

AN ABSTRACT OF THE THESIS OF

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Title: TIME USE FOR HOUSEHOLD TASKS PERFORMED BY SCHOOL-AGE

CHILDREN IN TWO-PARENT, TWO-CHILD OREGON FAMILIES

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The purpose of this study was to investigate the household tasks that school-age children perform and the average amount of time spent performing those tasks. The sample included 219 children in 135 families taken from the Oregon sample of 210 families interviewed for the Northeast Regional Research Project 113: "An Interstate Urban/Rural Comparison of Families' Time Use." Families included in this study were limited to those composed of two parents and at least one school-age child, since time data were not gathered for children under six years of age. Eighty-four families had two school-age children and 51 families had one school-age child and one younger child under six years of age. There were 116 boys and 103 girls in the 66 rural and 69 urban families.

A questionnaire had been used to collect information on demographic characteristics and household data. A time chart had been used to record the precategorized activities of the homemaker, spouse, and children over six years of age for two separate 24-hour periods.

The demographic variables used in the data analysis included age-group of the child, sex of the child, age of the sibling, place of

residence, whether the homemaker was gainfully employed or a fulltime homemaker, occupation of homemaker, occupation of spouse, educational level of homemaker, educational level of spouse, and family income level.

The chi square test of independence was used to determine whether there were relationships between the tasks school-age children performed and the demographic variables. Children's contributions to household work were concentrated in food preparation, dishwashing, shopping, housecleaning, and maintenance of home, yard, car, and pets. Fewer than 28 percent of the children contributed to care and construction of clothing and household linens, physical and nonphysical care of family members, or management. Overall, the types of tasks children performed were dependent upon the age of the child and the age of his/her sibling. Children age twelve through seventeen and those with younger siblings over six were more likely to perform household tasks than other children. Of the 219 children included in the study, 206 children (94.1 percent) contributed to household work. The number of tasks performed by a child ranged from zero to seven for one day and from zero to ten for a two-day period.

One-way analysis of variance was used to test for differences in the average amount of time spent on all tasks when respondents were grouped by selected independent variables. Two null hypotheses were rejected indicating that there was a significant difference in the average amount of time spent on household tasks by school-age children according to the age-group and the sex of the child. Children ages 15 through 17 spent significantly more time performing household tasks than children in other age groups, and girls spent significantly more time performing household tasks than boys. The amount of time children

contributed to household work ranged from five minutes per day to over fourteen hours per day. The average time contributed to household tasks by children was slightly over 81 minutes per day.

TIME USE FOR HOUSEHOLD TASKS PERFORMED BY SCHOOL-AGE  
CHILDREN IN TWO-PARENT, TWO-CHILD OREGON FAMILIES

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CHAPTER I

INTRODUCTION

One of the primary concerns of the family is the development and growth of its members. In all societies the family has the responsibility of preparing children for adulthood. Children grow and develop through interaction "with one another in work and play, joy and sorrow, routine and nonroutine activities in the daily arena of life" (Davey 1980, p. 43). Such interaction and sharing of experiences contributes to the building of family relationships, the well-being of family members, and the physical skill development of each individual (Davey 1971, 1980). Diesing (1962, p. 236) contends that "people who constantly share action and experience are interdependent in the sense that a change in one produces an answering change in others." Thus, experiences within the family can produce the feeling of "group participation, a further sharing of intimacies, and a sense of lively satisfaction" (Bossard and Boll 1950, p. 200). Everyday experiences within the family provide children with role models to be imitated, examples of goals to be achieved, opportunities to develop values, attitudes, and skills, and feelings of security and protection (Davey 1971).

In the home, children receive their first work experiences (e.g., in putting their toys away or helping a parent carry in groceries from

the family car). These early work experiences at home contribute to the discovery and learning period for children and encourage the development of a value for work that may carry over into adult life. Work experiences should be well planned and managed by the family (Davey 1971, Steidl and Bratton 1968).

Among the household tasks children participate in are care of younger children, dishwashing, bed making, food preparation, and care of the house (Warren 1940, Wilson 1929). Stephens (1979) has stated that children learn household tasks by watching parents work, imitating parents work in their play, and helping and working with parents. As the children grow older, parents give them more responsibilities and more "grown-up" work to do. By performing household tasks, children learn to be helpful, responsible, and gain mutual support from family members with whom they are working (Diesing 1962, Stephens 1979).

#### Statement of the Problem

Since participation in household tasks may play an important role in the development of one's attitude toward work, physical skill development, and development of social interaction skills, it is desirable that families be encouraged to provide opportunities for children to participate in this segment of family life. As a basis for providing such encouragement, this study will investigate the performance of household tasks by Oregon children: how much time is spent in the performance of such tasks, the relationships between selected demographic variables and the specific tasks children perform, and the relationships between the demographic variables and the amount of time children spend perform-

ing household tasks.

### Objectives of the Study

The objectives of this study are:

1. To determine which household tasks were performed by school-age children in two-parent, two-child Oregon households
2. To determine differences in the types of household tasks performed by school-age children related to the age-group of the child, the sex of the child, the age of the sibling, whether the residence is urban or rural, whether the homemaker is gainfully employed or a fulltime homemaker, the occupation of the homemaker, the occupation of the homemaker's spouse, the education of the homemaker, the education of the homemaker's spouse, and family income
3. To determine the amount of time school-age children spend on performing household tasks
4. To determine the differences in the mean amount of time school-age children spend on household tasks according to the age-group of the child, the sex of the child, the age of the sibling, whether the residence is urban or rural, whether the homemaker is gainfully employed or a fulltime homemaker, the occupation of the homemaker, the occupation of the homemaker's spouse, the education of the homemaker, the education of the homemaker's spouse, and family income

### Hypotheses

The following research hypotheses were developed:

1. The types of household tasks performed by school-age children are

dependent on the child's age-group

2. The types of household tasks performed by school-age children are dependent on the child's sex
3. The types of household tasks performed by school-age children are dependent on age-group of the sibling
4. The types of household tasks performed by school-age children are dependent on whether the residence is urban or rural
5. The types of household tasks performed by school-age children are dependent on whether the homemaker is gainfully employed or a fulltime homemaker
6. The types of household tasks performed by school-age children are dependent on the occupation of the homemaker
7. The types of household tasks performed by school-age children are dependent on the occupation of the spouse
8. The types of household tasks performed by school-age children are dependent on the educational level of the homemaker
9. The types of household tasks performed by school-age children are dependent on the educational level of the spouse
10. The types of household tasks performed by school-age children are dependent on the family income level
11. The mean amount of time spent on household tasks performed by school-age children will differ according to the child's age-group
12. The mean amount of time spent on household tasks performed by school-age children will differ according to the child's sex
13. The mean amount of time spent on household tasks performed by school-age children will differ according to the age-group of the sibling

14. The mean amount of time spent on household tasks performed by school-age children will differ according to whether the residence is urban or rural
15. The mean amount of time spent on household tasks performed by school-age children will differ for children of fulltime and gainfully employed homemakers
16. The mean amount of time spent on household tasks performed by school-age children will differ according to the occupation of the homemaker
17. The mean amount of time spent on household tasks performed by school-age children will differ according to the occupation of the spouse
18. The mean amount of time spent on household tasks performed by school-age children will differ according to the educational level of the homemaker
19. The mean amount of time spent on household tasks performed by school-age children will differ according to the educational level of the spouse
20. The mean amount of time spent on household tasks performed by school-age children will differ according to the family income level

The chi square test of independence was used for the first ten hypotheses in order to determine whether or not there was a relationship between performance of a task and the descriptive variables. One-way analysis of variance was used on the remaining ten hypotheses to test for differences in the mean amount of time spent on tasks when respon-

dents were grouped by the independent variables. The level of significance was set at  $p < .05$  indicating that there is a five percent chance that differences between observed and expected frequencies, and/or differences between means are the result of sampling error.

### Operational Definitions

Age-group: Children's ages were divided into four groups for the purpose of analysis: 6-8, 9-11, 12-14, and 15-17 years of age

Family: A household unit consisting of one spouse, one homemaker, and two children

Homemaker: The primary adult responsible for the operation of the home.

In this study, all Oregon homemakers are female

Household task: The categories of household tasks on the time record chart (Appendix A) for the Interstate project (of which this study is a part), adjusted for the purposes of this study are:

1. Food preparation
2. Dishwashing
3. Shopping
4. Housecleaning
5. Maintenance of home, car, yard, and pets
6. Care and construction of clothing and household linens
7. Physical and nonphysical care of family members
8. Management

Household work: "Purposeful activities performed in individual households to create services that make it possible for a family to function as a family" (Walker and Woods 1976, p. xx); interchange-

able with "household tasks" in this study

School-age: Children from six to eighteen years of age

Spouse: The adult in the household who is not the homemaker. In this study, all Oregon spouses are male

Urban/Rural Residence: Urban "cities of 100,000 or more population and the areas surrounding them with populations of 2500 or more."

"Rural was defined as areas with a population less than 2500"

(Sanik 1979, p. 50)

#### Assumptions of the Study

1. The two-parent, two-child families investigated in this research were typical of such families in Oregon with children of those ages
2. The homemakers in the sample accurately recalled and recorded tasks performed by their school-age children

#### Limitations of the Study

1. The original sample was restricted to two-parent, two-child families in one urban and one rural area of Oregon. The interstate project was part of the Northeast Regional Research Project 113: "An Interstate Urban/Rural Comparison of Families' Time Use." The sample for this study was further restricted to those families in the original sample with at least one school-age child
2. The children whose task performance were examined in this study were of school-age only
3. Tasks performed by children under six were not reported
4. Tasks of less than five minutes duration were not reported

## CHAPTER II

### REVIEW OF LITERATURE

A review of the literature related to the use of resources in the home, homemaker's household work, contributions by the spouse, and children's contributions to accomplishing household tasks is presented in this chapter. Contributions of all family members to household work can be beneficial to the functioning family. Their contributions may increase the available resource alternatives for meeting the daily work demands of the family and can provide early work experiences for children. Well-planned work experiences at home are important in the development of human capital.

#### Use of Resources in the Home

Use of human resources plays an important role in encouraging the growth and development of family members and affects the overall efficiency of the family. Children's involvement in household tasks may increase family efficiency or simply lighten part of the work activities usually performed by adults.

Gross, Crandall, and Knoll (1980) and Nickell, Rice, and Tucker (1976) state that resources, both human and nonhuman, are family assets that can be used to achieve goals and meet demands. Human resources include time, health and energy, knowledge, and comprehension as well as skills, attitudes, abilities, and interests of family members. The

nonhuman resources of a family consist of economic resources (e.g., money, credit, and material assets) and environmental resources (e.g., community facilities and natural resources). Each family's resources vary and are limited in varying degrees. Indeed, families utilize and implement resources in different ways in order to achieve family goals (Deacon and Firebaugh 1975).

In order for a resource to be utilized it must be recognized as a possible resource. Baker (1970) identifies this type of utility as resourcefulness. Gilboy (1968) identifies three additional types of utility necessary for implementation and allocation of resources:

Time utility: A resource must be available at the right time

Place utility: A resource must be available at the right place

Form utility: A resource must be available in the right form

Diesing (1962) believes that scarcity affects resource utilization. Scarcity occurs when demands exceed resources. Scarcity of resources exists, in part, because our wants are continually changing and are unlimited. As one want is met another takes its place.

Since resources are limited and demands are unlimited, homemakers need to use managerial skills. These skills are defined as "the process of planning, organizing, implementing, and evaluating the use of resources to accomplish goals and satisfy wants" (Nickell, Rice, and Tucker 1976, p. 462). Managerial ability not only helps homemakers identify and allocate available resources, it enables them to be creative in the development of new resources (Bratton 1971). Specifically, the use of time may be identified as a resource for all families. Time is constantly being allocated and used to attain family and individual

goals. How family members use their time affects goal attainment and the development and use of other resources. This is especially true in the allocation of time for parents' and children's household work (Deacon and Firebaugh 1975).

Appropriate allocation and use of time and skills by both parents and children are necessary for effective functioning of the family unit (Deacon and Firebaugh 1975).

Researchers Fethke and Hauserman (1979), Hall and Schroeder (1970), Robinson, Converse, and Szalai (1972), and Walker and Woods (1976) have identified seven factors that affect the way families utilize time for household work. They are: size of family, age of family members, level of family income, whether or not the homemaker is gainfully employed, what employment the homemaker is engaged in, and the stage in the family life cycle.

#### Homemakers' Household Work

Traditionally, women have provided the time and skill necessary to accomplish household work. However, such work can also be shared by other members of the family. Tasks can be assigned to individual members or to several members who can work together on a task or group of tasks (Deacon and Firebaugh 1975). However, the homemaker may consider available time, skill, identified goals, and established standards when deciding whether and how to divide responsibilities or to do the work alone.

Caplow (1974) reported the three most time-consuming household tasks performed by women have been cleaning, child care, and food preparation. Traditionally, the major portion of the spouse's time has

been used to provide funds for the household. Spouses also contribute to household work by caring for the yard, car and heating system, and taking care of repairs and upkeep of the home (Blood 1955, Hall and Schroeder 1970, Johannis 1958, and Walker and Woods 1976).

Early studies of homemakers' use of time in household work were conducted in the late 1920's and early 1930's. Researchers have continued to study household work, making possible a comprehensive view of the work involved in maintaining a family home in farm, rural nonfarm, and city areas of the United States.

Wilson (1929) reported how 513 Oregon homemakers used their time. The study was primarily concerned with the 288 farm families, but included 71 country-nonfarm and 154 noncountry-nonfarm families. Each homemaker recorded data for one "typical" week in 1926-27, a week not broken by unusual circumstances. Wilson found that fulltime farm homemakers averaged 51.6 hours per week on household work, country-nonfarm homemakers averaged 54.8 hours per week, and noncountry-nonfarm homemakers averaged 51.5 hours per week.

Warren (1940) collected time-use data and supplemental information in 1936 from 497 farm-owner households in Genesee County, New York. The homemakers were interviewed and time spent in household work by all family members was reported. In Warren's study, the average time spent by all homemakers in household tasks was 7.4 hours per day, with other workers contributing an additional 1.6 hours per day.

In the spring of 1952, Wiegand (1954) conducted a time-use study in the same township areas of New York as Warren's and added the city of Auburn, New York. Wiegand interviewed 95 farm homemakers, 102 city fulltime homemakers, and 53 city homemakers who were employed more than

15 hours per week. Hours spent on household work were recalled by the homemaker for the weekday prior to the interview and for the previous Saturday and Sunday. These homemakers spent an average of 4.5 hours per day on the household tasks of food preparation, care of clothing, and care of house.

In 1964 Hall was called upon to testify in court concerning nonmoney contributions and the value of work performed by homemakers and mothers. Because there was no recent research concerning the nonmoney contributions made by homemakers to the household, Hall and Schroeder (1970) conducted a study of 229 homemakers residing in Seattle, Washington. They found that families with more than two persons spent more time at all household tasks than did two-person families. Additionally, "full-time homemakers between the ages of 26 and 40, with children under 13 years of age and with a dog or cat or both" spent the most time at household work (Hall and Schroeder 1970, p. 29). Homemakers were found to spend a total of 49.3 hours per week in household tasks (Hall and Schroeder 1970).

An extensive study by Walker (1969), reported time used for household activities by 1,296 Syracuse, New York families. The study included husband/wife households with no children and husband/wife households with one, two, three, four to six, and seven to nine children. Interviewers recorded the data by means of a questionnaire and a time chart. Of the 1,296 homemakers, 979 were fulltime homemakers and 317 were employed over fifteen hours per week. Walker and Woods (1976) found the average time used for household work by all homemakers was seven hours per day.

In the United States, the average amount of time devoted to house-

hold work appears to have changed little over the span of forty years. Wilson (1929) reported 7.3 hours of household work performed per day by fulltime homemakers in 1926; Wiegand (1954) reported 7.4 hours per day in 1952; and Walker (1969) reported 8 hours per day in 1967-68 (Table 2.1).

### Factors Influencing Amount of Time Spent on Housework

In 1974, Vanek compared studies covering a 50 year period. She found that rural homemakers spent approximately the same amount of time in household work as urban homemakers; while employed homemakers spent less time than other homemakers. Wiegand (1954) found little difference between time spent on all household work by farm and city fulltime homemakers. Again, employed homemakers spent the least amount of time on household tasks.

Warren (1940) reported that factors such as size of household, number of children under 15 years of age, and age of the youngest child influenced the time spent in household work. Walker and Woods (1976) stated that if the family had no children, the average time spent in household work dropped from seven hours per day to five hours per day for all homemakers. As the number of children increased, the number of hours spent in household work increased.

Both O'Neill (1978) and Wilson (1929) reported that rural children tended to contribute more time (58 minutes per day) to household tasks than did urban children (40 minutes per day).

Wilson (1929) found that as the level of education increased, so did time spent on care of family members and home management by both farm and urban homemakers. However, Walker and Woods (1976, p. 25)

TABLE 2.1 COMPARISON OF TIME USE FOR HOUSEHOLD WORK: A SUMMARY OF RESEARCH BETWEEN 1926 AND 1968

AVERAGE HOURS PER DAY							
Homemaking Activities	Fulltime Homemakers <sup>a</sup>					Employed Homemakers <sup>a</sup>	
	1926-27 (N-154) b	1936 (N-497) c	1952 (N-102) d	1964 (N-229) e	1967-68 (N-979) f	1952 (N-53) d	1967-68 (N-317) f
All food activities	2.8	3.3	2.6	2.1	2.3	1.9	1.6
Care of house	1.3	2.3	1.6	1.8	1.6	0.8	1.2
Care of clothes	1.6	1.0	1.6	1.2	1.3	0.8	0.9
Care of family members	1.2	0.5	1.1	1.3	1.8	0.3	0.8
Marketing and record keeping	0.4	0.2	0.5	0.6	1.0	0.3	0.8
All homemaking work	7.3	7.4	7.4	7.0	8.0	4.1	5.3

<sup>a</sup>Classified as fulltime if homemaker worked 0-14 hours/week for pay and as employed if she worked 15 or more/week.

<sup>b</sup>Wilson (1929)

<sup>c</sup>Warren (1940)

<sup>d</sup>Wiegand (1954)

<sup>e</sup>Hall and Schroeder (1970)

<sup>f</sup>Walker (1969)

observed that the educational level of homemaker and spouse had "little effect on time used for any major household work." Another factor that was found to have little influence on time spent on household work was family income level (Warren 1940).

While the total amount of time spent on household tasks has changed little over the last 50 years, amounts of time spent on various tasks have changed. Time for shopping, managerial tasks, travel, and family care have increased. Although time spent on food preparation and meal cleanup has decreased, these tasks continue to be the most time-consuming. Changes in the amount of time spent on household tasks were influenced by the age of the youngest child, the number of children in the family, and the educational level of the homemaker (Warren 1940, Wilson 1929, Walker and Woods 1976).

#### Contributions by the Spouse

Since there are many activities involved in maintaining a household, the time and skills of various family members utilized in performing household tasks constitutes a resource. In many situations the assistance of the spouse in household work may be an important alternative resource in meeting the daily demand of household work.

Walker and Woods (1976) found that 61 percent of the husbands performed one to three tasks per day. The household tasks they were most likely to perform were:

1. Physical and nonphysical care of family members
2. Marketing
3. Meal preparation
4. Maintenance of home, yard, car, and pets

They reported that the amount of time spent on those tasks represented between 14 and 20 percent of the spouses' total time and varied little from an average of 1.6 hours per day whether or not the homemaker was employed. As the wives' time in paid employment increased, the spouses' time for meal preparation increased from six to twelve minutes per day (Walker 1970a).

The age of the wife was another factor influencing the amount of time husbands spent helping with household tasks. Wives under 40 years of age who were employed 15 or more hours a week received more help from their husbands than did wives who spent more time at home. Older employed wives received less help than younger employed wives (Walker 1970a).

Husbands contributed an average of twenty minutes per day to family care. Other time spent on household work varied with the number of children, but no consistent patterns were identified. Generally, wives who were employed 15 or more hours per week and had a baby received more help from husbands than did wives who were not employed and/or who did not have a baby (Walker 1970a).

Husbands' time contribution was also affected by the time spent in his own employment.

The average household work time varied from 2.1 hours [per day] for husbands employed less than 40 hours per week to 1.2 hours [per day] for those employed 50 or more hours per week (Walker and Woods 1976, p. 44).

The amount of time the husband spent in household work was mainly influenced by the age of the wife and the amount of time spent in his own employment. When the wife was under 40 years of age, had small children, was employed 15 hours or more per week, or when the husband worked less than 40 hours per week, the husband contributed more time to household work (Walker 1970a, Walker and Woods 1976).

## Children's Contributions to Accomplishing Household Tasks

In many societies, the family prepares its children for work. Children learn about work by watching and imitating parents. Generally, first work experiences involve family activities and household tasks. The family is the immediate beneficiary of the work children perform, either through an increase in family efficiency or through the lightening of part of the work activities usually performed by adults (Caplow 1974).

However, the family is not the only beneficiary. Early work experiences provide an important discovery and learning period for children. Skills, values, and attitudes toward work are developed and may carry over into adult life:

The goal of accomplishing household work is primarily a means to other ends, one of which is the development and socialization of children. Work in homes is a child's first acquaintance with work--how satisfying or dissatisfying it is, how difficult or easy, how essential to his existence, how important to accept responsibility and to control time and events. Homemaking work can be the vehicle for his experimentation with task accomplishment. Failures may be less costly when they occur within the shelter of the individual's own family (Steidl and Bratton 1968, p. 177).

### Tasks Children Perform

Many researchers have found that children perform a variety of tasks. In 1929, Wilson determined that the tasks most children performed were grocery shopping, fire tending, and dishwashing. Johannis (1958) commented that the tasks young children performed were simple and easily taught (e.g., table setting and dishwashing for girls and taking out the garbage for boys). Knoll (1957) found that in 202 New York families more than half the children 14 years and older took on the

more difficult tasks of yard work and driving for the family. Other tasks accomplished by children in that age-group consisted of dishwashing, food preparation, care of clothing, and house care. Fewer than one-third of the children contributed to shopping, record keeping, food preservation, and home maintenance. In rural nonfarm families, fewer than ten percent of the children took total responsibility for dishwashing and food preparation. In rural farm families no children took total responsibility for any one task.

Several researchers have contributed support to the theory that boys and girls model their household contributions after same sex parents (Johannis 1958, Lynch 1975, and O'Neill 1979). The homemaker usually has performed the traditional household tasks, with teenage girls assisting her more often in these tasks than teenage boys. However, boys and girls aged six through nine have shared household tasks. For girls, the pattern, set in early years, of helping with food preparation, housecleaning, dishwashing, and care of clothing lasts through the age of 17. Girls have performed a greater number of activities and spent more time doing household tasks than boys the same age. At age ten, the boys have switched to activities more traditionally associated with the male role (lawn and yard care), then switched again to assist with food preparation from ages 14 through 17. Lynch (1975, p. 24) speculated:

Learning to do sex-related jobs as children may perpetuate division of labor throughout life because adults will continue doing those jobs at which they were most efficient as children.

Food preparation, dishwashing, and housecleaning have been the tasks most frequently performed by girls, and tasks involving home, car,

yard, and pet care have been more frequently performed by boys.

In child care, teenagers have most often assisted in "seeing that the children get dressed, wear the right clothes and helping children with their school work" (Johannis 1957, p. 32). Girls have spent more time than boys in all child care activities.

A variety of tasks have been performed by all children. The tasks were usually simple and easily taught. Few children have assumed complete responsibility for any one task. The total family effort in household tasks has followed the traditional sex division of labor.

#### Time Children Spent on Tasks

Wilson (1929) reported that most household help received by the homemaker was from within the family. The average total assistance for household tasks was 9.5 hours per week. Of this children contributed 4.6 hours per week.

In later studies researchers indicated that the amount of time children spent on tasks had changed. Morton (1979), Osborne (1979), and Walker (1970b) reported that in families with children ages six through eleven years, children contributed an average of 1.1 hours per week for household tasks in households where the mother was not employed. In households where the homemaker was employed, time spent by children in household tasks per week ranged from "about one-half hour for families with one child to a total of two and one-half hours in the largest families" (Walker and Woods 1976, p. 259). In two-child families, each child contributed an average of under one-half hour per day, per task, and a total of 5.7 hours per week on all tasks.

Shopping; housecleaning; maintenance of home, yard, car; and pet care were the most time consuming of the household tasks performed by children six through seventeen years of age. Girls spent more time than boys in all tasks except maintenance. Teenagers (12 through 17 years of age) spent more time in total household work than younger children (six through eleven years old). As the age of the child increased, time spent in food preparation and shopping increased (Walker and Woods 1976).

When the average time contributions in Walker's 1967-68 study were compared with her 1977 data, it was found that boys and girls contributed more household work in 1977 than in 1967-68, and that the boys' contributions increased more than the girls' (O'Neill 1978).

Generally, time spent on household tasks increased as the age of the child increased. Girls performed more tasks and spent more time on tasks than boys.

### Influencing Factors

Researchers have reported a wide variety of factors that influence the amount of time children spend on household tasks. Among them are the age of child and place of residence (Wilson 1929). For families living in town, grade-school children averaged 3.2 hours per week, while high-school children averaged 4.1 hours per week on household tasks. For farm families, grade-school children averaged 3.3 hours per week, and the high-school children averaged 5.0 hours per week on household tasks.

Later researchers (O'Neill 1978, Osborne 1979) also reported that as children grew older, they were engaged in more tasks and spent more

time performing tasks. In all age-groups, girls engaged in more household tasks and also spent more time doing them than boys. It was also reported that rural children spent more time on household work than urban children (O'Neill 1978, Osborne 1979).

Walker (1970b) reported that help from teenage children between 12 and 17 years of age increased as the number of children in the family increased, or when the mothers were gainfully employed. Teenagers contributed an average of 2.2 hours per day to household tasks when their mothers were employed and 2.0 hours per day when their mothers were fulltime homemakers. When there were no younger siblings in the home, teenagers in homes where the mother was employed did more household work (2.7 hours per day) than when the mother was a fulltime homemaker (2.1 hours per day). The average time spent doing household tasks per child was just under one hour in families with fulltime homemakers (Walker 1970b).

As children's commitments outside the home (such as school, paid employment, organizational activities, and/or social and recreational activities) increased, the time spent on household work decreased (Osborne 1979). Osborne reported that children's participation and the average time they spend on household work increased with age until age 15. Among 15 through 17 year-olds there were fewer children involved in household work. Osborne (1979) attributed this decrease to the amount of time teenage children spend in school and out-of-home activities.

Since neither the mother's nor the father's number of hours of employment have been shown to influence the amount of time children spend in household work, there is speculation that children's household work time does not serve as an alternative to parents' time in

accomplishing work around the home (Osborne 1979).

Generally, the tasks performed by children are sex related (e.g., girls care for the home and boys care for the yard and pets). The amount of time spent by children in household tasks increases with age until they reach 15, after which time spent on outside activities increases and time spent on household tasks decreases. Osborne (1979) speculated that supervision of children also appears to be an important determinant of how much children contribute to household work.

#### Summary of Children's Contributions to Household Work

The studies reviewed varied widely in focus, methodology, means of evaluation, time periods, and area of the country. It was found that children did contribute to household work.

Generally, as children grow older, they contributed more time to household work. The tasks young children performed required little skill and could have been easily taught. Division of tasks by sex was prevalent, and girls contributed more time and accomplished more tasks than boys. Factors such as parents' hours of employment, outside activities, and place of residence further influenced the patterns of children's contributions to household work.

The O'Neill, Osborne and Sanik studies were based on the NE 113 project "An Interstate Urban/Rural Comparison of Families' Time Use." All used the same data collection instrument and method and all interviewers were trained to follow identical procedures. The 1977 studies were closely patterned after the larger study done by Walker in 1967.

## CHAPTER III

### METHODOLOGY

This study investigated household tasks that school-age children perform and the average amount of time children spent on those tasks. The data analyzed for this study were collected in Oregon as part of the interstate project sponsored by the Northeast Regional Research Project 113: "An Interstate Urban/Rural Comparison of Families' Time Use." Kathryn E. Walker of Cornell University coordinated the project and was the principal investigator. Eleven states participated: California, Connecticut, Louisiana, New York, North Carolina, Oklahoma, Oregon, Texas, Utah, Virginia, and Wisconsin. Collection of data in Oregon for the interstate study was supported by the Oregon Agricultural Experiment Station, Oregon State University. All participating states had two common objectives: (1) to establish a data bank on the use of time by urban and rural families, and (2) to compare time use between urban and rural families in the different geographic areas and between or among states (Walker 1976). All participating states used personal interviews as part of the data collection process. All interviewers were trained to follow a standard interview procedure.

#### Sample Selection

In Oregon, sites selected for data collection for the interstate project were the urban and suburban Portland Standard Metropolitan

Statistical Area (SMSA) and both rural farm and nonfarm areas of Linn and Benton Counties. For the rural sample, a list of all two-parent families with one or two children was compiled from the 1975 Albany City Directory. The directory included the birthdates of each child in the family born before 1975 and thus permitted identification and listing the family in one of the five age strata by age of the younger child. City records of vital statistics and local newspapers were consulted to secure information on new births for families listed in the directory as having only one child. About two-thirds of the families lived outside the city of Albany in Linn County and one-third lived in rural North Albany in Benton County. Random samples were drawn from the stratified lists by selecting every Nth family. Half-way through the interview schedule, families with new births were added to the stratified lists and new random samples were drawn (Olson 1979).

Although the Portland SMSA includes Multnomah, Clackamas, and Washington Counties in Oregon and Clark County, Washington, only the three Oregon counties were included in the urban Oregon sample (Olson 1979). A professional marketing research firm that had previously conducted a state-wide study on families selected the urban sample. Using lists from the metropolitan area developed for the former study, a new list was prepared for the interstate project according to the age strata of the younger child. This method accounted for nearly 73 percent of the urban sample. Additional urban families were obtained by (1) "asking families already identified in on-going cross section studies if they had children and, if so, in what age groups" (Olson 1979, pp. 1-2), and (2) telephoning randomly selected phone numbers.

A letter was sent to all selected possible urban and rural respondents inviting them to participate in the interstate project (Appendix B). A week later, interviewers contracted these families to assess their willingness to take part in the project and offered to remunerate them in the amount of ten dollars upon completion of the interviews.

The rural lists included names of 331 families. When the families were contacted, 110 did not fit the strata criteria, 11 could not be located or had moved, and 87 refused to participate. A total of 123 interviews with rural families were completed. Of these, 18 were eliminated because they lived within the Albany City limits. Of the 105 remaining families, 36 lived in Benton County and 69 lived in Linn County. The final total rural completion rate was 59 percent, with a 41 percent refusal rate (Olson 1979).

For the urban sample, interviewers contacted 189 families by the first procedure discussed. Of these, 112 refused and 77 agreed to participate. The resulting completion rate was 41 percent and the refusal rate was 59 percent. The completion rates were not available for the 28 families added to the original urban sample (Olson 1979).

The final sample in the interstate project consisted of 210 families equally divided between urban and rural areas and among the five age stratifications. For the 210 families there were 42 families in each age-group.

For this present research project, a subsample of families with at least one school-age child was selected from the Oregon interstate project sample. This limitation was imposed because no time use data

had been gathered on the activities of children under the age of six. This subsample consisted of 135 families with 219 school-age children, of whom 116 were boys and 103 were girls. There were 66 rural and 69 urban families. In 84 families, both children were school-age. In 51 families, one child was school-age and one child was under six years of age. The 75 families with two children under six years of age were not included in the subsample for this study.

### Data Collection

The instruments used by Walker in her 1967-68 time study were revised and tested for the 1977-78 interstate study. The categories of household tasks used in 1967-68 were also refined (Walker 1976).

Two instruments were used: (1) a questionnaire to collect information on demographic characteristics and household tasks, and (2) a time chart (Appendix C) on which to record the precategorized activities of the homemaker, spouse, and children aged six through seventeen for a 24-hour period. Each 24-hour time chart was broken down into ten-minute sections, which could be further subdivided. Thus, each activity could be calculated to the nearest five minute interval.

In the interstate project household tasks were divided into the following ten categories: (1) food preparation, (2) dishwashing, (3) shopping, (4) housecleaning, (5) maintenance of home, yard, car, and pets, (6) care of clothing and household linens, (7) construction of clothing and household linens, (8) physical care of family members, (9) nonphysical care of family members, and (10) management (Appendix A). This researcher combined items (6) and (7) (care and construction of

clothing and household linens), and items (8) and (9) (physical and nonphysical care of family members).

Interviews were scheduled for equal distribution over the seven days of the week for three segments of the year--January through April, May through August, and September through December--to take into account any seasonal variations (Appendix D). However, because of scheduling difficulties, data were collected in Oregon from January 1977 through February 1978.

Five interviewers were hired for the two areas and trained to follow identical procedures in collecting the data. They contacted each homemaker on the stratified lists by telephone to arrange for personal interviews. On the first interview, the homemaker was asked to recall "yesterday's" activities for all family members over six years of age. The interviewer recorded this information on the time chart. The use of the time chart was explained so that the homemaker could record the following day's activities on a second time chart using the diary method (Appendix E). Another appointment, which had been arranged at the initial interview, followed the recording of the second day's activities to review, to assist with any needed corrections, and to collect questionnaire data. At the completion of the last interview, the remuneration check for ten dollars was awarded the homemaker for her work.

The variables used for this study on children's tasks were:

1. Type of household tasks
2. Child's age at time of interview
3. Child's sex

4. Age of the child's sibling
5. Urban or rural residence
6. Whether the homemaker was gainfully employed or a fulltime homemaker
7. Occupation of homemaker
8. Occupation of spouse
9. Educational level of homemaker
10. Educational level of spouse
11. Family income level
12. Average time spent on household tasks

#### Data Analysis

This research used data taken from the Oregon sample for the Northeast Regional Research Project 113: "An Interstate Urban/Rural Comparison of Families' Time Use." All data were edited, coded, and placed on computer tape. All time inputs were averaged over the two days for this analysis. This gave an average for two-sevenths of a week instead of one-seventh. (Details on the occupation, education, and income categories are give in Appendix F).

The chi square test of independence and one-way analysis of variance (ANOVA) were used for data analysis. The probability level for all statistical tests was set at  $p < .05$ . This denotes a situation where in five percent of the cases sampled, it would be possible to make the mistake of rejecting a null hypothesis when, in fact, it was true (Turney and Robb 1973).

### Chi Square Test of Independence

The chi square test of independence ( $\chi^2$ ) was used to determine whether or not performance of specific household tasks by children was independent of selected demographic variables. This test uses a contingency table to compare observed frequencies with theoretical (expected) frequencies for two variables. When the observed frequencies are significantly different from the theoretical frequencies (that is, when the  $\chi^2$  value is found to be larger) the null hypothesis is rejected and it is concluded that the two variables are not independent (Glass and Stanley 1970, p. 329). In this study the observed frequencies were determined by counting the number of children who performed each specific household task.

### One-Way Analysis of Variance

One-way analysis of variance was used to determine significant differences in the mean amount of time spent by children on household tasks when categorized by the demographic variables. In this test, the F value of each demographic variable is determined by deriving the ratio of the mean square between groups to the mean square within groups (Turney and Robb 1973). The F statistic is appropriate for significance testing of differences between means (averages).

## CHAPTER IV

### FINDINGS

The findings of this research are presented in two sections. The first includes a description of the families in the sample and the factors considered in the analysis of which tasks the children performed and the amount of time they spent performing those tasks. The second section discusses the testing of the hypotheses.

#### Description of the Families in the Sample

The data analyzed for this study were collected in Oregon as part of the interstate project sponsored by the Northeast Regional Research Project 113: "An Interstate Urban/Rural Comparison of Families' Time Use." In Oregon, data were collected from 210 two-parent, two-child families in 1977. Half of the families lived in the urban and suburban Portland Standard Metropolitan Statistical Area (SMSA) and half lived in a rural area of Linn or Benton County.

For purposes of this study, the data collection categories for occupation, education, and family income level were collapsed. This was necessary in order to obtain a sufficient number of observed frequencies in each cell. Appendix F shows the relationship of the collapsed categories to the data collection categories.

### Children's Age-Group, Sex, Place of Residence, and Age of Sibling

Since no time-use data were recorded for children under six years of age, only families with at least one child between the ages of six and seventeen were included in this study. The subsample consisted of 135 families with 219 school-age children and included 116 boys and 103 girls. In 84 families both children were school-age, and in 51 families one child was school-age and one child was under six. One hundred eleven children were from 69 urban families, and 108 children were from 66 rural families. There were 66 children aged 6-8, 46 children aged 9-11, 59 children aged 12-14, and 48 children in the 15-17 age-group. Lynch (1975), O'Neill (1978), and Osborne (1979) also used these age-group categories which facilitates comparisons among these studies.

The average age of all of the school-age children was 11.22 years, the average age of the girls was 11.66 years, and the average age of boys was 10.03 years. A breakdown by age-group, number of families, sex, place of residence, and numbers of school-age children with younger and older siblings is presented in tables 4.1 and 4.2.

### Occupation of Homemaker and Spouse

In each family both the homemaker and spouse recorded the number of hours they worked outside the home and their occupation for the week prior to the sampling period. Eighty-two were fulltime homemakers (60.7 percent). Fifty-three of the homemakers reported fulltime gainful employment (39.3 percent). Eleven employed homemakers (8.1 percent) reported being private or public service workers or laborers; 17 (12.6 percent) were craftsmen, foremen, or clerical workers; 9 (6.7 percent)

TABLE 4.1 DISTRIBUTION OF FAMILIES AND CHILDREN BY AGE-GROUP, SEX, AND PLACE OF RESIDENCE

Age-Group of Children	Number of Families	Male Children		Female Children		Total Children	
		Urban/Rural	Urban/Rural	Urban/Rural	Urban/Rural	Number (Percent)	
6- 8	63	21	16	14	15	66	(30.1)
9-11	43	14	16	7	9	46	(21.0)
12-14	50	14	15	18	12	59	(26.9)
15-17	37	9	11	14	14	48	(21.9)
TOTAL	193 <sup>a</sup>	58	58	53	50	219	(99.9)*

<sup>a</sup>Number of families does not total 135 because some families had both children in the same age-group and others were in different age-groups

\* Error due to rounding

TABLE 4.2 DISTRIBUTION OF SCHOOL-AGE CHILDREN AND WHETHER OR NOT THEIR SIBLINGS ARE YOUNGER OR OLDER

Category of Child by Age of Sibling	Number of School-Age Children	Percent of Children
Child with younger sibling (under age six)	51	23.3
Child with older sibling	84	38.4
Child with younger sibling (over age six)	84	38.4
TOTAL	219	100.1

\* Error due to rounding

were salespersons, managers, or farmers; and 16 (11.9 percent) were employed as professional or technical workers (Table 4.3).

In this study, 130 of the 135 spouses (96.3 percent) were employed. Of these, 21 (15.6 percent) of the spouses were private or public service workers, or laborers; 32 (23.7 percent) were craftsmen, foremen, or clerical workers; 43 (31.9 percent) were employed as professional or technical workers. Five spouses (3.7 percent) did not report an occupation.

#### Education of Homemaker and Spouse

Generally, the spouses had more education than the homemakers. More spouses (35.6 percent) than homemakers (17.8 percent) earned a bachelor's degree or higher. More women than men reported completion of high school or less as their highest level of education.

A summary of the educational levels for homemakers and spouses is given in Table 4.4. Sixty-eight homemakers (50.4 percent) had completed high school or less. Forty-two homemakers (31.1 percent) had attended up to three years of college, and 24 (17.8 percent) had received a bachelor's degree or higher. Fifty spouses (37.0 percent) had completed high school or less, 36 (26.7 percent) had attended college for one to three years, and 48 (35.6 percent) had received a bachelor's degree or higher.

#### Family Income Level

Half of the families reported an annual income of between \$15,000 and \$24,999. No families reported an annual income less than \$5,999.

TABLE 4.3 OCCUPATION OF HOMEMAKER AND SPOUSE

Occupations	<u>Homemaker</u> Number (Percent)		<u>Spouse</u> Number (Percent)	
Private, public service worker, or laborer	11	( 8.1)	21	(15.6)
Craftsman, foreman, or clerical	17	(12.6)	32	(23.7)
Sales, manager, or farmer	9	( 6.7)	43	(31.9)
Professional or technical	16	(11.9)	34	(25.2)
Fulltime homemaker	82	(60.7)	0	--
Not reported	0	--	5	( 3.7)
TOTAL	135	(100.0)	135	(100.1)*

\* Error due to rounding

TABLE 4.4 EDUCATIONAL LEVELS OF HOMEMAKER AND SPOUSE

Highest Level Completed	<u>Homemaker</u> Number (Percent)		<u>Spouse</u> Number (Percent)		<u>Total</u> Number (Percent)	
High school diploma or less	68	(50.4)	50	(37.0)	118	(43.7)
Partial college	42	(31.1)	36	(26.7)	78	(28.9)
Bachelor's degree or higher	24	(17.8)	48	(35.6)	72	(26.7)
Not reported	1	( 0.7)	1	( 0.7)	2	( 0.7)
TOTAL	135	(100.0)	135	(100.0)	270	(100.0)

There was little difference in the income levels for the urban and rural families (Table 4.5).

In comparing incomes from the subsample families with those of Oregon families, the sample has a higher income level than the overall state population (Social Accounting for Oregon, 1977). Both mean and median income levels for urban and rural samples in this study were in the income category for which \$17,499 is the midpoint. The Oregon state median for 1976 was \$13,750. The 1976 median family income for each area surveyed in this study was Portland SMSA, \$14,689; Linn County, \$12,789; and Benton County, \$14,932.

TABLE 4.5 FAMILY INCOME LEVELS

Annual Income	<u>Urban</u>		<u>Rural</u>		<u>Total</u>	
	Number	(Percent)	Number	(Percent)	Number	(Percent)
\$ 6, -\$14,999	13	(18.8)	11	(16.7)	24	(17.8)
\$15, -\$24,999	35	(50.7)	33	(50.0)	68	(50.4)
\$25, -and over	21	(30.4)	22	(33.3)	43	(31.9)
TOTAL	69	(99.9)*	66	(100.0)	135	(100.1)*

\*Error due to rounding

#### Statistical Analysis of the Data

The chi square test of independence was used to test the null hypotheses to determine whether or not the eight household tasks performed by the children were independent of the selected demographic variables. The initial analysis used the Statistical Package for the

Social Sciences program for chi square test of independence and was run at the Oregon State University Milne Computer Center. The analysis was run separately for each of the eight household tasks using an 8 x k contingency table. The results for each household task with each variable are shown in tables 4.6 through 4.15.

For the remaining hypotheses, one-way analysis of variance was used to test for differences in the mean amount of time spent on all tasks when respondents were grouped in categories for each independent demographic variable. The .05 level of significance was selected as a criterion indicating that there is a five percent chance that significant differences may exist as a result of sampling error.

The hypotheses were stated in research form on pages 3, 4, and 5. In this section each hypothesis will be restated in null form prior to the discussion of the results of the statistical test.

$H_0^1$ : There is no relationship between the types of household tasks performed by school-age children and the age-group of the child performing the task

The chi square test of independence was used to determine whether or not each of the eight household tasks performed by the children was related to the age-group of the child performing the task. When analysis was performed for all household tasks the  $X^2$  value was 48.12 ( $p \leq .001$ ) (Appendix G). Based on this statistically significant chi square value, the null hypothesis was rejected indicating that the types of household tasks performed by school-age children were related to the age-group of the child performing the task. More detailed analysis (calculation of the chi square value for each task) enabled the researcher to identify

statistically significant chi square values for food preparation ( $X^2 = 28.85$ ,  $p=.0000$ ), dishwashing ( $X^2 = 37.16$ ,  $p=.0000$ ), and physical and nonphysical care of family members ( $X^2 = 19.96$ ,  $p=.0002$ ), indicating that performance of these tasks by school-age children was related to the age-group of the child performing the task (Table 4.6).

When observed frequencies were compared with theoretical frequencies in the contingency tables for significant variables, children 12 years of age and older were observed to participate more frequently than theoretically expected in food preparation and dishwashing, while younger children (ages 6-8) were observed to participate more frequently than theoretically expected in care of family members. Children aged 6-8 performed an average of 2.3 tasks; the children ages 9-11 averaged 2.5 tasks; those ages 12-14 averaged 3.1 tasks; and those ages 15-17 averaged 3.6 tasks per day. The average number of tasks performed by all children was 2.8 tasks per day. Likelihood of performing a task increased as the age of the child increased.

$H_0^2$ : There is no relationship between the types of household tasks performed by school-age children and the sex of the child performing the task

When analysis was performed for all household tasks the  $X^2$  value was 11.35 ( $p \leq .20$ ) (Appendix G). Based on this chi square value, the null hypothesis was not rejected indicating that the types of household tasks performed by school-age children were not related to the sex of the child performing the task. More detailed analysis (calculation of the chi square value for each task) enabled the researcher to identify statistically significant values for dishwashing ( $X^2 = 15.37$ ,  $p=.0001$ ), and care and

TABLE 4.6 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY AGE-GROUP

Tasks	$\frac{6-8}{N=66^a}$ 0 (E) <sup>b</sup>	$\frac{9-11}{N=46^a}$ 0 (E) <sup>b</sup>	$\frac{12-14}{N=59^a}$ 0 (E) <sup>b</sup>	$\frac{15-17}{N=48^a}$ 0 (E) <sup>b</sup>	Total Children N=219 0	$\chi^2$	Prob.
Food preparation	29 (42)	24 (29)	46 (38)	41 (31)	140	28.85	.0000 <sup>c</sup>
Dishwashing	8 (22)	9 (15)	29 (19)	28 (29)	74	37.16	.0000 <sup>c</sup>
Shopping	27 (31)	18 (22)	32 (28)	26 (23)	103	4.36	.23
Housecleaning	25 (30)	20 (21)	25 (27)	29 (22)	99	6.16	.10
Maintenance of home, yard, car, pets	19 (27)	21 (19)	30 (24)	20 (20)	90	6.85	.08
Care and construction of clothing and household linens	5 (8)	4 (6)	9 (8)	10 (6)	28	5.41	.14
Physical and non- physical care of family members	29 (18)	16 (13)	6 (16)	10 (13)	61	19.96	.0002 <sup>c</sup>
Management	8 (8)	4 (7)	6 (7)	9 (4)	27	2.65	.45
Average tasks performed	2.3	2.5	3.1	3.6	2.8		
TOTAL	150	116	183	173	622		

<sup>a</sup>Number of children in each age-group; <sup>b</sup>E=theoretical expected frequency; <sup>c</sup>p<.05

construction of clothing and household linens ( $X^2 = 4.67, p=.0307$ ) (Table 4.7). Performance of the above tasks by school-age children provide support for the conclusion that dishwashing and care and construction of clothing and household linens were related to the sex of the child.

When observed frequencies were compared with theoretically expected frequencies in the contingency tables, girls were observed to participate significantly more frequently than theoretically expected for dishwashing and care and construction of clothing and household linens. Girls were also observed to participate more frequently than theoretically expected for all household tasks except maintenance tasks. Boys participated less frequently than theoretically expected in all tasks.

$H_0^3$ : There is no relationship between types of household tasks performed by school-age children and the age of the sibling

When analysis was performed for all household tasks the  $X^2$  value was 47.01 ( $p \leq .001$ ) (Appendix G). Based on this statistically significant chi square value, the null hypothesis was rejected indicating that whether or not household work was performed by school-age children was related to the age of the sibling. More detailed analysis (calculation of the chi square value for each task) enabled the researcher to identify statistically significant chi square values for food preparation ( $X^2 = 15.57, p=.0004$ ), dishwashing ( $X^2 = 19.25, p=.0001$ ), and physical and nonphysical care of family members ( $X^2 = 32.47, p=.0000$ ). Performance of these tasks by school-age children were related to the age of the sibling of the child performing the task (Table 4.8).

TABLE 4.7 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY THE SEX OF THE CHILD

Tasks	Boys N=116 <sup>a</sup>		Girls N=103 <sup>a</sup>		Total Children N=219	$\chi^2$	Prob.
	0	(E) <sup>b</sup>	0	(E) <sup>b</sup>	0		
Food preparation	67	(74)	73	(66)	140	3.52	.06
Dishwashing	25	(39)	49	(17)	74	15.37	.0001 <sup>c</sup>
Shopping	52	(55)	51	(48)	103	.31	.58
Housecleaning	45	(52)	54	(47)	99	3.56	.06
Maintenance of home, yard car, pets	49	(48)	41	(42)	90	.05	.82
Care and construction of clothing and household linens	9	(15)	19	(13)	28	4.67	.0307 <sup>c</sup>
Physical and nonphysical care of family members	30	(32)	31	(29)	61	.30	.58
Management	10	(14)	17	(13)	27	2.45	.12
Average tasks performed	2.5		3.3		2.8		
TOTAL	287		335		622		

<sup>a</sup>Number of boys and girls; <sup>b</sup>E=theoretical expected frequency; <sup>c</sup>p<.05

TABLE 4.8 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THE THEORETICAL EXPECTED FREQUENCIES AND THE AGE OF THE SIBLING

Tasks	Children With Younger Sibling under age 6 N=51 <sup>a</sup>	Children With Older Sibling N=84 <sup>a</sup>	Children With Younger Sibling over age 6 N=84 <sup>a</sup>	Total Children N=219 0	$\chi^2$	Prob.
	0 (E) <sup>b</sup>	0 (E) <sup>b</sup>	0 (E) <sup>b</sup>			
Food preparation	21 (33)	57 (28)	62 (54)	140	15.57	.0004 <sup>c</sup>
Dishwashing	5 (17)	30 (28)	39 (28)	74	19.25	.0001 <sup>c</sup>
Shopping	20 (24)	40 (40)	43 (40)	103	1.85	.40
Housecleaning	18 (23)	37 (38)	44 (38)	99	3.81	.15
Maintenance of home, yard, car, pets	17 (21)	40 (35)	33 (35)	90	2.86	.24
Care and construction of clothing and household linens	4 (6)	11 (11)	13 (11)	28	1.67	.43
Physical and nonphysical care of family members	30 (14)	23 (23)	18 (23)	61	32.47	.0000 <sup>c</sup>
Management	6 (6)	10 (10)	11 (10)	27	.08	.96
Average tasks performed	2.4	2.8	3.1	2.8		
TOTAL	121	238	163	622		

<sup>a</sup>Number of children in each sibling group; <sup>b</sup>E=theoretical expected frequency; <sup>c</sup>p<.05

Children with a sibling under six years of age were observed to participate more frequently than theoretically expected in care of family members. Children with a younger sibling over six years of age were observed to participate more frequently than theoretically expected in all but two tasks: maintenance of home, yard, car, and pets; and physical and nonphysical care of family members. Children with an older sibling were observed to participate more frequently than theoretically expected in food preparation and dishwashing.

In this study, no analysis was made of shared time. The performances of tasks together could be an intervening variable influencing this finding since those with brothers or sisters over age six were more likely to perform tasks than calculated expected values would indicate.

H<sub>0</sub><sup>4</sup>: There is no relationship between types of household tasks performed by school-age children and whether the residence was urban or rural

Whether or not school-age children performed household tasks was not related to the place of residence. However, when analysis was performed for each task there was a significant difference, based upon residence for maintenance of home, car, yard, and pets ( $\chi^2 = 6.27, p=.0123$ ). Performance of these maintenance tasks was observed to be related to whether the child's place of residence was urban or rural. Fifty-four of the 108 rural children were observed to have participated in maintenance tasks, whereas the calculated theoretical expected value was 44. Fewer of the urban children (O=36) were observed to participate in maintenance tasks than the theoretical value (E=46) (Table 4.9).

TABLE 4.9 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY URBAN OR RURAL RESIDENCE

Tasks	Urban N=111 <sup>a</sup>		Rural N=108 <sup>a</sup>		Total Children N=219	$\chi^2$	Prob.
	0	(E) <sup>b</sup>	0	(E) <sup>b</sup>	0		
Food preparation	77	(71)	63	(69)	140	2.43	.12
Dishwashing	38	(38)	36	(36)	74	.00	1.00
Shopping	49	(52)	54	(51)	103	.54	.47
Housecleaning	48	(50)	51	(49)	99	.21	.65
Maintenance of home, yard, car, pets	36	(46)	54	(44)	90	6.27	.0123 <sup>c</sup>
Care and construction of clothing and household linens	12	(14)	16	(14)	28	.47	.49
Physical and nonphysical care of family members	29	(31)	32	(31)	61	.18	.67
Management	11	(16)	16	(12)	27	.81	.37
Average tasks performed	2.7		3.0		2.8		
TOTAL	300		322		622		

<sup>a</sup>Number of children in each area of residence; <sup>b</sup>E=theoretical expected frequency;

<sup>c</sup>p<.05

$H_0^5$ : There is no relationship between types of household tasks performed by school-age children whether the homemaker is gainfully employed or a fulltime homemaker

For all household tasks the  $\chi^2$  value was 13.44 ( $p \leq .10$ ), indicating the types of tasks school-age children performed was not related to whether the homemaker was gainfully employed or a fulltime homemaker. However, when analysis was performed for each task, there were some significant differences. For dishwashing the chi square value was 6.71 ( $p \leq .01$ ) and for physical and nonphysical care of family members the value was  $\chi^2 = 4.28$  ( $p \leq .05$ ). In homes where the homemaker reported being gainfully employed, 42 children were observed to participate in dishwashing tasks, whereas the theoretical frequency was 31. For physical and non-physical care of family members, more children of fulltime homemakers participated than the theoretical frequency ( $O=43$ ,  $E=35$ ) (Table 4.10).

$H_0^6$ : There is no relationship between types of household tasks performed by school-age children and the occupation of the homemaker

For all household tasks the  $\chi^2$  value was 21.67 ( $p \leq .08$ ), indicating that the types of tasks school-age children performed was not significantly related to the occupation of the homemaker. However, when analysis was performed for each task, there was a significant difference for dishwashing ( $\chi^2 = 17.59$ ,  $p = .0015$ ), indicating that the performance of this task by school-age children was related to the occupation of the homemaker. When the occupation of the homemaker was fulltime homemaker, the observed number of children performing dishwashing tasks was less than the theoretical frequency ( $O=32$ ,  $E=43$ ). When the homemaker was gainfully employed in a professional or technical occupation more children washed dishes

TABLE 4.10 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES AND WHETHER THE HOMEMAKER IS GAINFULLY EMPLOYED OR A FULLTIME HOMEMAKER

Tasks	Employed Homemaker N=93 <sup>a</sup>		Fulltime Homemaker N=126 <sup>a</sup>		Total Children N=219	$\chi^2$	df	Prob.*
	0	(E) <sup>b</sup>	0	(E) <sup>b</sup>	0			
Food preparation	66	(59)	74	(81)	140	1.43	1	≤.30
Dishwashing	42	(31)	32	(43)	74	6.71	1	≤.01
Shopping	41	(44)	62	(59)	103	.25	1	≤.70
Housecleaning	42	(42)	57	(57)	99	.00	1	≤.95
Maintenance of home yard, car, pets	37	(38)	53	(52)	90	.05	1	≤.90
Care and construction of clothing and household linens	11	(12)	17	(16)	28	.06	1	≤.90
Physical and nonphysical care of family members	18	(26)	43	(35)	61	4.28	1	≤.05 <sup>c</sup>
Management	12	(11)	15	(16)	27	.15	1	≤.70
Average tasks performed	2.9		2.8		2.8			
TOTAL	269		353		622			

<sup>a</sup>Number of children whose mothers are employed or fulltime homemakers; <sup>b</sup>E=theoretical expected frequency; <sup>c</sup>p<.05

\* This table was computed using the formula  $\chi^2 = \frac{\sum (O-E)^2}{E}$

than the theoretical frequency ( $O=17$ ,  $E=10$ ) (Table 4.11).

$H_0^7$ : There is no relationship between types of household tasks performed by school-age children and the occupation of the spouse

Whether or not school-age children performed household tasks was not related to the occupation of the spouse. However, when analysis was performed for each task, there was a significant difference for housecleaning ( $\chi^2 = 8.83$ ,  $p=.0317$ ) and for care and construction of clothing and household linens ( $\chi^2 = 9.76$ ,  $p=.0207$ ).

Table 4.12 shows the observed and theoretical frequencies for children's participation in each household task by occupation of the spouse. When observed frequencies were compared with theoretical frequencies in the contingency tables for significant variables, in households where the occupation of the spouse was professional or technical, more children were observed to participate in housecleaning than theoretically expected. In households where the occupation of the spouse was private or public service worker, or laborer; and craftsman, foreman, or clerical, more children were observed to participate in care and construction of clothing and household linens than theoretically expected.

$H_0^8$ : There is no relationship between types of household tasks performed by school-age children and the educational level of the homemaker

The null hypothesis was not rejected for any household task. The result of the chi square test of independence provides evidence that the tasks children perform are not related to the educational level of the homemaker (Table 4.13).

TABLE 4.11 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY OCCUPATION OF THE HOMEMAKER

Tasks	Private, Public Service Worker or Laborer N=18 <sup>a</sup> 0 (E) <sup>b</sup>	Craftsman, Foreman or Clerical N=29 <sup>a</sup> 0 (E) <sup>b</sup>	Sales, Manager or Farmer N=16 <sup>a</sup> 0 (E) <sup>b</sup>	Professional or Technical N=30 <sup>a</sup> 0 (E) <sup>b</sup>	Fulltime Homemaker N=126 <sup>a</sup> 0 (E) <sup>b</sup>	Total Children N=219 0	$\chi^2$	Prob.
Food preparation	14 (11)	17 (19)	11 (10)	24 (19)	74 (81)	140	6.85	.14
Dishwashing	7 (6)	8 (10)	10 (5)	17 (10)	32 (43)	74	17.59	.0015 <sup>c</sup>
Shopping	8 (8)	9 (14)	10 (8)	14 (14)	62 (59)	103	4.80	.31
Housecleaning	9 (8)	8 (13)	9 (7)	16 (14)	57 (57)	99	5.39	.25
Maintenance of home, yard, car, pets	7 (7)	7 (12)	10 (7)	13 (12)	53 (52)	90	6.62	.16
Care and construction of clothing and household linens	2 (2)	2 (4)	3 (2)	4 (4)	17 (16)	28	1.52	.82
Physical and nonphysical care of family members	3 (5)	8 (8)	4 (4)	3 (8)	43 (35)	61	8.41	.08
Management	3 (2)	4 (4)	2 (2)	3 (4)	15 (16)	27	.54	.97
Average tasks performed	2.9	2.2	3.7	3.1	2.8	2.8		
TOTAL	53	63	59	94	353	622		

<sup>a</sup>Number of children in each homemaker's occupation; <sup>b</sup>E=theoretical expected frequency; <sup>c</sup>p<.05

TABLE 4.12 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY OCCUPATION OF SPOUSE

Tasks	Private, Public Service Worker or Laborer N=33 <sup>a</sup>	Craftsman, Foreman or Clerical N=52 <sup>a</sup>	Sales, Manager or Farmer N=69 <sup>a</sup>	Professional or Technical N=56 <sup>a</sup>	Total Children N=210*	X <sup>2</sup>	Prob.
	0 (E) <sup>b</sup>	0 (E) <sup>b</sup>	0 (E) <sup>b</sup>	0 (E) <sup>b</sup>	0		
Food preparation	19 (21)	35 (34)	42 (45)	40 (36)	136	2.44	.49
Dishwashing	10 (11)	13 (17)	20 (23)	26 (18)	69	6.70	.08
Shopping	13 (16)	33 (35)	30 (33)	24 (27)	100	7.11	.07 <sup>c</sup>
Housecleaning	11 (15)	20 (23)	28 (31)	34 (25)	93	8.83	.0317 <sup>c</sup>
Maintenance of home, yard, car, pets	17 (13)	26 (26)	23 (28)	19 (23)	85	6.08	.11
Care and construction of clothing and household linens	8 (4)	10 (7)	8 (9)	2 (7)	28	9.76	.0207 <sup>c</sup>
Physical and nonphysical care of family members	12 (9)	14 (15)	17 (19)	16 (16)	59	1.57	.67
Management	3 (3)	8 (8)	7 (9)	8 (7)	26	1.27	.74
Average tasks performed	2.8	3.1	2.5	3.0	2.8		
TOTAL	93	159	175	169	596*		

<sup>a</sup>Number of children in each spouse's occupation; <sup>b</sup>E=theoretical expected frequency; <sup>c</sup>p<.05

\* Five spouses did not report their occupation

TABLE 4.13 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY EDUCATIONAL LEVEL OF HOMEMAKER

Tasks	High School Diploma or Less N=111 <sup>a</sup>		Partial College N=69 <sup>a</sup>		B.S. Degree or More N=37 <sup>a</sup>		Total Children N=217*	X <sup>2</sup>	Prob.
	0	(E) <sup>b</sup>	0	(E) <sup>b</sup>	0	(E) <sup>b</sup>			
Food preparation	75	(71)	40	(44)	23	(24)	138	1.73	.42
Dishwashing	34	(37)	26	(23)	13	(12)	73	.99	.61
Shopping	52	(32)	34	(32)	16	(17)	102	.35	.84
Housecleaning	45	(50)	31	(31)	22	(17)	98	4.01	.13
Maintenance of home, yard, car, pets	45	(45)	30	(28)	13	(15)	88	.70	.71
Care and construction of clothing and household linens	18	(14)	7	(9)	3	(5)	28	2.31	.32
Physical and nonphysical care of family members	28	(31)	20	(19)	13	(10)	61	1.39	.50
Management	15	(13)	6	(8)	5	(4)	26	1.04	.60
Average tasks performed	2.8		2.8		2.9		2.8		
TOTAL	312		194		108		614*		

<sup>a</sup>Number of children in each educational level of homemaker; <sup>b</sup>E=theoretical expect frequency

\* One homemaker did not report her educational level

$H_0^9$ : There is no relationship between types of household tasks performed by school-age children and the educational level of the spouse

Whether or not school-age children performed household tasks was not related to the educational level of the spouse. However, when analysis was performed for each task, there was a significant difference for food preparation ( $X^2 = 6.26$ ,  $p=.0436$ ), shopping ( $X^2 = 12.60$ ,  $p=.0018$ ), and housecleaning ( $X^2 = 9.09$ ,  $p=.0106$ ). These findings indicate that participation in tasks involving food preparation, shopping, and housecleaning were related to the educational level of the spouse. Table 4.14 shows the observed and theoretical frequencies for participation of children in each household task by educational level of the spouse. There were no patterns of increased or decreased observations with increasing or decreasing levels of education. When observed frequencies were compared with theoretical frequencies in the contingency tables, in households where the educational level of the spouse was high school or less, more children were observed to participate in shopping than the theoretically expected. In households where the educational level of the spouse was partial college, more children were observed to participate in shopping and housecleaning than the theoretically expected. In households where the educational level of the spouse was baccalaureate degree or higher, more children were observed to participate in food preparation and housecleaning than theoretically expected.

$H_0^{10}$ : There is no relationship between the types of household tasks performed by school-age children and level of family income

The null hypothesis was not rejected for any household task. The results of the chi square test of independence indicate that there is no

TABLE 4.14 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY EDUCATIONAL LEVEL OF SPOUSE

Tasks	High School Diploma or Less N=83 <sup>a</sup> 0 (E) <sup>b</sup>	Partial College N=55 <sup>a</sup> 0 (E) <sup>b</sup>	B.S. Degree or More N=79 <sup>a</sup> 0 (E) <sup>b</sup>	Total Children N=217* 0	X <sup>2</sup>	Prob.
Food preparation	51 (53)	29 (35)	58 (50)	138	6.26	.0436 <sup>c</sup>
Dishwashing	27 (28)	14 (19)	32 (27)	73	3.36	.18
Shopping	41 (39)	35 (26)	26 (37)	102	12.60	.0018 <sup>c</sup>
Housecleaning	27 (37)	31 (25)	40 (36)	98	9.09	.0106 <sup>c</sup>
Maintenance of home, yard, car, pets	36 (34)	24 (22)	28 (32)	88	1.35	.51
Care and construction of clothing and household linens	13 (11)	10 (7)	5 (10)	28	4.96	.08
Physical and nonphysical care of family members	19 (23)	19 (15)	23 (23)	61	2.29	.32
Management	13 (10)	5 (7)	9 (9)	26	.94	.62
Average tasks performed	2.7	3.0	2.8	2.8		
TOTAL	226	167	221	614*		

<sup>a</sup>Number of children in each educational level of spouse; <sup>b</sup>E=theoretical expected frequency

<sup>c</sup>p<.05; \* Two spouses did not report their educational level

relationship between the tasks the children perform and the family's income level (Table 4.15).

$H_0^{11}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to age-group of the child performing the task

The null hypothesis was rejected at the .05 level of significance, indicating that there is a significant difference in the mean amount of time spent on performing the eight household tasks according to the child's age-group.

Using the multiple range test, it was determined that children in the fifteen through seventeen age-group spent significantly more time on household tasks than children in the six through eight age-group. Children in the fifteen through seventeen age-group spent an average of 111.67 minutes per day performing household tasks, while children in the six through eight age-group spent an average of 59.47 minutes per day. Additionally, children aged 15-17 spent significantly more time on household tasks than children in the 12-14 age-group. Children in the latter group spent an average of 82.08 minutes per day performing household tasks (Table 4.16).

$H_0^{12}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to the sex of the child

The null hypothesis was rejected at the .05 level of significance indicating there is a difference in the average amount of time spent on eight household tasks according to the sex of the child.

Girls spent an average of 96.84 minutes per day performing household tasks, a significantly higher average amount of time than boys (68.58 minutes per day) (Table 4.17).

TABLE 4.15 NUMBER OF SCHOOL-AGE CHILDREN WHO PARTICIPATED IN EIGHT HOUSEHOLD TASKS AND THEORETICAL EXPECTED FREQUENCIES BY FAMILY INCOME LEVEL

Tasks	7,000- 14,999	15,000- 24,999	25,000- and over	Total Children	$\chi^2$	Prob.
	N=35 <sup>a</sup> 0 (E) <sup>b</sup>	N=108 <sup>a</sup> 0 (E) <sup>b</sup>	N=76 <sup>a</sup> 0 (E) <sup>b</sup>	N=219 0		
Food preparation	17 (23)	71 (69)	52 (49)	140	4.40	.11
Dishwashing	10 (12)	32 (36)	32 (26)	74	3.61	.16
Shopping	14 (16)	53 (51)	36 (36)	103	.88	.64
Housecleaning	12 (16)	48 (44)	39 (31)	99	2.86	.24
Maintenance of home, yard, car, pets	14 (14)	41 (44)	35 (31)	90	1.23	.54
Care and construction of clothing and household linens	5 (4)	14 (14)	9 (10)	28	.13	.94
Physical and nonphysical care of family members	10 (10)	31 (30)	20 (21)	61	.14	.93
Management	1 (4)	15 (13)	11 (9)	27	3.47	.18
Average tasks performed	2.4	2.8	3.1	2.8		
TOTAL	83	305	234	622		

<sup>a</sup>Number of children in each family income level; <sup>b</sup>E=theoretical expected frequency

TABLE 4.16 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND AGE-GROUP OF CHILD: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Age-Group	N	$\bar{X}$ Minutes Per Day			
6- 8	66	59.47			
9-11	46	82.66			
12-14	59	82.08			
15-17	48	111.67			
TOTAL	219	81.87			

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	3	75764.880	25254.960	4.44	.005
Within groups	215	1222755.040	5687.233		
TOTAL	218	1298519.920			

TABLE 4.17 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND SEX OF THE CHILD: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Sex	N	$\bar{X}$ Minutes Per Day			
Boys	116	68.58			
Girls	103	96.84			
TOTAL	219	81.87			

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	1	43592.604	43592.604	7.54	.007
Within groups	217	1254927.316	5783.075		
TOTAL	218	1298519.920			

$H_0^{13}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to age of sibling

The null hypothesis could not be rejected at the .05 level of significance. There is no significant difference in the average amount of time spent by school-age children in eight household tasks according to age of their sibling (Table 4.18).

TABLE 4.18 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND AGE OF SIBLING: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Age of Sibling	N	$\bar{X}$ Minutes Per Day
Child with sibling under six	51	73.43
Child with older sibling	84	79.20
Child with younger sibling over six	84	89.67
TOTAL	219	81.87

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	2	9346.154	4673.077	.78	.46
Within groups	216	1289173.766	5968.397		
TOTAL	218	1298519.920			

$H_0^{14}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to urban or rural residence

The null hypothesis could not be rejected at the .05 level of significance, although the F probability of .08 approached significance. There is no significant difference in the average amount of time spent on eight household tasks whether the residence of the child is urban or rural. Urban children spent an average of 72.93 minutes per day in eight household tasks compared to the 91.06 minutes per day averaged by rural children (Table 4.19).

TABLE 4.19 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND URBAN OR RURAL RESIDENCE: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Residence	N	$\bar{X}$ Minutes Per Day			
Rural	108	91.06			
Urban	111	72.93			
TOTAL	219	81.87			

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	1	18006.450	18006.450	3.05	.08
Within groups	217	1280513.470	5900.984		
TOTAL	218	1298519.920			

$H_0^{15}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children whether the homemakers are gainfully employed or fulltime homemakers

The null hypothesis could not be rejected at the .05 level of significance. There is no significant difference in the average amount of time spent by school-age children on eight household tasks whether the homemaker was gainfully employed or a fulltime homemaker (Table 4.20).

TABLE 4.20 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND WHETHER THE HOMEMAKER IS GAINFULLY EMPLOYED OR FULLTIME HOMEMAKER: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Employment of Homemaker	N	$\bar{X}$ Minutes Per Day			
Employed homemaker	79	79.21			
Fulltime homemaker	138	83.93			
TOTAL	217	82.21			

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	1	1120.349	1120.349	.19	.67
Within groups	215	1293142.900	6014.618		
TOTAL	216	1294263.249			

$H_0^{16}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to occupation of the homemaker

The null hypothesis could not be rejected at the .05 level of significance, indicating that there is no significant difference in the average amount of time spent by school-age children on eight household tasks according to the homemaker's occupation (Table 4.21).

TABLE 4.21 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND OCCUPATION OF THE HOMEMAKER: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Occupation of Homemaker	N	$\bar{X}$ Minutes Per Day
Private or public service worker, or laborer	18	87.64
Craftsman, foreman, or clerical	29	50.86
Sales, manager, or farmer	16	100.47
Professional or technical	30	91.25
Fulltime homemaker	126	83.59
TOTAL	219	81.87

Source	df	SS	MS	F Ratio	F Prob.
Between groups	4	37029.759	9257.440	1.57	.18
Within groups	214	1261490.161	5894.814		
TOTAL	218	1298519.920			

$H_0^{17}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to occupation of the spouse

The null hypothesis could not be rejected at the .05 level of significance, indicating that there is no significant difference in the average amount of time spent by school-age children on eight household tasks according to occupation of the spouse, however, the F probability did approach significance ( $p=.08$ ) (Table 4.22).

TABLE 4.22 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND OCCUPATION OF THE SPOUSE: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Occupation of Spouse	N	$\bar{X}$ Minutes Per Day
Private or public service worker, or laborer	33	106.67
Craftsman, foreman, or clerical	52	93.57
Sales, manager, or farmer	69	72.90
Professional or technical	56	70.05
TOTAL	210	82.56

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	3	40678.917	13559.639	2.27	.08
Within groups	206	1228651.589	5964.328		
TOTAL	209	1269330.506			

$H_0^{18}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to educational level of the homemaker

The null hypothesis could not be rejected at the .05 level of significance. There is no significant difference in the average amount of time spent by school-age children on eight household tasks according to the education level of the homemaker (Table 4.23).

TABLE 4.23 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND EDUCATIONAL LEVEL OF HOMEMAKER: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Educational Level	N	$\bar{X}$ Minutes Per Day
High school diploma or less	111	82.39
Partial college	69	78.23
B.S. degree or higher	37	86.76
TOTAL	217	81.81

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	2	1829.392	914.696	.15	.86
Within groups	214	1295691.921	6054.635		
TOTAL	216	1297521.313			

$H_0^{19}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to educational level of the spouse

The null hypothesis could not be rejected at the .05 level of significance. There is no significant difference in the average amount of time spent by school-age children on eight household tasks according to the educational level of the spouse (Table 4.24).

TABLE 4.24 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND EDUCATIONAL LEVEL OF SPOUSE: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Educational Level	N	$\bar{X}$ Minutes Per Day
High school diploma or less	83	88.86
Partial college	55	85.59
B.S. degree or higher	79	71.77
TOTAL	217	81.81

Source	df	SS	MS	F Ratio	F Prob.
Between groups	2	12866.104	6433.052	1.07	.34
Within groups	214	1284655.209	6003.062		
TOTAL	216	1297521.313			

$H_0^{20}$ : There is no significant difference in the mean amount of time spent on eight household tasks by school-age children according to family income level

The null hypothesis could not be rejected at the .05 level of significance. There is no significant difference in the average amount of time spent by school-age children on eight household tasks according to family income level (Table 4.25).

TABLE 4.25 TIME SCHOOL-AGE CHILDREN SPEND ON HOUSEHOLD TASKS AND FAMILY INCOME LEVEL: MEAN NUMBER OF MINUTES PER DAY AND ANOVA TABLE

Income Level	N	$\bar{X}$ Minutes Per Day			
\$ 6, - \$14,999	35	69.07			
\$15, - \$24,999	108	88.91			
\$25, - \$ and over	76	77.63			
TOTAL	219	81.87			

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between groups	2	12370.698	6185.49	1.04	.36
Within groups	216	1296149.223	5654.395		
TOTAL	218	1298519.920			

As part of the NE 113 project, this research has contributed to the knowledge of which household tasks Oregon children perform and the average time children spend performing household tasks. The results of the statistical analysis enable the researcher to conclude that Oregon children perform a variety of tasks. The household tasks were rank ordered according to the number of children performing each task: food preparation, shopping, housecleaning, maintenance tasks, and dishwashing (Table 4.26). This adds support to the findings of other researchers that children are most likely to engage in these five household tasks (Johannis 1958, Lynch 1975, O'Neill 1978, Osborne 1979, Walker 1970b, and Wilson 1929). No other researcher has rank ordered children's participation in household tasks so no comparison can be made.

More school-age children participated in food preparation than in any other task. Based on the significant relationships with the demographic variables, the children most likely to engage in food preparation: ages 12-17, have an older sibling or a younger sibling over age six, and live in a household where the spouse had a B.S. degree or higher.

Although dishwashing was number five when ranked according to the number of children who perform the task, it was the task with the greatest number of significant relationships with the demographic variables (Table 4.27). When the relationships were categorized the following profile emerged. Children who wash dishes are likely to be girls, be between the ages of 12 and 14, have a younger brother or sister, and live in a household where the homemaker is gainfully employed in a professional or technical occupation.

Physical and nonphysical care of family members was number six

TABLE 4.26 HOUSEHOLD TASKS PERFORMED BY SCHOOL-AGE CHILDREN: RANK ORDERED BY NUMBER OF CHILDREN WHO PERFORM THE TASK

Task	Number of Children Performing Each Task	Percent of Total
Food preparation	140	(23)
Shopping	103	(17)
Housecleaning	99	(16)
Maintenance of home, yard, car, and pets	90	(14)
Dishwashing	74	(12)
Physical and nonphysical care of family members	61	(10)
Care and construction of clothing and household linens	28	( 5)
Management	27	( 4)
TOTAL	622	(100.1) *

\* Error due to rounding



when ranked according to number of children who perform the task. This task had the same number of significant relationships with demographic variables as food preparation. When the relationships were categorized the following profile emerged. Children who care for family members are likely to be in the 6-8 age-group, have a sibling under age six, and live in a household where the homemaker is a fulltime homemaker.

When the household tasks were rank ordered according to the average time spent in performing each task, it was noted that children spent the most time doing: shopping, maintenance tasks, food preparation, housecleaning, and physical and nonphysical care of family members (Table 4.28). For the recorded two day period 103 children (17 percent) spent the most time shopping, a daily average of 25.8 minutes (30 percent of total work time-twt); 90 children (14 percent) spent an average of 19 minutes (22 percent of twt) performing maintenance tasks; 140 children (23 percent) spent an average of 11.5 minutes (13.5 percent of twt) in food preparation; 99 children (16 percent) spent an average of 11 minutes (13 percent of twt) cleaning house; and 61 children (10 percent) spent an average of 8 minutes (9 percent of twt) in physical and nonphysical care of family members.

In comparing the rank order of tasks by number of children who perform each task with the rank order of tasks by average time spent performing tasks only slight differences are noted. Food preparation ranked first by number of children (140) performing the task and third by average time (11.5 minutes) spent on the task. Shopping ranked second by number of children (103) performing the task and first by average time (25.8 minutes) spent on the task. Housecleaning ranked third by number of children (99) performing the task and fourth by average time (11 minutes) spent on the task. Maintenance tasks ranked fourth by number

TABLE 4.28 HOUSEHOLD TASKS PERFORMED BY SCHOOL-AGE CHILDREN: RANK ORDERED BY AVERAGE DAILY TIME SPENT PERFORMING TASKS

Task	Mean Minutes Per Task*	Percent of Total Work Time
Shopping	25.78	(30.2)
Maintenance of home, yard, car, and pets	19.00	(22.2)
Food preparation	11.54	(13.5)
Housecleaning	11.07	(13.0)
Physical and nonphysical care of family members	7.99	( 9.4)
Dishwashing	5.12	( 6.0)
Care and construction of clothing and household linens	2.66	( 3.1)
Management	2.29	( 2.7)
TOTAL	85.45	(100.1)**

\*mean is a per household figure and varies slightly from the per child mean  
 \*\*error due to rounding

of children (90) performing the task and second by average time (19 minutes) spent on the task. The rank order reversed for dishwashing and physical and nonphysical care of family members, and remained the same for care and construction of clothing and household linens and management in the two tables (Tables 4.26 and 4.28).

Based on the results of this research, it is posited that older children prepare food, older children also assist gainfully employed homemakers in dishwashing, and that children with younger siblings under

six assist fulltime homemakers with the care of their younger siblings.

The findings of this study enable the researcher to agree with Knoll's findings that participation in dishwashing is dependent upon the age of the child, with those 12 and older more likely to engage in the task than younger children.

When comparing the results of the Oregon data with the time studies from New York (O'Neill 1978) and Utah (Osborne 1979) (also taken from the NE 113 project), there were similarities and dissimilarities. Generally there was agreement among the three states that children's contributions to household tasks were concentrated in food preparation, dishwashing, shopping, housecleaning, and maintenance tasks. There was also agreement that more girls participated in a larger number of household tasks, and spent more time performing household tasks. More girls contributed to food preparation than to any other task for both Utah (Osborne 1979) and Oregon. Osborne (1979) found that rural children contributed significantly more time to household work than urban children. Rural children in this study contributed more time and performed a greater number of tasks than urban children, but the difference was not statistically significant.

The major dissimilarity appeared in the average amount of time school children spent on all household tasks. Oregon children spent slightly over 81 minutes per child per day, while Utah children averaged 49 minutes per child per day (Osborne 1979). New York boys averaged 50 minutes per day and girls averaged 75 minutes per day (O'Neill 1979), while Oregon boys averaged 68 minutes and girls averaged 96 minutes per day.

While Johannis (1958), Lynch (1975), and O'Neill (1978), and Osborne (1979) found support in their research for the hypothesis that food preparation, dishwashing, and housecleaning were sex-related tasks for girls and that tasks involving home, yard, car, and pets were sex-related tasks for boys, the findings of this study enable the researcher to conclude that only dishwashing and care and construction of clothing and household linens were sex-related tasks for girls, and that no tasks were male sex-related.

Because of small cell sizes in some of the tasks performed, it is possible the statistical tools failed to provide results which would have enabled the researcher to reject the null hypothesis when significant differences do indeed exist. This occurs because in Type II errors, Beta is a function of sample size.

CHAPTER V  
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purposes of this study were twofold: first, to determine whether or not relationships exist between selected independent demographic variables and the household tasks children perform; second, to determine whether or not there are significant differences in the average amount of time children spend on household tasks when children are grouped by selected independent demographic variables. This study included 219 children in 135 families from the Oregon sample of 210 families interviewed for the Northeast Regional Research Project 113: "An Interstate Urban/Rural Comparison of Families' Time Use." The subsample for this study was limited to families composed of two parents and at least one school-age child since no time data were gathered for children under six years of age. Eighty-four families had two school-age children and 51 families had one school-age child and one child under six years of age. There were 116 boys and 103 girls in the 66 rural and 69 urban families.

A questionnaire had been used to collect information on demographic characteristics and household data, and a time chart had been used to record the precategorized activities of the homemaker, spouse, and children over six years of age for two separate 24-hour periods. For this study, the household work activities were categorized into the following eight tasks:

1. Food preparation
2. Dishwashing
3. Shopping
4. Housecleaning
5. Maintenance of home, yard, car, and pets
6. Care and construction of clothing and household linens
7. Physical and nonphysical care of family members
8. Management

The following independent variables were used in the statistical analysis:

1. The age-group of the child
2. The sex of the child
3. The age of the sibling
4. Whether the residence was urban or rural
5. Whether the homemaker was gainfully employed or a fulltime homemaker
6. The occupation of the homemaker
7. The occupation of the homemaker's spouse
8. The education of the homemaker
9. The education of the homemaker's spouse
10. The family income

The chi square test of independence and one-way analysis of variance (ANOVA) were used for data analysis. The probability level for all statistical tests was set at  $p < .05$  which means that the chances are five in one-hundred that significant statistical differences are due to sampling error.

Children's contributions to household work were concentrated in

food preparation; dishwashing; shopping; housecleaning; and maintenance of home, yard, car, and pets. Fewer than 28 percent of the children contributed to care and construction of clothing and household linens, to the physical and nonphysical care of family members, or to management tasks.

Of the 219 children included in the study, 206 children (94.1 percent) contributed to household work. The number of tasks performed by all children ranged from zero to seven for one day and from zero to ten over the two-day period.

The chi square test of independence was used to determine whether there was a relationship between the independent demographic variables and which tasks the children perform. There were significant relationships ( $p < .05$ ) between:

1. The age-group of the child and food preparation, dishwashing, physical and nonphysical care of family members
2. The sex of the child and dishwashing and care and construction of clothing and household linens
3. The relative age of the sibling and food preparation, dishwashing, and physical and nonphysical care of family members
4. The place of residence and maintenance of home, yard, car, and pets
5. Whether the homemaker was gainfully employed or a fulltime homemaker and dishwashing and physical and nonphysical care of family members.
6. The occupation of the homemaker and dishwashing
7. The occupation of the spouse and housecleaning

8. The education of the spouse and food preparation, shopping, and housecleaning

No relationship was found between any task and the education of the homemaker or the family income (Table 4.27, p.65).

Food preparation, dishwashing, and physical and nonphysical care of family members had more significant relationships with the demographic independent variables than other household tasks. The demographic variables for food preparation were: age-group, age of sibling, and education of spouse; those for dishwashing were: age-group, sex, age of sibling, gainfully employed or fulltime homemaker, and occupation of homemaker; and those for care of family members were: age-group, age of sibling, and gainfully employed or fulltime homemaker.

The age-group of the child, age of the sibling, and education of the spouse had more significant relationships with household tasks than other demographic variables. The household tasks with significant demographic variables for age-group and age of the sibling were the same: food preparation, dishwashing, and care of family members; those for education of spouse were: food preparation, shopping, and housecleaning.

One-way analysis of variance was used to test for differences in the average amount of time spent on all tasks when respondents were grouped by selected demographic variables. Two null hypotheses were rejected. More time was spent on household tasks by school-age children ages 15-17 than by children ages 6-8 or ages 12-14. Girls spent significantly more time performing household tasks (96.84 minutes per day) than boys (68.58 minutes per day).

The average time contributed by children performing household tasks

was slightly over 81 minutes per day. These time contributions to household work ranged from five minutes to over fourteen hours in the days recorded.

### Conclusions

As part of the NE 113 project, this research has contributed to the knowledge of which household tasks Oregon children perform and the average time children spend performing household tasks. The results of the statistical analysis enable the researcher to conclude that Oregon children perform a variety of tasks.

The types of tasks they performed were related to their age, and the age of their brother or sister. Children ages twelve through seventeen and those with younger brothers or sisters over age six were more likely to perform household tasks than other children. Older children and girls averaged significantly more time than other children on the performance of household tasks.

The child's age-group and the sex of the child, were related to the average amount of time a child spent on household tasks, with older children and girls averaging significantly more time than others. The average amount of time all school-age children spent on household tasks was 81.82 minutes per day.

This study has contributed to the understanding of the influence of selected demographic variables on children's participation in household tasks and the time spent on those tasks. It is possible there are other influencing demographic variables not examined in this study.

The population of the sample is different from the population as a

whole on four counts: the number of homemakers gainfully employed was higher than the average labor force participation rate for Oregon women; the number of spouses employed was higher than the average U.S. labor force participation rate for men; in the sample there is a greater proportion of spouses engaged in professional occupations than in the general population; and the median family income for the sample is above the median income for the state. Statistical significance of these differences was not determined.

### Recommendations

It is recommended that any future study of children's total time use compare data from other states in the NE 113 project to discern whether there are significant regional differences in the tasks children perform or whether there are patterns of participation which are similar throughout the United States.

For future studies involving rural residents, it is recommended that an additional sample be taken from a more remote rural area which would include a higher proportion of farm families. Earlier studies (Wilson 1929) included both rural farm and rural nonfarm families. Furthermore, the current back to basics movement includes moving back to a more self-sufficient status often equated with living on a farm. Pastoral perceptions and expectations may not reflect reality and a study of the use of time by rural farm households would contribute to more accurate estimates of what more self-sufficient existence on a farm entails.

It is recommended that the study of Oregon children's participation in household work and the time spent on those tasks be expanded to

include an analysis of the time spent by children in school, school-related activities, social and recreational activities, and employment. Analysis of the time data for the above activities would give additional insight into time available for children to use in the performance of household tasks and would provide data for comparison with other states.

Analysis of the household tasks performed by family members working would provide additional insight to sex stereotyping of household tasks as well as cooperative work efforts compared to individual work efforts. Do children work together or alone on certain household tasks? Are there working relationships between children of same or different age-groups and between parents and children? Are the traditional sex-role tasks being perpetuated by homemakers and spouses? Understanding the factors that influence the tasks children perform and the time spent on tasks is important because of the socialization process that occurs and the rewards and sanctions encountered by children and parents as families prepare their children for adulthood.

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## APPENDICES

## APPENDIX A

## HOUSEHOLD TASK CATEGORIES AND DEFINITIONS

NEW YORK STATE COLLEGE OF HUMAN ECOLOGY  
A Statutory College of the State University  
Cornell University, Ithaca, New York

Department of Consumer Economics and Public Policy

Use-of-time Research Project  
Definition of Activities of Household Members

## FOOD

1. Food Preparation

All tasks relating to the preparation of food for meals, snacks, and future use.

Include time spent setting the table and serving the food.

2. Dishwashing

In addition to washing and drying dishes, loading and unloading dishwasher or dish drainer.

Include after-meal cleanup of table, leftovers, kitchen equipment and refuse.

## SHOPPING

3. Shopping

All activities related to shopping for food, supplies, equipment, furnishings, clothing, durables, and services, whether or not a purchase was made (by telephone, by mail, at home, or at the store). Also include:

Comparison shopping  
Putting purchases away  
Getting or sending of mail and packages  
Hiring of services (cleaning, repair, maintenance, other)

## HOUSE

4. Housecleaning

Any regular or periodic cleaning of house and appliances, including such tasks as:

Mopping, vacuuming, sweeping, dusting, waxing  
 Washing windows or walls  
 Cleaning the oven; defrosting and cleaning the refrigerator  
 or freezer  
 Making beds and putting rooms in order

5. Maintenance of Home, Yard, Car and Pets

Any repair and upkeep of home, appliances, and furnishings such as:

Painting, papering, redecorating, carpentry  
 Repairing equipment, plumbing, furniture  
 Putting up storm windows or screens  
 Taking out garbage and trash  
 Care of houseplants, flower arranging

Daily and periodic care of outside areas such as:

Yard, garden  
 Sidewalks, driveways, patios, outside porches  
 Garage, tool shed, other outside areas  
 Swimming pool

Maintenance and care of family motor vehicles (car, truck, van, motorcycle, snowmobile, boat) such as:

Washing, waxing  
 Changing oil, rotating tires and other maintenance  
 and repair work  
 Taking motor vehicle to service station, garage, or  
 car wash

Feeding and care of house pets. Also include trips to  
 kennel or veterinarian.

## CLOTHING AND HOUSEHOLD LINENS

6. Care

Washing by machine at home or away from home, including:

Collecting and preparing soiled items for washing  
 Loading and unloading washer or dryer  
 Hanging up items and removing from the line  
 Folding

Hand washing  
Ironing and pressing. Also include:

Getting out equipment, sprinkling

Putting away cleaned items and equipment  
Polishing shoes  
Preparing items for commercial laundry or dry cleaning  
Seasonal storage of clothing and textiles

## 7. Construction

Making alterations or mending  
Making clothing and household accessories (draperies, slip-covers, napkins, etc.) include such activities as:

Sewing  
Embroidering  
Knitting, crocheting, macrame

If these activities are to make product for self, immediate family members or to give as gift, include under (7).

If activity is primarily to produce product for sale, include time under paid work (12).

If activity is primarily as recreational rather than goal motivated, include time under "recreation" (15).

## HOUSEHOLD MEMBERS

### 8. Physical Care

All activities related to physical care of household members other than self such as:

Bathing, feeding, dressing and other personal care  
First aid or bedside care  
Taking household members to doctor, dentist, barber

### 9. Nonphysical Care

All activities related to the social and educational development of household members such as:

Playing with children  
Teaching, talking, helping children with homework  
Reading aloud  
Chauffeuring and/or accompanying children to social and educational activities  
Attending functions involving your child

## MANAGEMENT

10. Management

Making decisions and planning such as:

Thinking about, discussing, and investigating alternatives  
 Looking for ideas and seeking information  
 Assessing resources available (space, time, money, etc.)  
 Planning--family activities, vacations, menus, shopping  
 lists, purchases and investments

Supervising and coordinating activities  
 Checking plans as they are carried out  
 Thinking back to see how plans worked  
 Financial activities such as:

Making bank deposits and checking bank statements  
 Paying bills and recording receipts and expenses  
 Figuring income taxes

## WORK (OTHER THAN HOUSEHOLD)

11. School

School  
 Classes related to present or future employment

Include time spent in preparation for each of the above.  
 For example, work or reading done at home or at the  
 library relating to job or classes.

12. Paid

Paid employment and work-related activities, such as work  
 brought home, professional, business and union meetings,  
 conventions, etc.  
 Paid work for family farm or business, babysitting, paper  
 route.

13. Unpaid

Work or service done either as a volunteer or as an unpaid  
 worker for relatives, friends, family business or farm,  
 social, civic, or community organizations.

## NONWORK

14. Organization Participation

Attending and participating in:

Religious activities and services  
 Civic and political organizations  
 Other clubs and organizations

15. Social and Recreational Activities

Reading (other than required for school or work)  
 Watching TV  
 Listening to radio, stereo, etc.  
 "Going out" to movies, car shows, museums, sporting events,  
 concerts, etc.  
 Participating in any sport, hobby or craft  
 Taking a class or lesson for personal interest  
 Walking, cycling, boating, "taking a ride," training animals  
 Talking with friends or relatives, either in person or by  
 telephone  
 Entertaining at home or being entertained away from home  
 Writing letters, or cards to friends, relatives  
 Playing games, musical instruments, etc. (If adult is  
 playing with child include such activities under  
 nonphysical care.)

PERSONAL MAINTENANCE

16. Personal Care (of Self)

Sleeping  
 Bathing, getting dressed, other grooming and personal care  
 Making appointments and going to doctor, dentist, beautician  
 and other personal services  
 Relaxing, loafing, resting  
 Meditation

17. Eating

Eating any meal or snack, alone, with family or friends at  
 home or away from home.

OTHER

18. Other

Any activity not classified in categories 1 to 17  
 Any time block for which you cannot recall, do not know,  
 or do not wish to report

## APPENDIX B

## LETTER TO PARTICIPANTS

School of  
Home Economics



Corvallis, Oregon 97331 (503) 754-4651

January 17, 1977

Dear Mr. and Mrs.

A time-use research project is being conducted by the Family Resource Management Department within the School of Home Economics at Oregon State University. The Oregon study is part of a nationwide research project coordinated by Cornell University in New York State. The focus of the research is on family members and how they use their time, both in work and nonwork activities. We are interested in understanding more about the time-use problems of families today as well as comparing families today with Oregon families' time use in the late 1920's. This is possible because of an early research study done by Maud Wilson, a pioneer researcher from Oregon State University who was recognized nationally for her work.

Your help is very much needed for the completion of this project. Your name has been drawn by chance to represent the size and age composition of families we need to study. The information we are requesting is not personal in nature. The information you give us will be used for no purpose other than the research and your family will not be identified in any way. In addition to providing valuable data to us, we hope that your participation will be beneficial to you as we work with you to determine where your valuable time goes.

A member of the research team will contact you within the week to arrange a convenient time to talk with you. Please ask any questions you may have about your participation in this research. There will be two interviews, but only the homemaker needs to be present. The first interview will take one to two hours and a second interview will take approximately half an hour. Time for keeping the record will require another half-hour. We plan to thank our participants by offering \$10.00 for their personal use. We know that this does not measure the value of your contribution, but we want you to know that we recognize and appreciate the time and effort we are requesting of you.

I encourage your participation in the time-use study. Without the cooperation of Oregon residents, Oregon State University would be unable to conduct much of its research for the benefit of all.

Sincerely,

Geraldine Olson  
Principal Investigator and Head  
Department of Family Resource Management

1b

		12 midnight	1 am	2 am	3 am	4 am	5 am	6 am	7 am	8 am	9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm	10 pm	11 pm	12 midnight			
FOOD	Food Preparation																											Food Preparation	FOOD
	Dishwashing																											Dishwashing	
SHOPPING	Shopping																											Shopping	SHOPPING
HOUSE	Housecleaning																											Housecleaning	HOUSE
	Maintenance of Home, Yard, Car, and Pets																											Maintenance of Home, Yard, Car, and Pets	
CLOTHING AND HOUSEHOLD LINENS	Care																											Care	CLOTHING AND HOUSEHOLD LINENS
	Construction																											Construction	
HOUSEHOLD MEMBERS	Physical Care																											Physical Care	HOUSEHOLD MEMBERS
	Nonphysical Care																											Nonphysical Care	
MANAGEMENT	Management																											Management	MANAGEMENT
WORK (other than household)	School																											School	WORK (other than household)
	Paid																											Paid	
	Unpaid																											Unpaid	
NONWORK	Organization Participation																											Organization Participation	NONWORK
	Social and Recreational Activities																											Social and Recreational Activities	
PERSONAL MAINTENANCE	Personal Care (of self)																											Personal Care (of self)	PERSONAL MAINTENANCE
	Eating																											Eating	
OTHER	Other																											Other	OTHER

APPENDIX D INTERVIEW SCHEDULE

JANUARY-APRIL SEGMENT FOR RURAL OR URBAN SAMPLE

Interview one family in each group	During week of*	Schedule interview on:	Mon. & Wed.	Tues. & Thurs.	Wed. & Fri.	Thurs. & Sat.	Fri. & Sun.	Sat. & Mon.	Sun. & Tues.
		For record on:	Sun. & Tues	Mon. & Wed.	Tues. & Thurs.	Wed. & Fri.	Thurs. & Sat.	Fri. & Sun.	Sat. & Mon.
1,2,3,4,5	Jan. 9								
	Jan. 16								
1,2,3,4,5	Jan. 23								
	Jan. 30								
1,2,3,4,5	Feb. 6								
	Feb. 13								
1,2,3,4,5	Feb. 20								
	Feb. 27								
1,2,3,4,5	March 6								
	March 13								
1,2,3,4,5	March 20								
	March 27								
1,2,3,4,5	April 3								
	April 10								
substitute week	April 17								
	April 24								

\*You may interview 5 days with 3 days off in a rotating pattern of work days. You must interview in 7 - 2 week periods, but you may select these 7 - 2 week periods from the 16 weeks of the winter segment of January through April.

## APPENDIX E

## INSTRUCTIONS FOR KEEPING TIME CHART

## AN INTERSTATE URBAN/RURAL COMPARISON OF FAMILIES' TIME USE

## Instructions for Homemaker for Keeping Time Record

We need a record of how each member of your family, 6 years of age and older, used his/her time for two days. To show you how to keep the record, we will record yesterday's use of time while I am here. We would like you then to record each family member's use of time for the second day.

On the left and on the right side of the time record, household work and other activities are listed; across the top of the record, the 24 hours of the day are listed. Each hour is divided into six ten-minute periods to simplify recalling and recording time. However, time may be recorded in units of 5 minutes.

Recording Time of Family Members

A combination of colors and letters or numbers is used to record each household member's time. (See key on last page.) All females are represented by the color red and all males are represented by the color blue. The homemaker, symbol "H", is the adult with the major responsibility for operating the household. The homemaker's time use is represented by a red H if female or a blue H if male. The spouse (S) of the homemaker is also either blue or red. Children are shown on the time chart by their age written in either red for girls or blue for boys.

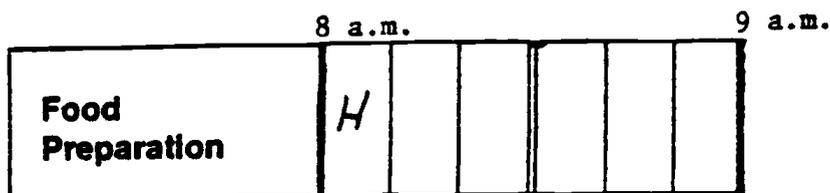
Activities will be coded by the definitions listed on the sheet entitled "Definitions of Activities of Household Members." If you are unable to determine the category for recording time for an activity, then code it under "Other" and label the activity and ask the interviewer when she returns for correct category.

Primary Time

Primary time is time when you are actively doing something that requires your main or "primary" attention: that is, time involved in getting ready for the job, working at the job, and cleaning up after the job, but it does not include the time required for a machine to function or food to cook without full attention.

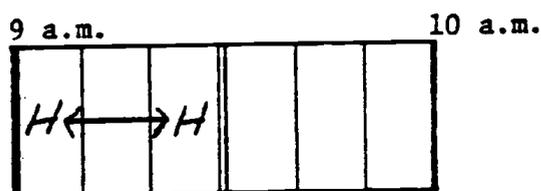
For example, if the female homemaker prepared breakfast from 8:00 to 8:10 a.m., write a red H in the first 10-minute block after 8 a.m.

**Example A.**



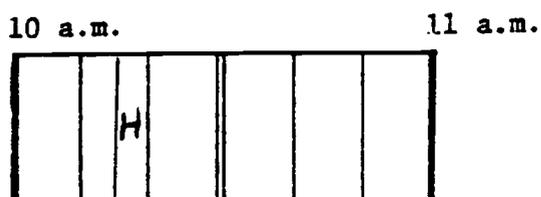
For longer, continuous activities, an arrow and line may be drawn from the time of starting the activity to the time of completing it, placing the person's symbol at each end (H ←————→ H). For example, half-hour activity by homemaker.

**Example B.**



For intervals of approximately 5 minutes, draw a line to divide the 10-minute time block in half and write the person's symbol in the block. For example, five minute activity (from 10:15 a.m. to 10:20 a.m.) by homemaker.

**Example C.**



If the activity took over 1/2 hour or if what was done is not self-evident from the heading, then write in the specific activity above the line. For example, if the spouse cleaned the garage, according to definitions this is recorded as "Maintenance of Home". If it took

from 10:00 a.m. to 11:40 a.m., place an S in the second block after 10 a.m. with an arrowed line to block at 11:40 a.m. and write "cleaned garage" over the line.

**Example D.**

	10. a.m.		11 a.m.				12 noon	
<b>Maintenance of Home, Yard, Car, and Pets</b>		S ←	Cleaned Garage				→ S	

Time recorded is active time use: that is time involved in getting ready for the job, working at the job, and cleaning up after the job; but it does not include the time required for a machine to function or food to cook without your full attention.

Secondary Time

A person may be engaged in more than one activity at the same time (one activity involving primary attention and the other activity requiring less attention). Secondary time is recorded in the same manner as the primary time with the addition of a circle around the individual's symbol to indicate the activity as secondary. For example, if a person was ironing and thinking about what to prepare for dinner, ironing would be the primary activity (Care of Clothing and Household Linens) and thinking about the dinner menu would be the secondary activity (Management).

**Example E.**

	2 p.m.		3 p.m.		
<b>Management</b>		⊕			

Travel Time

Time spent in traveling to and from an activity should also be recorded. Include transportation time with the activity for which the trip is made with a T after the individual's symbol to indicate the

approximate time used to travel. For example, the homemaker traveled for 20 minutes (from 1:00 p.m. to 1:20 p.m.) to the store, shopped for 40 minutes (from 1:20 p.m. to 2:00 p.m.), and then traveled home (from 2:00 p.m. to 2:20 p.m.).

**Example F.**

	1 p.m.			2 p.m.			3 p.m.		
<b>Shopping</b>	HT	HT	H	FURNITURE SHOPPING			H	HT	HT

If more than one thing was done on the trip, include the time enroute to the activity of the first stop and assign the time for the return trip to the last activity. In the above example, if the worker did not return home directly from shopping, but went next door to the bank to make a deposit before returning home the additional time and travel time would be recorded under management as noted below.

**Example G.**

	1 p.m.			2 p.m.			3 p.m.				
<b>Shopping</b>	HT	HT	H	FURNITURE SHOPPING							
<b>Management</b>							H	H	HT	HT	HT

Two or More Household Members Doing the Same Activity Together

To show that the same activity was done by more than one person at the same time and in the same place: place a penciled box around the symbols for any combination of individuals.

**Example H.**

				H	
				12	
H			H		
S			S		
10			10		

Homemaker and 12 year old did same activity.

Homemaker, spouse and 1 of the 2 children did the same activity.

Nonhousehold or Outside Help

Household work time of workers not living in your household should be recorded in the appropriate category. This worker is identified as either a paid worker (P) or an unpaid worker (U).

For example, if you hire someone to clean the house, cut the grass, or "babysit" children, the worker is a paid worker (P). If a relative (who does not live in the household) washed the dinner dishes, he/she is an unpaid worker (U).

Keys to Symbols

Sex of the individual will determine the color of the symbol used:

Red if female  
Blue if male

Homemaker           H

Spouse               S

Children            Age

Paid worker        P

Unpaid worker     U

Travel              T

Secondary time   ○       circle around individual's symbol

Individuals doing same activity box □ (in either color)

## APPENDIX F

RELATIONSHIPS OF COLLAPSED CATEGORIES  
TO DATA COLLECTION CATEGORIES

Occupation - Record of occupations of homemakers and spouses:

<u>Questionnaire Categories</u>	<u>Collapsed Categories</u>
Cleaning service workers Food service workers Health service workers Protective Service workers Private household workers Laborers Operatives, including transport	Private, public service worker, or laborer
Craftsman, foreman, and kindred workers Clerical and kindred workers	Craftsman, foreman, or clerical
Sales workers Managers and administrators, including farm	Sales, managers, or farmers
Professional, technical, and kindred workers	Professional or technical
Homemakers - fulltime	Homemakers - fulltime

Education - Record of the highest grade in school completed by the  
homemaker and spouse:

<u>Questionnaire Categories</u>	<u>Collapsed Categories</u>
Grade school (1-8) Partial high school (9-11) High school diploma	High school diploma or less
Vocational or technical training Partial college, no degree Associate's degree	Partial college
Bachelor's degree (BA, BS) Master's degree (MA, MS, MAT, ME, MBA, MPA, etc.) Doctorate (Ph.D., doctor of education)	Bachelor's degree or higher

Relationships of Collapsed Categories to Date Collection Categories  
(Continued)

Family Income - Total income before taxes last year (1976)

<u>Questionnaire Categories</u>	<u>Collapsed Categories</u>
Under - \$ 1,000	
\$ 1,000 - \$ 1,999	
\$ 2,000 - \$ 2,999	none reported
\$ 3,000 - \$ 3,999	
\$ 4,000 - \$ 4,999	
\$ 5,000 - \$ 5,999	
\$ 6,000 - \$ 7,499	
\$ 7,500 - \$ 9,999	\$ 6,000 - \$14,999
\$10,000 - \$11,999	
\$12,000 - \$14,999	
\$15,000 - \$19,999	\$15,000 - \$24,999
\$20,000 - \$24,999	
\$25,000 - \$49,999	\$25,000 - and over
\$50,000 - and over	

APPENDIX G

SUMMARY OF HYPOTHESES: CHI SQUARE ANALYSIS

Hypotheses	Tasks	$\chi^2$ Values	df	Prob.	H0 rejected/ not rejected
$H_0^1$ : age-group	food preparation	$\chi^2 = 28.85$	3	.0000 <sup>a</sup>	rejected
	dishwashing	$\chi^2 = 37.16$	3	.0000 <sup>a</sup>	rejected
	shopping	$\chi^2 = 4.36$	3	.23	not rejected
	housecleaning	$\chi^2 = 6.16$	3	.10	not rejected
	maintenance of home, yard, car, pets	$\chi^2 = 6.85$	3	.08	not rejected
	care and construction of clothing and household linens	$\chi^2 = 5.41$	3	.14	not rejected
	physical and non- physical care of family members	$\chi^2 = 19.96$	3	.0002 <sup>a</sup>	rejected
	management	$\chi^2 = 2.65$	3	.45	not rejected
	all household tasks	$\chi^2 = 48.62$	21	$\leq .001$ <sup>b</sup>	rejected
	$H_0^2$ : sex of child	food preparation	$\chi^2 = 3.52$	1	.0606
dishwashing		$\chi^2 = 15.37$	1	.0001 <sup>a</sup>	rejected
shopping		$\chi^2 = .31$	1	.58	not rejected
housecleaning		$\chi^2 = 3.56$	1	.06	not rejected
maintenance of home, yard, car, pets		$\chi^2 = .05$	1	.82	not rejected
care and construction of clothing and household linens		$\chi^2 = 4.67$	1	.0307 <sup>a</sup>	rejected
physical and non- physical care of family members		$\chi^2 = .30$	1	.58	not rejected

APPENDIX G Continued

Hypotheses	Tasks	$\chi^2$ Values	df	Prob.	H0 rejected/ not rejected
$H_0^2$ : sex of child continued	management	$\chi^2 = 2.45$	1	.12	not rejected
	all household tasks	$\chi^2 = 11.35$	7	$\leq .20$ <sup>c</sup>	not rejected
$H_0^3$ : age of sibling	food preparation	$\chi^2 = 15.57$	2	.0004 <sup>a</sup>	rejected
	dishwashing	$\chi^2 = 19.25$	2	.0001 <sup>a</sup>	rejected
	shopping	$\chi^2 = 1.85$	2	.40	not rejected
	housecleaning	$\chi^2 = 3.81$	2	.15	not rejected
	maintenance of home, yard, car, pets	$\chi^2 = 2.86$	2	.24	not rejected
	care and construction of clothing and household linens	$\chi^2 = 1.67$	2	.43	not rejected
	physical and non- physical care of family members	$\chi^2 = 32.47$	2	.0000 <sup>a</sup>	rejected
	management	$\chi^2 = .08$	2	.96	not rejected
	all household tasks	$\chi^2 = 47.01$	14	$\leq .001$ <sup>c</sup>	rejected
	$H_0^4$ : urban/rural residence	food preparation	$\chi^2 = 2.43$	1	.12
dishwashing		$\chi^2 = .00$	1	1.00	not rejected
shopping		$\chi^2 = .54$	1	.47	not rejected
housecleaning		$\chi^2 = .21$	1	.65	not rejected
maintenance of home, yard, car, pets		$\chi^2 = 6.27$	1	.0123 <sup>a</sup>	rejected
care and construction of clothing and household linens		$\chi^2 = .47$	1	.49	not rejected

APPENDIX G Continued

Hypotheses	Tasks	$\chi^2$ Values	df	Prob.	HO rejected/ not rejected	
$H_0^4$ : urban/rural residence continued	physical and non-physical care of family members	$\chi^2 = .18$	1	.67	c	not rejected
	management	$\chi^2 = .81$	1	.37		not rejected
	all household tasks	$\chi^2 = 6.26$	7	$\leq .70$		not rejected
$H_0^5$ : gainfully employed or fulltime homemaker	food preparation	$\chi^2 = 1.43$	1	$\leq .30$	b	not rejected
	dishwashing	$\chi^2 = 6.71$	1	$\leq .01$	ab	rejected
	shopping	$\chi^2 = .25$	1	$\leq .70$	b	not rejected
	housecleaning	$\chi^2 = .00$	1	$\leq .95$	b	not rejected
	maintenance of home, yard, car, pets	$\chi^2 = .05$	1	$\leq .90$	b	not rejected
	care and construction of clothing and household linens	$\chi^2 = .06$	1	$\leq .90$	b	not rejected
	physical and non-physical care of family members	$\chi^2 = 4.28$	1	$\leq .05$	ab	rejected
	management	$\chi^2 = .15$	1	$\leq .70$	b	not rejected
	all household tasks	$\chi^2 = 11.46$	7	$\leq .20$	b	not rejected
$H_0^6$ : occupation of homemaker	food preparation	$\chi^2 = 6.85$	1	.14	a	not rejected
	dishwashing	$\chi^2 = 17.59$	1	.0015		rejected
	shopping	$\chi^2 = 4.80$	1	.31		not rejected
	housecleaning	$\chi^2 = 5.39$	1	.25		not rejected
	maintenance of home, yard, car, pets	$\chi^2 = 6.62$	1	.16		not rejected
	care and construction of clothing and household linens	$\chi^2 = 1.52$	1	.82		not rejected

APPENDIX G Continued

Hypotheses	Tasks	$\chi^2$ Values	df	Prob.	HO rejected/ not rejected
$H_0^6$ : occupation of homemaker continued	physical and non-physical care of family members	$\chi^2 = 8.41$	1	.08	not rejected
	management	$\chi^2 = .54$	1	.97	not rejected
	all household tasks	$\chi^2 = 21.67$	28	$\leq .80$ <sup>b</sup>	not rejected
$H_0^7$ : occupation of spouse	food preparation	$\chi^2 = 2.44$	3	.49	not rejected
	dishwashing	$\chi^2 = 6.70$	3	.08	not rejected
	shopping	$\chi^2 = 7.11$	3	.07	not rejected
	housecleaning	$\chi^2 = 8.83$	3	.0317 <sup>a</sup>	rejected
	maintenance of home, yard, car, pets	$\chi^2 = 6.08$	3	.11	not rejected
	care and construction of clothing and household linens	$\chi^2 = 9.76$	3	.0207 <sup>a</sup>	rejected
	physical and non-physical care of family members	$\chi^2 = 1.57$	3	.67	not rejected
management	$\chi^2 = 1.27$	3	.74	not rejected	
all household tasks	$\chi^2 = 23.75$	21	$\leq .50$ <sup>b</sup>	not rejected	
$H_0^8$ : educational level of homemaker	food preparation	$\chi^2 = 1.73$	3	.42	not rejected
	dishwashing	$\chi^2 = .99$	3	.61	not rejected
	shopping	$\chi^2 = .35$	3	.84	not rejected
	housecleaning	$\chi^2 = 4.01$	3	.13	not rejected
	maintenance of home, yard, car, pets	$\chi^2 = .70$	3	.71	not rejected
	care and construction of clothing and household linens	$\chi^2 = 2.31$	3	.32	not rejected

APPENDIX G Continued

Hypotheses	Tasks	$\chi^2$ Values	df	Prob.	H0 rejected/ not rejected	
$H_0^8$ : educational level of homemaker continued	physical and non-physical care of family members	$\chi^2 = 1.39$	3	.50	c	not rejected
	management	$\chi^2 = 1.04$	3	.60		not rejected
	all household tasks	$\chi^2 = 7.81$	14	$\leq .90$		not rejected
$H_0^9$ : educational level of spouse	food preparation	$\chi^2 = 6.26$	2	.0436 <sup>a</sup>	c	rejected
	dishwashing	$\chi^2 = 3.36$	2	.18		not rejected
	shopping	$\chi^2 = 12.60$	2	.0018 <sup>a</sup>		rejected
	housecleaning	$\chi^2 = 9.09$	2	.0106 <sup>a</sup>		rejected
	maintenance of home, yard, car, pets	$\chi^2 = 1.35$	2	.51		not rejected
	care and construction of clothing and household linens	$\chi^2 = 4.96$	2	.08		not rejected
	physical and non-physical care of family members	$\chi^2 = 2.29$	2	.32		not rejected
	management	$\chi^2 = .94$	2	.62		not rejected
	all household tasks	$\chi^2 = 22.28$	14	$\leq .10$		not rejected
$H_0^{10}$ : family income	food preparation	$\chi^2 = 4.40$	2	.11	not rejected	
	dishwashing	$\chi^2 = 3.61$	2	.16	not rejected	
	shopping	$\chi^2 = .88$	2	.64	not rejected	
	housecleaning	$\chi^2 = 2.86$	2	.24	not rejected	
	maintenance of home, yard, car, pets	$\chi^2 = 1.23$	2	.54	not rejected	

APPENDIX G Continued

Hypotheses	Tasks	$\chi^2$ Values	df	Prob.	HO rejected/ not rejected
$H_0^{10}$ : family income continued	care and construction of clothing and household linens	$\chi^2 = .13$	2	.94	not rejected
	physical and non-physical care of family members	$\chi^2 = .14$	2	.93	not rejected
	management	$\chi^2 = 3.47$	2	.18	not rejected
	all household tasks	$\chi^2 = 6.17$	14	$\leq .98$	not rejected

<sup>a</sup> $p < .05$

<sup>c</sup>Calculated by hand,  $\chi^2 = \sum \frac{(O-E)^2}{E}$

<sup>e</sup>Calculated using Hewlet Packard 97

APPENDIX G

SUMMARY OF HYPOTHESES: ANOVA

Hypotheses	F Ratio	F Prob.	HO rejected/ not rejected
$H_0^{11}$ : time and child's age-group	4.44	.005 <sup>a</sup>	rejected
$H_0^{12}$ : time and child's sex	7.54	.007 <sup>a</sup>	rejected
$H_0^{13}$ : time and age of sibling	.78	.46	not rejected
$H_0^{14}$ : time and urban or rural residence	3.05	.08	not rejected
$H_0^{15}$ : time and employed or fulltime homemaker	.19	.67	not rejected
$H_0^{16}$ : time and occupation of homemaker	1.57	.18	not rejected
$H_0^{17}$ : time and occupation of spouse	2.27	.08	not rejected
$H_0^{18}$ : time and education of homemaker	.15	.86	not rejected
$H_0^{19}$ : time and education of spouse	1.07	.34	not rejected
$H_0^{20}$ : time and family income	1.04	.36	not rejected

<sup>a</sup> p<.05