OWNERSHIP AND USE OF HOME EQUIPMENT AS RELATED TO EMPLOYMENT OR NON-EMPLOYMENT STATUS OF WIVES/MOTHERS IN OKLAHOMA

By

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CHAPTER I

INTRODUCTION

Throughout the early years of human history, people tried to improve their way of living. They created utensils and artifacts to fulfill the needs of their every day life. The things they used are the major source of information the archeologists and historians use to determine the kind of living or behavior they had, and thus, their culture.

Home appliances played an important role in the history of the American household. Changes and improvements of the different tools and appliances from early colonial years until now can be observed. Those changes and improvements had been in accordance with the needs of each particular time, area of residence, and way of living. It must be stated, however, that technology played a vital role in the improvement of home appliances. For example, the laundry iron of the early years was heated by coal, charcoal, or directly on the stove. Thanks to the advances of technology, the first electric iron appeared in 1882. The early broom evolved as a vacuum cleaner in 1876 (Lifshey, 1973). These technological improvements were readily accepted by homemakers.

"The era of inventions has thus opened an outlook through which we may see the happy solutions to many problems (of housekeeping) . . ."

(Brun, 1896, p. 159). Brun (1896) continued: ". . . the prize is great and the calling high, . . . we have espoused the genius of inventions and welcome all time, waste, and toil savers as deliverers from the incubus which rests upon homemaking" (p. 161). At the turn of the century the virtues of technology were being espoused, lightening drudgery.

The use of electricity in home appliances facilitated even more the acceptance and, thus, the demand for the appliances. Andrews (1931) said that "electricity applied to additional household tasks presented the greatest single opportunity for progress in housework" (p. 471). Forty-two years later, Lifshey (1973) said "(electrical) power, along with an overwhelming array of electrical housewares which perform countless functions, have now become the servants of man" (p. 224). During World War II the electrical appliances were said to play an important role as time- and labor-saving devices for women who had to work outside the home, in farm or other areas where there were a shortage of workers. "Electrical household equipment can save much time and energy on the part of women and girls, and they, in turn, can be used to carry forward other phases of productive work" (Nale, 1941, p. 644).

It might be possible that the improvement in household equipment, especially the electrical appliances, facilitated women, especially wives, to enter the labor force in increasing numbers. In 1940 the proportion of wives working outside the home was 14.7 percent of the total women in the labor force in the United States. This proportion increased to 21.7 percent by April, 1944. Despite a small reduction

to 20 percent in 1947, this proportion has been steadily increasing. By 1969 the proportion of wives in the labor force nearly doubled that of 1947. In 1977, when the data for this study was being collected, wives working outside the home were 46.6 percent of the total women in the labor force (Bureau of the Census, 1978, p. 404).

With the participation of wives in the labor force, the family income increased. This made it economically feasible for many families to acquire those pieces of equipment needed at home to ease household tasks, which, in turn, made it easier for the wife to work outside the home. The demand for electric appliances increased throughout the years. Reports from 1946 reveal that there was a need to satisfy the demand for new household equipment.

> The tremendous market of appliances must be satisfied as soon as possible. During the war many appliances have either worn out or else are in such bad condition as to be scarcely usable. These must be replaced with new ones. Also, those people who established homes during the war need appliances hitherto unobtainable. Finally, there are those who until now have never had enough money to purchase needed equipment (Barazar, 1946, p. 11).

Tibbets (1954) said that "an increase in the proportion of families owning specific items is an indication of the rise in the level of living" (p. 1133). Thus, the ownership of equipment had been related to the socioeconomic status of the family. This pattern still remains today.

In 1950, the percentage of equipment most owned by households was as follows: refrigerators, 75 percent; radios, 75 percent; cooking stoves, 70 percent; vacuum cleaners, 60 percent; washing machines, about 70 percent; and sewing machines, about 45 percent (Tibbets, 1954, p. 1133). The ownership of home equipment has been steadily increasing during the three decades between 1950 and the present.

According to research by Appliance Manufacturer Magazine (1979), more than 70 percent of American families bought at least one major appliance since 1975. Twenty-six percent of the families bought at least one major appliance (e.g., refrigerators, washing machines, clothes dryers, and dishwashers) in 1978.

The acquisition of home appliances is a useful investment if the family purchases are in accordance with the family needs and also the equipment purchased will be used to its full capacity. It may be that the purchase of a selected home appliance is influenced by advertising, or because it is the latest model on the market. As Barazar (1946) stated: "An appliance considered by itself may be very efficient, durable and safe; but when considered in terms of the woman who uses it, its performance may be poor" (p. 12). Very often the appliance lacks the adequate use for which it was designed, because families lack information in relation to the proper use and care of such an appliance. Consequently, it may not be the labor saving device it is intended to be, but a waste of money.

In the nineteenth century when machinery had been already espoused to housework, a need existed for housewives to be trained in the use of the equipment. Brun (1896) stated: "The great cry of our day is 'Education in the work!' . . . the educating effect of machinery is nowhere more needed than in housework" (p. 161).

During World War II, the production of home equipment declined. Consequently, there was a shortage of appliances. Nevertheless, as mentioned earlier in this chapter, they played an important role in the household when defense programs were designed. Again, the need

for education had been re-emphasized, especially in the use of the equipment for those families who owned such equipment.

The role of home economists was of vital importance to meet these needs for education.

> To develop programs to help the owners to use this equipment to the best advantage offers a real challenge to home economists. There is a big job to be done in training on the various levels, and in the development of programs and methods for effective dissemination of fundamental information on selection, operation and care of electric household equipment (Nale, 1941, p. 646).

The need for education for consumers has not changed. Advances in technology has changed largely in the home appliance industry, therefore, families need to be educated in the use of appliances. Programs should be developed by home economists and other educators to help accomplish this objective. However, the family behavior in the purchase and use of equipment must first be researched in order that the educators can develop adequate programs which in turn can help the families in the efficient purchase and use of the equipment.

Purpose and Objectives of the Study

The purpose of this study is to ascertain the relationship between the ownership and use of selected household equipment and employment or non-employment status of wives/mothers in selected Oklahoma families. The objectives of this study are as follows:

1. Assess the presence and use of household equipment in selected Oklahoma families.
2. Identify the differences in types of household equipment owned and employment or non-employment status of wives/mothers in selected Oklahoma families.

3. Determine the frequency of use of household equipment with employment or non-employment status of wives/mothers.
4. Make recommendation for further research.

Hypotheses

The hypotheses were as follows:

1. There was no significant difference in the ownership of selected home appliances and the employment or non-employment status of wives/mothers.
2. There was no significant difference in the frequency of use of selected home equipment and the employment status of wives/mothers.

Assumptions and Limitations

The following assumptions were made:

1. The respondents would provide accurate information in the responses to the questionnaire and interviews.
2. The week chosen to administer the instrument was a typical week for each family.

The following limitations applied to the study:

1. The study was limited to 210 families in an urban area of Guthrie and a rural area of Alfalfa County in Oklahoma.
2. The sample was composed of families with only two adults and two children.

Definitions

The following definitions were utilized for this study:

Employed Women - were women who work for pay 15 hours or more a week.

Wives/Mothers - were women who are married with the husband present in the home and have two children aged 17 years or less.

Home Equipment - referred to those selected electrical appliances used as labor saving devices in housework and/or which exerted some utility service to the family.

Household or Family - the term referred to husband-wife households with children living at home (Walker and Wood, 1976). For this analysis, the household or family consisted of two parents and two children.

Housework - tasks involved in housekeeping and managing the house (Webster's New International Dictionary, 1966).

CHAPTER II

REVIEW OF LITERATURE

In the past decades, a number of studies have been done in relation to home equipment. The Bureau of the Census and the Bureau of Labor Statistics have conducted studies related to the ownership of equipment by households. Manufacturers usually survey consumers in order to identify preferences and attitudes toward different types of appliances. Business researchers study the consumer behavior related to purchase of different household goods.

The present chapter includes a review of research literature related to ownership and human resources, home equipment as a symbol of status, use of equipment, and purchase decisions regarding home equipment. The findings of these studies could be compared with those of the present study in order to draw further conclusions. Because this study explores the ownership and frequency of use of household equipment by employed and non-employed women, a section on employment patterns of wives in the United States is also included.

Ownership and Human Resources

Labor Saving

The primary objective of home appliances was to save labor in carrying out household work.

> Less of the drudgery of hard labor is the first effect of machinery in the household. A higher standard of living results, as the energy released from hard labor is applied to secure other satisfactions desired (Andrews, 1931, p. 465).

Time Saving

Little information was available related to the changes in time spent in household tasks due to the introduction of home equipment; however, it had been observed that the presence of appliances in the home had no effect on the reduction of time spent in household work. Johnston (1965) pointed out that the new standard of living had created new responsibilities for the homemaker. Consequently, she could not enjoy leisure time even though she had more labor-saving devices. "In spite of the many labor-saving devices, today's homemaker is seldom a lady of leisure" (p. 1). Johnston continues by saying:

> . . . today many women feel that in addition to homemaking responsibilities they should contribute to the family income, take part in community activities and have cultural interests as well. Standards for homemaking tasks have changed, too. Food is easier to prepare but more variety is expected. Standards of personal hygiene and household cleanliness are higher than ever before (p. 1).

Walker and Woods (1976, p. 32) stated:

> Contrary to the opinion of many, average time used by wives in household work has not been drastically reduced because of technological developments in automatic equipment such as dishwashers, washers and garbage disposers.

Walker and Woods pointed out that "much of the work of the family cannot be automated" (p. 32). As an example the authors mentioned child care time which has increased due to the necessary chauffeuring of children to educational and social activities.

In 1929, Hewes (1930) studied the ownership of household equipment as related to the changes in the everyday routine activities

within the home. The study was conducted at Mount Holyoke College, Massachusetts, with 929 students who represented the same numbers of homes in the United States. Each student was asked to obtain information on the use of appliances for food preparation and preservation, construction and laundering of clothing, and those used for cleaning the house. The study revealed that the homemaker spent more time in housework due to the presence of the appliances in the home. It was assumed by the author that with the aid of new electrical appliances more goods were prepared in the home rather than purchased in the store. Additionally, it was also found that the supply of household servants decreased with the introduction of electrical appliances. Hewes (1930) further stated:

> . . . 94.1 percent of the 764 respondents had laundry irons, 91.4 percent had vacuum cleaners, and 52.2 percent had washing machines. Sewing machines were owned by 36.5 percent and 21.9 percent of the families owned refrigerators (p. 242).

Hall and Schroeder (1970) conducted a study related to the time spent in household tasks and its relation to family and housing characteristics among 1,200 homemakers in Seattle, Washington. Information about use of home equipment was included. The findings showed no significant effect of the ownership of appliances "nor any particular kind of appliance" and the hours per week spent at all household tasks. The authors also found that "the total hours per week spent by homemakers at all household tasks had remained almost unchanged since 1920" (p. 28).

Home Equipment as a Status Symbol

Among many societies, the ownership of appliances had been

regarded as a symbol of status. Carman, Manzara, and Kaczor (1965) studied the distribution of various appliances among the population in the United States. The items studied were wringer washers, automatic washers, clothes dryers, food freezers, and television sets. The data were collected from the 1960 Census of Population and included 8,616 families. It was observed by the authors that there was a tendency to accumulate major appliances in the home, which they classified as "a 'taste' phenomenon." It was also found that families purchased appliances in accordance with their economic position, and no purchases were made until the family "had 'subjectively' depreciated the service given by the product" (Carman et al., 1965, p. 124). The subjective depreciation was determined by "family tastes, social position, psychological configuration and perceived economic condition" (Carman et al., 1965, p. 124). Lugo (1978, p. 2) said that "the improvement of Puerto Rican families to a higher economic level is many times reflected by the increase in the number of electrical appliances owned."

Demographic and Socio-Economic Characteristics of Appliance Owners

The ownership of home equipment was related to some family characteristics. Factors such as age, income, locale of residence, and family size affected the type of equipment owned.

Walker and Woods (1976) found in Syracuse, New York, that one-third of the households interviewed where there were employed wives had dishwashers, in contrast to one-fourth of those households where wives were not employed. Ownership of dishwashers increased slightly

with the number of children in the family. The ownership of a freezer increased as the age of the homemaker increased. Pressure cookers were owned mostly by wives aged 40 and over. The study did not find a significant relationship between the ownership of equipment and socio-economic level, except for dishwashers and garbage disposers which ownership ranged "from 60 to 45 percent for families on the highest level to 5 percent for families on the lowest level" (p. 76).

The 1971 Consumer Buying Survey of the U.S. Bureau of the Census (1972) examined the ownership of selected household durables. It was found that 74.0 percent of the surveyed households owned washing machines; 46.9 percent owned clothes dryers; 33.2 percent owned a separate food freezer; 31.9 percent of the households owned one or more room air conditioners; 21.3 percent owned dishwashers; and 13.0 percent owned a central air conditioner. The percentages for kitchen range and refrigerator ownership were 98.7 and 99.1, respectively.

The survey reported a positive relationship between the income of the family and the ownership of dishwashers, air conditioners, and clothes dryers. The higher the income ($15,000 or over), the more likely the families were to own these items. Age of household head was found to be related to the ownership of the surveyed items. Households with the head of the family between 25 and 44 years of age were more likely to own these items than households with the head 65 years or over, and 25 years or under. Ages of 45 to 64 were not pointed out in the study. Households with husband-wife present and presence of children over five years of age were more likely to own washing machines, clothes dryers, freezers, and central air conditioners.

Race, home ownership, and locale of residence were related to the ownership of home equipment. White families owned equipment more frequently than Black families. Homeowners owned more clothes dryers, freezers, dishwashers, and one and one-half times more air conditioners than renters. Surburban families owned more clothes dryers, dishwashers, and central air conditioners than those in central cities or outside the metropolitan areas. Non-metropolitan households were more likely to own freezers than either of the other two groups.

Henerfauth (1973) investigated the ownership and utilization of selected household equipment among 30 employed and 30 non-employed homemakers in Carbondale, Illinois. She found there was no significant difference in the items owned between the two categories of employed and non-employed homemakers. Employed homemakers owned more electric blenders, electric waffle bakers, electric grills, and electronic ranges. A total of 90 percent of both employed and non-employed homemakers owned an electric mixer, electric toaster, vacuum cleaner, electric coffeemaker, and electric skillet.

In her study of the ownership of durable goods, Cramer (1961) surveyed 1,200 households in the United Kingdom in 1953. The main purpose of the study was to ascertain the determinant factors for the ownership of cars, television sets, washing machines, and refrigerators. Demographic factors such as size of family, age of head, and locale of residence were considered. The author reported that no correlation was found between the above demographic factors and the ownership of refrigerators. There was a positive correlation between family size, locale of residence, and the possession of washing machines and television sets.

Hewes (1930, p. 242) observed a positive correlation between size of the family and the number of appliances owned; the larger the family the more appliances were present in the home. Larger families bought and used more washing machines, dishwashers, and irons.

Purchase Decision Making

One of the areas most studied in relation to appliances was that of purchase and consumer behavior. In seeking new market opportunities, manufacturers focus specific attention upon consumer behavior and the factors influencing their purchase decisions. Government and educative agencies study consumer behavior and decision making in order to develop educative programs to help the consumer make wise choices in the marketplace.

Ferber (1955) studied the factors influencing durable goods purchased among 150 families in Decatur, Illinois. The study revealed that electrical appliances accounted for more than one-fourth of the total purchases. Most of the purchases reported in the study were made by families of two to four members where the income ranged from $2,600 to $6,600. The age of the head of the household was between 20 and 50 years of age, and was engaged either in professional and managerial work or skilled labor. A considerable number of purchases were planned ahead, but many of the respondents reported they purchased on impulse. Lower and higher income level families were most likely to buy on impulse, especially those families in the higher income. It was also found that fewer families planned purchases for appliances than for other durable goods. The families' economic status, their financial expectations, and their general

outlook for the future were among the major factors influencing the expenditures on durable goods.

Lackey (1967) studied the family's decision making in the purchase of nine items of household equipment among 67 young homemakers whose husband studied at Oklahoma State University. The most frequent items purchased among these households were televisions and vacuum cleaners. The other items purchased in order of frequency were: refrigerator; range, stereo or hi-fi; room air conditioner; clothes washer; sewing machine; and clothes dryer. One-third of the number of items had been acquired as gifts, one-fourth were purchased used, and two-fifths were purchased new.

The major sources of information prior to purchase were advertising and friends. The other sources were manufacturers' handouts, parents, magazine or newspaper publications, consumer publications, and home economics classes. Cash was preferred to credit as the method of payment for the purchases. The price and the reputation of the brand had the most influence upon the purchase decision.

Over one-half of the respondents did not consider saving time or money the important reason for the purchase. They reported it was only something they wanted. This was true for television, stereos, and air conditioners. More than one-half of the purchases were planned. Less than one-half were made on impulse. All 67 young homemakers interviewed reported long-range plans made for future purchases of household equipment.

Keith (1966) studied the attitudes and opinions related to household equipment by 111 students of home economics at Oklahoma State

University. The factors influencing the choices of household equipment were: need, which was the most important; efficient performance; care and convenience; durability; variety of jobs performed by the equipment; cost; brand; cost of upkeep; guarantee; and appearance. The reason the student wanted household equipment was ranked and listed in order. They were: to conserve time; to make housework more enjoyable; to save physical labor; to make the home safer; and to save money.

Use of Equipment

Very few studies have been carried out in relation to the use of home equipment. If the purchase of appliances involved a major expenditure for the family, it must serve the family to its full capacity.

Henerfauth (1973) found that the equipment most used in order of frequency was: automatic clothes washers; waste disposals; clothes dryers; dishwashers; electric toasters; electric coffee makers; electric skillets; electronic ranges; electric grills; electric mixers; vacuum cleaners; electric blenders; electric waffle bakers; and fondue pots. The study revealed a relationship between the use of home equipment and the age of the homemaker, size of household, adequacy of facilities, and amount of meal preparation.

Malone (1967) studied the patterns of purchase and use of portable electric appliances used for meal preparation among 105 families in Marion, Illinois. Four differing income-level of families were selected for the study. It was found that the most frequently used appliances for meal preparation were the toaster, coffeemaker, can

opener, portable mixer, frypan, and standard mixer. The use of the appliances was related with the food preferences of the family.

Tibbets (1964) reported the findings of the Survey of Consumer Expenditures conducted by the Bureau of Labor Statistics in 1960-61 related to new measures of the distribution of house furnishings and equipment, and the length of time the families had owned them. It was found that there was a very rapid acceptance of the new types of household equipment. Most items owned and used were those generally considered necessities: refrigerator; washing machine; and cooking stove. Television sets were also among those items most used.

Walker and Woods (1976) reported on the frequency of use of kitchen equipment as related to the employment status of homemakers. They found that equipment was used a little less when the wives were employed. They also reported that the frequency of use of dishwashers, ovens, and electric mixers increased with the number of children present in the family.

Employment Trends of Wives in the United States From 1940 to 1947

Wives participated in the labor force since the colonial era, but the number of employed wives from that time until the first half of the twentieth century was very small. It was not until 1940, and the following years, especially during World War II, that the porportion of wives working outside the home had its greatest increase. The Bureau of the Census (1978) indicated that in 1940 the proportion of wives in paid jobs was 14.7 percent of the total women in the labor force. This proportion increased to 21.7 percent by April, 1944.

Despite a small reduction to 20 percent in 1947, the proportion of wives in the labor force continually increased. In 1977, the proportion of wives working outside the home was 46.6 percent of the total women in the labor force.

Summary

A general review of literature revealed a limited number of studies related to ownership and use of home equipment. Most studies on household goods have given emphasis to the purchase decision and consumer behavior in the market place. Little information was available with relation to the use of the equipment once purchased.

Home appliances were viewed as labor and time saving; nevertheless, the time spent in household work by full-time homemakers today remains the same as 50 years ago. Several authors speculated that this is due to the new responsibilities that the improved standard of living required of the homemaker.

The ownership of home appliances had been related with social status. The purchase decisions were then affected by social position, desired style of living, and economic condition. Variables that most affected the ownership and use of appliances were size of the family and income level. Other variables were: locale of residence, age of homemaker, and presence of children in the household.

CHAPTER III

RESEARCH PROCEDURE

Introduction

This study was part of a larger study, "An Investigation of Urban/Rural Families' Time Use," in which 11 states participated. The states participating were: Alabama, California, Connecticut, Louisiana, New York, North Carolina, Oklahoma, Oregon, Utah, Virginia, and Wisconsin. The data for Oklahoma had been previously collected by graduate students of the Division of Home Economics, Oklahoma State University. The data were collected from September, 1977 to December, 1978.

Purpose of the Study

The purpose of the study was to ascertain the relationship between the ownership and use of selected home appliances and the employment or non-employment status of wives/mothers.

The hypotheses were as follows:

1. There was no significant difference in the ownership of selected home appliances and the employment or non-employment status of wives/mothers.
2. There was no significant difference in the frequency of use of selected home equipment and the employment or non-employment status of wives/mothers.

Sampling Procedure

The sample of the study consisted of families residing in Alfalfa County and the city of Guthrie, both in Oklahoma. Each family was composed of two adults and two children. The sample size was 210 families.

Two-stage stratified sampling was used in the study. The first stratification was rural or urban classification. A sampling frame was created which listed two parent, two children families in Alfalfa County and Guthrie, Oklahoma. The names for this list were obtained from church lists, school records, city directories, and hospital birth records. The sample was further stratified by age groups according to the age of the youngest child. Groups were formed as follows: 1) less than one year; 2) one year, but not yet two years; 3) two to five years; 4) six to 11 years; and 5) 12 to 17 years. From each of these groups 21 families were selected at random to represent each day of the week. The year for the study was divided into three segments: spring, fall, and winter. Thirty-five families were selected to be interviewed for each segment; seven in each age group (Appendix A). A random numbers table was used to select the families. One hundred and five families were selected from rural-farm and non-farm areas. Another 105 families were selected from urban-suburban areas.

Each family selected from the stratified random sample was sent a letter which explained the purpose and procedure of the study and requested their participation. After the letter was sent, the interviewer contacted each family by telephone to set up an appointment

for the first interview. If, on the first call, no contact was made, the interviewer called as many as three times, keeping a record of the attempts to reach the family. After the third attempt without any success, the family was omitted. A total of 535 families were contacted in both rural and urban areas. In Guthrie, where the urban subsample was selected, 314 families were contacted. The response rate for this area was 54.97 percent. Alfalfa County was area selected for the rural subsample. There were 221 families contacted, and the response rate was 71.43 percent. The response rate for both areas was 62.13 percent.

Instrumentation

The method used to collect the data was the home interview. There were two instruments: a questionnaire and a time chart figuring 24 hours divided into 10 minute segments (Appendix B). The interview was conducted by two interviewers trained in interviewing procedures in order that the data would be comparable. The questionnaire for the larger study was developed by the researchers of the Time Use Study conducted in 1967 at Cornell University, New York.

The time chart included 17 categories of household, employment, and personal activities on the vertical side. Such categories were food preparation and clean up, shopping and management, house and yard care, paid work, school and organizational activities, personal care, and social-recreational time.

The homemaker was the respondent for the family. Most interviews were conducted at home; however, some were done outside the home if this was more convenient for the respondent. In the first interview,

information was gathered in relation to family composition, ages, and roles assumed by each family member in the household. Variables such as age of adults, education, employment, and housing types were unknown until the first interview.

A second interview was done in which information about meals prepared, services purchased by the family, civic services, and child care facilities utilized during the week previous to this second interview was collected. The information included the appliances owned and used by the family each day of the week. A record was kept of the hours the family members worked the week of the interview and the usual number of hours they worked. In addition, variables were recorded about individual and family income levels, occupation and educational level of the husband and wife, type of housing, and the location and size of the yard that was cared for by family members.

The data were coded so that a record of total time in various household tasks was compiled for each member of the family above six years of age. These data will not be used in the present study. Only information related with the ownership and use of home equipment will be included. The information asked for the present study is presented in Appendix C.

Data Analysis

Information for the larger study was coded onto electronic scanner sheets and from there transferred to computer tape. Computer cards were created for management of data for this study of home appliances.

Percentage frequencies were used to describe employment or non-employment status of wives/mothers. Percentage frequencies were also used for the socio-economic variables such as wife's education, education of the husband, occupations, and homeownership. Chi square (χ^2) was the statistical technique used to examine the relationship of type and number of selected appliances present in the home in relation to wife's employment status. The t-test was the statistical technique used to assess the frequency of use of the appliances in both groups, employed and non-employed wives/mothers.

CHAPTER IV

DATA ANALYSIS AND FINDINGS

Introduction

An analysis of the data, as well as a discussion of the findings, are presented in this chapter. The first part includes the family characteristics by area of residence and a comparison between rural and urban area. The second part analyzes the ownership of the selected appliances in the study, as related to the employment and non-employment status of wives/mothers. The third part discusses the frequency of use of the researched appliances by those families who own the appliance, and the comparison of this value to the employment and non-employment status of wives/mothers. The last section contains the summary of the chapter.

Family Characteristics

Characteristics of the family by area of residence are included in Table I. Included are age, education and occupation of husbands and wives, and the homeownership, as well as family income.

Age

From the raw data, it was observed that the ages of the wives/mothers ranged from 18 to 52 years. The highest frequency of the

TABLE I

FAMILY CHARACTERISTICS BY AREA OF RESIDENCE

Family Characteristics	Rural			Urban			Total		
	Number	Percent		Number	Percent		Number	Percent	
Age of Wives									
18-25	20	19.0	$\bar{X}$	15	14.3	$\bar{X}$	35	16.7	$\bar{X}$
26-35	57	54.3		67	63.8		124	59.0	
36-45	24	22.9	31.6	15	14.3	31.6	39	18.6	
46-55	4	3.8		8	7.6		12	5.7	
Totals	105	100.0		105	100.0		210	100.0	
Age of Husbands									
18-25	10	9.5	$\bar{X}$	10	9.5	$\bar{X}$	20	9.5	$\bar{X}$
26-35	52	49.5		60	57.1		112	53.3	
36-45	33	31.4	34.3	21	20.0	34.4	54	25.7	34.3
46-55	10	9.5		11	10.5		21	10.0	
56-65	-	-		3	2.8		3	1.5	
Totals	105	100.0		105	100.0		210	100.0	
Education of Wives									
Less than 12 years	3	2.8		9	8.6		12	5.7	
High school graduate	41	39.0		40	38.1		81	38.6	
Vocational or technical training	9	8.6		11	10.5		20	9.5	
Partial college, no degree	22	21.0		28	26.7		50	23.8	
Bachelor's degree	28	26.7		10	9.5		38	18.1	
Graduate degree	2	1.9		7	6.6		9	4.3	
Totals	105	100.0		105	100.0		210	100.0	

TABLE I (Continued)

Family Characteristics	Rural		Urban		Total	
	Number	Percent	Number	Percent	Number	Percent
Education of Husbands						
Less than 12 years	5	4.8	12	11.4	17	8.1
High school graduate	32	30.5	37	35.2	69	32.8
Vocational or technical training	5	4.8	4	3.8	9	4.3
Partial college, no degree	18	17.1	26	24.8	44	20.9
Associate degree	1	1.0	-	-	1	.5
Bachelor's degree	36	34.2	15	14.3	51	24.3
Graduate degree	8	7.6	11	10.5	19	9.1
Totals	105	100.0	105	100.0	210	100.0
Occupation of Wives						
Service workers	7	6.9	13	12.4	20	9.5
Private household workers	2	1.9	2	1.9	4	1.9
Craft and kindred workers	1	1.0	5	4.8	6	2.9
Operatives except transport	1	1.0	5	4.8	6	2.9
Transport operatives	-	-	2	1.9	2	1.0
Clerical workers	11	10.6	15	14.2	26	12.4
Sales workers	4	3.8	3	2.9	7	3.4
Managers and administrators	2	1.9	2	1.9	4	1.9
Teachers	7	6.9	3	2.9	10	4.9
Professional technical workers	4	3.8	2	1.9	6	2.9
Full time homemakers	65	62.3	53	50.4	118	56.3
Totals	105	100.0	105	100.0	210	100.0

TABLE I (Continued)

Family Characteristics	Rural		Urban		Total	
	Number	Percent	Number	Percent	Number	Percent
Occupation of Husbands						
Service workers	4	3.9	3	2.9	7	3.4
Craft and kindred workers	7	6.7	19	18.0	26	12.3
Labor (except farm)	4	3.8	5	4.8	9	4.3
Operative (except transport)	13	12.4	25	23.7	38	18.1
Transport operatives	1	1.0	7	6.7	3	3.8
Clerical workers	1	1.0	3	2.9	4	1.9
Sales workers	5	4.8	3	2.9	8	3.8
Managers and administrators	12	11.4	21	19.9	33	15.7
Farm laborers and supervisors	5	4.8	-	-	5	2.4
Farmers and farm managers	37	35.1	-	-	37	17.6
Teachers	6	5.7	4	3.8	10	4.8
Professional, technical workers	8	7.6	13	12.5	21	10.0
Full time homemakers	1	1.0	-	-	1	.5
Student or disabled	1	1.0	2	1.9	3	1.4
Totals	105	100.0	105	100.0	210	100.0
Income						
Less than $6,000	0	0	3	2.9	3	3.0
$6,000 to $7,499	1	1.0	2	1.9	3	2.9
$7,500 to $9,999	14	13.3	8	7.6	22	10.5
$10,000 to $11,999	15	14.3	6	5.7	21	10.0
$12,000 to $14,999	14	13.3	12	11.4	26	12.4

TABLE I (Continued)

Family Characteristics	Rural		Urban		Total	
	Number	Percent	Number	Percent	Number	Percent
Income (Cont.)						
$15,000 to $19,999	18	17.1	37	35.2	55	26.2
$20,000 to $24,999	5	4.8	18	17.1	23	11.0
$25,000 to $49,999	11	10.5	10	9.5	21	10.0
$50,000 and over	5	4.8	4	3.9	9	4.3
Not given	22	20.9	5	4.8	27	12.9
Totals	105	100.0	105	100.0	210	100.0
Homeownership						
Owned home	83	79.0	99	94.3	182	86.7
Rented	16	15.3	4	3.8	20	9.5
Other	6	5.7	2	1.9	8	3.8
Totals	105	100.0	105	100.0	210	100.0

total sample of wives reporting age was within the 26 to 35 years of age category (59.0 percent). The mean age for the total sample for wives/mothers was 31.6 years.

The raw data revealed that the age of the husbands ranged from 20 to 59 years. The mean age of the total sample of husbands reporting age was 34.4 years. The highest frequency of age reported for husbands was between 26 to 35 years.

Education

More than one-third (38.6 percent) of wives in both the rural and urban areas were high school graduates (39.0 percent and 38.1 percent, respectively). Wives in the rural area were more likely to have bachelor's degrees (26.7 percent) than those in the urban area (9.5 percent); however, more urban wives (6.7 percent) had graduate degrees than did rural wives (6.6 percent).

Nearly one-third (32.8 percent) of husbands of the total sample were high school graduates. The most frequently reported category of education for the rural area was the bachelor's degree (34.2 percent), while for the urban area it was high school graduate (35.2 percent). Slightly more urban husbands had graduate degrees (10.5 percent) than did rural husbands (7.6 percent).

Occupation

Respondents were asked to identify their occupation. One hundred and eighteen wives (56.3 percent) of the total sample gave their occupation as homemakers. Wives who were employed outside the home were 92 in number for the whole sample (43.7 percent). The occupations of

wives who worked outside the home ranged from service workers to professional and technical workers. The highest category reported in wives' occupation was clerical work (12.4 percent). Wives from the rural area were less likely to work outside the home than those from the urban area. Wives working outside the home from the rural area constituted 37.7 percent of this group, while from the urban area 49.5 percent were working outside the home.

The occupations of husbands ranged from service workers to professional and technical workers. The highest percentage of husbands from the rural area worked as farmers and farm managers (35.1 percent). Husbands from the urban area were engaged mostly as operatives other than transportation (23.7 percent), managers and administrators (19.9 percent), and in crafts and kindred workers (18.0 percent).

Income

One hundred and eighty-three families reported income, and in the "not given category" 27 respondents failed to report their income. Of families reporting income, 100 (47.6 percent) were from the urban area and 83 families (39.5 percent) were from the rural area. It is possible that problems of knowing the actual annual income because of its variability over the seasons prevented many farm families from giving their income. Others were hesitant to respond. The highest percentage of families of the total sample had incomes within the $15,000 to $19,999 category (26.2 percent).

Homeownership

Families from the urban area were more likely to own their

residences than those of the rural area. Ninety-nine (94.3 percent) of the urban families owned their residences. Eighty-three (79.0 percent) of the rural area families lived in an owned residence. The "other" category included mostly those houses provided by the employer for the family to live in while working for the company.

Ownership of Selected Home Appliances by Employed and Non-Employed Wives/Mothers

The appliances researched were: microwave oven, dishwasher, garbage disposer, trash compactor, automatic washing machine, clothes dryer, sewing machine, and vacuum cleaner. The ownership of freezers and types of ovens owned was also considered.

For the purpose of the study, employed wives/mothers were considered those who worked in paid jobs 15 or more hours a week. Non-employed wives/mothers were those who either worked as a full time homemaker or 14 or less hours a week in paid jobs. Using this definition, 140 families had a non-employed wife/mother, while 70 families had an employed wife/mother.

The hypothesis to be tested in relation to the ownership of equipment was:

H_1 There was no significant difference in the ownership of selected appliances and the employment or non-employment status of wives/mothers.

The Chi square (χ^2) was the test used to measure the level of significance between the ownership of the researched appliances and

the employment or non-employment of wives/mothers. As indicated in Tables II through XI, the majority of the families, regardless of the employment status of the wives/mothers, owned the researched appliances. The most owned were the vacuum cleaner and the automatic washing machine. All 140 families (100 percent) with non-employed wives/mothers owned a vacuum cleaner, and 138 (98.6 percent) of this same category owned an automatic washing machine. Of the 70 families with employed wives/mothers, 68 (97.1 percent) owned a vacuum cleaner. The automatic washing machine was owned by 67 (95.7 percent) of the families in this category.

TABLE II

OWNERSHIP OF VACUUM CLEANER BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	140	100.0	68	97.1	208	99.9
No	0	0	2	2.9	2	1.0
Totals	140	100.0	70	100.0	210	100.0
χ^2=4.0385*						

*There was no statistical significance in Chi square value in this analysis.

TABLE III

OWNERSHIP OF AUTOMATIC WASHING MACHINE BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	138	98.6	67	95.7	205	97.6
No	2	1.4	3	4.3	5	2.4
Totals	140	100.0	70	100.0	210	100.0
χ^2=1.6390*						

*There was no statistical significance in Chi square value in this analysis.

TABLE IV

OWNERSHIP OF CLOTHES DRYER BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	134	95.7	65	92.9	199	94.8
No	6	4.3	5	7.1	11	5.2
Totals	140	100.0	70	100.0	210	100.0
χ^2=.7675*						

*There was no statistical significance in Chi square value in this analysis.

TABLE V

OWNERSHIP OF SEWING MACHINE BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	130	92.9	63	90.0	192	91.9
No	10	7.1	7	10.0	17	8.1
Totals	140	100.0	70	100.0	210	100.0
χ^2=.5120*						

*There was no statistical significance in Chi square value in this analysis.

TABLE VI

OWNERSHIP OF DISHWASHER BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	94	67.1	43	61.4	137	65.2
No	46	32.9	27	38.6	73	34.8
Totals	140	100.0	70	100.0	210	100.0
χ^2=.6719*						

*There was no statistical significance in Chi square value in this analysis.

TABLE VII

OWNERSHIP OF GARBAGE DISPOSER BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	51	36.4	20	28.6	71	33.8
No	89	63.6	50	71.4	139	66.2
Totals	140	100.0	70	100.0	210	100.0
χ^2=1.2874*						

*There was no statistical significance in Chi square value in this analysis.

TABLE VIII

OWNERSHIP OF FREEZER BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	101	72.1	51	72.9	152	72.4
No	39	27.9	19	27.1	58	27.6
Totals	140	100.0	70	100.0	210	100.0
χ^2=.0119*						

*There was no statistical significance in Chi square value in this analysis.

TABLE IX

OWNERSHIP OF MICROWAVE OVENS BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	30	21.4	14	20.0	44	21.0
No	110	78.6	56	80.0	166	79.9
Totals	140	100.0	70	100.0	210	100.0
χ^2=.0575*						

*There was no statistical significance in Chi square values in this analysis.

TABLE X

OWNERSHIP OF TRASH COMPACTOR BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Ownership	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	13	9.3	6	8.6	19	9.0
No	127	90.7	64	91.4	191	91.0
Totals	140	100.0	70	100.0	210	100.0
χ^2=.0289*						

*There was no statistical significance in Chi square value in this analysis.

TABLE XI

TYPE OF OVEN OWNED BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Type of Oven Owned	Non-Employed (n=140)		Employed (n=70)		Total (n=120)	
	Number	Percent	Number	Percent	Number	Percent
Continuous cleaning	18	12.9	17	24.3	35	16.7
Self cleaning	30	21.4	10	14.3	40	19.0
Conventional	92	65.7	43	61.4	135	64.3
Totals	140	100.0	70	100.0	210	100.0
χ^2=5.0405						

*There was no statistical significance in Chi square values in this analysis.

The least owned of the selected appliances by both categories of families were the microwave oven and the trash compactor. The microwave oven was owned by 30 (21.4 percent) families with non-employed wife/mother, while for those who had an employed wife/mother this number was 14 (20.0 percent). The trash compactor was owned by six (8.6 percent) families with an employed wife/mother. Thirteen (9.3 percent) of families with a non-employed wife/mother owned a trash compactor.

The type of oven most owned by both categories was the conventional oven. This appliance was owned by 92 (65.7 percent) families with non-employed wives/mothers, and by 43 (61.4 percent) of families with employed wives/mothers.

The Chi square test revealed no significant difference between the ownership of the appliances and the employment or non-employment status of wives/mothers. This was true of all appliances.

Frequency of Use of Selected Home Appliances by Employed and Non-Employed Wives/Mothers

In the previous section, the ownership of the selected appliances as related to the employment or non-employment status of wives/mothers has been discussed. The present section analyzes the frequency of use of the appliances by owners, as well as the comparison in the use of the appliances owned between the two categories of employed and non-employed wives/mothers. The number of loads of laundry washed during the week is also included. The t-test was used to analyze the level of significance in the difference between the frequency of use of the selected home equipment and the employment or non-employment status of wives/mothers.

The hypothesis to be tested was:

H_2 There was no significant difference between the frequency of use of selected home equipment and the employment or non-employment status of wives/mothers.

Frequency of Use of the Owned Equipment by Employed Wives/Mothers

Table XII refers to the frequency of use of the appliances owned by those families where the wife was employed. The appliance most frequently used by this category was the garbage disposer. This piece

TABLE XII

FREQUENCY OF USE OF SELECTED APPLIANCES
BY EMPLOYED WIVES/MOTHERS
(n=70)

Appliance	Frequency of Use Per Week									
	1-2 Days		3-4 Days		5 Days		6-7 Days		Do Not Use	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Microwave oven	-	-	1	7.1	-	-	10	71.4	3	21.4
Dishwasher	1	2.3	7	16.3	3	7.0	28	65.1	4	9.3
Garbage disposer	2	10.0	-	-	-	-	18	90.0	-	-
Trash compactor	1	16.7	2	33.4	-	-	2	33.3	1	16.7
Washing machine (automatic)	8	12.0	20	29.8	5	7.5	32	47.7	2	3.0
Clothes dryer	10	15.4	19	29.2	6	9.2	28	43.1	2	3.1
Sewing machine	20	31.7	5	7.9	3	4.8	2	3.2	33	52.4
Vacuum cleaner	33	48.5	25	36.8	1	1.5	5	7.4	4	5.9

of equipment was used six or seven days of the week by 18 (90.0 percent) of the owners. The second appliance most frequently used was the microwave oven which was used six or seven days of the week by 10 (71.4 percent) of the owners.

The least used appliance by employed wives/mothers was the sewing machine. More than half (52.4 percent) of owners of this appliance in the category of employed wives/mothers did not use the sewing machine. Nearly one-third (31.7 percent) used the sewing machine one or two days a week.

Frequency of Use of the Owned Equipment by Non-Employed Wives/Mothers

The appliance most used by the category of non-employed wives/mothers was the garbage disposer. This appliance was used six or seven days of the week by 43 (84.3 percent) of the owners. The second most used appliance was the microwave oven. This piece of equipment was used six or seven days of the week by 23 (76.7 percent) of the owners (Table XIII).

The sewing machine was found to be the least used appliance by non-employed wives/mothers. Nearly 45 percent of the owners of the sewing machine in this category did not use this appliance, and more than one-third (37.0 percent) used the sewing machine one or two days a week.

The t-test analysis revealed no significant difference between the frequency of use of the appliances owned and the employment or non-employment status of wives/mothers (Table XIV).

TABLE XIII

FREQUENCY OF USE OF SELECTED APPLIANCES BY
NON-EMPLOYED WIVES/MOTHERS
(n=140)

Appliance	Frequency of Use Per Week									
	1-2 Days		3-4 Days		5 Days		6-7 Days		Do Not Use	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Microwave oven	1	3.3	1	3.3	1	10.0	23	76.7	2	6.7
Dishwasher	6	6.4	15	16.0	9	9.6	61	64.9	3	3.2
Garbage disposer	-	-	5	9.8	2	3.9	43	84.3	1	2.0
Trash compactor	2	14.2	1	7.1	1	7.1	7	50.0	3	21.4
Washing machine (automatic)	8	5.8	47	34.1	27	19.6	52	37.7	4	2.9
Clothes dryer	17	12.7	39	29.1	27	20.1	47	35.1	4	3.0
Sewing machine	48	37.0	15	11.5	4	3.1	5	3.9	58	44.6
Vacuum cleaner	74	52.8	40	28.6	9	6.4	10	7.1	7	5.0

TABLE XIV

t-TEST VALUE FOR USE OF SELECTED MAJOR APPLIANCES
BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS

Appliance	Number of Cases	Mean	Standard Deviation	t-Value*	Degrees of Freedom
Microwave oven					
Employed	14	5.286	2.972	0.94	42
Non-Employed	30	6.000	2.000		
Dishwasher					
Employed	43	5.535	2.282	.19	135
Non-Employed	94	5.606	1.936		
Garbage disposer					
Employed	20	6.500	1.539	-0.28	69
Non-Employed	51	6.392	1.457		
Trash compactor					
Employed	6	3.667	2.944	0.47	18
Non-Employed	14	4.357	3.079		
Washing machine					
Employed	67	4.836	2.100	-0.08	203
Non-Employed	138	4.812	1.819		
Clothes Dryer					
Employed	65	4.631	2.162	-0.11	197
Non-Employed	134	4.597	1.982		

TABLE XVI (Continued)

Appliance	Number of Cases	Mean	Standard Deviation	t-Value*	Degrees of Freedom
Sewing machine					
Employed	63	1.095	1.711	0.72	191
Non-Employed	130	1.285	1.726		
Vacuum cleaner					
Employed	68	2.485	1.732	0.37	206
Non-Employed	140	2.579	1.671		

*There were no statistically significant t-values in these analyses.

Number of Loads Washed During the Week

In the t-test analysis for the use of the appliances, the washing machine did not appear to be among the most frequently used as related to the number of days used during the week. Nevertheless, it was revealed in the raw data that the number of loads washed in a week ranged from four to thirty. It is possible that in many families, more than one load was washed in a day. The largest percentage of wives/mothers, either employed or not, washed six to ten loads in a week (Table XV).

TABLE XV

LOADS OF LAUNDRY WASHED IN A WEEK BY EMPLOYED AND NON-EMPLOYED WIVES/MOTHERS IN OKLAHOMA

Number of Loads	Non-Employed		Employed		Total	
	Number	Percent	Number	Percent	Number	Percent
5 or less	5	3.6	6	8.6	11	5.2
6-10	72	51.4	38	54.3	110	52.4
11-15	38	27.1	20	28.6	58	27.6
16-20	20	14.3	5	7.1	25	11.9
21 and over	5	3.6	1	1.4	6	2.9
Totals	70	100.0	140	100.0	210	100.0

Summary

An analysis of the data and findings were presented in this chapter. All of the researched appliances were found to be owned by nearly all the families, regardless of the employment or non-employment status of the wives/mothers. The most owned were the vacuum cleaner and the washing machine. The least owned were the trash compactor and the microwave oven. In the analysis of the use of the appliances owned, it was the garbage disposer and the microwave oven which were most used by both categories, employed or non-employed wives/mothers. The type of oven owned was found to be the conventional oven for both categories in the study. The numbers of loads of laundry washed during the week appeared to be nearly the same for both categories also.

The Chi square values revealed no significant difference existed between the ownership of the selected appliances and the employment and non-employment status of wives/mothers. The t-test analysis revealed no significant difference existed between the use of the selected appliances and the employment or non-employment status of wives/mothers.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This present chapter contains a summary of the project, as well as the conclusions regarding the relationship between the ownership of selected major appliances and the employment patterns of wives/mothers. It also includes recommendations for further research in this and other areas of home appliances.

Summary

The purpose of the study was to ascertain the relationship between the ownership and use of selected major appliances and the employment status of wives/mothers in selected Oklahoma families. The appliances researched were: automatic washing machine, microwave oven, dishwasher, clothes dryer, trash compactor, garbage disposer, sewing machine, and vacuum cleaner. The ownership of freezer and the type of oven was also researched.

Two hundred and ten families were selected for the study. One hundred and five families were randomly selected from the rural area of Alfalfa County, and 105 families were randomly selected from the urban area of Guthrie, both in Oklahoma. Each family was composed of two adults and two children 17 years of age or less. The method of data collection was the home interview where the homemaker was the respondent of the family. The instrument was the questionnaire.

The majority of wives/mothers in the sample were between 26 and 35 years of age. The same pattern existed for the husbands. The income most reported by the families was within the $15,000 to $19,000 bracket.

The majority of the families interviewed owned the researched appliances. The appliances most owned were the automatic washing machine and the vacuum cleaner. The least owned appliances were the microwave oven and the trash compactor. The automatic washing machine was owned by 98.6 percent of families with non-employed wife/mother and by 95.7 percent of families with employed wife/mother. One hundred percent of families with non-employed wife/mother owned a vacuum cleaner, and for those with employed wife/mother this number was 97.1 percent. The microwave oven was owned by 21.4 percent of families with non-employed wife/mother, and by 20 percent of the families with an employed wife/mother.

The equipment most frequently used by both categories was the microwave oven and the garbage disposer. The majority of owners of these pieces of equipment--90 percent of the families with an employed wife/mother and 43 percent of families with a non-employed wife/mother--used them six to seven days of the week.

As reported in Chapter IV, no significant difference was found between the ownership of the selected major appliances researched and the employment or non-employment status of wives/mothers.

Conclusions

The present study revealed that the employment or non-employment status of wives/mothers is not related to the ownership of major

appliances nor the use of them once purchased for household work. It is possible that other factors such as availability of the appliance, size of the family, and family life cycle stage, as well as knowledge regarding the appliances could affect their ownership and use in housework. Families in both groups, those with employed or non-employed wives/mothers were very similar in the way they did housework.

Even though industry has taken many tasks that earlier were done at home, there is a given amount of work that must be done at home to maintain a household. In an industrial society, it is expected that there will be technology in the household in the form of appliances to contribute in that work. However, the ownership of household equipment is worthless without a knowledge of the proper use, care, and maintenance of that equipment. On the other hand, the appliance industry must be aware of what type of equipment the families need, and develop those pieces of equipment which could fulfill those needs.

The challenge to home economists and other educators who are service personnel of equipment and utility companies is to be aware of the technological changes in the appliance industry and to educate the families on the use, care, and maintenance of the new equipment. But, at the same time, their responsibility is to take into account the needs of the families regarding appliances and put them into the hands of the designers, in order that the appliances designed and constructed could fulfill the needs of the families regarding housework.

Recommendations

Because of the size of the sample and the areas studied, this

study is not representative of the whole state of Oklahoma. Further research should be made including a broader sample. It also must include more appliances and other variables that might affect relationship between the ownership of appliances and the employment or non-employment status of wives.

A study should be made in relation to use of the appliances and energy consumption. It could include information in relation to the knowledge the homemaker has relative to the use of home appliances and energy consumption. A study should also be made relative to the knowledge the homemaker has of the care and maintenance of the appliances owned, and a study should be made in relation to the criteria used by the appliance industry in the development of new pieces of equipment.

These types of studies will help educators become aware of the needs for education of the families in the area of home equipment and, as a result, educational programs and services for the families could be developed. It will also help the educators to exert their role as interface between the families and the appliance industry in order that the appliance developed will fulfill the needs of the families regarding household work.

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APPENDIXES

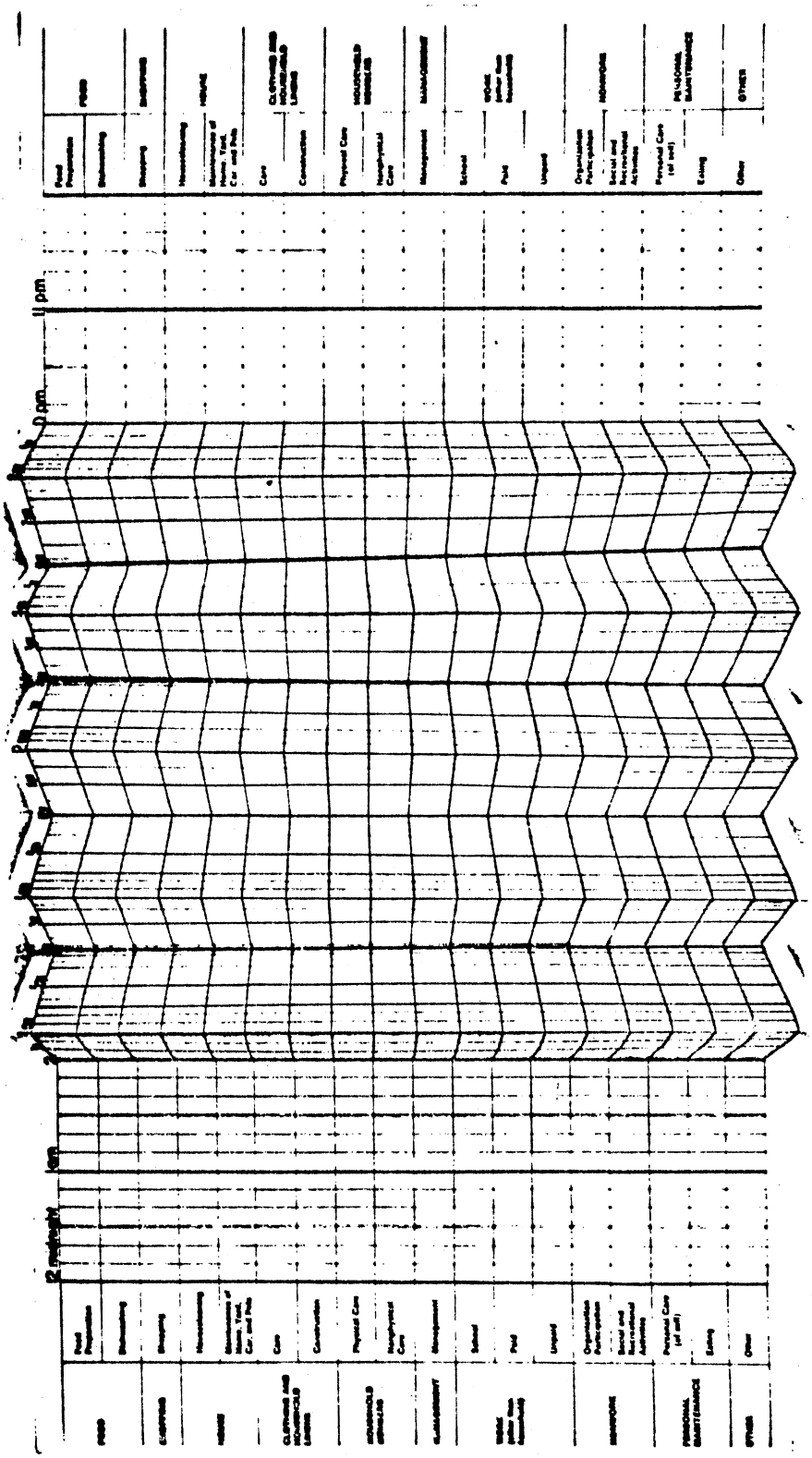
APPENDIX A

STRATIFIED SAMPLE BY AGE OF THE YOUNGER CHILD AND SEGMENTS OF THE YEAR FOR EACH AREA

Age Category of Younger Child	Segment of the Year			
	Jan.-April	May-August	Sept.-Dec.	
1	7	7	7	21
2	7	7	7	21
3	7	7	7	21
4	7	7	7	21
5	7	7	7	21
Total	35	35	35	105

APPENDIX B

TIME CHART



APPENDIX C

QUESTIONNAIRE

Housing and Equipment Questions From an Investigation of Rural-Urban Families Time Use

1. Do you own or rent your home?
   Own or buying Rent Other _____

2. Do you have a separate freezer(s) (free-standing?)
   Yes No

3. Is your oven
   ___ continuous cleaning?
   ___ self cleaning?
   ___ neither?

4. Do you have a:

	Yes	No
microwave oven?		
dishwasher?		
garbage disposer?		
trash compactor?		
washing machine--automatic?		
washing machine--nonautomatic?		
clothes dryer?		
sewing machine?		
vacuum cleaner?		

5. If Yes, on how many of the last 7 days has it been used for your household work?

microwave oven	0	1	2	3	4	5	6	7	N/A
dishwasher	0	1	2	3	4	5	6	7	N/A
garbage disposer	0	1	2	3	4	5	6	7	N/A
trash compactor	0	1	2	3	4	5	6	7	N/A
washing machine--automatic	0	1	2	3	4	5	6	7	N/A
washing machine--nonautomatic	0	1	2	3	4	5	6	7	N/A
clothes dryer	0	1	2	3	4	5	6	7	N/A
sewing machine	0	1	2	3	4	5	6	7	N/A
vacuum cleaner	0	1	2	3	4	5	6	7	N/A

6. How many loads of clothes were washed during the last 7 days? _____

VITA[2]

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Master of Science

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