study was concerned with the condition of the systems, not the expense of operation. Although only one-third of the participants had central heating systems, 95.2% reported having no problems. Slightly more had problems with their cooling systems as 5.9% reported minor problems and 1.4% had major problems. This still resulted in 92.8% reporting no cooling system problems although most households used free standing fans, window air conditioners or window fans (8).

Lindamood and Hanna, housing teachers at Kansas State University and co-authors of a textbook, reported that all dwellings require repairs over time to forestall deterioration. The annual maintenance expenditures for owner-occupants of conventional single-family dwellings varied from 1% to 3% of the current market value of the house (5).

Garner studied nine housing repairs with 682 respondents to her questionnaire. By dividing the participants into two groups, she found some interesting results. One group decided to do their

own repairs. They were the younger group who comprised larger households. Those who did their own repairs usually had more repair skills and received satisfaction from completing a repair.

On the other hand, the second group contracted their repairs. The older population contracted more repairs than the younger group as did persons with higher incomes.

She also found that individuals in older housing structures were more likely to do their own repairs, specifically exterior painting and equipment repairs. Middle income households were more likely to do their own interior painting and masonry repairs (2).

CHAPTER III

STUDY FINDINGS

The purpose of this chapter is to present findings that show the relationships between the number of housing problems and the various characteristics that influence them. The mean number of housing problems reported along with only the five most predominant problems from the housing survey are included in this study. Study findings are presented in six sections which are organized according to the dependent variables. Each section contains three tables in order to present findings regarding the three independent variables. These variables are: (1) characteristics of the homemaker, (2) characteristics of the present house, and (3) number of contacts with Extension.

Section I compares the relationships between the mean number of housing problems and the three independent variables.

Section II shows the relationships between kitchen storage problems and the three independent variables.

Section III presents data concerning the relationships between bedroom storage problems and the three independent variables.

Section IV deals with the relationships between outdoor storage problems and the three independent variables.

Section V shows the relationships between houses that cost too much to heat and cool and the three independent variables.

Section VI presents information concerning the relationships between houses that were expensive to maintain and repair and the three independent variables.

For purposes of analysis, Section I uses the F test to show the one way variance between the dependent and independent variables. Sections II through VI use the Chi Square test to determine the relationships between variables.

I. MEAN NUMBER OF HOUSING PROBLEMS

This section contains three tables showing the relationships between the mean number of housing problems reported by homemakers and the three independent variables. The statistical test for this section is the F test with a probability level of .05 being accepted as significant.

Characteristics of the Homemaker

Table I presents the number and percent of homemakers responding to the survey and their mean number of housing problems as related to the characteristics of the homemakers. Characteristics studied include marital status, age, education, employment, family income, and number in household.

Marital status. Of the 2,530 homemakers participating in the survey, 1,978 (77.9%) were married with the 379 (15.0%) widowed homemakers constituting the next largest group. Separated homemakers reported the highest mean number of housing problems (7.38). Following this was the divorced group (5.98) and the single group (5.90).

TABLE I
RELATIONSHIPS BETWEEN HOUSING PROBLEMS AND
CHARACTERISTICS OF HOMEMAKERS

Personal and Family Characteristics	Mean Number of Housing Problems Reported				
	Number of Respondents	Percent	Mean Problems	Variance Ratio	P
<u>Marital Status</u>					
Married	1970	77.9	4.99		
Divorced	65	2.6	5.98		
Widowed	379	15.0	4.37		
Separated	8	.3	7.38		
Single	108	4.2	5.90		
Total	2530	100.0	4.97	F=4.66	P=0.001
<u>Age</u>					
Under 20	26	1.0	6.19		
20-29	254	10.1	5.98		
30-39	507	20.2	5.42		
40-49	348	13.9	5.09		
50-59	440	17.6	4.62		
60-Over	931	37.2	4.54		
Total	2506	100.0	4.97	F=8.28	P=0.001
<u>Education</u>					
Under 8 Years	90	3.7	6.81		
8-11 Years	367	15.2	4.99		
High School Graduate	980	40.3	5.11		
Some College	579	23.8	4.67		
College Graduate	413	17.0	4.76		
Total	2429	100.0	4.99	F=5.38	P=0.001
<u>Employment</u>					
Full-time	516	20.5	5.34		
Part-time	338	13.5	5.33		
Unemployed	93	3.7	6.23		
Homemaker Full-time	1101	43.9	4.79		
Retired	461	18.4	4.48		
Total	2509	100.0	4.97	F=6.06	P=0.001

TABLE I (continued)

Personal and Family Characteristics	Mean Number of Housing Problems Reported				
	Number of Respondents	Percent	Mean Problems	Variance Ratio	P
<u>Family Income</u>					
Under 5,000	126	8.5	6.23		
5,000-9,999	239	16.2	5.81		
10,000-14,999	308	20.8	5.57		
15,000-24,999	445	30.1	4.95		
25,000-Over	361	24.4	4.15		
Total	1479	100.0	5.13	F=11.19	P=0.001
<u>Number in Household</u>					
One Person	370	14.6	4.33		
Two Persons	1000	39.5	4.45		
Three Persons	443	17.5	5.47		
Four Persons	467	18.5	5.18		
Five and Over	251	9.9	6.76		
Total	2538	100.0	5.00	F=18.99	P=0.001

Widowed homemakers reported the lowest number of housing problems (4.37). The mean number of housing problems was significantly related to marital status at the .001 level.

Age. Over one-third of the participants were in the over 60 age group (37.2%) but reported the lowest number of housing problems (4.54). The number of problems reported was higher as age decreased with the younger homemakers under age 20 having the highest number (6.19). The F test showed a positive relationship between the mean number of problems reported and age.

Education. The largest group of homemakers was high school graduates (40.3%). Of the five educational levels completed, those with under 8 years of schooling reported considerably more housing problems (6.81) than the other homemakers. High school graduates were next (5.11) followed by the 8 to 11 year group (4.99). The level of education completed was significantly related to the mean number of housing problems at the .001 level.

Employment. Nearly half of the survey participants were full-time homemakers (43.9%). The small group of unemployed homemakers had the highest number of housing problems (6.23). Full-time employed and part-time employed homemakers reported the next highest numbers of housing problems. When tested, a positive relationship was shown between the mean number of housing problems and employment.

Family income. Of the 1,479 homemakers that reported their income, the under \$5,000 group had the highest number of housing problems (6.23). This number decreased as income increased with the

over \$25,000 group having the fewest problems (4.15). The number of housing problems was related to family income at the .001 level.

Number in household. The mean number of housing problems was lowest for one person households (4.33). As the household size increased, the number of problems reported increased. The five and over households reported the most housing problems. When tested, a positive relationship was shown indicating the number of housing problems was related to the size of the household.

Characteristics of Present House

Table II shows the mean number of housing problems as related to the characteristics of the present house.

Location. Nearly one-third of the homemakers were rural farm families and reported more housing problems than the other two groups (5.01). Urban homemakers had the fewest problems (4.66). However, the relationship was not found to be significant.

Type of house. Of the 2,513 homemakers, a majority lived in single family units (92.3%) and reported the fewest number of housing problems (4.84). The mobile home dwellers had considerably more housing problems (8.00). A positive relationship was shown between these variables indicating that the mean number of housing problems was related to the type of house.

Tenure. Most homemakers (90.8%) owned their homes and reported fewer housing problems than homemakers with other types of tenure (4.77 compared to 6.92). The F test showed a strong positive relationship between these variables.

TABLE II
RELATIONSHIPS BETWEEN HOUSING PROBLEMS AND
CHARACTERISTICS OF PRESENT HOUSE

Characteristics of Present House	Mean Number of Housing Problems Reported				
	Number of Respondents	Percent	Mean Problems	Variance Ratio	P
<u>Location</u>					
Urban	578	23.0	4.66		
Rural-Farm	844	33.5	5.17		
Rural Non-Farm	1094	43.5	5.01		
Total	2516	100.0	4.97	F=1.94	P=0.121
<u>Type of House</u>					
Single Family	2320	92.3	4.84		
Apartment	106	4.2	5.35		
Mobile Home	87	3.5	8.00		
Total	2513	100.0	4.97	F=28.25	P=0.001
<u>Tenure</u>					
Owens Home	2282	90.8	4.77		
Other	231	9.2	6.92		
Total	2513	100.0	4.97	F=64.59	P=0.001
<u>Years in House</u>					
5 and Under	805	31.7	4.60		
6-20 Years	1095	43.1	4.93		
Over 20	638	25.2	5.49		
Total	2538	100.0	4.97	F=9.41	P=0.001
<u>Age of House</u>					
0-4 Years	274	11.0	2.79		
5-9 Years	392	15.7	4.26		
10-19 Years	665	26.7	4.78		
20-29 Years	445	17.9	5.15		
30 or More	716	28.7	6.30		
Total	2492	100.0	4.98	F=28.68	P=0.001

TABLE II (continued)

Characteristics of Present House	Mean Number of Housing Problems Reported				P
	Number of Respondents	Percent	Mean Problems	Variance Ratio	
<u>Condition of House</u>					
Excellent	881	34.8	2.56		
Good	1235	48.9	5.40		
Adequate	334	13.2	8.33		
Poor	68	2.7	10.81		
Very Poor	10	.4	12.30		
Total	2528	100.0	4.97	F=278.85	P=0.001
<u>Number of Bedrooms</u>					
Two or Less	590	23.2	5.90		
Three	1426	56.2	4.82		
Four or More	522	20.6	4.32		
Total	2538	100.0	4.97	F=25.09	P=0.001
<u>Number of Baths</u>					
Not Any	27	1.1	9.63		
One	1174	46.3	6.13		
Two	1029	40.5	4.13		
Three or More	308	12.1	2.92		
Total	2538	100.0	4.97	F=101.43	P=0.001
<u>Separate Dining</u>					
No	1275	51.3	5.47		
Yes	1209	48.7	4.42		
Total	2484	100.0	4.94	F=45.878	P=0.001
<u>Recreation or Family Room</u>					
No	1188	48.6	5.82		
Yes	1255	51.4	4.10		
Total	2443	100.0	4.94	F=124.05	P=0.001

TABLE II (continued)

Characteristics of Present House	Mean Number of Housing Problems Reported				
	Number of Respondents	Percent	Mean Problems	Variance Ratio	P
<u>Laundry Room</u>					
No	802	32.5	6.17		
Yes	1661	67.5	4.36		
Total	2463	100.0	4.95	F=121.61	P=0.001
<u>Central Heat</u>					
No	1340	53.9	5.88		
Yes	1145	46.1	3.90		
Total	2485	100.0	4.96	F=167.92	P=0.001
<u>Central Air</u>					
No	1489	59.9	5.79		
Yes	999	40.1	3.71		
Total	2488	100.0	4.96	F=180.59	P=0.001
<u>Room Air Conditioner</u>					
No	1277	52.1	4.42		
Yes	1176	47.9	5.61		
Total	2453	100.0	4.99	F=57.32	P=0.001

Years in house. The 805 homemakers who had lived in their houses 5 years or less reported the fewest number of housing problems (4.60). This number increased as the years in house increased. This relationship was significant at the .001 level.

Age of house. The largest percentage of homemakers (28.7%) lived in houses 30 or more years old and reported the highest number of housing problems (6.30). As the age of the house decreased, the number of problems decreased. Those that lived in new houses had the fewest housing problems (2.79). When tested, the variables were related at the .001 level.

Condition of house. Of the 2,528 homemakers, 1,235 (48.9%) reported their houses were in good condition and reported fewer (5.40) housing problems than those with houses in poorer condition. The group with the lowest number of problems had houses in excellent condition (2.56). When tested by the F test, a very strong relationship was shown ($F=278.85$).

Number of bedrooms. Homemakers living in houses with two or less bedrooms had more housing problems (5.90) than those in larger houses. The number of problems decreased as the number of bedrooms increased. The analysis showed that housing problems were significantly related to the number of bedrooms in the house.

Number of baths. A large majority of homemakers had houses with one (46.3%) or two (40.5%) baths. Those with no baths had the highest number of housing problems (9.63). The number of problems decreased as the number of baths increased. The F test showed a

strong relationship and indicated that housing problems were related to the number of baths.

Separate dining. Homemakers who did not have separate dining facilities had more housing problems than those with separate dining (5.47 compared to 4.42). The relationship was significant at the .001 level.

Recreation or family room. Significantly more housing problems were reported by homemakers who did not have a recreation or family room than those with such a room (5.82 compared to 4.10). When tested, the relationship was significant at the .001 level.

Laundry room. Considerably more housing problems were reported by homemakers who did not have a laundry room than those with a laundry room (6.17 compared to 4.36). The F test showed a strong relationship ($F=121.61$) indicating that the number of housing problems was significantly related to having or not having a laundry room.

Central heat. Homemakers without central heat reported considerably more housing problems than those with central heat (5.88 compared to 3.90). This relationship was significant at the .001 level.

Central air. More housing problems were reported by homemakers who did not have central air than those who had central air (5.79 compared to 3.71). When analyzed, a significant relationship was found at the .001 level.

Room air conditioner. A larger number of housing problems was reported by homemakers who had a room air conditioner than those without one (5.61 compared to 4.42). This relationship was significant at the .001 level.

Number of Contacts with Extension

Table III gives the mean number of housing problems as related to the number of contacts with Extension during the past year.

Meetings. The highest number of housing problems was reported by homemakers who had attended no Extension meetings (5.33). This number decreased as the number of meetings attended increased. The relationship was significant at the .016 level.

Office visits. Those reporting the highest number of housing problems had made no visits to the Extension office last year (5.22). The mean number of problems decreased slightly as the number of office visits increased. However, the relationship was not significant.

Telephone calls. Homemakers who called the Extension office 1 to 3 times had the highest number of housing problems. However, all groups had about the same number of problems. The analysis showed the variables were not related.

Newsletters. Those who received over 13 newsletters reported the most housing problems followed closely by those that received no newsletters. These variables were not related.

Total Extension contacts. Of the 2,534 homemakers, 2,310 (91.2%) made 1 to 12 contacts with Extension during the last year and

TABLE III
RELATIONSHIPS BETWEEN HOUSING PROBLEMS AND
NUMBER OF CONTACTS WITH EXTENSION

Extension Contacts	Mean Number of Housing Problems Reported				
	Number of Respondents	Percent	Mean Problems	Variance Ratio	P
<u>Meetings</u>					
Not Any	445	17.6	5.33		
Under 10	853	33.6	5.15		
10-12	696	27.5	4.75		
Over 13	541	21.3	4.65		
Total	2535	100.0	4.97	F=3.06	P=0.016
<u>Office Visits</u>					
Not Any	1011	39.9	5.22		
1-3	851	33.6	4.73		
4-6	374	14.7	4.89		
Over 7	300	11.8	4.89		
Total	2536	100.0	4.97	F=2.56	P=0.054
<u>Telephone Calls</u>					
Not Any	831	32.8	4.97		
1-3	769	30.3	5.07		
4-6	441	17.4	4.87		
Over 7	494	19.5	4.89		
Total	2535	100.0	4.97	F=0.32	P=0.811
<u>Newsletters</u>					
Not Any	424	16.7	5.00		
1-6	737	29.0	4.97		
7-11	298	11.8	4.84		
12	845	33.3	4.98		
Over 13	234	9.2	5.03		
Total	2538	100.0	4.97	F=0.10	P=0.983

TABLE III (continued)

Extension Contacts	Mean Number of Housing Problems Reported				
	Number of Respondents	Percent	Mean Problems	Variance Ratio	P
<u>Total Extension Contacts</u>					
Not Any	197	7.8	4.59		
1-12	2310	91.2	5.01		
13-25	25	.9	4.32		
Over 41	2	.1	8.00		
Total	2534	100.0	4.97	F=1.32	P=0.266

reported 5.01 housing problems. Those with no contacts (7.8%) had 4.59 housing problems while those making 13 to 25 contacts (0.9%) had only 4.32 housing problems. When tested, the relationship was not significant.

II. KITCHEN STORAGE PROBLEMS

This section contains three tables showing the relationships between homemakers that reported having inadequate kitchen storage and the three independent variables. The Chi Square test shows the strength of the relationships between the variables.

Characteristics of the Homemaker

Table IV compares the number and percent of homemakers with kitchen storage problems as related to the personal and family characteristics of the homemakers.

Marital status. Eight hundred and ninety homemakers (35.4%) reported having a slight problem and 290 homemakers (11.5%) had a big problem with kitchen storage. Of these, separated homemakers had the highest percentage reporting this problem (50.0% slight and 12.5% big) with singles being the next largest group (38.9% slight and 19.4% big). Slightly more divorced (35.4% slight and 13.8% big) than married homemakers (35.9% slight and 11.6% big) reported this problem. Widowed homemakers (31.4% slight and 8.3% big) had the fewest reporting inadequate kitchen storage. The number of homemakers with kitchen storage problems was significantly related to marital status at the .014 level.

TABLE IV

RELATIONSHIPS BETWEEN KITCHEN STORAGE PROBLEMS AND CHARACTERISTICS OF HOMEMAKERS

Personal and Family Characteristics	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Marital Status						
Married	1031	52.5	704	35.9	228	11.6
Divorced	33	50.8	23	35.4	9	13.8
Widowed	225	60.3	117	31.4	31	8.3
Separated	3	37.5	4	50.0	1	12.5
Single	45	41.7	42	38.9	21	19.4
Total	1337	53.1	890	35.4	290	11.5
Chi Square	$\chi^2 = 19.11$		df = 8		p = 0.014	
Age						
Under 20	7	26.9	14	53.8	5	19.2
20-29	115	45.3	97	38.2	42	16.5
30-39	225	44.5	227	44.9	54	10.7
40-49	175	50.3	126	36.2	47	13.5
50-59	256	58.4	135	30.8	47	10.7
60-Over	546	59.3	282	30.6	93	10.1
Total	1324	53.1	881	35.3	288	11.6
Chi Square	$\chi^2 = 57.61$		df = 10		p = 0.001	

TABLE IV (continued)

Personal and Family Characteristics	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Education</u>						
Under 8 Years	40	44.9	30	33.7	19	21.3
8-11 Years	209	57.9	98	27.1	54	15.0
High School Graduate	490	50.2	382	39.1	105	10.7
Some College	311	53.7	209	36.1	59	10.2
College Graduate	230	55.8	138	33.5	44	10.7
Total	1280	52.9	857	35.4	291	11.6
Chi Square	$\chi^2 = 28.86$		df = 8		p = 0.001	
<u>Employment</u>						
Full-time	230	44.7	210	40.8	75	14.6
Part-time	172	51.0	120	35.6	45	13.4
Unemployed	35	37.6	42	45.2	16	17.2
Homemaker Full-time	624	57.0	366	33.4	105	9.6
Retired	271	59.3	140	30.6	46	10.1
Total	1332	53.3	878	35.2	287	11.5
Chi Square	$\chi^2 = 19.11$		df = 8		p = 0.001	

TABLE IV (continued)

Age. Well over half of the young homemakers in the under 20 age group had kitchen storage problems. This percentage declined as age increased with the over 60 age group having the fewest homemakers reporting this problem. The Chi Square test showed a strong positive relationship between the number of homemakers reporting kitchen storage problems and age. More younger homemakers had inadequate kitchen storage than older homemakers.

Education. More homemakers who had completed less than 8 years of schooling reported having kitchen storage problems (33.7% slight and 21.3% big) than other homemakers. The percentage reporting this problem decreased as the level of education increased. The one exception was the 8 to 11 year level that had the lowest percentage reporting this problem (27.1% slight and 15.0% big). The level of education was significantly related to the number of homemakers having kitchen storage problems at the .001 level.

Employment. A higher percentage of unemployed homemakers (45.2% slight and 17.2% big) reported inadequate kitchen storage than other groups. Those employed full-time were the next highest group (40.8% slight and 14.6% big) followed by part-time employed homemakers (35.6% slight and 13.4% big). Full-time and retired homemakers had the smallest percentages reporting this problem. A strong positive relationship was shown between these two variables when tested by Chi Square.

Family income. Of the 1,474 respondents, the group with the highest percentage of inadequate kitchen storage was those earning under \$5,000 (35.2% slight and 19.3% big). The over \$25,000 group

had the lowest percentage reporting this problem (38.2% slight and 8.0% big). However, the relationship between family income and the number of homemakers having kitchen storage problems was not significant at the .05 level.

Number in household. The percentage of households having kitchen storage problems was lowest for one person households (31.4% slight and 8.7% big). The number of homemakers with this problem increased consistently as the number in the household increased. Households of five and over reported the most kitchen storage problems (39.0% slight and 18.3% big). The Chi Square test showed a positive relationship between these variables. Therefore, the number of homemakers with kitchen storage problems was significantly related to the number in the household. More larger households had kitchen storage problems than smaller households.

Characteristics of Present House

Table V presents the number and percent of homemakers with kitchen storage problems as related to the characteristics of the present house.

Location. Fewer rural-farm homemakers reported kitchen storage problems than the other two groups. The rural non-farm group had the highest percentage with this problem (36.6% slight and 13.2% big). The number of homemakers with kitchen storage problems was significantly related to the location of the house at the .042 level.

Type of house. Of the 2,501 homemakers, 2,310 resided in single family dwellings. Eight hundred and eleven (35.1%) of these

TABLE V
RELATIONSHIPS BETWEEN KITCHEN STORAGE PROBLEMS AND CHARACTERISTICS OF PRESENT HOUSE

Characteristics of Present House	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Location</u>						
Urban	303	52.7	213	37.0	59	10.3
Rural-Farm	477	57.0	274	32.7	86	10.3
Rural Non-Farm	548	50.2	400	36.6	144	13.2
Total	1328	53.0	888	35.4	289	11.5
Chi Square	$\chi^2 = 13.10$		$df = 6$		$p = 0.042$	
<u>Type of House</u>						
Single Family	1254	54.3	811	35.1	245	10.6
Apartment	57	49.0	36	34.6	17	16.3
Mobile Home	23	26.4	37	42.5	27	31.0
Total	1328	53.1	884	35.3	289	11.6
Chi Square	$\chi^2 = 46.34$		$df = 4$		$p = 0.001$	
					Total	Percent
					Respondents	Percent
					575	100
					837	100
					1092	100
					2505	100

TABLE V (continued)

Characteristics of Present House	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Tenure						
Owens Home	1242	54.7	800	35.2	288	10.0
Other	84	36.4	90	39.0	57	24.7
Total	1326	53.0	890	35.6	285	11.4
Chi Square	$\chi^2 = 53.52$		$df = 2$		$p = 0.001$	
Years in House						
5 and Under	424	52.9	278	34.7	100	12.5
6-20 Years	572	52.4	409	37.5	110	10.1
Over 20	345	54.6	206	32.6	81	12.8
Total	1341	53.1	893	35.4	291	11.5
Chi Square	$\chi^2 = 6.74$		$df = 4$		$p = 0.150$	
					2525	100

TABLE V (continued)

Characteristics of Present House	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Age of House</u>						
0-4 Years	179	65.3	78	28.5	17	6.2
5-9 Years	202	51.7	148	37.9	41	10.5
10-19 Years	357	53.8	247	37.2	60	9.0
20-29 Years	231	52.0	152	34.2	61	13.7
30 or More Years	347	49.1	251	35.5	109	15.4
Total	1316	53.1	876	35.3	288	11.6
Chi Square	$\chi^2 = 39.03$		df = 14		p = 0.001	
<u>Condition of House</u>						
Excellent	589	67.2	237	27.0	51	5.8
Good	619	50.3	480	39.0	131	10.7
Adequate	112	33.6	150	45.0	71	21.3
Poor	13	19.4	22	32.8	32	47.8
Very Poor	2	20.0	2	20.0	6	60.0
Total	1335	53.0	891	35.4	291	11.6
Chi Square	$\chi^2 = 255.77$		df = 8		p = 0.001	

TABLE V (continued)

Characteristics of Present House	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Number of Bedrooms</u>						
Two or Less	282	48.4	199	34.1	102	17.5
Three	754	53.0	526	37.0	142	10.0
Four or More	305	58.7	168	32.3	47	9.0
Total	1341	53.1	893	35.4	291	11.5
Chi Square	$\chi^2 = 88.20$		$df = 4$		$p = 0.001$	
<u>Number of Baths</u>						
Not Any	8	29.6	6	22.2	13	48.1
One	568	48.8	424	36.4	173	14.8
Two	557	54.3	382	37.3	86	8.4
Three or More	208	67.5	81	26.3	19	6.2
Total	1341	53.1	893	35.4	291	11.5
Chi Square	$\chi^2 = 88.20$		$df = 6$		$p = 0.001$	
<u>Separate Dining</u>						
No	629	49.5	464	36.5	178	14.0
Yes	683	56.8	417	34.7	103	8.6
Total	1312	53.0	881	35.6	281	11.4
Chi Square	$\chi^2 = 22.90$		$df = 2$		$p = 0.001$	

TABLE V (continued)

TABLE V (continued)

Characteristics of Present House	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Central Air						
No	726	49.0	548	37.0	207	14.0
Yes	589	59.2	328	33.0	78	7.8
Total	1315	53.1	876	35.4	285	11.5
Chi Square	$\chi^2 = 8.03$		$df = 2$		$p = 0.018$	
Room Air Conditioner						
No	707	55.5	423	33.2	143	11.2
Yes	584	49.9	446	38.1	140	12.0
Total	1291	52.8	869	35.6	283	11.6
Chi Square	$\chi^2 = 8.03$		$df = 2$		$p = 0.018$	

had a slight problem and 245 (10.6%) had a big problem with kitchen storage. A higher percentage of kitchen storage problems were seen among those that lived in apartments (34.6% slight and 16.3 big) than in single family units. But homemakers living in mobile homes had the largest percentage reporting this problem (42.5% slight and 31.0% big). The Chi Square test showed a very strong relationship between the variables indicating that kitchen storage problems were significantly related to the type of house.

Tenure. Home ownership was the predominant type of tenure among the homemakers surveyed. Of the 2,501 participants, 2,270 owned their home with 231 having other types of tenure. Those who owned their homes had significantly fewer problems with kitchen storage than the other types of tenure.

Years in house. A lower percentage of homemakers who had lived in their houses over 20 years reported having kitchen storage problems than the other groups. However, there was no significant differences between this group and those residing 5 years and under or 6 to 20 years in their houses.

Age of house. Homemakers living in houses 0 to 4 years old had few kitchen storage problems (28.5% slight and 6.2% big). In comparison, the highest percentage of homemakers reporting this problem had houses 30 or more years old (35.5% slight and 15.4% big). The other age groups fell between these two groups. When tested, kitchen storage problems were significantly related to age of the house. Newer houses had fewer kitchen storage problems than older structures.

Condition of the house. Homemakers with houses in excellent condition reported fewer kitchen storage problems than the other groups. The percentage having this problem increased significantly as the condition of the house deteriorated. When tested by the Chi Square test, a very strong relationship was shown ($\chi^2 = 255.77$). Therefore, the number of kitchen storage problems was significantly related to the condition of the house.

Number of bedrooms. Homemakers with two or less bedrooms reported more kitchen storage problems (34.1% slight and 17.5% big) than larger houses with four or more bedrooms (32.3% slight and 9.0% big). The analysis showed that kitchen storage problems were significantly related to the number of bedrooms at the .001 level.

Number of baths. Twenty-seven homemakers reported having no bathrooms. Of these, six had a slight problem with kitchen storage (22.2%) while thirteen reported it as a big problem (48.1%). Those with only one bath still had considerable problems with kitchen storage (36.4% slight and 14.8% big). This percentage decreased as the number of baths increased. For houses with three or more baths, a dramatic decline was seen (26.3% slight and 6.2% big). The Chi Square test showed a strong relationship between the variables.

Separate dining. Homemakers who reported no separate dining facilities had more kitchen storage problems than those with separate dining. This relationship was significant at the .001 level.

Recreation or family room. More homemakers who did not have a recreation or family room reported kitchen storage problems (36.2%

slight and 14.9% big) than those with such a room (35.0% slight and 8.2% big). This relationship was significant at the .001 level.

Laundry room. Homemakers with a laundry room had significantly fewer kitchen storage problems than those without a laundry room.

Central heat. Of the 2,474 homemakers, 1,140 had central heat. Only 97 (8.5%) of these had a big problem with kitchen storage while 385 (33.8%) reported a slight problem. Homemakers without central heat had a higher percentage of kitchen storage problems (37.1% slight and 14.1% big). This relationship was significant when tested by the Chi Square test.

Central air. Homemakers who had central air reported fewer problems with kitchen storage (33.0% slight and 7.8% big) than those without central air (37.0% slight and 14.0% big). When analyzed by the Chi Square test, a significant relationship was found at the .001 level.

Room air conditioner. In reverse of the central air findings, more homemakers who had room air conditioners reported having kitchen storage problems (38.1% slight and 12.0% big) than those without room air conditioners (33.2% slight and 11.2% big). This relationship was significant at the .018 level.

Number of Contacts with Extension

Table VI reports the number and percent of homemakers with kitchen storage problems as related to the number of contacts with Extension during the past year.

TABLE VI

RELATIONSHIPS BETWEEN KITCHEN STORAGE PROBLEMS AND NUMBER OF CONTACTS WITH EXTENSION

Extension Contacts	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Meetings</u>						
Not Any	217	49.1	166	37.6	59	13.3
Under 10	420	49.4	330	38.8	101	11.9
10-12	389	56.1	227	32.8	77	11.1
Over 13	314	58.6	168	31.3	54	10.1
Total	1340	53.1	891	35.3	291	11.5
Chi Square	$\chi^2 = 17.45$		$df = 6$		$p = 0.008$	
<u>Office Visits</u>						
Not Any	529	52.7	360	35.9	115	11.5
1-3	446	52.6	308	36.3	94	11.1
4-6	199	53.5	125	33.6	48	12.9
Over 7	166	55.5	100	33.4	33	11.0
Total	1340	53.1	893	35.4	290	11.5
Chi Square	$\chi^2 = 2.16$		$df = 6$		$p = 0.904$	
Total Respondents 2522						
Total Percent 100						

TABLE VI (continued)

Extension Contacts	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Telephone Calls						
Not Any	452	54.9	293	35.6	78	9.5
1-3	402	52.4	272	35.5	93	12.1
4-6	231	52.6	154	35.1	54	12.3
Over 7	255	51.7	173	35.1	65	13.2
Total	1340	53.1	892	35.4	290	11.5
Chi Square	$\chi^2 = 5.46$		$df = 6$		$p = 0.486$	
Newsletters						
Not Any	220	52.3	156	37.1	45	10.7
1-6	401	54.6	252	34.3	81	11.0
7-11	148	49.7	108	36.2	42	14.1
12	438	52.3	298	35.6	102	12.2
Over 13	134	57.3	79	33.8	21	9.0
Total	1341	53.1	893	35.4	291	11.5
Chi Square	$\chi^2 = 6.46$		$df = 8$		$p = 0.596$	
					Total	Percent
					Respondents	Percent
					823	100
					767	100
					439	100
					493	100
					2522	100
					421	100
					734	100
					298	100
					838	100
					234	100
					2525	100

TABLE VI (continued)

Extension Contacts	Homemakers with Kitchen Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Total Extension Contacts</u>						
Not Any	111	56.6	67	34.2	18	9.2
1-12	1211	52.7	815	35.5	272	11.8
13-25	17	68.0	8	32.0	25	100
Total	1339	53.2	890	35.3	290	11.5
Chi Square	$\chi^2 = 5.75$		$df = 4$		$p = 0.219$	

Meetings. Homemakers who had attended over 13 Extension meetings reported the fewest number of kitchen storage problems. As the number of meetings attended decreased, the number of homemakers with this problem increased. Those who had attended no meetings reported the most problems. The number of homemakers with kitchen storage problems was significantly related to the number of Extension meetings attended at the .008 level.

Office visits. Slightly fewer homemakers who had visited the Extension office more than 7 times reported having problems with kitchen storage than the other groups. No difference was seen among homemakers who had made no visits and those who had visited 1 to 3 times. The number of office visits was not significantly related to the number of kitchen storage problems.

Telephone calls. Homemakers who had not called the Extension office reported fewer kitchen storage problems than those who had made calls. The number of homemakers with this problem increased slightly as the number of calls increased. However, analysis showed the relationship was not significant.

Newsletters. Of the 2,525 homemakers, 234 had received over 13 newsletters. This group reported having fewer kitchen storage problems than the other groups. However, those reporting the highest percentage of this problem had received 7 to 11 newsletters. Those that had received no newsletters reported about the same amount of inadequate kitchen storage as those that received 12 newsletters. Analysis showed that kitchen storage problems were not related to the number of newsletters received.

Total Extension contacts. Of the 196 homemakers that reported having no contacts with Extension, 67 (34.2%) had a slight problem and 18 (9.2%) had a big problem with kitchen storage. Most of the homemakers fell into the 1 to 12 contact category, but reported a higher percentage of kitchen storage problems (35.5% slight and 11.8% big). When analyzed, no significant relationship was found between homemakers having kitchen storage problems and their total number of Extension contacts.

III. BEDROOM STORAGE PROBLEMS

This section consists of three tables that show the relationships between homemakers who reported needing more storage space in their bedrooms and the three independent variables. The Chi Square test shows the strength of the relationships between the variables.

Characteristics of the Homemaker

Table VII compares the number and percent of homemakers who felt they had inadequate bedroom storage space as related to the personal and family characteristics of the homemakers.

Marital status. Nine hundred and eight (36.1%) homemakers reported having a slight problem with bedroom storage and 325 (12.9%) reported this as a big problem. Of these, the eight separated homemakers had the highest percentage reporting this problem (62.5% slight and 12.5% big). The widowed group had the smallest percentage with this problem (32.2% slight and 9.4% big). The married group

TABLE VII

RELATIONSHIPS BETWEEN BEDROOM STORAGE PROBLEMS AND CHARACTERISTICS OF HOMEMAKERS

Personal and Family Characteristics	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Marital Status</u>						
Married	983	50.2	717	36.6	259	13.2
Divorced	29	44.6	26	40.0	10	15.4
Widowed	216	58.2	120	32.3	35	9.4
Separated	2	25.0	5	62.5	1	12.5
Single	47	43.9	40	37.4	20	18.7
Total	1277	50.9	908	36.2	325	12.9
Chi Square	$\chi^2 = 16.81$		df = 8		p = 0.032	
<u>Age</u>						
Under 20	9	34.6	16	61.5	1	3.8
20-29	94	37.0	100	39.4	60	23.6
30-39	234	46.2	188	37.2	84	16.6
40-49	165	47.4	140	40.2	43	12.4
50-59	240	55.0	147	33.7	49	11.2
60-Over	524	57.2	307	33.5	85	9.3
Total	1266	50.9	898	36.1	322	13.0
Chi Square	$\chi^2 = 71.99$		df = 10		p = 0.001	

TABLE VII (continued)

Personal and Family Characteristics	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Education</u>						
Under 8 Years	35	39.8	34	38.6	19	21.6
8-11 Years	208	57.6	106	29.4	47	13.0
High School Graduate	466	47.7	375	38.4	135	13.8
Some College	309	53.6	208	36.1	59	10.2
College Graduate	198	48.1	161	39.1	53	12.9
Total	1216	50.4	884	36.6	313	13.0
Chi Square	$\chi^2 = 24.50$		$df = 8$		$p = 0.002$	
<u>Employment</u>						
Full-time	231	44.9	201	39.1	82	16.0
Part-time	163	48.7	127	37.9	45	13.4
Unemployed	45	48.4	32	34.4	16	17.2
Homemaker Full-time	578	52.9	374	34.2	140	12.8
Retired	250	54.9	166	36.5	39	8.6
Total	1267	50.9	900	36.2	322	12.9
Chi Square	$\chi^2 = 20.79$		$df = 8$		$p = 0.008$	

TABLE VII (continued)

Personal and Family Characteristics	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Family Income</u>						
Under 5,000	63	51.6	36	29.5	23	18.9
5,000-9,999	118	50.0	84	35.6	34	14.4
10,000-14,999	132	42.9	140	45.5	36	11.7
15,000-24,999	220	49.5	170	38.3	54	12.2
25,000-Over	185	51.4	132	36.6	43	11.9
Total	718	48.8	562	38.2	190	12.9
Chi Square	$\chi^2 = 14.88$		$df = 8$		$p = 0.061$	
<u>Number in Household</u>						
One Person	222	61.2	110	30.3	31	8.5
Two Persons	552	55.9	328	33.2	108	10.9
Three Persons	196	44.3	180	40.7	66	14.9
Four Persons	208	44.5	199	42.6	60	12.8
Five and Over	100	39.8	91	36.3	60	23.9
Total	1278	50.9	908	36.2	325	12.9
Chi Square	$\chi^2 = 72.72$		$df = 8$		$p = 0.001$	
					2511	100

(36.6% slight and 13.2% big), divorced group (40.0% slight and 15.4% big) and single group (37.4% slight and 18.7% big) fell between the first two groups. The number of homemakers having bedroom storage problems was significantly related to marital status at the .032 level.

Age. Almost two-thirds of the under 20 age group (61.5% slight and 3.8% big) and the 20 to 29 age group (39.3% slight and 23.6% big) reported having a bedroom storage problem. The percentage reporting this problem declined consistently as age increased. The over 60 age group had the lowest percentage with this problem (33.5% slight and 9.3% big). The Chi Square test showed a positive relationship between the variables.

Education. More homemakers that had completed under 8 years of school reported problems with bedroom storage (38.6% slight and 21.6% big) than the other groups. The next largest groups reporting this problem were the high school graduates (38.4% slight and 13.8% big) and college graduates (39.2% slight and 12.9% big). Fewer problems were seen among the same college group (36.1% slight and 10.2% big) and the fewest problems were reported by those that completed 8 to 11 years of school (29.4% slight and 13.0% big). Although the number of homemakers reporting this problem were not consistent with the educational level, these variables were significantly related at the .002 level.

Employment. A higher percentage of full-time employed homemakers (39.1% slight and 16.0% big) reported having a problem

with bedroom storage than other groups. The unemployed had the next highest percentage (34.4% slight and 17.2% big). While part-time employed homemakers had almost the same total percentage with this problem as the unemployed, they had fewer reporting this as a big problem (37.9% slight and 13.4% big). A smaller percentage of full-time homemakers (34.2% slight and 12.8% big) and retired homemakers (36.5% slight and 8.6% big) reported this problem. When tested by the Chi Square test, a positive relationship was shown between the two variables.

Family income. Of the 1,470 homemakers that reported their income, the group with the highest percentage having a problem with bedroom storage was those earning \$10,000 to \$14,999 (45.5% slight and 11.7% big). Those earning under \$5,000 (29.5% slight and 18.9% big) and those earning over \$25,000 (36.6% slight and 11.9% big) had the lowest percentages with this problem. However, when tested, the relationship between homemakers with bedroom storage problems and family income was not significant.

Number in household. The percentage of households with bedroom storage problems was lowest for one person households (30.3% slight and 8.5% big). As the household size increased, the percentage reporting this problem increased. The five and over group had the highest percentage (36.3% slight and 23.9% big). The Chi Square test showed a positive relationship between the variables.

Characteristics of Present House

Table VIII shows the number and percent of homemakers who reported needing additional storage as related to the characteristics of their present house.

Location. A slightly higher percentage of rural non-farm homemakers reported problems with bedroom storage than the other two groups. The smallest group reporting this problem was the urban homemakers. However, the relationship was not found to be significant.

Type of house. Of the 2,495 homemakers, the 87 mobile home dwellers had the highest percentage (46.0% slight and 28.7% big) reporting inadequate bedroom storage. Apartment dwellers were next (33.3% slight and 17.1% big) while single family units had the lowest percentage reporting this problem (35.9% slight and 12.2% big). The Chi Square test showed a positive relationship between the variables.

Tenure. Most of the participants (2,266) owned their house as compared to other types of tenure (229). Those that owned their houses had considerably fewer problems with inadequate bedroom storage (36.3% slight and 11.6% big) than the other group (35.8% slight and 24.9% big). The relationship between these variables was significant at the .001 level.

Years in house. Somewhat fewer homemakers who had lived in their houses 5 years and under reported problems with bedroom storage (32.3% slight and 13.3% big) than the other groups. The 6 to 20 year group had a slightly higher percentage reporting this problem (37.2% slight and 12.2% big) while the over 20 year group had the most

TABLE VIII

RELATIONSHIPS BETWEEN BEDROOM STORAGE PROBLEMS AND CHARACTERISTICS OF PRESENT HOUSE

Characteristics of Present House	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
Location	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Urban	298	52.1	206	36.0	68	11.9
Rural-Farm	424	50.7	294	35.2	118	14.1
Rural-NonFarm	549	50.3	405	37.1	137	12.6
Total	1271	50.8	906	36.2	323	12.9
Chi Square	$\chi^2 = 4.10$		$df = 6$		$p = 0.675$	
Type of House	Single Family		Apartment		Mobile Home	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Single Family	1195	51.9	827	35.9	281	12.2
Apartment	52	49.5	35	33.3	18	17.1
Mobile Home	22	25.3	40	46.0	25	28.7
Total	1269	50.9	902	36.2	324	13.0
Chi Square	$\chi^2 = 33.40$		$df = 4$		$p = 0.001$	

TABLE VIII (continued)

Characteristics of Present House	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Tenure						
Owens Home	1180	52.1	823	36.3	263	11.6
Other	90	39.3	82	35.8	57	24.9
Total	1270	50.9	905	36.3	320	12.8
Chi Square	$\chi^2 = 35.30$		$df = 2$		$p = 0.001$	
Years in House						
5 and Under	436	54.4	259	32.3	107	13.3
6-20 Years	550	50.6	405	37.2	133	12.2
Over 20 Years	297	47.3	246	39.2	85	13.5
Total	1283	57.0	910	36.1	325	12.9
Chi Square	$\chi^2 = 9.45$		$df = 4$		$p = 0.051$	

TABLE VIII (continued)

Characteristics of Present House	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Age of House</u>						
0-4 Years	187	68.2	75	27.4	12	4.4
5-9 Years	213	54.5	141	36.1	37	9.5
10-19 Years	345	52.1	240	36.3	77	11.6
20-29 Years	232	52.6	149	33.8	60	13.6
30 or More	278	39.4	292	41.4	136	19.3
Total	1255	50.9	897	36.2	322	13.0
Chi Square	$\chi^2 = 96.53$		$df = 14$		$p = 0.001$	
<u>Condition of House</u>						
Excellent	599	68.5	226	25.8	50	5.7
Good	573	46.7	505	41.1	150	12.2
Adequate	89	27.1	154	46.8	86	26.1
Poor	14	20.9	20	29.9	33	49.3
Very Poor	3	30.0	1	10.0	6	60.0
Total	1278	50.9	906	36.1	325	13.0
Chi Square	$\chi^2 = 319.25$		$df = 8$		$p = 0.001$	

TABLE VIII (continued)

Characteristics of	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Present House						
<u>Number of Bedrooms</u>						
Two or Less	259	44.5	216	37.1	107	18.4
Three	725	51.1	533	37.6	161	11.3
Four or More	299	57.8	161	31.1	57	11.0
Total	1283	51.0	910	36.1	325	12.9
Chi Square	$\chi^2 = 31.71$		df = 4		p = 0.001	
<u>Number of Baths</u>						
Not Any	8	30.8	5	19.2	13	50.0
One	498	42.8	458	39.3	208	17.9
Two	564	55.2	366	35.8	91	8.9
Three or More	213	69.4	81	26.4	13	4.2
Total	1283	51.0	910	36.1	325	12.9
Chi Square	$\chi^2 = 135.38$		df = 6		p = 0.001	
<u>Separate Dining</u>						
No	602	47.5	473	37.3	192	15.2
Yes	654	54.5	422	35.1	125	10.4
Total	1256	50.9	895	36.3	317	12.8
Chi Square	$\chi^2 = 17.47$		df = 2		p = 0.001	

TABLE VIII (continued)

Characteristics Of Present House	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Rec./Family Room						
No	538	45.5	447	37.8	198	16.7
Yes	702	56.4	428	34.4	115	9.2
Total	1240	51.1	875	35.0	313	12.9
Chi Square	$\chi^2 = 42.56$		$df = 2$		$p = 0.001$	
Laundry Room						
No	346	43.4	301	37.8	150	18.8
Yes	903	54.7	586	35.5	162	9.8
Total	1249	51.0	887	36.2	312	12.7
Chi Square	$\chi^2 = 48.40$		$df = 2$		$p = 0.001$	
Central Heat						
No	591	44.4	518	38.9	222	16.7
Yes	665	58.4	375	33.0	98	8.6
Total	1265	50.9	893	36.2	320	13.0
Chi Square	$\chi^2 = 60.59$		$df = 2$		$p = 0.001$	
Total						

TABLE VIII (continued)

Characteristics of Present House	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Central Air						
No	669	45.3	566	38.3	242	16.4
Yes	591	59.5	325	32.7	78	7.8
Total	1260	51.0	891	36.1	320	13.0
Chi Square	$\chi^2 = 62.02$		$df = 2$		$p = 0.001$	
Room Air Conditioner						
No	693	54.5	435	34.2	144	11.3
Yes	539	46.3	452	38.8	174	14.9
Total	1232	50.6	887	36.4	318	13.0
Chi Square	$\chi^2 = 17.74$		$df = 2$		$p = 0.001$	

homemakers with inadequate bedroom storage (39.2% slight and 13.5% big). A weak but positive relationship was shown by the Chi Square test.

Age of house. Relatively few homemakers who lived in houses 0 to 4 years old reported problems with bedroom storage (27.4% slight and 4.4% big). This percentage increased as the age of the house increased. The highest percentage was from those living in houses over 30 years old (41.4% slight and 19.3% big). When tested by the Chi Square test, a fairly strong relationship was shown between the variables.

Condition of the house. Fewer homemakers who lived in houses in excellent condition reported bedroom storage problems (25.8% slight and 5.7% big) than the other groups. The percent having this problem increased as the condition of the house deteriorated. The poor group (29.9% slight and 49.3% big) and very poor group (10.0% slight and 60.0% big) had the highest percentages with this problem. When tested by the Chi Square test, a very strong relationship was shown ($\chi^2 = 319.25$).

Number of bedrooms. A higher percentage of homemakers living in houses with two or less bedrooms had problems with bedroom storage (37.1% slight and 18.4% big) than the other groups. Those residing in three bedroom houses (37.6% slight and 11.3% big) had lower percentages reporting this problem. The analysis showed that bedroom storage problems were significantly related to the number of bedrooms in the house.

Number of baths. The 26 homemakers that reported having no bathrooms had the largest percentage of bedroom storage problems (19.2% slight and 50.0% big). Over half of those with only one bath reported this problem (39.3% slight and 17.9% big). The percentage decreased substantially for houses with two baths (35.8% slight and 8.9% big) and three or more baths (26.4% slight and 4.2% big). The Chi Square test showed a strong relationship between the variables.

Separate dining. Homemakers who did not have separate dining had more problems with bedroom storage (37.3% slight and 15.2% big) than those that had separate dining (35.1% slight and 10.4% big). This relationship was significant at the .001 level.

Recreation or family room. Significantly more homemakers who did not have a recreation or family room in their houses reported bedroom storage problems (37.8% slight and 16.7% big) than those with such a room (34.4% slight and 9.2% big). When tested, this relationship was significant at the .001 level.

Laundry room. Fewer homemakers who had a laundry room reported having inadequate bedroom storage (35.5% slight and 9.8% big) than those without a laundry room (37.8% slight and 18.8% big). The number of homemakers with this problem was significantly related to having a laundry room.

Central heat. Of the 1,138 homemakers with central heat, 375 (33.0%) had a slight problem and 98 (8.6%) had a big problem with bedroom storage. Those without central heat had a significantly higher percentage reporting this problem (38.9% slight and 16.7% big).

Central air. Fewer homemakers who had central air in their houses reported problems with bedroom storage (32.7% slight and 7.8% big) than those without central air (38.2% slight and 16.4% big). When analyzed, a significant relationship was found at the .001 level.

Room air conditioner. This relationship was the reverse of that found for central air. A larger percentage of those with room air conditioners had bedroom storage problems (38.8% slight and 14.9% big) as compared to those without room air conditioners (34.2% slight and 11.3% big). This relationship was significant at the .001 level.

Number of Contacts with Extension

Table IX gives the number and percent of homemakers with bedroom storage problems as related to the number of contacts with Extension during the past year.

Meetings. The highest percentage of bedroom storage problems was reported by homemakers who had attended no Extension meetings (37.7% slight and 15.7% big). This percentage declined as the number of meetings attended increased. However, those who attended 10 to 12 meetings had fewer bedroom storage problems (34.1% slight and 11.0% big) than those that attended over 13 meetings (36.2% slight and 10.8% big). When tested by the Chi Square test, the relationship was significant at the .029 level.

Office visits. Those reporting the highest percentage of bedroom storage problems had visited the Extension office over 7 times during the past year. Those who visited 4 to 6 times and those with no visits had about the same percentage reporting this problem. The

TABLE IX

RELATIONSHIPS BETWEEN BEDROOM STORAGE PROBLEMS AND NUMBER OF CONTACTS WITH EXTENSION

Extension Contacts	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Meetings</u>						
Not Any	205	46.6	166	37.7	69	15.7
Under 10	414	48.8	313	36.9	122	14.4
10-12	379	54.9	235	34.1	76	11.0
Over 13	284	53.0	194	36.2	58	10.8
Total	1282	51.0	908	36.1	325	12.9
Chi Square	$\chi^2 = 14.02$		$df = 6$		$p = 0.029$	
<u>Office Visits</u>						
Not Any	505	50.5	359	35.9	136	13.6
1-3	447	52.7	300	35.4	101	11.9
4-6	186	50.1	130	37.5	46	12.4
Over 7	144	48.5	112	37.7	41	13.8
Total	1282	51.0	910	36.2	324	12.9
Chi Square	$\chi^2 = 2.78$		$df = 6$		$p = 0.836$	
					2516	100

TABLE IX (continued)

Extension Contacts	Homemakers with Bedroom Storage Problems							
	Not a Problem		Slight Problem		Big Problem		Total	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent	Respondents	Percent
Telephone Calls								
Not Any	434	52.9	278	33.9	109	13.3	821	100
1-3	380	49.6	295	38.5	91	11.9	766	100
4-6	232	52.8	154	35.1	53	12.2	439	100
Over 7	235	48.1	183	37.4	71	14.5	489	100
Total	1281	50.9	910	36.2	324	12.9	2515	100
Chi Square	$\chi^2 = 6.64$		$df = 6$		$p = 0.356$			
Newsletters								
Not Any	209	49.8	151	36.0	60	14.3	420	100
1-6	384	52.2	256	34.8	95	12.9	735	100
7-11	165	55.6	97	32.7	35	11.8	297	100
12	409	49.0	312	37.4	113	13.5	834	100
Over 13	116	50.0	94	40.5	22	9.5	232	100
Total	1283	51.0	910	36.1	325	12.9	2518	100
Chi Square	$\chi^2 = 8.47$		$df = 8$		$p = 0.389$			

TABLE IX (continued)

Extension Contacts	Homemakers with Bedroom Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Total Extension Contacts						
Not Any	97	49.7	70	35.9	28	14.4
1-12	1169	51.0	830	36.2	293	12.8
13-25	14	56.0	8	32.0	3	12.0
Total	1280	51.0	908	36.1	324	12.9
Chi Square	$\chi^2 = 0.67$		df = 4		p = 0.955	
					195	100
					2292	100
					25	100
					2572	100

1 to 3 visit group had the smallest percentage with this problem. However, the relationship was not significant when tested.

Telephone calls. Homemakers who called the Extension office over 7 times had the highest percentage reporting bedroom storage problems. Those who called 1 to 3 times comprised the next largest group with the 4 to 6 call group and the no call group reporting the lowest percentages with this problem. However, an analysis showed the variables were not related.

Newsletters. Homemakers who received 12 newsletters last year had the highest percentage reporting bedroom storage problems. The next highest group was those who received no newsletters followed by the over 13 newsletters group, the 1 to 6 group and the 7 to 11 group. When analyzed, the relationship was not significant.

Total Extension contacts. The 195 homemakers who made no contacts with Extension last year reported the most problems with bedroom storage (35.9% slight and 14.4% big). This was followed by those with 1 to 12 contacts (36.2% slight and 12.0% big) and 13 to 25 contacts (32.0% slight and 12.0% big). However, the analysis showed that the relationship was not significant.

IV. OUTSIDE STORAGE PROBLEMS

This section contains three tables that show the relationships between homemakers who reported needing more outside storage space and the three independent variables. The Chi Square test shows the strength of the relationships between the variables.

Characteristics of the Homemaker

Table X shows the number and percent of homemakers who need more outside storage space as related to their personal and family characteristics.

Marital status. Of the 2,505 homemakers, 725 (28.9%) reported having a slight problem and 311 (12.4%) reported having a big problem with outside storage space. The group with the highest percentage reporting this problem was the separated homemakers (37.5% slight and 37.5% big). Divorced homemakers (20.0% slight and 23.1% big) and married homemakers (30.8% slight and 12.3% big) were the next highest groups. The smallest percentage was reported by the widowed group (21.1% slight and 11.0% big). The number of homemakers having outside storage problems was significantly related to marital status at the .001 level.

Age. The 20 to 29 age group had the most homemakers reporting outside storage problems (33.9% slight and 14.6% big). Following this group were the 40 to 49 age group, the 30 to 39 age group and the under 20 age group. The percentage decreased significantly for the 50 to 59 age group (30.3% slight and 12.0% big) and for the over 60 age group (24.5% slight and 10.1% big). The Chi Square test showed a positive relationship between outside storage problems and age of the homemakers.

Education. More homemakers who had completed some college reported problems with outside storage (30.4% slight and 13.5% big) than the other groups. The next largest percentages reported were

TABLE X

RELATIONSHIPS BETWEEN OUTSIDE STORAGE PROBLEMS AND CHARACTERISTICS OF HOMEMAKERS

Personal and Family Characteristics	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Total Respondents						
Total Respondents						
Percent						
Percent						
Total Respondents						
Percent						
Percent						
Total Respondents						
Percent						
Percent						
Total Respondents						
Percent						
Percent						
Total Respondents						
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TABLE X (continued)

Personal and Family Characteristics	Homemakers with Outside Storage Problems					
	Not a Problem			Big Problem		
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Education						
Under 8 Years	59	67.0	15	17.0	14	15.9
8-11 Years	208	57.6	101	28.0	52	14.4
High School Grad.	583	59.0	274	28.1	117	12.0
Some College	323	56.1	175	30.4	78	13.5
College Graduate	245	59.6	133	32.4	33	8.0
Total	1418	58.8	698	29.0	294	12.0
Chi Square		$\chi^2 = 17.93$		$df = 8$		$p = 0.022$
Employment						
Full-time	266	51.7	179	34.8	70	13.6
Part-time	175	52.2	115	34.3	45	13.4
Unemployed	55	59.1	23	24.7	15	16.1
Homemaker Full-time	662	60.8	286	26.3	140	12.9
Retired	298	65.8	116	25.6	39	8.6
Total	1456	58.6	719	28.9	309	12.4
Chi Square		$\chi^2 = 33.16$		$df = 8$		$p = 0.001$

TABLE X (continued)

Personal and Family Characteristics	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Family Income</u>						
Under 5,000	65	52.4	39	31.5	20	16.1
5,000-9,999	124	52.5	79	33.5	33	14.0
10,000-14,999	178	58.0	83	27.0	46	15.0
15,000-24,999	246	55.3	154	34.6	45	10.1
25,000-Over	218	60.6	112	31.1	30	8.3
Total	831	56.5	467	31.7	174	11.8
Chi Square	$\chi^2 = 33.16$		df = 8		p = 0.040	
<u>Number in Household</u>						
One Person	245	67.3	74	20.3	45	12.4
Two Persons	608	61.9	243	27.8	101	10.3
Three Persons	241	54.5	151	34.2	50	11.3
Four Persons	238	51.0	163	34.9	66	14.1
Five and Over	136	54.2	67	26.7	48	19.1
Total	1468	58.6	728	29.1	310	12.4
Chi Square	$\chi^2 = 47.59$		df = 8		p = 0.001	

from the 8 to 11 year group, college graduates, and high school graduates. Those who completed under 8 years of school reported the fewest number of outside storage problems (17.0% slight and 15.9% big). The level of education completed was significantly related to the number of homemakers with outside storage problems at the .022 level.

Employment. A higher percentage of full-time employed homemakers (34.8% slight and 13.6% big) and part-time employed homemakers (34.3% slight and 13.4% big) reported having a problem with outside storage than other groups. The unemployed group had fewer with a slight problem (24.7%), but had the highest percentage reporting a big problem (16.1%). A smaller percentage of full-time homemakers (26.3% slight and 12.9% big) and retired homemakers (25.6% slight and 8.6% big) reported this problem. When tested by the Chi Square test, a positive relationship was shown between these two variables.

Family income. Of the 1,472 homemakers who reported their income, the group with the highest percentage having a problem with outside storage was those earning under \$5,000 per year (31.5% slight and 16.1% big). The percentage with this problem decreased for all other groups as the income increased. One exception was the \$15,000 to \$24,999 group that had more homemakers with this problem than the \$10,000 group. The fewest problems were seen among the highest income group. When tested, the number of homemakers with outside storage problems was related to family income at the .040 level.

Number in household. The percentage of households with outside storage problems was lowest for one person households (20.3% slight and 12.4% big). As the household size increased, the percentage reporting this problem increased. However, the four and over group reported more total homemakers with this problem than the five and over group, but the five and over group had the highest percentage of homemakers with big outside storage problems. The Chi Square test showed a positive relationship between these variables.

Characteristics of Present House

Table XI shows the number and percent of homemakers that had inadequate outside storage as related to the characteristics of their present house.

Location. A slightly higher percentage of rural non-farm homemakers reported problems with outside storage than the other two groups. The smallest group reporting this problem was the rural farm homemakers. However, the relationship was not found to be significant.

Type of house. Of the 2,490 homemakers, the 87 mobile home dwellers had the highest percentage (39.1% slight and 25.3% big) reporting a lack of outside storage space. Single family dwellings were next (29.0% slight and 12.0% big) while apartment dwellers had the lowest percentage reporting this problem (20.4% slight and 11.7% big). The Chi Square test showed a positive relationship between the variables.

TABLE XI

RELATIONSHIPS BETWEEN OUTSIDE STORAGE PROBLEMS AND CHARACTERISTICS OF PRESENT HOUSE

Characteristics of Present House	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Location</u>						
Urban	335	58.7	174	30.5	62	10.9
Rural - Farm	513	61.3	223	26.6	101	12.1
Rural - NonFarm	614	56.5	327	30.1	146	13.4
Total	1462	58.6	725	29.0	309	12.4
Chi Square	$\chi^2 = 8.88$		$df = 6$		$p = 0.181$	
<u>Type of House</u>						
Single Family	1356	59.0	668	29.0	276	12.0
Apartment	70	68.0	21	20.4	12	11.7
Mobile Home	31	35.6	34	39.1	22	25.3
Total	1457	58.5	723	29.0	310	12.4
Chi Square	$\chi^2 = 27.05$		$df = 4$		$p = 0.001$	

TABLE XI (continued)

Characteristics of Present House	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
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TABLE XI (continued)

Characteristics of Present House	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Age of House						
0-4 Years	164	59.9	79	28.8	31	11.3
5-9 Years	210	54.1	130	33.5	48	12.4
10-19 Years	376	57.0	206	31.2	78	11.8
20-29 Years	270	61.4	120	27.3	50	11.4
30 or More	425	59.9	183	25.8	101	14.2
Total	1445	58.4	718	29.1	308	12.4
Chi Square	$\chi^2 = 17.43$		$df = 14$		$p = 0.234$	
Condition of House						
Excellent	591	67.6	221	25.3	62	7.1
Good	685	55.9	386	31.5	154	12.6
Adequate	166	50.2	103	31.1	62	18.7
Poor	27	40.3	15	22.4	25	37.3
Very Poor	1	10.0	1	10.0	8	80.0
Total	1470	58.6	726	29.0	311	12.4
Chi Square	$\chi^2 = 136.03$		$df = 8$		$p = 0.001$	
					2507	100

TABLE XI (continued)

Characteristics of Present House	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Number of Bedrooms</u>						
Two or Less	335	58.4	155	27.0	84	14.6
Three	810	57.1	435	30.7	174	12.3
Four or More	328	63.1	139	26.7	53	10.2
Total	1473	58.6	729	29.0	311	12.4
Chi Square	$\chi^2 = 9.78$		$df = 4$		$p = 0.044$	
<u>Number of Baths</u>						
Not Any	11	45.8	4	16.7	9	37.5
One	663	57.1	341	29.3	158	13.6
Two	597	58.5	307	30.1	116	11.4
Three or More	202	65.8	77	25.1	28	9.1
Total	1473	58.6	729	29.0	311	12.4
Chi Square	$\chi^2 = 24.31$		$df = 6$		$p = 0.001$	
<u>Separate Dining</u>						
No	688	54.6	387	30.7	186	14.8
Yes	755	62.8	326	27.1	121	10.1
Total	1443	58.6	713	28.9	307	12.5
Chi Square	$\chi^2 = 20.69$		$df = 2$		$p = 0.001$	

TABLE XI (continued)

TABLE XI (continued)

Characteristics of Present House	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Central Air</u>						
No	847	57.5	423	28.7	203	13.8
Yes	601	60.5	294	29.6	98	9.9
Total	1448	58.7	717	29.1	301	12.2
Chi Square	$\chi^2 = 8.52$		$df = 2$		$p = 0.014$	
<u>Room Air Conditioner</u>						
No	753	59.4	377	29.8	137	10.8
Yes	671	57.5	335	28.7	160	13.7
Total	1424	58.5	712	29.3	297	12.2
Chi Square	$\chi^2 = 4.80$		$df = 2$		$p = 0.091$	
					Total	Percent
					1473	100
					993	100
					2466	100
					1267	100
					1166	100
					2433	100

Tenure. Those who owned their homes had fewer problems with outside storage (29.0% slight and 12.0% big) than those with other types of tenure (28.9% slight and 17.1% big). However, the relationship between the variables was not significant.

Years in house. Slightly more homemakers who had lived in their houses 5 years or less reported problems with outside storage than the other groups. The percentage with this problem decreased as the number of years lived in the house increased. However, the relationship between these variables was not significant.

Age of house. Those homemakers who lived in houses 5 to 9 years old reported the most problems with outside storage (33.5% slight and 12.4% big). The lowest percentage was from those living in houses 20 to 29 years old (27.3% slight and 11.4% big). When tested by the Chi Square test, the variables were not related.

Condition of the house. Fewer homemakers who lived in houses in excellent condition reported outside storage problems (25.3% slight and 7.1% big) than the other groups. The percentage having this problem increased as the condition of the house deteriorated. The poor group (22.4% slight and 37.3% big) and very poor group (10.0% slight and 80.0% big) had the highest percentages with this problem. When tested by the Chi Square test, a relatively strong relationship was shown ($\chi^2 = 136.03$).

Number of bedrooms. More homemakers living in houses with three bedrooms had problems with outside storage (30.7% slight and 12.3% big). Those residing in houses with two or less bedrooms

(27.0% slight and 14.6% big) and four or more bedrooms (26.7% slight and 10.2% big) had fewer homemakers reporting this problem. The analysis showed that outside storage problems were significantly related to the number of bedrooms in the house.

Number of baths. The 24 homemakers who reported having no bathrooms had the largest percentage of outside storage problems (16.0% slight and 37.5% big). This percentage decreased substantially for houses with one bath (29.3% slight and 13.6% big), two baths (30.1% slight and 11.4% big), and three or more baths (25.1% slight and 9.1% big). The Chi Square test showed a positive relationship between the variables.

Separate dining. Homemakers who did not have separate dining facilities had more problems with outside storage (30.7% slight and 14.8% big) than those who had separate dining (27.1% slight and 10.1% big). When tested, the relationship was significant at the .001 level.

Recreation or family room. Significantly more homemakers who did not have a recreation or family room in their houses reported outside storage problems (28.1% slight and 15.1% big) than those with such a room (30.1% slight and 9.4% big). When tested, the relationship was significant at the .001 level.

Laundry room. Slightly more homemakers who did not have a laundry room reported having outside storage problems than those with a laundry room. However, the relationship was not significant when tested by the Chi Square test.

Central heat. Of the 1,138 homemakers with central heat, only 335 (29.4%) had a slight problem and 122 (10.7%) had a big problem with outside storage. Those without central heat had a slightly higher percentage reporting this problem (28.7% slight and 13.5% big). However, the variables were not significantly related when tested by the Chi Square test.

Central air. More homemakers who did not have central air in their houses reported problems with outside storage (28.7% slight and 13.8% big) than those with central air (29.6% slight and 9.9% big). When analyzed, a significant relationship was found at the .014 level.

Room air conditioner. A larger percentage of those with room air conditioners had outside storage problems than those without room air conditioners. However, the relationship was not significant when tested.

Number of Contacts with Extension

Table XII gives the number and percent of homemakers with outside storage problems as related to the number of contacts with Extension during the past year.

Meetings. The highest percentage of outside storage problems was reported by homemakers who had attended under 10 Extension meetings. This percentage decreased for the other three groups including those attending no Extension meetings. The lowest percentage was reported by those attending over 13 meetings. When tested, the relationship was not significant.

TABLE XII

RELATIONSHIPS BETWEEN OUTSIDE STORAGE PROBLEMS AND NUMBER OF CONTACTS WITH EXTENSION

Extension Contacts	Homemakers with Outside Storage Problems							
	Not a Problem				Slight Problem			
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Meetings								
Not Any	254	58.1	132	30.2	51	11.7	437	100
Under 10	467	55.1	273	32.2	108	12.7	848	100
10-12	420	60.8	180	26.0	91	13.2	691	100
Over 13	331	62.0	143	26.8	60	11.2	534	100
Total	1472	58.6	728	29.0	310	12.4	2510	100
Chi Square	$\chi^2 = 10.78$		df = 6		p = 0.095			
Office Visits								
Not Any	574	57.6	281	28.2	142	14.2	997	100
1-3	509	60.1	246	29.0	92	10.9	847	100
4-6	212	57.1	115	31.0	44	11.0	371	100
Over 7	176	59.5	87	29.4	33	11.1	296	100
Total	1471	58.6	729	29.0	311	12.4	2511	100
Chi Square	$\chi^2 = 6.24$		df = 6		p = 0.397			

TABLE XII (continued)

Extension Contacts	Homemakers with Outside Storage Problems							
	Not a Problem		Slight Problem		Big Problem		Total	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent	Respondents	Percent
<u>Telephone Calls</u>								
Not Any	483	59.2	288	27.9	105	12.9	816	100
1-3	460	60.1	214	27.9	92	12.0	766	100
4-6	248	56.6	142	32.4	48	11.0	438	100
Over 7	279	56.9	145	29.6	66	13.5	490	100
Total	1470	58.6	729	29.0	311	12.4	2510	100
Chi Square	$\chi^2 = 4.71$		df = 6		p = 0.582			
<u>Newsletters</u>								
Not Any	233	55.9	136	32.6	48	11.5	417	100
1-6	439	59.9	199	27.1	95	13.0	733	100
7-11	178	59.9	82	27.6	37	12.5	297	100
12	491	58.9	240	28.8	102	12.2	833	100
Over 13	132	56.7	72	30.9	29	12.4	233	100
Total	1473	58.6	729	29.0	311	12.4	2513	100
Chi Square	$\chi^2 = 4.70$		df = 8		p = 0.439			

TABLE XII (continued)

Extension Contacts	Homemakers with Outside Storage Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Total Extension Contacts						Total Respondents
Not Any	118	61.1	57	29.5	18	9.3
1-12	1336	58.4	662	28.9	291	12.7
13-25	15	60.0	9	36.0	1	4.0
Total	1469	58.6	728	29.0	310	12.4
Chi Square	$\chi^2 = 3.77$		df = 4		p = 0.439	
						2507
						100
						100
						100
						100

Office visits. Those reporting the highest percentage of outside storage problems had visited the Extension office 4 to 6 times during the past year. The group that visited 1 to 3 times had the lowest percentage of homemakers with this problem. However, the relationship was not significant when tested.

Telephone calls. Homemakers who called the Extension office 4 to 6 times had the highest percentage reporting outside storage problems. The 1 to 3 calls group had the smallest percentage reporting this problem. An analysis showed the variables were not related.

Newsletters. Homemakers who received no newsletters last year had the highest percentage reporting outside storage problems. Those who had received 1 to 6 and 7 to 10 newsletters had the smallest percentages reporting this problem. However, when analyzed, the relationship was not significant.

Total Extension contacts. The homemakers who made 1 to 12 contacts with Extension last year reported more problems with outside storage than the other groups. Those with no contacts had the fewest homemakers with this problem. However, the analysis showed that the relationships were not significantly related.

V. HOUSES THAT COST TOO MUCH TO HEAT AND COOL

This section consists of three tables that show the relationships between homemakers who reported their houses were too expensive to heat and cool and the three independent variables. The Chi Square test shows the strength of the relationships between the variables.

Characteristics of the Homemaker

Table XIII compares the number and percent of homemakers who reported their houses cost too much to heat and cool as related to their personal and family characteristics.

Marital status. A higher percentage of widowed homemakers (37.1% slight and 22.3% big) felt their houses cost too much to heat and cool as compared to the other groups. The lowest percentages were reported by the married group (35.9% slight and 16.4% big) and the separated group (25.0% slight and 25.0% big). Although there were some differences shown among the groups, the number of homemakers having this problem was not significantly related to marital status.

Age. Well over half of the 50 to 59 age group (38.2% slight and 18.3% big) and the over 60 age group (35.4% slight and 20.7% big) had houses that were too expensive to heat and cool. The percentage reporting this problem decreased with age. Those under age 20 had the lowest percentage with this problem (30.8% slight and 7.7% big). When tested by the Chi Square test, a positive relationship was shown.

Education. More homemakers who had completed under 8 years of school reported their houses cost too much to heat and cool (31.1% slight and 28.9% big) than the other groups. The next largest groups with this problem were the college graduates (40.4% slight and 15.3% big) and the high school graduates (38.5% slight and 16.1% big). Those with some college composed the smallest group reporting this problem (33.1% slight and 15.2% big). Although the number of

TABLE XIII

RELATIONSHIPS BETWEEN HOUSES THAT COST TOO MUCH TO HEAT AND
COOL AND CHARACTERISTICS OF HOMEMAKERS

Personal and Family Characteristics	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Marital Status						
Married	930	47.6	701	35.9	321	16.4
Divorced	30	46.2	23	35.4	12	18.5
Widowed	151	40.6	138	37.1	83	22.3
Separated	4	50.0	2	25.0	2	25.0
Single	46	43.0	38	35.5	23	21.5
Total	1161	46.4	902	36.0	441	17.6
Chi Square	$\chi^2 = 11.43$		df = 8		p = 0.179	
Age						
Under 20	16	61.5	8	30.8	2	7.7
20-29	126	49.6	92	36.2	36	14.2
30-39	249	49.6	184	36.7	69	13.7
40-49	168	48.6	119	34.4	59	17.1
50-59	190	43.5	167	38.2	80	18.3
60-Over	402	43.9	324	35.4	190	20.7
Total	1151	46.4	894	36.0	436	17.6
Chi Square	$\chi^2 = 19.28$		df = 10		p = 0.037	

TABLE XIII (continued)

Personal and Family Characteristics	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Education						
Under 8 Years	36	40.0	28	31.1	26	28.9
8-11 Years	166	46.0	109	30.2	86	23.8
High School Graduate	441	45.5	373	38.5	156	16.1
Some College	297	51.7	190	33.1	87	15.2
College Graduate	183	44.3	167	40.4	63	15.3
Total	1123	46.6	867	36.0	418	17.4
Chi Square	$\chi^2 = 33.20$		$df = 2$		$p = 0.001$	
Employment						
Full-time	245	47.9	193	37.7	74	14.5
Part-time	158	46.9	127	37.7	52	15.4
Unemployed	45	48.4	32	34.4	16	17.2
Homemaker	522	47.9	355	32.6	213	19.5
Full-time Retired	184	40.6	185	40.8	84	18.5
Total	1154	46.4	892	35.9	439	17.7
Chi Square	$\chi^2 = 17.70$		$df = 8$		$p = 0.024$	

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Personal and Family Characteristics	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Family Income						
Under 5,000	56	44.8	42	33.6	27	21.6
5,000-9,999	105	44.5	75	31.8	56	23.7
10,000-14,999	133	43.5	118	38.6	55	18.0
15,000-24,999	233	52.5	147	33.1	64	14.4
25,000-Over	193	53.9	126	35.2	39	10.9
Total	720	49.0	508	34.6	241	16.4
Chi Square	$\chi^2 = 26.42$		$df = 10$		$p = 0.037$	
Number in Household						
One Person	154	42.1	130	35.5	82	22.4
Two Persons	472	48.0	336	34.2	175	17.8
Three Persons	191	43.2	165	35.6	57	19.5
Four Persons	242	52.2	165	35.6	57	12.3
Five and Over	102	40.8	107	42.8	41	16.4
Total	1161	46.3	903	36.0	441	17.6
Chi Square	$\chi^2 = 25.72$		$df = 8$		$p = 0.001$	

homemakers reporting this problem was not consistent with the increasing educational level, these variables were significantly related at the .001 level.

Employment. A higher percentage of retired homemakers (40.8% slight and 18.5% big) reported that their houses cost too much to heat and cool than the other groups. A decrease in this problem was seen in the other groups with the unemployed homemakers having the smallest percentage (34.4% slight and 17.2% big). When tested by the Chi Square test, a positive relationship was shown between these two variables.

Family income. Of the 1,469 homemakers reporting their income, the group with the highest percentage reporting that their houses cost too much to heat and cool was those earning \$10,000 to \$14,999 (38.6% slight and 18.0% big). The total percentage declined among the \$5,000 to \$9,999 group (31.8% slight and 23.7% big) and the under \$5,000 group (33.6% slight and 21.6% big) although these had more reporting it as a big problem. Fewer homemakers in the upper income brackets reported this problem. The relationship between homemakers with houses that cost too much to heat and cool and family income was significant at the .001 level.

Number in household. The percentage of homemakers with houses that cost too much to heat and cool was highest for the five and over households (42.8% slight and 16.4% big). This was followed by one person households (35.5% slight and 22.4% big), three person households (37.3% slight and 19.5% big), and two person households (34.2%

slight and 17.8% big). The four person households had the lowest percentage with this problem (35.6% slight and 12.3% big). The Chi Square test showed a positive relationship between these variables.

Characteristics of Present House

Table XIV shows the number and percent of homemakers that reported their houses cost too much to heat and cool as related to the characteristics of their present house.

Location. A higher percentage of rural non-farm homemakers reported their houses cost too much to heat and cool than the other two groups. The rural farm homemakers were next with the urban homemakers having the lowest percentage with this problem. However, the relationship was not found to be significant.

Type of house. The group living in mobile homes had the highest percentage of problems with the expense of heating and cooling their houses (40.0% slight and 29.4% big). Single family dwellings showed a lower percentage with this problem (35.9% slight and 17.4% big) but homemakers living in apartments had the lowest reponse (35.6% slight and 12.5% big). The Chi Square test showed a positive relationship between the variables at the .006 level.

Tenure. Among the homemakers surveyed, home ownership was the main type of tenure. This group had fewer problems with the cost of heating and cooling their houses (35.9% slight and 16.7% big) than the group with other tenure (37.4% slight and 26.9% big). The relationship between these variables was significant at the .001 level.

TABLE XIV

RELATIONSHIPS BETWEEN HOUSES THAT COST TOO MUCH TO HEAT AND COOL AND
AND CHARACTERISTICS OF PRESENT HOUSE

Characteristics of Present House	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Location</u>						
Urban	294	51.3	194	33.9	85	14.8
Rural-Farm	357	42.8	314	37.6	164	19.6
Rural-NonFarm	504	46.5	390	36.0	190	17.5
Total	1156	46.4	898	36.0	439	17.6
Chi Square	$\chi^2 = 12.32$		$df = 4$		$p = 0.055$	
<u>Type of House</u>						
Single Family	1074	46.7	826	35.9	400	17.4
Apartment	55	52.9	36	34.6	13	12.5
Mobile Home	26	30.6	34	40.0	25	29.4
Total	1155	46.6	896	36.0	438	17.6
Chi Square	$\chi^2 = 14.34$		$df = 4$		$p = 0.006$	
					Total	Percent
					Respondents	Percent
					573	100
					835	100
					1084	100
					2493	100
					2300	100
					104	100
					85	100
					2489	100

TABLE XIV (continued)

Characteristics of	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Present House						
<u>Tenure</u>						
Owns Home	1072	47.4	811	35.9	378	16.7
Other	81	35.7	85	37.4	61	26.9
Total	1153	46.3	896	36.0	439	17.6
Chi Square	$\chi^2 = 18.32$		$df = 2$		$p = 0.001$	
<u>Years of House</u>						
5 and Under	430	54.0	245	30.8	121	15.2
6-20 Years	500	46.0	416	38.3	171	15.7
Over 20	236	37.5	244	38.8	149	23.7
Total	1166	46.4	905	36.0	441	17.6
Chi Square	$\chi^2 = 47.67$		$df = 4$		$p = 0.001$	
					2512	100

TABLE XIV (continued)

Characteristics of Present House	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Age of House						
0-4 Years	191	70.2	64	23.5	17	6.3
5-9 Years	186	47.9	143	36.9	59	15.2
10-19 Years	311	47.0	241	36.5	109	16.5
20-29	206	46.7	159	36.1	76	17.2
30 or More	250	35.4	288	40.7	169	23.9
Total	1144	46.3	895	36.2	430	17.4
Chi Square						
		$\chi^2 = 110.80$		$df = 14$		$p = 0.001$
Condition of House						
Excellent	551	63.2	239	27.4	82	9.4
Good	501	41.0	495	40.5	227	18.6
Adequate	91	27.5	154	46.5	86	26.0
Poor	16	23.5	13	19.1	39	57.4
Very Poor	3	30.0				70.0
Total	1162	46.4	901	36.0	441	17.6
Chi Square						
		$\chi^2 = 262.08$		$df = 8$		$p = 0.001$

TABLE XIV (continued)

Characteristics of Present Home	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Number of Bedrooms						
Two or Less	253	43.7	207	35.8	119	20.6
Three	688	48.6	506	35.7	223	15.7
Four or More	225	43.6	192	37.2	99	19.2
Total	1166	46.4	905	36.0	441	17.6
Chi Square	$\chi^2 = 9.86$		$df = 4$		$p = 0.043$	
Number of Baths						
Not Any	9	37.5	7	29.2	8	33.3
One	514	44.2	417	35.9	232	19.9
Two	494	48.5	377	37.0	148	14.5
Three or More	149	48.7	104	34.0	53	17.3
Total	1166	46.4	905	36.0	441	17.6
Chi Square	$\chi^2 = 16.40$		$df = 6$		$p = 0.012$	
Separate Dining						
No	599	47.4	425	33.6	241	19.1
Yes	546	45.7	467	39.0	183	15.3
Total	1145	46.5	892	36.2	424	17.2
Chi Square	$\chi^2 = 10.44$		$df = 2$		$p = 0.005$	

TABLE XIV (continued)

Characteristics of Present House	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Rec./Family Room</u>						
No	525	44.6	424	36.1	227	19.3
Yes	604	48.6	449	36.1	191	15.4
Total	1129	46.7	873	36.1	418	17.3
Chi Square	$\chi^2 = 7.44$		$df = 2$		$p = 0.024$	
<u>Laundry Room</u>						
No	337	42.2	293	36.7	161	21.1
Yes	803	48.9	588	35.8	250	15.2
Total	1140	46.7	881	36.1	418	17.1
Chi Square	$\chi^2 = 15.88$		$df = 2$		$p = 0.001$	
<u>Central Heat</u>						
No	577	43.4	481	36.1	273	20.5
Yes	569	50.3	411	36.3	152	13.4
Total	1146	46.5	892	36.2	425	17.3
Chi Square	$\chi^2 = 24.06$		$df = 2$		$p = 0.001$	

TABLE XIV (continued)

Characteristics of Present House		Homemakers with Heating and Cooling Problems					
		Not a Problem		Slight Problem		Big Problem	
		Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Central Air</u>							
No		627	42.6	552	37.5	293	19.9
Yes		514	51.9	341	34.4	135	13.6
Total		1141	46.3	893	36.3	428	17.4
Chi Square		$\chi^2 = 26.01$		$df = 2$		$p = 0.001$	
<u>Room Air Conditioner</u>							
No		648	51.3	423	33.5	193	15.3
Yes		477	41.0	457	39.3	230	19.8
Total		1125	46.3	880	36.2	423	17.4
Chi Square		$\chi^2 = 26.47$		$df = 2$		$p = 0.001$	
						Total Respondents	Percent
						1472	100
						990	100
						2462	100

Years in house. Fewer homemakers who had lived in their houses 5 years or less reported problems with the expense of heating and cooling their houses (30.8% slight and 15.2% big) than the other groups. Those who had resided 6 to 20 years in their houses had a higher percentage with this problem (38.2% slight and 15.7% big). But those in the over 20 year group had the most homemakers reporting the problem (38.8% slight and 23.7% big). The Chi Square test showed a positive relationship between the variables.

Age of house. Only a few of the homemakers who lived in new houses 0 to 4 years old had a problem with the cost of heating and cooling (23.5% slight and 6.3% big). The percentage with this problem increased with the age of the house. The highest percentage came from those living in houses 30 or more years old (40.7% slight and 23.9% big). When tested by the Chi Square test, a strong relationship was shown between the variables ($\chi^2 = 110.80$).

Condition of the house. Relatively few homemakers with houses in excellent condition reported having a problem with the cost of heating and cooling (27.4% slight and 9.4% big). The percentage of homemakers with this problem increased significantly as the condition of the house deteriorated. Over half of those having houses in good condition had this problem (40.5% slight and 18.6% big) while more than two-thirds of the adequate (46.5% slight and 26.0% big), poor (19.1% slight and 57.4% big), and very poor (70.0% big) reported this problem. When tested by the Chi Square test, an extremely strong relationship was shown ($\chi^2 = 262.08$).

Number of bedrooms. Homemakers living in houses with four or more bedrooms (37.2% slight and 19.2% big) had slightly more problems with their houses costing too much to heat and cool than those with two or less bedrooms (35.8% slight and 20.6% big). Those with three bedroom houses had the smallest percentage of homemakers with this problem (35.7% slight and 15.7% big). The analysis showed a weak but positive relationship.

Number of baths. The 24 homemakers with no bathrooms had the highest percentage reporting problems with the cost of heating and cooling their houses (29.2% slight and 33.3% big). Those with only one bath had a somewhat smaller number reporting this problem (35.9% slight and 19.9% big). In comparison, the two bath house (37.0% slight and 14.5% big) and the three or more bath house (34.0% slight and 17.3% big) had the lowest percentages although the three or more group had more homemakers that considered the cost of heating and cooling a big problem. The Chi Square test showed a positive relationship between the variables.

Separate dining. Those who reported having separate dining facilities had slightly more problems (39.0% slight and 15.3% big) with houses that cost too much to heat and cool than homemakers without separate dining (33.6% slight and 19.1% big). The relationship was significant at the .005 level.

Recreation or family room. More homemakers who did not have a recreation or family room considered their houses expensive to heat and cool (36.1% slight and 19.3% big) than those with such a room

(36.1% slight and 15.4% big). The relationship was significant at the .024 level.

Laundry room. Homemakers without a laundry room had significantly more problems with houses that cost too much to heat and cool (36.7% slight and 21.1% big) than those with a laundry room (35.8% slight and 15.2% big). When tested, the relationship was significant at the .001 level.

Central heat. Significantly more homemakers who did not have central heat reported having a problem with the expense of heating and cooling their houses (36.1% slight and 20.5% big) than those with central heat (36.3% slight and 13.4% big). The Chi Square test showed a positive relationship between the variables.

Central air. Considerably more homemakers who did not have central air reported that their houses cost too much to heat and cool (37.5% slight and 19.9% big) as compared with those that had central air (34.4% slight and 13.6% big). When analyzed by the Chi Square test, a significant relationship was found at the .001 level.

Room air conditioner. The findings for room air conditioners were the reverse of the central air findings. A larger percentage of homemakers who had room air conditioners said their houses cost too much to heat and cool (39.3% slight and 19.8% big) as compared to those without a room air conditioner (33.5% slight and 15.3% big). This relationship was found to be significant at the .001 level.

Number of Contacts with Extension

Table XV reports the number and percent of homemakers with houses that cost too much to heat and cool as related to the number of contacts with Extension during the past year.

Meetings. A higher percentage of homemakers who had attended 10 to 12 meetings reported having houses that cost too much to heat and cool (39.7% slight and 15.7% big) than the other groups. Those who attended under 10 meetings and those that attended over 13 meetings reported fewer total problems but had a higher percentage of homemakers that considered their heating and cooling cost as a big problem. The group that had not attended any Extension meetings had the lowest percentage of homemakers with this problem (35.3% slight and 13.5% big). When tested by the Chi Square test, the relationship was significant at the .013 level.

Office visits. More homemakers who had not visited the Extension office had problems with houses that cost too much to heat and cool than those that had visited the office. The group with the lowest percentage reporting this problem had visited the Extension office over 7 times. However, the relationship was not significant when tested.

Telephone calls. Homemakers who had called the Extension office 1 to 3 times reported the most problems with the cost of heating and cooling their houses. The highest percentage of homemakers with this problem had made 4 to 6 calls. However, the analysis showed the variables were not related.

TABLE XV

RELATIONSHIPS BETWEEN HOUSES THAT COST TOO MUCH TO HEAT AND COOL
AND NUMBER OF CONTACTS WITH EXTENSION

Extension Contacts	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Meetings</u>						
Not Any	223	51.1	154	35.3	59	13.5
Under 10	393	46.5	288	34.0	165	19.5
10-12	308	44.6	274	39.7	108	15.7
Over 13	242	45.1	186	34.6	109	20.3
Total	1166	46.5	902	36.0	441	17.6
Chi Square	$\chi^2 = 16.33$		df = 6		p = 0.013	
<u>Office Visits</u>						
Not Any	442	44.4	362	36.3	192	19.3
1-3	403	47.7	295	34.9	147	17.4
4-6	177	47.6	133	35.8	62	16.7
Over 7	143	48.1	115	38.7	39	13.1
Total	1165	46.4	905	36.1	440	17.5
Chi Square	$\chi^2 = 7.59$		df = 6		p = 0.270	
					Total	Percent
					Respondents	Percent
					436	100
					846	100
					690	100
					2509	100
					2509	100
					2510	100

TABLE XV (continued)

Extension Contacts	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Telephone Calls</u>						
Not Any	385	47.2	280	34.3	151	18.5
1-3	343	45.0	276	36.2	144	18.9
4-6	210	47.8	162	36.9	67	15.3
Over 7	227	46.2	186	37.9	78	15.9
Total	1165	46.4	904	36.0	440	17.5
Chi Square	$\chi^2 = 5.15$		$df = 6$		$p = 0.525$	
<u>Newsletters</u>						
Not Any	213	51.1	142	34.1	62	14.9
1-6	351	47.8	259	35.3	124	16.9
7-11	135	45.6	101	34.1	60	20.3
12	363	43.6	323	38.8	146	17.5
Over 13	104	44.6	80	34.3	49	21.0
Total	1166	46.4	905	36.0	441	17.6
Chi Square	$\chi^2 = 11.45$		$df = 8$		$p = 0.177$	
					2512	100

TABLE XV (continued)

Extension Contacts	Homemakers with Heating and Cooling Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Total Extension Contacts						
Not Any	110	57.0	62	32.1	21	10.9
1-12	1041	45.5	831	36.3	416	18.2
13-25	14	56.0	8	32.0	3	12.0
Total	1165	46.5	901	36.0	440	17.6
Chi Square	$\chi^2 = 12.38$		$df = 4$		$p = 0.015$	
					2506	100
					193	100
					2288	100
					25	100

Newsletters. The homemakers who had received 12 newsletters (38.8% slight and 17.5% big) and those who had received over 13 newsletters (34.3% slight and 21.0% big) reported the highest percentages of houses that cost too much to heat and cool. In comparison, those who had received no newsletters had the lowest number of homemakers with this problem (34.1% slight and 14.9% big). The analysis showed that the number of homemakers with houses that cost too much to heat and cool was not related to the number of newsletters received.

Total Extension contacts. The homemakers who had made 1 to 12 contacts with Extension reported the most problems with houses that cost too much to heat and cool (36.3% slight and 18.2% big). Those that made no contacts last year had the lowest percentage with this problem (32.1% slight and 10.9% big). When analyzed, the relationship was significant at the .015 level.

VI. HOUSES EXPENSIVE TO MAINTAIN AND REPAIR

This section contains three tables that show the relationship between homemakers reporting that their houses were expensive to maintain and repair and the three independent variables. The Chi Square test shows the strength of the relationships between the variables.

Characteristics of the Homemaker

Table XVI shows the number and percent of homemakers who felt their houses were expensive to maintain and repair as related to their personal and family characteristics.

TABLE XVI

RELATIONSHIPS BETWEEN HOUSES THAT WERE EXPENSIVE TO MAINTAIN AND
REPAIR AND CHARACTERISTICS OF HOMEMAKERS

Personal and Family Characteristics	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Marital Status</u>						
Married	1115	57.6	527	27.2	293	15.1
Divorced	33	51.6	13	20.3	18	28.1
Widowed	177	48.5	113	31.0	75	20.5
Separated	4	50.0	4	50.0	0	0.0
Single	53	50.0	30	28.3	23	21.7
Total	1382	55.8	687	27.7	409	16.5
Chi Square	$\chi^2 = 23.88$		df = 8		p = 0.002	
<u>Age</u>						
Under 20	17	65.4	6	23.1	3	11.5
20-29	155	61.0	66	26.0	33	13.0
30-39	299	59.4	142	28.2	62	12.3
40-49	200	58.3	96	28.0	47	13.7
50-59	237	55.2	126	29.4	66	15.4
60-Over	460	51.2	244	27.1	195	21.7
Total	1368	51.2	244	27.1	195	16.5
Chi Square	$\chi^2 = 31.96$		df = 10		p = 0.001	
					2454	100

TABLE XVI (continued)

Personal and Family Characteristics	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Education						
Under 8 Years	32	36.8	24	27.6	31	35.6
8-11 Years	185	52.3	78	22.0	91	25.7
High School Graduate	528	54.7	294	30.5	143	14.8
Some College	352	61.6	135	23.6	84	14.7
College Graduate	242	59.5	125	30.7	40	9.8
Total	1339	56.2	656	27.5	389	16.3
Chi Square	$\chi^2 = 74.28$		df = 8		p = 0.001	
Employment						
Full-time	316	61.8	131	25.6	64	12.5
Part-time	178	53.6	96	28.9	58	17.5
Unemployed	48	52.7	20	22.0	23	25.3
Homemaker Full-time	602	55.9	301	28.0	173	16.1
Retired	225	50.1	134	29.8	90	16.6
Total	1369	55.7	682	27.7	408	16.6
Chi Square	$\chi^2 = 21.98$		df = 8		p = 0.005	

TABLE XVI (continued)

Marital status. Six hundred and eighty-seven homemakers (27.7%) reported having a slight problem and 409 (16.5%) had a big problem with houses that were expensive to maintain and repair. Of these, widowed homemakers had the highest percentage of this problem (31.0% slight and 20.5% big) with separated (50.0% slight) and single (28.3% slight and 28.1% big) homemakers being the next largest groups. Divorced homemakers (20.3% slight and 28.1% big) had slightly fewer homemakers reporting this problem with the married group (27.2% slight and 15.1% big) reporting the fewest problems. The number of homemakers reporting this problem was significantly related to marital status at the .002 level.

Age. Almost half of the over 60 age group had houses that were expensive to maintain and repair (27.1% slight and 21.7% big). The percentage reporting this problem declined as age decreased with the youngest group having the lowest percentage (23.1% slight and 11.5% big). The Chi Square test showed a positive relationship between the variables.

Education. Considerably more homemakers who had completed less than 8 years of schooling reported that their houses were expensive to maintain and repair (27.6% slight and 35.6% big) than the other groups. The percentage of homemakers reporting this problem decreased as the level of education increased. One exception was the group of college graduates who reported slightly more of this problem than the some college group. However, fewer college graduates reported this as a big problem than the some college group. The level

of education was significantly related to the number of homemakers reporting this problem at the .001 level.

Employment. A higher percentage of retired homemakers (29.8% slight and 20.0% big) reported that their houses were expensive to maintain and repair than other groups. Full-time employed homemakers had the smallest percentage (25.6% slight and 12.5% big) reporting this problem. When tested by the Chi Square test, a positive relationship was shown between these two variables.

Family income. Only 1,462 homemakers responded to this question. Of these, the group with the highest percentage of houses that were expensive to maintain and repair was those earning under \$5,000 (24.6% slight and 32.0% big). The percentage reporting this problem decreased as income increased. The over \$25,000 group had the lowest percentage with this problem (24.4% slight and 7.0% big). The relationship between family income and houses that were expensive to maintain and repair was significant at the .001 level.

Number in household. The percentage of homemakers with houses that were expensive to maintain and repair was lowest for four person households (24.8% slight and 9.9% big). This was followed by the two person household (25.8% slight and 18.4% big), three person household (28.6% slight and 17.0% big), and one person household (28.5% slight and 21.1% big). The five and over group reported the most homemakers with this problem (37.8% slight and 16.1% big). The Chi Square test showed a strong relationship between these variables.

Characteristics of Present House

Table XVII presents the number and percent of homemakers who reported that their houses were expensive to maintain and repair as related to the characteristics of their present house.

Location. A higher percentage of rural farm homemakers (30.3% slight and 20.3% big) reported that their houses were expensive to maintain and repair than the other two groups. The rural non-farm homemakers were next (27.1% slight and 15.2% big) with the urban homemakers having the lowest percentage reporting this problem (25.2% slight and 13.9% big). The number of homemakers with this problem was significantly related to the location of the house at the .001 level.

Type of house. Of the 2,464 homemakers, only 86 lived in mobile homes. However, this group reported the highest percentage of houses that were expensive to maintain and repair (36.0% slight and 16.3% big). A lower percentage of this problem was seen among those who lived in single family dwellings (27.8% slight and 16.8% big). But the lowest number of responses was from apartment dwellers (21.0% slight and 10.0% big). The Chi Square test showed a positive relationship between the variables at the .031 level.

Tenure. Home ownership was the main type of tenure among the homemakers surveyed. Those who owned their homes had slightly fewer problems with the high cost of maintenance and repair than the other types of tenure. However, the relationship was not significant.

Years in house. A lower percentage of homemakers who had lived in their houses 5 years and under reported having houses that were

TABLE XVII

RELATIONSHIPS BETWEEN HOUSES THAT WERE EXPENSIVE TO MAINTAIN AND REPAIR
AND CHARACTERISTICS OF PRESENT HOUSE

Characteristics of Present House	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Location						
Urban	346	60.9	143	25.2	79	13.9
Rural-Farm	407	49.4	250	30.3	167	20.3
Rural-NonFarm	621	57.8	291	27.1	163	15.2
Total	1375	55.7	684	27.7	409	16.6
Chi Square	$\chi^2 = 24.32$		$df = 6$		$p = 0.001$	
Type of House						
Single Family	1262	55.4	633	27.8	383	16.8
Apartment	69	69.0	21	21.0	10	10.0
Mobile Home	41	47.7	31	36.0	14	16.3
Total	1372	55.7	685	27.8	407	16.5
Chi Square	$\chi^2 = 10.67$		$df = 4$		$p = 0.031$	
					Total	Percent
					Respondents	Percent
					568	100
					824	100
					1075	100
					2468	100
					2278	100
					100	100
					86	100
					2464	100

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Characteristics of Present House	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Tenure						
Owns Home	1245	55.6	628	28.0	367	16.4
Other	124	56.1	54	24.4	43	19.5
Total	1369	55.6	682	27.7	410	16.7
Chi Square	$\chi^2 = 2.09$		$df = 2$		$p = 0.351$	
Years in House						
5 and Under	531	67.1	168	21.2	92	11.6
6-20	602	55.9	309	28.7	165	15.3
Over 20	252	40.8	212	34.3	154	24.9
Total	1385	55.7	689	27.7	411	16.5
Chi Square	$\chi^2 = 103.99$		$df = 4$		$p = 0.001$	

TABLE XVII (continued)

Characteristics of	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Present House						
Total Respondents						
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TABLE XVII (continued)

Characteristics of	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Present House						
Number of Bedrooms						
Two or Less	295	51.9	156	27.5	117	20.6
Three	802	57.0	390	27.7	215	15.3
Four or More	288	56.5	143	28.0	79	15.5
Total	1385	55.7	689	27.7	411	16.5
Chi Square	$\chi^2 = 9.30$		$df = 4$		$p = 0.054$	
Number of Baths						
Not Any	3	12.5	5	20.8	16	66.7
One	547	47.8	349	30.5	248	21.7
Two	641	63.3	258	25.5	113	11.2
Three or More	194	63.6	77	25.2	34	11.1
Total	1385	55.7	689	27.7	411	16.5
Chi Square	$\chi^2 = 118.67$		$df = 6$		$p = 0.001$	
Separate Dining						
No	686	55.0	329	26.4	232	18.6
Yes	680	57.1	344	28.9	166	13.9
Total	1366	56.1	673	27.6	398	16.3
Chi Square	$\chi^2 = 9.98$		$df = 2$		$p = 0.007$	

TABLE XVII (continued)

Characteristics of Present House	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Rec./Family Room</u>						
No	601	51.7	325	27.9	237	20.4
Yes	747	60.6	337	27.3	149	12.1
Total	1348	56.3	662	27.6	386	16.1
Chi Square	$\chi^2 = 34.10$		$df = 2$		$p = 0.001$	
<u>Laundry Room</u>						
No	386	49.2	222	28.3	177	22.5
Yes	966	59.2	448	27.5	218	13.4
Total	1352	55.9	670	27.7	395	16.3
Chi Square	$\chi^2 = 37.04$		$df = 2$		$p = 0.001$	
<u>Central Heat</u>						
No	628	47.6	402	30.5	288	21.9
Yes	736	65.6	277	24.7	109	9.7
Total	1364	55.9	679	27.8	387	16.3
Chi Square	$\chi^2 = 97.15$		$df = 2$		$p = 0.001$	

TABLE XVII (continued)

Characteristics of	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Present House						
Central Air						
No	697	47.8	456	31.3	306	21.0
Yes	666	68.0	223	22.8	91	9.3
Total	1363	55.9	679	27.8	397	16.3
Chi Square	$\chi^2 = 107.16$		$df = 2$		$p = 0.001$	
Room Air Conditioner						
No	769	61.2	317	25.2	170	13.5
Yes	573	49.7	356	30.9	224	19.4
Total	1342	55.7	673	27.9	394	16.4
Chi Square	$\chi^2 = 33.95$		$df = 2$		$p = 0.001$	

expensive to maintain and repair (21.2% slight and 11.6% big) than those who had resided for longer periods. The homemakers in the 6 to 20 year group had a higher percentage reporting this problem (28.7% slight and 15.3% big). But those who had lived in their houses over 20 years had the highest percentage with this problem (34.3% slight and 24.9% big). The Chi Square test showed a very strong relationship ($\chi^2 = 103.99$) between the variables.

Age of house. Very few homemakers who lived in houses 0 to 4 years old had a problem with houses that were expensive to maintain and repair (10.3% slight and 4.1% big). In comparison, the highest percentage of homemakers reporting this problem had houses 30 or more years old (34.4% slight and 27.4% big). The other groups fell in between these with the percentage reporting this problem increasing with the age of the house. When tested by the Chi Square test, an extremely strong relationship was shown between the variables ($\chi^2 = 235.43$).

Condition of the house. Fewer homemakers with houses in excellent condition reported problems with the expense of maintenance and repair (13.6% slight and 5.3% big) than the other group. The percentage having this problem increased significantly as the condition of the house deteriorated. Those having houses in poor and very poor condition had the highest percentages of homemakers with this problem. When tested by the Chi Square test, an extremely strong relationship was shown ($\chi^2 = 543.06$).

Number of bedrooms. Homemakers living in houses with two or less bedrooms had more problems with houses that were expensive to maintain and repair (27.5% slight and 20.6% big) than other houses. Those living in four bedroom houses reported less of this problem (28.0% slight and 15.5% big) followed by three bedroom houses (27.7% slight and 15.3% big). The analysis showed that this problem was significantly related to the number of bedrooms.

Number of baths. Of the 24 homemakers who reported having no baths, most had a problem with the expense of maintenance and repair (20.8% slight and 66.7% big). Those with only one bath still had a large percentage of the homemakers reporting this problem (30.5% slight and 21.7% big). The percentage decreased drastically for houses with two or three baths. The Chi Square test showed a strong relationship between the variables.

Separate dining. Homemakers who reported having no separate dining facilities had slightly more problems (26.4% slight and 18.6% big) with houses that were expensive to maintain and repair than homemakers with separate dining (28.9% slight and 13.9% big). This relationship was significant at the .007 level.

Recreation or family room. More homemakers who did not have a recreation or family room reported that their houses were expensive to maintain and repair (27.9% slight and 20.4% big) than those with such a room (27.3% slight and 12.1% big). This relationship was significant at the .001 level.

Laundry room. Homemakers without a laundry room had significantly more problems with houses that were expensive to maintain and repair (28.3% slight and 22.5% big) than those with a laundry room (27.5% slight and 13.4% big). When tested, this relationship was significant at the .001 level.

Central heat. Of the 2,440 homemakers, 1,122 reported they had central heat. Only 109 (9.7%) of these had a big problem with houses that were expensive to maintain and repair while 277 (24.7%) reported this as a slight problem. Homemakers without central heat had a significantly higher percentage reporting this problem (30.5% slight and 21.9% big). The Chi Square test showed a positive relationship between the variables.

Central air. Fewer homemakers who had houses with central air reported having a problem with houses that were expensive to maintain and repair (22.8% slight and 9.3% big) than those without central air (31.3% slight and 21.0% big). When analyzed by the Chi Square test, a significant relationship was found at the .001 level.

Room air conditioner. In reverse of the central air findings, a larger percentage of homemakers that had room air conditioners reported that their houses were expensive to maintain and repair (30.9% slight and 19.4% big) than those without room air conditioners (25.2% slight and 13.5% big). This relationship was significant at the .001 level.

Number of Contacts with Extension

Table XVIII reports the number and percent of homemakers with houses that were expensive to maintain and repair as related to the number of contacts with Extension during the past year.

Meetings. A higher percentage of homemakers who had attended over 13 Extension meetings reported having houses that were expensive to maintain and repair than the other groups. The percentage decreased as the number of meetings attended decreased. Those that attended no meetings had the fewest homemakers with this problem. However, when tested, the relationship was not significant.

Office visits. Slightly more homemakers who had not visited the Extension office reported having problems with houses that were expensive to maintain and repair than those that had visited the office. However, those that visited over 7 times had about the same percentage reporting this problem as those that had not visited. The relationship was not significant when tested.

Telephone calls. Homemakers who had not called the Extension office had a smaller percentage reporting that their houses were expensive to maintain and repair than those that had made 1 to 3 calls. Those who had made over 7 calls had the fewest reporting this problem. However, an analysis showed the variables were not related.

Newsletters. Of the 2,485 homemakers, 231 had received over 13 newsletters. However, this group had the highest percentage reporting that their houses were expensive to maintain and repair (32.0% slight and 16.5% big). Those who had received no newsletters

TABLE XVIII

RELATIONSHIPS BETWEEN HOUSES THAT WERE EXPENSIVE TO MAINTAIN AND REPAIR
AND NUMBER OF CONTACTS WITH EXTENSION

Extension Contacts	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Meetings</u>						
Not Any	253	58.8	114	26.5	63	14.7
Under 10	478	57.0	225	26.8	136	16.2
10-12	374	54.7	191	27.9	119	17.4
Over 13	278	52.6	159	30.1	92	17.4
Total	1383	55.7	689	27.8	410	16.5
Chi Square	$\chi^2 = 5.11$		df = 6		p = 0.529	
<u>Office Visits</u>						
Not Any	525	53.1	291	29.5	172	17.4
1-3	488	58.2	216	25.8	134	16.0
4-6	213	58.2	92	25.1	61	16.7
Over 7	158	54.3	89	30.6	44	15.1
Total	1384	55.7	688	27.7	411	16.6
Chi Square	$\chi^2 = 7.56$		df = 6		p = 0.272	

TABLE XVIII (continued)

Extension Contacts	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
Telephone Calls						
Not Any	452	56.0	213	26.4	142	17.6
1-3	396	52.2	235	31.0	128	16.9
4-6	248	57.4	117	27.1	67	15.5
Over 7	288	59.5	122	25.2	74	15.3
Total	1384	55.8	687	27.7	411	16.6
Chi Square	$\chi^2 = 9.07$		df = 6		p = 0.170	
Newsletters						
Not Any	245	59.8	106	25.9	59	14.4
1-6	391	53.8	208	28.6	128	17.6
7-11	168	57.3	81	27.6	44	15.0
12	462	56.1	220	26.7	142	17.2
Over 13	119	51.5	74	32.0	38	16.5
Total	1385	55.7	689	27.7	411	16.5
Chi Square	$\chi^2 = 7.46$		df = 8		p = 0.488	

TABLE XVIII (continued)

Extension Contacts	Homemakers with Expensive to Maintain and Repair Problems					
	Not a Problem		Slight Problem		Big Problem	
	Number of Respondents	Percent	Number of Respondents	Percent	Number of Respondents	Percent
<u>Total Extension</u>						
<u>Contacts</u>						
Not Any	127	66.5	39	20.4	25	13.1
1-12	1242	54.9	637	28.1	384	17.0
13-25	13	52.0	11	44.0	1	4.0
Total	1382	55.7	687	27.7	410	16.5
Chi Square	$\chi^2 = 14.54$		df = 4		p = 0.006	
					2479	100
					2263	100
					25	100

had the lowest percentage with this problem (25.9% slight and 14.4% big). The analysis showed that the number of homemakers with houses that were expensive to maintain and repair was not related to the number of newsletters received.

Total Extension contacts. The 25 homemakers who reported the most contacts with Extension also had the highest percentage of houses that were expensive to maintain and repair (44.0% slight and 4.0% big). Those who made no contacts had the lowest percentage of homemakers with this problem (20.4% slight and 13.1% big). Most of the homemakers had between 1 and 12 contacts with Extension and fell in between these two groups. When analyzed, the relationships were significant at the .006 level.

CHAPTER IV

SUMMARY OF MAJOR FINDINGS

I. PURPOSES AND OBJECTIVES OF THE STUDY

The purpose of this study was to gain knowledge concerning the number and kind of housing problems that exist in Tennessee as reported by homemakers.

The specific objectives of the study were:

- I. To determine relationships between housing problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- II. To determine relationships between kitchen storage problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- III. To determine relationships between bedroom storage problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- IV. To determine relationships between outside storage problems and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.
- V. To determine relationships between houses that cost too much to heat and cool and characteristics of homemakers,

characteristics of present house, and number of contacts with Extension.

- VI. To determine relationships between houses that were expensive to maintain and repair and characteristics of homemakers, characteristics of present house, and number of contacts with Extension.

II. METHODS AND PROCEDURES

This section describes the methods and procedures that were used to obtain and analyze the survey data for this study.

Population and Sample Studied

The population for this study consisted of homemakers from 94 Tennessee counties. At least thirty homemakers from each county were selected by the Extension agents from eight potential audiences: (1) all Home Demonstration Club members, (2) young non-club homemakers, (3) EFNEP participants, (4) housing program participants, (5) all homemakers (general), (6) 4-H parents or leaders, (7) special interest groups, or (8) other homemakers. Three of the eight audiences were chosen from which the agent randomly selected ten homemakers each, making a total of thirty. Across the state, a total of 2,538 homemakers was surveyed.

Survey Instrument

The survey was developed by Maxine McManus, Agricultural Extension Service Housing Specialist. In addition to asking information concerning the participants' personal and family characteristics,

questions sought information about their present houses, possible housing problems in existence, sources used for housing information, and numbers of contacts with Extension during the past 12 months.

Interviews

Group interviews were conducted by the agents with the homemakers completing their own survey forms.

Analysis of Data

Survey forms were mailed by agents to their district offices and forwarded to the State Agricultural Extension Education Office at The University of Tennessee. Computer data cards were punched for statistical analysis.

For testing the relationships between variables, the F test determined the one way variance between the mean number of housing problems reported and the three independent variables (characteristics of homemakers, characteristics of present house, and number of contacts with Extension). To determine relationships between the five most prominent housing problems and the three independent variables, the Chi Square statistical test was used. A probability level of .05 was accepted as being statistically significant.

III. MAJOR FINDINGS

Relationships between Housing Problems and Homemakers' Characteristics

All of the six personal and family characteristics were positively related to the mean number of housing problems reported.

With marital status, the separated, divorced and single homemakers reported the most housing problems. Widowed homemakers had the fewest housing problems.

In considering age, the younger groups had the highest percentage of housing problems. The number of problems decreased as age increased. With educational level, the most problems were reported by those who had completed less than 8 years of schooling. High school graduates were the next group and those who had completed 8 to 11 years followed.

Homemakers who were unemployed had more housing problems than those in the other groups. Employed, both full-time and part-time, homemakers reported more problems than the other two groups. With family income, the lower income groups had the highest number of problems. Problems reported decreased as income increased.

Finally, with number in the household, the larger households reported more housing problems than smaller households.

Relationships between Housing Problems and Characteristics of Present House

All of the fourteen characteristics of the present house were significantly related to the mean number of housing problems except location. Although not significant, urban homemakers had fewer housing problems than rural homemakers.

The condition of the house was strongly related to the mean number of housing problems reported. The number of problems increased as the condition of the house worsened.

When considering the type of house, those in single family dwellings reported fewer problems than those in other types of dwellings. Also, those who owned their homes reported considerably fewer problems than those with other types of tenure.

In looking at years in house, the number of problems increased with the number of years homemakers had resided in their houses. Problems also tended to increase as the age of the house increased.

Concerning the various rooms, the number of housing problems decreased as the number of bedrooms and the number of baths increased. Homemakers without separate dining, recreation or family room, and laundry room reported more problems than those with such rooms.

Those without central heat and central air had more problems than homemakers with such systems. Those with room air conditioners had more housing problems than those without them.

Relationships between Housing Problems and Extension Contacts

Of the five variables, only the number of meetings attended was significantly related to the number of housing problems. Those who had not attended meetings reported the most housing problems.

The numbers of office visits, telephone calls, newsletters received, and total Extension contacts were not significantly related to the number of housing problems reported.

Relationships between Kitchen Storage Problems and Homemakers' Characteristics

Of the six personal and family characteristics requested on the survey, all were related to the number of homemakers with kitchen storage problems except family income. Even with income, the incidence of the problem decreased slightly with an increase in the income level.

Marital status had the weakest positive relationship with adequacy of kitchen storage at the .014 level. The separated and single groups reported the highest percentages of homemakers with inadequate kitchen storage.

The other four independent variables showed strong relationships with the occurrence of kitchen storage problems. Age, education, employment, and number in household were all significantly related at the .001 level. Over half of the young homemakers under age 20 had problems with kitchen storage. This number declined as age increased. For the educational level, those who completed under 8 years of schooling reported the highest percentage with this problem. This percentage decreased as the level of education increased. With employment, the unemployed and full-time employed homemakers reported the most problems with inadequate kitchen storage. Finally, large households, especially those with five or more, had more problems with kitchen storage than smaller families.

Relationships between Kitchen Storage Problems and Characteristics of Present House

All of the fourteen characteristics of the present house were significantly related to the number of homemakers reporting kitchen

storage problems except years in house. Each of the three categories of years in house had about the same percentages of problems.

The strongest relationship was seen with the condition of the house. As the condition worsened, the number of homemakers with kitchen storage problems increased. The type of house, tenure, age of house, number of bedrooms, number of baths, separate dining, recreation or family room, laundry room, central heat, and central air showed relationships significant at the .001 level. With the type of house, those living in mobile homes had considerably more kitchen storage problems than apartment dwellers or those in single family units. Those who owned their homes reported fewer problems than others. The age of the house was significantly related to this problem with more older houses having a higher incidence of kitchen storage problems than newer houses.

With regard to number of rooms, houses with fewer bedrooms had more kitchen storage problems. This also applied to the number of baths in the house. Homemakers without separate dining, recreation or family room, and laundry room had more kitchen storage problems than homemakers with these rooms.

Those without central heat and central air also had more inadequate kitchen storage than those with a central system.

The other two variables also were significantly related to this problem although to a weaker extent. Location of the house was significant at the .042 level. Homemakers who lived in rural non-farm houses tended to have more kitchen storage problems than urban and

rural farm families. Rural farm homemakers had the fewest problems. The relationship between having a room air conditioner and kitchen storage problems was significant at the .018 level. In contrast to the central air findings, those with room air conditioners had significantly more reporting kitchen storage problems.

Relationships between Kitchen Storage Problems and Extension Contacts

Homemakers who attended more than 13 Extension meetings had fewer kitchen storage problems than other homemakers. However, the numbers of office visits, telephone calls, newsletters received, or total contacts with Extension were not significantly related to the number of homemakers with this problem.

Relationships between Bedroom Storage Problems and Homemakers' Characteristics

Family income was the only variable that was not significantly related to the number of homemakers having the problem. The medium income range (\$10,000 to \$14,999) had the highest incidence of bedroom storage problems.

The strongest relationships were with age and number in household. Approximately two-thirds of the younger homemakers had bedroom storage problems as compared to 40% of those in older groups. This problem decreased as age increased. Also, larger families reported the most with this problem, while smaller families had significantly fewer.

Although to a weaker extent, the other three variables also were significantly related to this problem. Marital status at the

.032 level, education at the .002 level, and employment at the .008 level were related to the number of homemakers with bedroom storage problems. In the marital status groups, the separated, single, and divorced homemakers reported the highest percentages of this problem. Widowed homemakers had a considerably lower percentage with this problem. The level of education affected the incidence of this problem with those who had completed 8 years of school reporting the most bedroom storage problems. However, those who had completed 8 to 11 years reported the fewest problems with bedroom storage. With employment, full-time employed, unemployed, and part-time employed homemakers had more bedroom storage problems than other homemakers. Retired homemakers had the smallest percentage reporting bedroom storage problems.

Relationships between Bedroom Storage Problems and Characteristics of Present House

Of the fourteen variables, location and years in house were not significantly related to the number of homemakers with bedroom storage problems. The three categories under location displayed about the same number of problems each. With years in house, those who had resided over 20 years in their houses had slightly more bedroom storage problems, although not at a significant level.

The condition of the house showed a very strong relationship to the problem. As the houses deteriorated, the percentage with bedroom storage problems increased drastically. The other variables also were significant at the .001 level. In looking at the type of

house, nearly 75% of the mobile home dwellers reported bedroom storage problems. For tenure, those who did not own their homes reported more of this problem than home owners. The age of the house was significantly related to the problem with more older houses having bedroom storage problems than newer houses.

Those houses with two or less bedrooms and no or one bath had significantly more problems with bedroom storage than those with more bedrooms or baths. Homemakers without separate dining, recreation or family room, and laundry room reported higher percentages of this problem. Also, those without central air and central heat had nearly 15% more homemakers reporting bedroom storage problems than those with these systems. Those with room air conditioners had a higher percentage reporting this problem than those without room air conditioners.

Relationships between Bedroom Storage Problems and Extension Contacts

The only variable that was significantly related to the number of homemakers with bedroom storage problems was the number of meetings attended. Those who had attended no meetings had the highest percentage of homemakers with this problem. Of the other four variables, none were significantly related.

Relationships between Outside Storage Problems and Homemakers' Characteristics

In looking at the six characteristics, all were positively related to having outside storage problems. The strongest relationship was seen in the number in household variable. While the four

person household had the most homemakers with this problem, the five and over group had the highest percentage reporting it as a big problem.

Marital status, age, and employment were all significantly related at the .001 level. When looking at marital status, the separated group had the highest percentage with outside storage problems while the widowed group reported the fewest problems. Among the age groups, the 20 to 29 group reported the most problems, but the under 20 group had the highest percentage of homemakers with a big problem. With employment, those who were full-time employed and part-time employed had significantly more outside storage problems than the other groups.

Education was related to the problem at the .022 level while family income showed a weaker relationship at the .040 level. With the educational level, the some college group reported the highest percentage of outside storage problems while the under 8 years group had the lowest percentage. With family income, the lower the income level, the higher the percentage of outside storage problems except for the \$15,000 to \$24,999 group.

Relationships between Outside Storage Problems and Characteristics of Present House

Of the fourteen variables, seven were not significantly related to the number of homemakers with outside storage problems. These included location, tenure, years in house, age of house, laundry room, central heat, and room air conditioner.

Having central air was related to the number who had this problem at the .014 level. Those without central air had more outside storage problems than those with the system.

In looking at rooms, the number of bedrooms was significantly related to the number of homemakers with this problem at the .044 level. Those with three bedrooms had more outside storage problems than homemakers with two or less bedrooms although the two or less group had more big problems. The number of baths also was significant with homemakers who had no baths reporting the most problems with outside storage. Other significant variables were separate dining, recreation or family room, and type of house. Those without separate dining and a recreation or family room had more of this problem than homemakers with these rooms. In looking at the type of house, mobile home dwellers had considerably more outside storage problems than homemakers living in apartments or single family units.

The strongest relationship was seen with the condition of the house. Those with poor and very poor houses had a much higher percentage of outside storage problems.

Relationships between Outside Storage Problems and Extension Contacts

When considering if the numbers of contacts with Extension had any relationship with the problem of outside storage, none of the five variables studied was significant.

Relationships between Houses That Cost Too Much to Heat and Cool and Homemakers' Characteristics

When looking at the six personal and family characteristics, all were significantly related to the number of homemakers who reported that their houses cost too much to heat and cool except marital status. Although it was not significant, a slightly higher percentage of widowed homemakers felt they had this problem as compared to the other groups.

The age of the homemaker was related to this problem at the .037 level. Over half of the 50 to 59 age group and the over 60 age group reported that their houses cost too much to heat and cool. This percentage was lower for the younger groups.

Employment was significant at the .024 level. The retired group had the highest percentage of homemakers with this problem.

Education, family income, and number in household were significantly related to the problem of houses that cost too much to heat and cool at the .001 level. When looking at the education level, those that had completed less than 8 years of schooling had the highest percentage of this problem. The family income variable indicated that the medium group (\$10,000-\$14,999) had the most problems. In comparison, the lower income groups had higher percentages of homemakers reporting this as a big problem. The last variable, number in household, indicated that households of five and more had more problems with the expense of heating and cooling. This was followed by one person, three persons, and two person households. The group with the lowest percentage reporting this problem was the four person household.

Relationships between Houses That Cost Too Much to Heat and Cool and Characteristics of Present House

Of the fourteen characteristics surveyed, all were significantly related to the number of homemakers who had houses that cost too much to heat and cool except the location of the house. Rural farm homemakers reported the highest percentage of this problem although it was not significant.

The strongest relationship was shown between this problem and the condition of the house. Those houses in poor and very poor condition had the highest number of homemakers reporting this problem.

Seven of the variables were significantly related to the problem at the .001 level. With tenure, home owners had significantly fewer problems with houses that were expensive to heat and cool than other types of tenure. In looking at the years lived in the house, those who had resided over 20 years in their houses had the highest incidence of this problem. With age of the house, older houses, especially those 30 or more years old, had higher percentages reporting this problem. Also, those homemakers who did not have a laundry room, central heat, or central air were more likely to have this problem. Those who had a room air conditioner reported more problems with the cost of heating and cooling their houses than those without a room air conditioner.

Number of bedrooms, number of baths, separate dining, and recreation or family room were also significantly related to this problem although to a weaker degree. Homemakers with four or more bedrooms reported slightly more problems than those with two or less

bedrooms. With the number of baths, homemakers without a bath in their house had the largest number with this problem. Also, those without separate dining and a recreation or family room had more problems with the cost of heating and cooling their houses than those with these rooms.

Relationships between Houses That Cost Too Much to Heat and Cool and Extension Contacts

Among the six variables, the number of meetings attended and total Extension contacts were significantly related to homemakers with houses that cost too much to heat and cool. Homemakers who attended 10 to 12 Extension meetings and those who attended over 13 meetings had the highest percentages of homemakers with this problem. For total contacts, those with 1 to 12 contacts reported the most problems with houses that cost too much to heat and cool.

The numbers of office visits, telephone calls, and newsletters were not related to homemakers with this problem.

Relationships between Houses That Were Expensive to Maintain and Repair and Homemakers' Characteristics

All of the six personal and family characteristics were significantly related to the number of homemakers reporting that their houses were expensive to maintain and repair. The Chi Square test indicated the strongest relationship with family income. Those with lower incomes had the highest percentages reporting this problem. As income increased, fewer homemakers had a problem with the expense of maintenance and repair.

Marital status, age, education, employment, and number in household also showed significant relationships with this problem. With marital status, the widowed homemakers reported the most problems with this variable followed closely by separated and single homemakers. Divorced homemakers had more reporting this as a big problem than the other groups.

In looking at age, the number of homemakers with this problem increased as age increased. With education, those with less education generally had more homemakers with this problem than those completing higher levels of education. Retired homemakers indicated they had more problems with houses that were expensive to maintain and repair than other homemakers. Five person households had the largest percentage of homemakers reporting this problem. This was followed by one person, three person and two person households.

Relationships between Houses That Were Expensive to Maintain and Repair and Characteristics of Present House

All of the fourteen characteristics of the present house were significantly related to the number of homemakers reporting that their houses were expensive to maintain and repair except tenure and number of bedrooms. With tenure, the home owners and those with other types of tenure reported about the same number with this problem. Although not significant, those with two or less bedrooms had slightly more problems with the expense of maintenance and repair than the other groups.

Of the other variables, the strongest relationship was shown with the condition of the house. The percentage of homemakers

reporting this problem increased as the condition of the house deteriorated. Age of the house also had a strong relationship to this problem. As the age of the house increased, the number of homemakers with this problem increased.

Location, years in house, number of baths, recreation or family room, laundry room, central heat, central air, and room air conditioner were all significantly related to this problem at the .001 level. With location, rural farm homemakers reported more problems with houses that were expensive to maintain and repair than those living in other locations. The number of years lived in a house showed that this problem increased as homemakers lived longer in their houses.

In looking at the specific rooms, those with no baths in their houses had considerably more problems with the expense of maintenance and repair than those who had baths. One bath houses had more homemakers with this problem than those with more baths. Those without a recreation or family room had a higher percentage reporting this problem than those having such a room. This also applied to those without a laundry room.

Homemakers without central heat and central air reported more problems with the expense of maintenance and repair than those with a central system. With the room air conditioner, those with one had more of this problem than those without one.

The type of house was significantly related at the .031 level. Again, mobile home dwellers had the highest percentage of homemakers

with this problem. However, this was followed by single family units while apartment dwellers reported the fewest number with this problem. Separate dining was significant at the .007 level. Those without separate dining had more problems with their houses being expensive to maintain and repair than those with separate dining.

Relationships between Houses That Were Expensive to Maintain and Repair and Extension Contacts

The total numbers of Extension contacts was significantly related to the number of homemakers with houses that were expensive to maintain and repair at the .006 level. The groups that made more contacts had the highest percentages of homemakers reporting this problem.

The numbers of meetings attended, office visits, telephone calls, or newsletters received were not significantly related to this problem.

IV. IMPLICATIONS

Since it was found that younger homemakers experienced the most housing storage problems, and that older homemakers had the most problems concerned with housing expense, and that homemakers who had completed less than 8 years of schooling reported more housing problems than those with higher levels of education, and that lower income families who earned less than \$5,000 experienced more housing problems than higher income families, and that larger families of five or more members had more housing problems than smaller families; therefore, it is implied that these are the personal

characteristics that seem to influence housing problems and that all these characteristics can be related to the income level of the household since income is often less for younger homemakers, older homemakers, those with less education, and larger families.

Since it was found that mobile home dwellers had considerably more housing problems than those who lived in other types of houses, and that homemakers who lived in houses that had two or less bedrooms, one or no baths, no separate dining, no recreation or family room, no laundry room, no central heat, no central air, and a room air conditioner reported more housing problems than other homemakers; therefore, it is implied that these are the housing characteristics that appeared to influence housing problems and that all these characteristics can be related to the size of the house with smaller houses having more housing problems.

Since it was found that homemakers who lived in houses over 30 years old had more housing problems than those who lived in newer houses and that those who lived in houses in poor condition experienced a large number of housing problems where the housing problems increased as the condition of the house deteriorated; therefore, it is implied that these two characteristics strongly relate to the incidence of housing problems.

V. RECOMMENDATIONS

From this study, it is evident that appropriate county Extension programs on housing should be directed toward specific audiences which have been identified as having particular housing problems. Those

with houses in poor condition need programs on home repair and maintenance. Young homemakers with large families and small houses need storage ideas. Older homemakers who are retired need information to help reduce the costs involved with housing. Persons living in mobile homes need programs concerning storage and expense problems.

Further study is recommended to identify differences among the audiences and to determine the extent to which the various personal and housing characteristics influence the occurrence of housing problems.

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APPENDIX

LAND-USE BOND

100% CASH

THE AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF TENNESSEE
KNOXVILLE, TENNESSEE

1981 HOUSING SURVEY
(See Instructions on Last Page)



Name of Respondent _____ Address _____

Name of County _____ Date _____

1 Card Number
(1)

(2) (3) (4) County TEMIS Code Number

(5) (6) Respondent Number (Leave blank)

(7) Audience: 1 = HDC Members; 2 = Young Non-Club Homemakers; 3 = EFNEP;
4 = 4-H Parents or Leaders; 5 = Housing Program Homemakers;
6 = All Homemakers; 7 = Special Interests; 8 = Other (please
specify) _____

PART I - GENERAL INFORMATION

(8) Your sex (1 = Female; 2 = Male)

(9) Marital status (1 = Married; 2 = Divorced; 3 = Widowed; 4 = Separated;
5 = Single)

(10) Your age (Agent may use personal judgment) (1 = Under 20; 2 = 20 to 29;
3 = 30 to 39; 4 = 40 to 49; 5 = 50 to 59; 6 = 60 and over)

(11) Your highest level of educational achievement (Agent may use personal
judgment) (1 = Less than eight years; 2 = 8 to 11 years; 3 = High
school graduate; 4 = Some college; 5 = College graduate)

(12) Employment status (1 = Employed full time; 2 = Employed part time;
3 = Unemployed; 4 = Full time homemaker; 5 = Retired)

(13) Optional: Total family income, before taxes, in 1980
(1 = under \$5,000; 2 = \$5,000 thru \$9,999; 3 = \$10,000 thru
\$14,999; 4 = \$15,000 thru \$24,999; 5 = \$25,000 and over)

(14) Number of people in household (Actual number)

*Coding Instructions:

- (1) Fill each column with a number and right justify.
- (2) A zero (0) = none.
- (3) A nine (9) in any column = do not know.

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August/81

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PART II - INFORMATION ABOUT PRESENT HOUSE

- (15) _____ Geographic location (1 = Urban; 2 = Rural farm; 3 = Rural non-farm)
- (16) _____ Type of home in which you now live (1 = Single family; 2 = Apartment in a house; 3 = Apartment building; 4 = Duplex; 5 = Mobile home--single or double wide; 6 = Mobile home with attached structure)
- (17) _____ Tenure (1 = Owns home; 2 = Rents home; 3 = Lives rent-free with someone else; 4 = Other (please specify) _____)
- (18) _____ (19) _____ Number of years you have lived in present house (actual number)
- (20) _____ Age of house (1 = 0 to 4 years; 2 = 5 to 9 years; 3 = 10 to 19 years; 4 = 20 to 29 years; 5 = 30 years or more)
- (21) _____ Condition of house (1 = Excellent; 2 = Good, needs minor repairs; 3 = Adequate, needs many repairs but mostly minor ones; 4 = Poor, needs some major repairs; 5 = Very poor, needs to be torn down)
- (22) _____ Number of bedrooms in home (actual number)
- (23) _____ Number of baths in home (use $\frac{1}{2}$ if bath not complete with lavatory, toilet, tub or shower)
- (24) _____ Separate dining room (1 = No; 2 = Yes; 3 = No answer)
- (25) _____ Family or recreation room (1 = No; 2 = Yes; 3 = No answer)
- (26) _____ Utility or laundry room (1 = No; 2 = Yes; 3 = No answer)
- (27) _____ Does house have central heat (1 = No; 2 = Yes; 3 = No answer)
- (28) _____ Does house have central air conditioning (1 = No; 2 = Yes; 3 = No answer)
- (29) _____ Does house have room air conditioner (1 = No; 2 = Yes; 3 = No answer)

PART III - POSSIBLE PROBLEMS WITH HOUSE

(1 = Not a problem; 2 = Slight problem; 3 = Big problem)

- (30) _____ Too small--not enough space inside
- (31) _____ Not enough rooms

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(1 = Not a problem; 2 = Slight problem; 3 = Big problem)

- (32) Not enough bathrooms
- (33) Room arrangement does not provide adequate privacy from other members of household
- (34) Rooms poorly arranged so that activities of one person interfere with others
- (35) Kitchen is inconvenient to work in
- (36) Need more storage space in kitchen
- (37) Need more storage space in bedrooms
- (38) Is poorly insulated
- (39) Costs too much to heat and cool
- (40) Badly needs some repairs
- (41) Maintenance and repairs cost too much
- (42) Outside appearance is not very nice
- (43) Need more outside storage space
- (44) Inside is dull and uninteresting
- (45) Lack of privacy from neighbors
- (46) Too big--too much space inside
- (47) Not a very comfortable or relaxing place in which to live

Other (please specify) _____

Other (please specify) _____

Last year, what did you consider to be your major housing problem?

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PART IV - HOUSING INFORMATION

Sources of housing information received last year
(0 = Not a source; 1 = Was a source, but not particularly helpful;
2 = Source that was particularly helpful)

Radio
(48)

Television
(49)

Newspaper
(50)

Magazines
(51)

Extension housing publications
(52)

Other (please specify) _____
(53)

Would you be interested in receiving information in any of the
following areas? (1 = No; 2 = Yes; 0 = No response)

Repairs and maintenance
(54)

Making home more energy efficient
(55)

Kitchen remodeling
(56)

Remodeling (please specify) _____
(57)

Building a house
(58)

Buying a house
(59)

Over the past 12 months:

How many Extension meetings did you attend?
(60) (61)

How many visits did you make to the county office?
(62) (63)

How many telephone calls did you make to the county office?
(64) (65)

How many newsletters did you receive from the county office?
(66) (67)

VITA

Ann L. Cherry, daughter of Mr. and Mrs. W. H. Lazenby of Dickson County, was born on July 19, 1949. She was graduated from William James High School in White Bluff in 1967. She entered The University of Tennessee at Knoxville, in 1967 majoring in Home Economics. During 1969, she taught elementary school after which she completed her Bachelor of Science Degree in Home Economics at Austin Peay State University in Clarksville in 1973.

She was employed in November, 1973, with the Agricultural Extension Service in Montgomery County where she worked with 4-H youth. In 1979, she transferred to Jefferson County where her responsibilities included adult and youth home economics.

She is a member of Gamma Sigma Delta, Epsilon Sigma Phi and the Association of Extension 4-H Workers. She is active in church work and the Parent Teacher Association.

Her husband, Myron, is from Hickman County and they have two children, Michael and Kimberly.