

A SURVEY OF SANDOVAL COUNTY, NEW MEXICO,
HOMEMAKERS' FOOD BUYING PRACTICES
AND HOUSEHOLD USE OF FOODS

By

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CHAPTER I

INTRODUCTION

Description of the Problem

Information of homemakers' food buying practices can determine basic household food use patterns. Knowledge of food use is essential to planning effective consumer related food and nutrition information. Buying practices indicate values homemakers place on food preferences.

There has been increased interest and need for research concerning buying practices of people in the United States since 1969. On May 6, 1969, when addressing the Congress of the United States, President Nixon stated:

In the past few years we have awakened to the distressing fact that despite our material abundance and agricultural wealth, many Americans suffer from malnutrition . . . People must be educated in choosing proper foods. All of us, poor and non-poor alike, must be reminded that proper diet is a basic determinant of good health (U. S. Department of Agriculture, 1970, p. 147).

Consumer related food and nutrition information is important if the problems of a segment of the population and a plan for educational nutrition programs are to be contrived. A knowledge of food buying practices and food use patterns of people in the United States is essential in order to establish a premise for nutrition education and consumer related food education programs. Food consumption should be researched and consumer buying practices surveyed to ascertain which

foods may be deficient in the diet.

Sound consumer related food and nutrition education should be made available to each individual. Proficiency in food selection is developed through a basic knowledge of well-founded food buying practices based on established principles of food use and dietary allowances. In the United States each person should be enabled to select a diet which is culturally acceptable to him for the least cost.

Statement of the Problem

The problem of this research was to identify food buying practices and household food use of selected homemakers in Sandoval County, New Mexico, as a basis for planning consumer oriented food and nutrition education programs. Conclusions drawn from analysis of specific variables relating to food buying practices and household food use in relation to background information of the respondents were used to establish suggestions and recommendations for planning consumer oriented food and nutrition education programs.

Objectives of the Study

The objectives of this study were:

1. To develop an instrument to obtain data of food buying practices, household food use, and background characteristics of Sandoval County homemakers.
2. To analyze selected background characteristics, food buying practices, and household food use of Sandoval County homemakers.
3. To formulate suggestions and recommendations for consumer oriented food and nutrition programs for homemakers in Sandoval County,

New Mexico.

Procedure

1. The researcher reviewed literature relating to the profile of New Mexico residents; food consumption surveys; history of food and nutrition education programs through the Cooperative Extension Service; and homemakers' food and nutrition knowledge, practices, and opinions.

2. The researcher developed an instrument to determine food buying practices and household food use of homemakers in Sandoval County, New Mexico.

3. The researcher contacted homemakers through group meetings, recreational meetings, health clinics, and home visits. As a result of these visits 150 homemakers volunteered to participate in the study. This number was defined by the researcher as the sample of the study.

4. The researcher analyzed food buying practices and household food use and background characteristics of homemakers in Sandoval County, New Mexico.

5. On the basis of the findings, suggestions and recommendations were made for consumer oriented food and nutrition programs. These were submitted to New Mexico State University Extension Service to help plan future consumer education for Sandoval County, New Mexico.

Significance of the Problem

Trends established by research concerning food buying practices indicate an increased need for consumer oriented food and nutrition information available to the American homemaker. According to the

United States Department of Agriculture, Food Consumption Survey
food patterns have changed from 1959 to 1965. Between 1959 and 1965
there was an increased consumption of snack items, alcoholic beverages,
and high protein foods and decreased use of green and yellow vegetables,
fruits, dairy products, and grains. Sugars and fats are an increas-
ingly large part of the American diet. Thus, there has been a shift to
foods that provide less nutrient return for money spent (U.S.D.A.,
Report Number 39, 1975).

In a time when Americans want more for their money and are receiv-
ing less, information is necessary to orient consumer programs for those
with the greatest need. Americans are receiving less nutrition for their
food dollar than ever before due to the lack of information about food
buying. Food and nutrition consumer education can help to alleviate
lack of information about food and nutrition. Once home economists
become familiar with basic food buying practices of the American con-
sumer, food and nutrition objectives can be implemented into educational
programs which inform the public.

Home economists are challenged in the 1970's to meet the ever-
increasing problem of inflation. As the prices ascend, the American
consumer becomes ever more aware of the weakened buying power of the
dollar. Now is the time that consumer oriented food and nutrition
education programs can help the American people to realize better food
for their dollar. Providing families with nourishment and saving money
on food prices are two of the most important food-related concerns of
homemakers (F.D.A., 1973).

Definition of Terms

For the purpose of this study, the following terms were defined:

Anglos--white, Anglo-Saxon, Caucasians residing in New Mexico.

Buying practices--selections made by the consumer which exhibits choice of one item over another and represents usual or most often exhibited patterns of purchasing goods.

Consumer buying practices--patterns of selection determined by those who purchase goods.

Consumer oriented food and nutrition information--information concerning the selection of foods based on the needs of the consumer. Planned facts concerning selection of food and nutrition information in the form of pamphlets, books, educational workshops, meetings, home visits, and audio-visual aids.

Homemaker--"one who manages a household" (Webster, 1973, p. 237).

Household food use--procurement and implementation of food items into the household diet.

Low-income--those people in Sandoval County with \$3,000.00 or less annual income.

Nutrition--the food you eat and how the body uses it (U.S.D.A., 1970).

Sandoval County--a large rural county in North Central New Mexico which is composed of three main cultures: Spanish-Americans, American Indian, and Anglos. Sandoval County is a low income county ranking seventeenth in New Mexico per capita income.

Shopping preferences--selections made by the consumer which exhibits choice of one item over another.

Limitations of the Study

The population was limited to homemakers of Sandoval County, New Mexico. The sample of this study was limited by the fact that only those specific groups of Sandoval County Extension Service who volunteered to answer the survey instrument were included.

Assumptions

1. Consumer related food and nutrition information is essential in developing better health practices and stimulating better buying practices.
2. Homemakers of Sandoval County, New Mexico, are in need of consumer related food and nutrition information to help form better buying practices and improve household use of foods.
3. Information concerning consumer buying practices is important in establishing programs by New Mexico State University Extension Service to meet the needs of homemakers in Sandoval County, New Mexico.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Buying preferences based on sound consumer related food and nutrition information can help to eliminate malnutrition and nutrition misinformation among Americans. In order to reduce nutrition misinformation, sound consumer related food and nutrition information is essential. According to the philosophy and the objectives of the American Home Economics Association established in 1959:

If home economics is to meet the challenge of today and the future, it must serve individuals and more families more effectively; expanded research must focus on needs of individuals and families, and the education of the home economist must be strengthened (McGrath and Johnson, 1968, p. 2).

Home economists can better serve the needs of both families and individuals through consumer education related to food and nutrition buying practices.

The need for expanded research in this area of consumer buying practices established the basis for this study. The review of literature includes: (1) profile of New Mexico residents, (2) food consumption surveys, (3) history of food and nutrition education programs through the Cooperative Extension Service, and (4) homemakers' food and nutrition knowledge, practices, and opinions.

Profile of New Mexico Residents

In the state of New Mexico, during 1972, 25.8 percent of the total payroll employment was in retail trade. Of 56,647 employees, 8,975 were employed in food stores. This indicates that nearly one-fourth of all retail employees work in food stores. In 1972, Sandoval County had eight retail food stores and one-half employed one to three persons (U. S. Department of Commerce, 1972). Implications from existing data are: (1) Sandoval County, with a population of 17,492, represents 0.97 percent of the total population of New Mexico; (2) Sandoval County is a rural county with only 17.6 percent of the population residing in a development area; and (3) retail food stores are the major source of food supply in Sandoval County (Johansen, 1971).

The median family income in New Mexico, as of the 1970 census, was \$7,849, compared with a national average of \$9,590. New Mexico ranked 38th among the 50 states in average income per capita. In 1971, 18.5 percent of New Mexico's families were below the poverty level compared with 10.7 percent for the United States (New Mexico State University, Bulletin 606, 1971). This data indicates that Sandoval County residents have an average median income of \$1,341 less than the National median income.

The cost of food in New Mexico rose 71 percent between 1952 and 1972, while food prices in the United States rose 47 percent, a difference of \$84 more per person each year. Part of this difference is a result of increased consumption and the remainder is largely the result of the shift to more expensive retail food prices. The retail price of a market basket of food, indicative of what an average household

spends at the store for its annual supply of U. S. farm-produced foods, was \$1,311 in 1972. The same amount of food cost \$985 in 1952, an increase of 33 percent over a twenty-year period (U.S.D.A., 1973).

The processing and market spread between the farm cost and the retail cost of the market basket was \$522 in 1952. This went up to \$790 in 1972, an increase of 51 percent over a twenty-year period. The overall cost of services, food handling and processing, are even more inclined to go up and stay up. In the last 20 years service costs have increased every year. The total increase between 1952 and 1972 was 107 percent for service cost (U.S.D.A., 1973).

This data indicates that food consumption is at an all time high while the cost of service becomes an ever increasing proportion of the food dollar. Due to low income levels of people in Sandoval County, New Mexico, this creates a spiraling decrease of consumer buying power.

Food Consumption Surveys and Studies

In order to understand the need for consumer related research, it is essential to acquire knowledge of household food consumption of people in the United States. Definition of consumer problems of a segment of the population can only be achieved and corrected through this type of related food and nutrition information.

A Study of Food Habits in New Mexico (1949-1952)

This study was conducted with a sample of 600 New Mexico residents through the use of personal interviews. Data indicated that the following essential food groups were not used in sufficient amounts to insure an adequate diet: milk, other protein foods, vitamin C rich foods,

whole grain bread and cereals, and yellow and green vegetables. The excessive use of sweets was found throughout the state. New Mexico Agricultural Experiment Station found that much can be done through teaching the relative importance of these foods, their relative food value and cost. The low intake of the food groups appear to be related to failure to understand their importance. Also, in many areas, the foods were not available, or if available, the cost was not worked into the family budget. Food histories indicated that the majority of children who expressed a distaste for milk and vegetables had a high intake of concentrated sweets although many of the families who said they did not have enough money to buy sufficient amounts of the essential foods, spent an appreciable amount for sweets. The data established that consumer education concerning food and nutrition information relating sound buying practices was and is still needed in New Mexico (U.S.D.A., 1954).

Changes in the Diets of Households Survey
(1955-1965)

During the past decade in the United States, despite a higher income and a greater abundance of food, there has been a decrease in adequate dietary levels of household food consumption. Poor diets were found among the affluent as well as the poor. Thirty-six percent received less than two-thirds of the Recommended Dietary Allowances in the 1965 survey, in comparison to 9 percent of the household diets receiving less than two-thirds of the Recommended Dietary Allowances in 1955. One of the major suggestions was to help individuals choose food

wisely and to help low income families with needed consumer knowledge (Adelson, 1968).

1965 Food Consumption Survey

Data indicated from the 1965 United States Department of Agriculture Food Consumption Survey that nutrients which were most often found to be below recommended amounts in the diets of children and adults of all regions surveyed were: vitamin A, ascorbic acid, calcium, and iron. This data indicates that deficient diets were most probably due to poor diet choices regardless of income levels. The data determined the need for nutrition education, oriented toward the consumer in order to change food selection behavior. People must learn what foods are most nutritious in order to buy foods which improve the diet.

White House Conference on Food, Nutrition, and Health, 1969

One of the recommendations of the conference was:

Consumer education includes family budgeting in which food is one of the major components. As an essential and integral concern of the consumer education, nutrition education should be directed toward the best utilization of the family's resources for food. Low-income families have special difficulty in meeting nutrient needs and therefore will benefit from practical nutrition education efforts tailored to their particular problems (White House Report, 1970, p. 48).

Nutritional Follow-Up Session of the White House Conference on Food, Nutrition, and Health, 1971

Consumer problems were re-emphasized in this Conference. Findings

indicated that the percentage of processed food consumed in the United States ascended from 10 percent in 1941, to about 50 percent in 1971. Many housewives do not buy potatoes and flour anymore, but frozen french fried potatoes or ready-made frozen cake (Mayer, 1969, p. 58). This decreases the woman's work, but does not eliminate the savings in price. Consumer education relating sound shopping preferences is essential in up-dating overall food consumption patterns.

The 1975 Consumer Survey of Food Purchasing
Practices by New Mexico State University
Extension Service

This study identified shopping preferences of families living in the market area of Penasco, New Mexico. The purpose of the study was to provide retail information which could be used by retailers to evaluate their own practices on numbers of brands and size of packages stocked. This study measured some aspects of the complexities of food buying for family consumption; the relative importance to shoppers as to whether markets carry fresh fruits and vegetables; how important it is that there be a choice of private and/or national brands; to what extent do prices, cleanliness, and friendliness of market personnel influence shoppers in the selection of markets.

The findings of this survey included:

1. Sixty-eight percent of the respondent families had incomes under \$3,000
2. The age of the head of household was 50 to 54 years
3. Forty-four of those surveyed had not been schooled beyond the eighth grade, 23 percent had completed high school

4. The average household expenditure on food per month was \$124.21 as of February, 1973

5. Unemployment for the month prior to the survey was at a high of 42 percent of the respondent families

6. Lack of mobility, dependence on credit, community loyalty, and lower expectations for food retail stores, were possible determining factors for major shopping being done in community food stores (Sneed, 1975).

History of Food and Nutrition Education Through the Cooperative Extension Service

Food and nutrition education through the Cooperative Extension Service began as information dispersed by canning clubs in the Southern United States. In 1914, the first County Home Demonstration Agents were employed by the United States Cooperative Extension Service. By July 1, 1918, there were 1,715 counties with home economists in the United States (U.S.D.A. Bulletin, 1929).

In the early 1960's an amendment to the Smith-Lever Act established authorization for the Cooperative Extension Service

. . . to aid in diffusing among the people of the United States useful and practical information on subjects related to agriculture and home economics, and to encourage application of the same (U.S.D.A. Report, 1974, p. 3).

As a result of this amendment the Expanded Food and Nutrition Education Program (EFNEP) became an integral part of the Cooperative Extension Service home economics and 4-H youth programs. The EFNEP program was designed to teach low-income audiences, and to help them acquire a more nutritionally adequate diet through the most efficient and effective

use of available resources.

The mission of the total home economics program in the Cooperative Extension Service is to provide education to enhance the quality of living for families. The progression of families from EFNEP to other home economics areas enables families to participate in educational programs in family living areas in addition to nutrition. The 4-H phase of EFNEP is charged specifically with providing educational programs for disadvantaged youth primarily in depressed city areas.

Objectives of the Expanded Food and Nutrition Education Programs

The Expanded Food and Nutrition Education Programs' objective is to help families, especially those with young children living in poverty or near poverty, to acquire knowledge, skill, and changed behavior necessary to achieve adequate diets in normal nutrition. Such a program can be expected to result in:

1. Improved diets and health for the total family
2. Increased knowledge of the essentials of nutrition
3. Increased ability to select and buy food that satisfies nutrition needs
4. Increased ability to prepare and serve palatable meals
5. Improved practices in food storage, safety, and sanitation
6. Increased ability to manage resources that relate to food, including food stamps
7. Increased participation in the food assistance programs

(U.S.D.A., 1974).

There are three overall objectives for the 4-H phase of the Expanded Food and Nutrition Education Programs. They are:

1. To provide education for youth in the principles of nutrition and diets, and in the acquisition and use of foods
2. To contribute to the personal development of the disadvantaged urban youth through improved nutrition
3. To contribute to the improvement of diets and nutrition of families by means of educational programs for youth (U.S.D.A., 1974).

Content of the Expanded Food and Nutrition

Education Programs

The content of the EFNEP includes:

1. Food and nutrition is the principal subject for both the adult and the 4-H phases.

Subject-matter areas closely related to nutrition and considered to be appropriate are:

1. Financial management as it relates to food, including the essential components of budgeting, planning, and basic knowledge which must be understood before they can be successfully applied to food
2. The use and care of the kitchen
3. Health and sanitation practices
4. Personal development through improved diets and nutrition
5. Information on family referral services
6. Family relations as they affect diets and nutrition
7. Gardening and food preparation
8. Food preservation

9. Meal planning and food selection, preparation, and buying (U.S.D.A., 1974).

Sandoval County Expanded Food and Nutrition

Education Programs

In Sandoval County, New Mexico, the Extension Home Economist has utilized EFNEP programs since 1968. Due to the high percentage of low-income groups this program has much to offer residents of Sandoval County. An estimate of over one-third of the total Sandoval County population is low-income.

Homemakers' Food and Nutrition Knowledge, Practices, and Opinions

Sound nutritional information can help reduce poor buying practices among American homemakers. It is necessary to ascertain information which indicates the present level of knowledge concerning food and nutrition buying practices.

A nationwide survey was conducted in 1973 to determine how much nutrition education consumers need, who needed it most and how to get it. The survey consisted of 92 questions to 1,500 respondents. Conclusions drawn from the resulting data were:

1. Food shoppers have a working knowledge of nutrition
2. Young shoppers and those with a college education were most likely to know more about nutrition
3. Strongest educational efforts should be aimed at the poor, the old, the less educated, and the minorities
4. How a person rated his own nutritional knowledge turned out to

be a good indicator of his actual knowledge

5. Younger, better educated, or employed homemakers were most interested in nutrition

6. Primary nutrition knowledge sources were schools, magazines, and newspapers (U.S.D.A., 1974).

In the North Central States Research Study of the diets of pre-school children it was found that the poorest diets were demonstrated by children whose mothers had a relatively low level of nutrition knowledge and unfavorable attitudes toward meal planning (Vivian, 1970). This re-emphasizes the need for positive consumer oriented food and nutrition education programs for homemakers.

Findings of the 1975 United States Department of Agriculture Report indicated that less than one-half of the homemakers surveyed understood the need for a variety of foods in the diet, and for varying amounts of food dependent on the age and sex of the household members (U.S.D.A., 1974). Most homemakers thought in terms of specific categories of foods than of a good assortment of foods in sufficient quantities. Over half of the homemakers reported they would buy different kinds of food if they wanted to spend less for food, and one-third said they would buy less quality food. Results indicated that homemakers had a fair knowledge of food and nutrition facts, but that they had very limited facilities in using these facts to select meals and snacks for desirable daily food intake. Nutrition education was needed to help homemakers gain the needed ability in selecting the foods for the home from the foods her family ate so as to provide a good diet (U.S.D.A., Research Project Report Number 39, 1975).

An investigation designed to determine what influenced food

purchasing practices of low-income families in Fayette, Kentucky, was completed in 1970 (Johnson, 1970). This survey included 105 homemakers selected as low-income. The household unit consisted of homemakers with one or more children under 18 years of age and an annual income of less than \$3,400. Findings indicated that the sample homemakers followed food purchasing practices which were similar to each other. These practices were influenced by certain identifiable variables such as: income, family size, ownership, age and educational level, sources of food and nutrition, costs, and availability of food. Results of this study indicated that many families did not purchase adequate amounts of certain foods within the fruits, vegetables, meat, and milk products. The homemakers' nutrition knowledge was inadequate. No significant differences between homemakers with and without previous classes concerning food and nutrition information indicated educational programs had been generally ineffective. Homemakers requested help with food and nutrition preferably through newspapers and home visits. Basic food and nutrition information must be provided low-income families at all levels of education, with special emphasis on the elementary grades (Johnson, 1970).

Results from an investigation of food shopping practices and informational needs of 66 rural Southern Idaho homemakers indicated that 30.3 percent had a need for improvement of their food buying practices. According to scores taken from the 1966 U.S.D.A. Food Buyers Quiz, also administered to the 66 homemakers, 94 percent of the consumers needed assistance in purchasing groceries (Vassar, 1970).

In Keokuk, Iowa, a survey was conducted with 992 persons signing pledge cards that committed persons to the improvement of their own

diets, then questioned them about their success (Lambert and Schwab, 1975). Participants were all ages, but researchers drew a random 50 cards to represent the 18 years and older age group and another 50 to represent the 17 year and younger age group. These 100 cards comprised the sample of the study. Findings of the study showed that persons who pledged themselves to change their food habits are more strongly motivated. Participation and acceptance of nutrition information suggests that children may be a possible nutrition education channel to adults. "Most important, however, the study encouraged belief in voluntary commitment, and choice may be the key to success in changing food habits" (Lambert and Schwab, 1975, p. 3).

Conclusions drawn from the data of homemakers' food and nutrition knowledge, practices, and opinions studies can be summarized as follows:

1. Food consumption patterns in the United States indicate an increased need for nutrition information available to the consumer.
2. Education of consumer buying practices by nutrition education programs should be directed at the old, the poor, the less educated, and the minorities.
3. There is a relationship between the poor diets and the level of nutrition education of homemakers.
4. Nutrition education and consumer information is necessary in helping homemakers gain needed ability in food buying practices.
5. Homemakers indicate that previous food and nutrition education efforts have been relatively ineffective.
6. Opinions of homemakers suggest that voluntary commitment and choice are essential to changing food habits of individuals.

Summary

The literature reviewed in this chapter established a need for continued program planning for consumer oriented food and nutrition education programs. Consumer oriented food and nutrition education is essential in New Mexico due to low-income which may result in poor food buying practices. Facts indicate that food consumption is at an all time high while the cost of service is becoming an ever-increasing proportion of the food dollar. Food consumption surveys provided information regarding the need for consumer research. Nutrition conferences established a need for consumer education as an important influence to wise shopping practices. A history of nutrition education through the Cooperative Extension Service established objectives and purposes of existing food and nutrition education programs. Homemakers' food and nutrition knowledge, practices, and opinions were reviewed and indicated a need for improvement of food buying practices. Surveys concerning food purchasing practices were reviewed and considered as a model for a survey of Sandoval County homemakers. Using this information, a survey of food buying practices and household food use was developed for this study. The procedures for conducting the survey will be described in the following chapter.

CHAPTER III

PROCEDURE AND METHODS

This study was conducted to identify food buying practices and household food use of selected Sandoval County homemakers. The procedures were: (1) review of food consumption surveys and studies and investigation of recent methods used in measuring food buying practices and household food use; (2) the population of the study was defined; (3) a survey instrument was developed, pilot tested, administered, and data was analyzed; (4) information from this instrument helped formulate the basis for consumer oriented food and nutrition education programs developed for Sandoval County residents; and (5) suggestions and recommendations were formulated for consumer related food and nutrition programs planned for New Mexico State University Cooperative Extension Service.

Selection of the Sample

Permission was obtained from New Mexico State University Cooperative Extension Service for the researcher to survey Sandoval County, New Mexico. Approval was necessary to establish official use of Sandoval County Extension Office.

The survey instrument was pretested with five Sandoval County homemakers representative of the sample.

One hundred fifty homemakers were contacted by the researcher through group meetings, home visits, recreational meetings, health clinics, and business contacts. These Sandoval County homemakers agreed to complete the questionnaire. Eleven respondents were disqualified due to incompleteness of the survey instrument. Hence, the data was obtained from 139 respondents.

Designing the Survey Instrument

The survey instrument was developed by the researcher to ascertain selected Sandoval County homemakers' food buying practices and home food use patterns. Three main parts were included in the questionnaire. Part I included background information. These questions pertained to household size, age, employment, education, ethnic identification, income level, residency, and rural or urban location of the respondents. Part II solicited data about food buying practices, food use practices, and food information needs. Part III asked for data which pertained to the Basic Four Food Groups and their use in meal planning practices of Sandoval County homemakers.

Surveying Sandoval County Homemakers

Regarding Food Buying Practices

and Home Food Use

The questionnaire was administered by the researcher to Sandoval County homemakers in seven communities through group meetings, recreational meetings, home visits, business contacts, and health clinic patients. In the spring of 1976, homemakers were asked to respond to the survey instrument in order to promote nutrition programs in Sandoval

County. A cover letter (see Appendix) accompanied the survey instrument which explained the purpose of the research and the identification of the researcher's employment as Sandoval County Home Economist. Respondents were assured that their responses would remain anonymous. Of the 150 questionnaires which were distributed, 139 (92 percent) were completed.

Data was hand tabulated by frequency and percentages of responses. Analysis was accomplished through comparison of percentages. The findings were used in establishing suggestions and recommendations for consumer oriented food and nutrition education programs.

CHAPTER IV

RESULTS OF DATA

Background Characteristics of Respondents

Household Size

The data presented in Table I identifies the total number of adults and children, both male and female, living in households of the respondents. This data indicated that 245 (58 percent) of the males residing in the households, were under 18 years of age. Two hundred fifty-nine (61 percent) of the females residing in the households were under 18 years of age. There was an average of three children per household. In 16 households (12 percent), there were three or more adults. Of children living at home, 87 females (20 percent) were between the ages of four and ten years of age. The greatest number of male children, 78 (19 percent), were between the ages of 10 and 15 years (see Table I, p. 25).

Age of Respondents

The largest number, 111 (80 percent) of the respondents, were between the ages of 44 and 65 years. The least number of respondents, three (two percent), were 65 years and older. In the 25 to 44 age group there were 20 homemakers (14 percent). The under 25 years of age

TABLE I
BACKGROUND CHARACTERISTICS OF SUBJECTS

Variable	Characteristic	No.	Percent
<u>Household Size</u>	Females, birth to 4 yrs.	62	14.01
	Females, 4 to 10 yrs.	87	20.06
	Females, 10 to 15 yrs.	68	16.04
	Females, 15 to 18 yrs.	37	9.01
	Females, 18 to 25 yrs.	28	7.03
	Females, 25 to 35 yrs.	38	10.02
	Females, 35 to 50 yrs.	42	11.07
	Females, 50 yrs. and older	56	13.09
	Males, birth to 4 yrs.	73	17.04
	Males, 4 to 10 yrs.	56	13.03
	Males, 10 to 15 yrs.	78	19.01
	Males, 15 to 18 yrs.	52	12.02
	Males, 18 to 25 yrs.	37	8.03
	Males, 25 to 35 yrs.	47	11.05
	Males, 35 to 50 yrs.	41	9.07
	Males, 50 yrs. and older	61	13.06
<u>Age Range of Respondent</u>	Under 25 yrs.	5	4.03
	25 to 44 yrs.	20	14.02
	44 to 65 yrs.	111	80.02
	65 yrs. and older	3	2.06
<u>Employment</u>	Full-time	56	41.04
	Part-time	37	26.02
	Household	46	33.01
<u>Education</u>	Less than high school	11	7.01
	High school degree	120	87.01
	Training after high school	5	4.03
	College	3	2.02
<u>Ethnic Background</u>	Anglo	83	59.04
	Spanish American	48	35.05
	Oriental	5	4.03
	Black	3	2.06
<u>Income Levels</u>	Less than \$3,000	15	11.07
	\$3,000 to \$4,999	18	13.09
	\$5,000 to \$5,999	33	24.08
	\$5,999 to \$10,000	62	44.06
	\$10,999 to \$18,000	11	8.01

TABLE I (Continued)

Variable	Characteristic	No.	Percent
<u>Residency in New Mexico</u>	Less than 2 yrs.	3	2.02
	2 to 5 yrs.	11	8.02
	5 to 10 yrs.	51	37.06
	10 to 20 yrs.	34	24.07
	Native New Mexican	40	29.05
<u>Place of Residency</u>	Urban--Rio Rancho	77	55.04
	Rural--near town	54	39.03
	Rural--on farm or ranch	8	6.02

N = 139

group was represented by five (four percent) of the total respondents (see Table I, p. 25).

Employment of Respondents

The data indicated that 56 homemakers (41 percent) were employed full-time. Part-time employment was engaged by 37 homemakers (26 percent). No employment outside of the household was indicated by 46 (33 percent) of the respondents (see Table I, p. 25).

Education of Respondents

Of the 139 respondents, the majority, 120 (87 percent), indicated an educational level of high school. Eleven homemakers (seven percent) had less than a high school degree. Training after high school was indicated by five homemakers (four percent) of the respondents. An educational level of a college education was indicated by three

homemakers (two percent) (see Table I, p. 25).

Ethnic Background of Respondents

The ethnic background of the respondents was chiefly Anglo. Eighty-three (59 percent) of the respondents were Anglos. Spanish Americans ranked second in number with 48 (35 percent) of the respondents. Orientals numbered five (four percent) and Blacks numbered three (two percent) of the respondents (see Table I, p. 25).

Income Level of Respondents

The greatest number of respondents had incomes which ranged between \$5,999 and \$10,000 annually. Sixty-two homemakers (44 percent) were in this income level. The income level of \$5,000 to \$5,999 was identified by 33 (24 percent) of the respondents. Fifteen homemakers (11 percent) indicated an income level of less than \$3,000 annually. An income of \$3,000 to \$4,999 per annum was indicated by eight homemakers (13 percent) of the respondents. The least frequent income was \$10,000 to \$18,000 per annum as identified by 11 homemakers (eight percent) of the respondents (see Table I, p. 25).

Residency in New Mexico

Fifty-one homemakers (37 percent) of the respondents had resided in New Mexico for 5 to 10 years. Thirty-four homemakers (24 percent) had lived in New Mexico for 10 to 20 years. Native New Mexicans were almost one-third of the total respondents. Forty (29 percent) of the total respondents were native to New Mexico. Of the 40 homemakers native to New Mexico, 36 (90 percent) were native Spanish Americans. Three

homemakers (two percent) were residents less than two years (see Table I, p. 26).

Place of Residency

Two types of residency were identified by the respondents. Urban residency was composed of those homemakers living in Rio Rancho. Seventy-seven (55 percent) of the respondents were urban residents. Rural residency, identified by 62 homemakers (45 percent), were those who lived in rural communities in Sandoval County. Rural residents who lived near town were identified by 54 (39 percent) of the homemakers who responded. Rural homemakers who lived on farms or ranches numbered eight (six percent) of the respondents (see Table I, p. 26).

Discussion of Food Buying Practices of Respondents

Food Buying Decision Makers

Of the 139 respondents, 137 (99 percent) identified that they made the decision of which food items to buy. Alternative decision makers were husband and grandmother. One husband (0.5 percent) and one grandmother (0.5 percent) was identified as the person who decided which food items to buy (see Table II, p. 29).

Use of a Shopping List

A shopping list was used by 58 of the respondents (43 percent). Those homemakers not using a shopping list totaled 81 (57 percent) of the respondents (see Table II, p. 29).

TABLE II
HOUSEHOLD FOOD PRACTICES OF RESPONDENTS

Variable	Characteristic	No.	Percent
<u>Who Makes Food Buying Decision</u>	Homemaker	137	99.01
	Husband	1	0.53
	Grandmother	1	0.52
<u>Use of Shopping List</u>	Yes	58	43.07
	No	81	57.06
<u>Location of Food Shopping</u>	Outside of Sandoval County	128	92.04
	Local grocery store	11	8.03
<u>Method of Purchase</u>	Cash or check	108	78.02
	Credit	18	13.07
	Food stamps	13	9.06
<u>Frequency of Buying</u>	Every two weeks	97	68.05
	Once a month	40	28.03
	Once every six months	2	4.02
<u>Time Spent on Food Buying Practices</u>	Buying food, 0 to 5 hrs./wk.	137	99.01
	Buying food, 5 to 10 hrs./wk.	2	1.01
	Planning menus, 0 to 5 hrs./wk.	137	99.02
	Planning menus, 5 to 10 hrs./wk.	2	1.03
	Preparing meals, 0 to 5 hrs./wk.	8	6.04
	Preparing meals, 5 to 10 hrs./wk.	42	30.05
	Preparing meals, 10 to 20 hrs./wk.	81	58.04
	Preparing meals, 20 hrs. and more/wk.	8	6.02
	Preparing sack lunches, 0 to 5 hrs./wk.	133	96.02
	Preparing sack lunches, 5 to 10 hrs./wk.	6	4.01
<u>Alternative Selection Buying Practices</u>	Make more foods from scratch	101	73.06
	Buy different kinds of foods	15	11.05
	Buy lower quality food items	6	4.04
	Buy a smaller amount of food	17	12.03
<u>Number of Meals Prepared Daily</u>	0 to 1 meals per day	48	35.00
	2 to 3 meals per day	28	20.01
	3 to 4 meals per day	59	43.02
	4 or more meals per day	4	2.03

TABLE II (Continued)

<u>Variable</u>	<u>Characteristic</u>	<u>No.</u>	<u>Percent</u>
<u>Number of Household Members Present Daily at Main Meal</u>	1 member	10	7.04
	1 to 2 members	47	34.00
	3 to 4 members	64	36.01
	5 to 6 members	4	2.01
	7 to 8 members	8	6.01
	9 members or more	6	5.01
<u>Method of Food Preparation</u>	Make foods from scratch	80	57.16
	Make foods from premixes	59	43.23
<u>Use of Kitchen Appliances</u>	Refrigerator	139	100.00
	Electric or gas range	136	98.06
	Mixer	123	89.14
	Freezer	120	87.32
	Pressure saucepan	98	71.47
	Pressure canner	69	49.57
	Blender	59	43.46
	Dishwasher	11	8.32
	Wood stove	9	6.21
	Hot plate	1	0.76
<u>Food Buying Information Source</u>	Self taught	120	86.04
	Mother or grandmother	16	12.03
	Newspapers	3	2.02
<u>Response to Need for Food Buying Information</u>	Definite need	127	92.07
	Probable need	6	4.08
	Might need	4	3.05
	Definite no need	2	1.07
<u>Use of Home Grown Foods</u>	Rural grown vegetables	87	62.01
	Rural grown meat	30	21.01
	Rio Rancho grown vegetables	5	3.02
	Rio Rancho grown meat	0	0.02
<u>Making of Homemade Breads</u>	Do not make own bread	130	94.13
	Do make own bread	9	6.04
<u>Request for Information According to Subject Matter Area</u>	How to shop for best quality food at lower prices	127	92.05
	Drying foods	86	62.07
	Freezing foods	57	41.09
	Food spoilage	51	37.11
	Planning menus	33	24.32
	Canning foods	25	18.47
	Use of leftover foods	18	13.07
	Buying meats	7	5.08
	How to plant a garden	1	0.53

TABLE II (Continued)

Variable	Characteristic	No.	Percent
<u>Types of Information</u>	Information in pamphlets	118	86.03
<u>Presentation Requested</u>	Information in workshops	11	8.14
	Information in meetings	6	4.23
	Information in a home visit	4	2.17

N = 139

Location of Food Shopping

Of the 139 respondents, the majority, 128 (92 percent) shopped for food outside of Sandoval County. Eleven homemakers (eight percent) shopped most frequently at their local grocery store (see Table II, p. 29).

Method of Purchase

Most homemakers, 108 (78 percent) indicated they paid cash or by check for food items. Credit was used by 18 homemakers (13 percent) to buy food. Food stamps were used by 13 respondents (9 percent) (see Table II, p. 29).

Frequency of Buying

Nonperishable food items were purchased every two weeks by 97 (68 percent) of the total respondents. Forty (28 percent) of the homemakers bought food items once a month. The least number of respondents, two (four percent) bought nonperishable food items once every six months

(see Table II, p. 29).

Time Spent on Food Buying and Preparation

Most homemakers, 137 (99 percent), spent zero to five hours a week buying food. Five to ten hours a week was spent for food purchasing by two (one percent) of the respondents.

Most respondents, 137 (99 percent), spent zero to five hours weekly planning menus. Two homemakers (two percent) spent between 5 and 10 hours weekly planning menus.

Eight homemakers (six percent) spent zero to five hours weekly preparing meals. Several respondents, 42 (30 percent), spent 5 to 10 hours weekly preparing meals. The largest number of respondents, 81 (58 percent), spent 10 to 20 hours a week on food preparation. Eight (six percent) of the respondents spent 20 hours or more a week preparing meals.

The greatest number of respondents, 133 (96 percent), indicated they spent five hours or less preparing sack lunches. Six homemakers (four percent) spent 5 to 10 hours a week preparing sack lunches (see Table II, p. 29).

Alternative Selection Buying Practices

Several homemakers, 100 (73 percent), felt that the food budget could be cut by making more foods from scratch. Buying different kinds of foods was indicated by 15 (11 percent) of the homemakers as a way to cut the food budget. The least number of respondents, six (four percent), identified that buying a lower quality food item was the way they would save money on food. Seventeen (12 percent) of the

respondents said they would buy a smaller amount of food (see Table II, p. 29).

Number of Meals Prepared Daily

Several homemakers, 59 (43 percent), prepared three to four meals daily. Forty-eight homemakers (35 percent) prepared zero to one meal daily. Two to three meals were prepared daily by 28 respondents (20 percent). The least number of homemakers, four (two percent), prepared six or more meals daily (see Table II, p. 29).

Number of Household Members Present at Main Meal Daily

The greatest number of respondents, 64 (36 percent), indicated that three to four members were present at the main meal. The second greatest number of responses, 47 (34 percent), had two members present at the main meal daily. Ten homemakers (seven percent) indicated that one person was present at their main meal each day. Nine members or more present at the main meal was indicated by six respondents (five percent). The least number of responses, four (two percent), indicated that five to six members were present at the main meal each day (see Table II, p. 30).

Method of Food Preparation

Most homemakers, 80 (57 percent), made their foods from scratch. Fifty-nine (43 percent) made their foods from premixes (see Table II, p. 30).

Use of Kitchen Appliances

All 139 (100 percent) of the respondents had a refrigerator in their home. Most homemakers, 136 (98 percent), had a gas or electric range. Several respondents, 123 (89 percent), had a mixer. One hundred twenty homemakers (87 percent) had a freezer. A pressure saucepan was used by 98 (71 percent) of the respondents. Almost half, 69 (49 percent), of the homemakers used a pressure canner. A blender was used by 59 (43 percent) of the homemakers. The dishwasher was used by 11 (8 percent) of the respondents. The wood stove was used by nine (six percent) of the respondents. The hot plate was the least frequently used appliance as identified by one (0.7 percent) homemaker (see Table II, p. 30).

Food Buying Information Source

Most homemakers, 120 (92 percent), learned how to buy food through experience. Sixteen (12 percent) of the respondents identified mothers and grandmothers as sources of information about food purchasing. Newspapers were the least frequent source of food buying information by three (two percent) of the homemakers (see Table II, p. 30).

Need for Food Buying Information

A definite need for food buying information was indicated by 127 (92 percent) of the respondents. Six homemakers (four percent) responded that there was a probable need for food buying information. Four (three percent) of the respondents indicated that they might need food buying information. The least number of homemakers, two (one percent), indicated that they have no need for food buying information

(see Table II, p. 30).

Use of Home Grown Foods

Eighty-seven (62 percent) of the rural homemakers indicated they grow their own vegetables. Of the total rural respondents, 30 (21 percent) raised their own meat. Of all the urban homemakers, five (three percent) indicated that they grew their own vegetables. None of the 77 urban homemakers raised their own meat (see Table II, p. 30).

Baking of Homemade Breads

A majority of the respondents, 130 (94 percent), did not make their own bread for household use (see Table II, p. 30).

Information According to Subject Matter

The majority of the homemakers, 127 (92 percent), requested information on how to shop for the best quality food at the lowest price. Other information requested by the respondents included: drying foods, 86 (62 percent); freezing foods, 57 (41 percent); food spoilage, 51 (37 percent); planning menus, 33 (24 percent); canning foods, 25 (18 percent); use of leftover foods, 18 (13 percent); buying meats, 7 (5 percent). The least requested information by the respondents was how to plant a garden. One homemaker (0.5 percent) of the total respondents requested this information (see Table II, p. 30).

Types of Presentation Requested

Most respondents, 118 (86 percent), indicated they would prefer

food buying information in the form of pamphlets. Eleven (eight percent) selected workshops as their preference for information on food purchasing. Meetings were selected by six (four percent) of the respondents to obtain information on food buying. Four (two percent) of the homemakers indicated they would prefer food buying information by a home visit (see Table II, p. 31).

Use of Basic Four Food Groups and Income of Respondents

Use of Basic Four Food Groups and income of respondents is shown in Table III, page 37. Bread, cereal, and snack foods were most frequently used by all income groups. The bread and cereal group was included everyday by: 10 out of 11 (99 percent) of high income homemakers, 111 out of 113 (98 percent) of middle income respondents, and by 14 out of 15 (99 percent) of the low income homemakers.

Snacks were included everyday by: 8 out of 11 (97 percent) of the high income respondents, 108 out of 113 (96 percent) of the middle income homemakers, and by 14 out of 15 (99 percent) of the low income respondents.

Foods from the meat group were included everyday by: 10 out of 11 (99 percent) of the high income homemakers, 110 out of 113 (97 percent) of the homemakers in the middle income groups, and by none of the low income respondents. Frequency of eating meat seemed to be influenced by income level. None of the low income groups ate meat everyday, but 13 out of 15 (94 percent) of the low income respondents ate meat once a week.

TABLE III

USE OF BASIC FOUR FOOD GROUPS BY RESPONDENTS

Food Groups	Income Level	Everyday		Twice/week		Once/week		2 to 3 times/mo.	
		No.	%	No.	%	No.	%	No.	%
Meat Group	High income	10	99.0	1	1.0	0	0.0	0	0.0
	Middle income	110	97.0	3	3.0	0	0.0	0	0.0
	Low income	0	0.0	2	6.0	14	94.0	0	0.0
Breads and Cereals Group	High income	10	99.0	1	1.0	0	0.0	0	0.0
	Middle income	111	98.0	2	2.0	0	0.0	0	0.0
	Low income	14	98.0	1	2.0	0	0.0	0	0.0
Fruits and Vegetables Group	High income	10	99.0	1	1.0	0	0.0	0	0.0
	Middle income	110	97.0	3	3.0	0	0.0	0	0.0
	Low income	0	0.0	2	3.0	13	94.0	0	0.0
Dairy Group	High income	8	97.0	3	3.0	0	0.0	0	0.0
	Middle income	111	98.0	2	2.0	0	0.0	0	0.0
	Low income	0	0.0	13	97.0	2	3.0	0	0.0
Snacks	High income	8	97.0	3	3.0	0	0.0	0	0.0
	Middle income	108	96.0	7	4.0	0	0.0	0	0.0
	Low income	14	99.0	1	1.0	0	0.0	0	0.0

N = 139; high income = \$10,000 or more annually (N = 11); middle income = \$3,000 to \$9,999 annually (N = 113); low income = less than \$3,000 annually (N = 15).

Dairy foods were included everyday by: 8 out of 11 (97 percent) of the high income homemakers, 111 out of 113 (98 percent) of the middle income respondents. None of the low income group ate dairy foods everyday. However, 13 out of 15 low income respondents (97 percent) included the dairy group every other day. Income level effected the frequency of use of the dairy group in the low income groups by less frequent inclusion in the daily meals.

Fruits and vegetables were eaten everyday by: 10 out of 11 (99 percent) of the high income respondents, 110 out of 113 (97 percent) of the middle income respondents, and by none of the low income homemakers. Thirteen out of 15 (94 percent) of the low income homemakers included fruits and vegetables once a week in food use. This date indicated that low income homemakers use fruits and vegetables less frequently than other income groups in meal planning (see Table III, p. 37).

Foods Used Most Frequently

Most frequently used foods were determined by at least 50 percent or more of the homemakers incorporating them everyday in meal planning. The following foods were used everyday in meal preparation as indicated by number and percent of respondents: fresh eggs, 127 (92 percent); fresh bread, 127 (92 percent); fresh milk, 125 (91 percent); cheese, 123 (98 percent); carbonated beverages, 120 (87 percent); fresh fruit, 118 (85 percent); canned yellow vegetables, 112 (81 percent); and macaroni, 110 (79 percent) (see Table IV, p. 39).

TABLE IV
FOODS USED MOST FREQUENTLY

Food	Everyday		Twice/week		Once/week	
	No.	%	No.	%	No.	%
Fresh eggs	127	92.0	8	6.1	4	2.0
Fresh bread	127	92.0	12	8.2	0	0.1
Fresh milk	125	91.1	14	9.0	0	0.3
Cheese	123	89.2	12	9.4	4	2.2
Carbonated beverages	120	87.3	10	7.0	9	6.2
Fresh fruit	118	85.4	10	7.0	11	8.0
Canned yellow vegetables	112	81.5	7	5.3	20	14.0
Macaroni	110	79.4	21	17.1	8	4.0
Canned chile, red or green	105	76.0	32	23.2	2	1.3
Fresh beef	102	73.3	13	25.3	4	2.0
Dry beans and peas	89	64.0	41	30.0	9	6.4
Potato chips	87	62.0	43	32.0	9	6.3
Ketchup	84	60.1	45	33.1	10	7.2
Hot sauce	79	57.0	20	15.2	4	2.0
Canned fish	74	56.0	34	25.0	31	21.1
Canned fruit juice	72	54.1	21	15.1	46	31.0
Mustard	69	49.1	42	30.1	29	20.0

Note: Most frequently eaten foods were determined by at least 50 percent or more of the respondents incorporating them everyday in meal planning.

N = 139

Foods Used Least Frequently

Least frequently used foods were the foods which had not been included in the food use of the respondents. The least frequently used foods identified by the respondents in number and percentage were: frozen eggs, 139 (100 percent); canned poultry, 139 (100 percent); fresh fish, 134 (97 percent); ^{frozen} frozen doughnuts, 133 (96 percent); hamburger helper, 102 (71 percent); and hot cereals, 60 (54 percent) (see Table V, p. 40).

TABLE V
FOODS USED LEAST FREQUENTLY

Food	2 to 3 times/mo.		Once/month		Once/year		Never	
	No.	%	No.	%	No.	%	No.	%
Frozen eggs	0	0.0	0	0.0	0	0.0	139	100.0
Canned poultry	0	0.0	0	0.0	0	0.0	139	100.0
Fresh fish	0	0.0	0	0.0	5	3.0	134	97.0
Frozen doughnuts	0	0.0	0	0.0	6	4.0	133	96.2
Hamburger helper	0	0.0	0	0.0	37	29.0	102	71.1
Hot cereals	27	19.1	34	24.0	18	13.2	60	54.0
Instant potatoes	5	2.0	47	34.2	43	31.7	54	33.2
Nonfat dry milk	17	12.3	51	37.1	39	27.3	32	24.5
Frozen fruits	19	14.5	48	34.0	42	30.1	30	22.1
Canned milk	24	16.0	53	38.0	41	29.2	21	17.0
Frozen dark green vegetables	0	0.0	41	30.2	80	57.4	28	13.1
Seasoning dinner packets	0	0.0	87	62.3	41	29.6	11	9.2
Frozen yellow vegetables	32	24.2	44	31.4	51	39.0	7	6.4
Alcohol	37	26.3	51	37.2	47	34.1	4	3.1
Olives	36	26.1	42	31.3	57	40.2	4	3.2

Note: Least frequently used foods were the foods which had not been included in the food use of the respondents.

N = 139

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to identify food buying practices and household food use patterns of selected homemakers in Sandoval County, New Mexico. An instrument was developed and administered by the researcher to obtain data of background characteristics, food buying practices, and household food use of 139 homemakers. On the basis of the findings, suggestions and recommendations were made for consumer oriented nutrition programs in Sandoval County, New Mexico.

The sample was obtained by the researcher who contacted Sandoval County homemakers at group meetings, recreational meetings, health clinic patients, and home visits. As a result of these contacts, 150 homemakers volunteered to complete the questionnaire. Only 139 out of the 150 completed questionnaires (91 percent) were analyzed, due to incomplete data from 11 questionnaires.

Three parts were included in the instrument. Part I included ten questions which identified background information of the respondents. These questions solicited household size, age, employment, education, ethnic identification, income level, and residency. Part II had 18 questions which solicited data about food buying practices of Sandoval County homemakers, food use practices of the respondents, and food information needs of the respondents. Part III solicited data which indicated the use of the Basic Four Food Groups. Data was recorded by

number and percent of the responses to each question. Data was analyzed by comparison of percentages tabulated by hand.

Suggestions and recommendations for consumer oriented food and nutrition programs for Sandoval County homemakers were made on the basis of the analysis of the data.

Summary of Findings

Background characteristics indicate that the largest number of respondents, 111 (80 percent), were between the ages of 44 and 65 years; 56 homemakers (41 percent) were employed full-time; 120 homemakers (87 percent) were Anglos and 48 (35 percent) were Spanish American homemakers; 62 homemakers (44 percent) had incomes which ranged between \$5,999 and \$10,000; 51 homemakers (37 percent) had lived in New Mexico 5 to 10 years; 77 (55 percent) of the homemakers were located in an urban area, 54 (39 percent) were located in rural areas, and 8 (6 percent) of the respondents lived on farms and ranches.

A definite need for food buying information was identified by the fact that 127 (92 percent) of the respondents indicated that they desired information about how to shop for the best quality food at lower prices.

Most homemakers, 101 (73 percent), indicated that they felt they could save money by making more foods from scratch. Other responses, 32 (23 percent), identified buying lower quality food as a means of spending less money for food.

Information relating to food buying was most often obtained through self experience. The means of obtaining information about buying food which was most preferred by respondents, 118 (86 percent),

was via pamphlets. The remaining number of respondents, 21 (14 percent), preferred workshops, meetings, and home visits as a means of obtaining food buying information.

One hundred twenty (87 percent) of the homemakers indicated they had a freezer. In addition, appliances which were available for use by the respondents were: electric or gas range, 136 (98 percent); mixer, 123 (89 percent); and pressure saucepan, 98 (71 percent).

Frequency of use of the Basic Four Food Groups seemed to be influenced by income level. Low-income homemakers did not include the meat group, fruits and vegetables group, or the dairy group everyday as was characteristic of the high and middle income homemakers. Of the 15 low-income homemakers who responded, 13 (94 percent) included meat once a week, 13 (94 percent) included the dairy group every other day, and 13 (94 percent) included fruits and vegetables once a week in food use.

Carbonated beverages were used by 120 (87 percent) of the households on a daily basis. Potato chips were included by 87 (62 percent) of the households everyday. Nonfat dry milk was never used by 28 (13 percent) of the households surveyed. These food buying practices in Sandoval County indicates the likeliness of low intakes of calcium and vitamin A in the diets of families in Sandoval County, New Mexico.

Conclusions

Conclusions drawn by the researcher from this study include:

1. There is a need for nutrition information which can be utilized by homemakers in Sandoval County, New Mexico.
2. There is a need for consumer oriented information concerning food buying practices for Sandoval County homemakers.

3. There is a need for nutrition information relating the Basic Four Food Groups and their use in the daily diet of Sandoval County residents.

4. There is a need for menu planning information relating money management of food buying practices for Sandoval County homemakers.

5. There is a need for a professional home economist in planning and dispensing consumer oriented nutrition education programs in Sandoval County, New Mexico.

6. There is a need for the Cooperative Extension Service through the New Mexico State University to establish and promote consumer oriented food and nutrition education programs in Sandoval County, New Mexico.

Suggestions and Recommendations for Consumer
Oriented Food and Nutrition
Education Programs

On the basis of the findings of this study, the following recommendations are proposed by the researcher to promote consumer oriented food and nutrition information to Sandoval County homemakers:

1. A consumer oriented food and nutrition education program should be established by the New Mexico Cooperative Extension Service and by the Sandoval County Extension Office with emphasis on consumer education to provide food buying information for the residents of Sandoval County, New Mexico.

2. Opportunities should be provided for home economists to attend in-service training meetings, conventions, and workshops which offer current consumer education resource material.

3. More consumer oriented food and nutrition information should be made available concerning food buying through the United States Extension Service and the New Mexico State University Extension Service in the form of pamphlets, meetings, home visits, and news items.

4. Food retailers should become an active part of consumer education in promoting nutrition and food information. They should be encouraged to establish a policy on behalf of the consumer to inform people of beneficial food buying practices.

5. Consumer oriented education should be made available to homemakers concerning better use of the food dollar through patronizing county food retailing businesses. This would save time, energy, and cost of transportation.

Recommendations for Further Study

Further study should include studies of food buying practices of homemakers in the United States and trends of certain characteristics in comparison to ethnic background. More information concerning specific nutritional status of residents in Sandoval County could indicate food use patterns and be directed to development of specific educational needs of the people in this area. Diet adequacy could be investigated through anthropometrical measurements, blood and urine analysis, and diet recall to indicate the food intake and frequency of use of the Basic Four Food Groups. Retail food business techniques need to be investigated as to how to lower prices and increase local profits from the people residing within the retail business area.

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APPENDIX

Cooperative Extension Service
New Mexico State University
Sandoval County, New Mexico

United States Department of Agriculture

FOOD SURVEY

Hello, I am Paula Pitt, Sandoval County Extension Home Economist. The Extension Service is a branch of the United States Department of Agriculture. I am conducting a survey on behalf of New Mexico State University about food buying practices of Sandoval County homemakers. Your answers will be kept anonymous. Please do not sign your name anywhere on this survey. Please answer all of the questions the best you can. If you need something explained, please do not hesitate to ask me. Thank you very much for your time and considerate help.

It is important to answer all of the questions. Please check (X) the best answer for your situation.

PART I

1. How many adults live in your household? (Please fill in)

No. of females 18-25 yrs. old No. of males 18-25 yrs. old
 No. of females 25-35 yrs. old No. of males 25-35 yrs. old
 No. of females 35-50 yrs. old No. of males 35-50 yrs. old
 No. of females 50 yrs. & older No. of males 50 yrs. & older

2. How many children live in your household? (Please fill in)

No children live in my household
 No. of females birth to 4 yrs. No. of males birth to 4 yrs.
 No. of females 4-10 yrs. old No. of males 4-10 yrs. old
 No. of females 10-15 yrs. old No. of males 10-15 yrs. old
 No. of females 15-18 yrs. old No. of males 15-18 yrs. old

3. Please check (X) the age range in which your age belongs:

under 25 yrs. 25-44 yrs. 44-65 yrs. over 65 yrs.

4. What is your marital status? (Please check one)

single married divorced widow
 other (please specify) _____

5. Are you employed other than your household?

Yes, my employment is: full-time part-time
 No

6. What is the last grade you completed in school? (Please circle one)

School: 1 2 3 4 5 6 7 8 9 10 11 12 College: 1 2 3 4
 Other: (after 12th grade) (please specify) _____

7. To which ethnic group do you belong? (Please check one)

Spanish-American American Indian Oriental Anglo
 Negro Other

8. Please check one on this list which is nearest your income for 1975, before taxes.

<input type="text"/> Under \$3,000	<input type="text"/> \$8,000-\$8,999	<input type="text"/> \$13,000-\$13,999
<input type="text"/> \$3,000-\$4,999	<input type="text"/> \$9,000-\$9,999	<input type="text"/> \$14,000-\$14,999
<input type="text"/> \$5,000-\$5,999	<input type="text"/> \$10,000-\$10,999	<input type="text"/> \$15,000-\$18,000
<input type="text"/> \$6,000-\$6,999	<input type="text"/> \$11,000-\$11,999	<input type="text"/> \$18,000 and over
<input type="text"/> \$7,000-\$7,999	<input type="text"/> \$12,000-\$12,999	

9. How long have you lived in New Mexico? (Please check one)
- Less than 2 yrs. 2-5 yrs. 5-10 yrs. 10-20 yrs.
 20 yrs. or more native New Mexican
10. Where do you live in Sandoval County? Name of nearest town _____
- A. Do you live (Please check one) in town
 in suburbs or near town
 on a farm
 on a ranch

PART II

11. Are you the person who usually decides which foods to buy for your household?
- Yes No If not, who does? _____
12. Are you the person who buys the food for your household?
- Yes No If not, who does? _____
13. When you buy food for your household, do you use a shopping list?
- Yes No
14. Where do you shop for food? (Please check the one you most often use)
- Local, town grocery store
 Small, neighborhood grocery store
 Mercantile grocery store
 Large grocery store outside of Sandoval County
 Other (please specify) _____
15. When you buy food, do you: (Please check the one you do most often)
- Pay cash or check Charge or credit card
 Food stamps Other (please specify) _____
16. How often do you buy non-perishable food items such as canned goods, flour, and sugar? (Please check one)
- Daily Once every two months
 Once a week Once every six months
 Once every two weeks Once a year
 Once a month

17. About how many hours do you spend during an average week in the activities listed below? (Please fill in)
- | | |
|---|--|
| <u> </u> No. of hrs. buying food | <u> </u> No. of hrs. planning menus |
| <u> </u> No. of hrs. preparing meals | <u> </u> No. of hrs. preparing sack lunches |
18. Suppose you wanted to cut down on the amount of money you spent for food. Which one of the ways listed comes closest to describing how you would do it?
- | | |
|--|--|
| <u> </u> Buy a lower quality of food | <u> </u> Make more foods from scratch |
| <u> </u> Buy a smaller amount of food | <u> </u> Other (please specify) _____ |
| <u> </u> Buy different kinds of food | _____ |
19. How many meals do you prepare each day? (Please fill in)
- No. of meals per day
- A. How many of the household members are present at the main meal?
- No. of household members present at the main meal
20. Do you prepare foods: (Please check the method you use most often)
- From scratch
- From partially made pre-mixed foods (such as cake mixes, hamburger helper, etc.)
21. Which of the following kitchen appliances do you use? (Please check all that apply)
- | | | |
|----------------------------|-------------------------------------|---------------------------------|
| <u> </u> blender | <u> </u> electric or gas range | <u> </u> pressure saucepan |
| <u> </u> mixer | <u> </u> wood stove | <u> </u> pressure canner |
| <u> </u> refrigerator | <u> </u> hot plate | <u> </u> freezer |
| | | <u> </u> dishwasher |
22. Where do you learn how to buy food? (Please check one)
- | | | |
|------------------------------|--------------------------|--|
| <u> </u> self taught | <u> </u> newspaper | <u> </u> mother, grandmother |
| <u> </u> grammar school | <u> </u> magazine | <u> </u> Extension Service |
| <u> </u> high school | <u> </u> television | <u> </u> other (please specify) _____ |
| <u> </u> college | <u> </u> neighbors | _____ |
23. Which statement best describes your interest in having more information about methods of shopping for food to save money? (Please check one)
- I definitely would be interested
- I probably would be interested
- I might be interested
- I probably would not be interested
- I definitely would not be interested

24. Do you have your own home grown: (Please check all that apply)

meat eggs other (please specify) _____
 fruits milk
 vegetables cheese

25. Do you make your own bread at home?

Yes No

26. Do you preserve your own: (Please check all that apply)

fruits soups
 vegetables relishes and pickles
 meats other (please specify) _____

27. What information would you most like to have concerning buying of food? (Please check all that apply)

buying meats drying foods
 planning menus food spoilage
 canning techniques use of leftovers
 freezing techniques how to shop for the best quality at
 how to plant a garden lower prices

28. How would you most prefer to obtain information concerning food buying? (Please check all that apply)

pamphlets meetings workshops home visits

PART III

29. Please check (X) how often you include the following foods in your meals eaten at home.

Food	Every-day	Twice/week	Once/week	2 to 3 Times/month	Once/month	Once/year	Never
Fresh eggs							
Frozen eggs							
Fresh lamb							
Frozen lamb							
Fresh beef							
Frozen beef							
Canned beef							
Fresh pork							
Frozen pork							
Canned pork							
Fresh fish							
Frozen fish							
Canned fish							

Food	Every-day	Twice/week	Once/week	2 to 3 Times/month	Once/month	Once/year	Never
Fresh poultry							
Frozen poultry							
Canned poultry							
Cold meat cuts							
Organ meats (liver)							
Dry beans and peas							
Fresh dark green leafy vegetables							
Frozen dark green leafy vegetables							
Canned dark green leafy vegetables							
Fresh yellow vegetables							
Frozen yellow vegetables							
Canned yellow vegetables							
Canned chile, red or green							
Frozen chile, red or green							
Canned vegetables							
Frozen vegetables							
Fresh vegetables							
Fresh fruits							
Frozen fruits							
Canned fruits							
Frozen fruit juices							
Canned fruit juices							
Fresh bread							
Cold cereals							
Hot cereals							
Rice							
Macaroni							
Spaghetti							
Fresh potatoes							
Frozen potatoes							
Instant potatoes							
Fresh milk							
Canned milk							
Nonfat dry milk							
Cheese							
Ice cream							
Pizza							
Potato chips							
Carbonated beverages							
Alcohol							
Hamburger helper							
Seasoning dinner packets (taco mix, etc.)							
Soups							
Frozen doughnuts, sweet rolls							

Food	Every- day	Twice/ week	Once/ week	2 to 3 Times/ month	Once/ month	Once/ year	Never
Fresh doughnuts, sweet rolls							
Jams and jellies							
Pickles and relishes							
Olives							
Ketchup							
Mustard							
Hot sauce							

VITA²

Paula Jean Pitt

Candidate for the Degree of

Master of Science

Thesis: A SURVEY OF SANDOVAL COUNTY, NEW MEXICO, HOMEMAKERS' FOOD
BUYING PRACTICES AND HOUSEHOLD USE OF FOODS

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Personal Data: Born in Las Vegas, Nevada, February 13, 1949, the daughter of Mr. and Mrs. Paul A. Parker; married to William Frederick Pitt, 1969; have one son, William Paul.

Education: Graduated from Western High School, Las Vegas, Nevada, in May, 1967; attended the University of New Mexico, 1970-72; received the Bachelor of Science in Home Economics Education degree from the University of New Mexico, December, 1972; completed a dietetic internship at Oklahoma State University, July, 1974; completed the requirements for the Master of Science degree at Oklahoma State University in December, 1976.

Professional Experience: Dietetic Aide, Sunrise Hospital, Las Vegas, Nevada, 1969; Dietetic Aide, Bernalillo County Medical Center, Albuquerque, New Mexico, 1972; Food Service Worker, Marriott Corporation, 1973; Nutritionist for Oklahoma State University Food Service and Oklahoma State University Pre-schools, 1974-75; New Mexico State University Extension Home Economist located in Sandoval County, Bernalillo, New Mexico.

Professional Organizations: American Home Economics Association, New Mexico Home Economics Association, and the University of New Mexico Alumni Association.