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ABSTRACT

A study of the Kansas Cooperative Extension's Expanded Food and Nutrition Education Program (EFNEP) was intended to determine the effectiveness of instruction provided by this federally funded program. The program endeavors to benefit low income families by improving participants' food and nutrition practices, behaviors, and food consumption patterns. Only 5.5 percent of the 115 subjects (selected by proportional random sampling and typical of EFNEP participants nationwide) ate the recommended number of servings from the four basic food groups before receiving the instruction, but 22.1 percent of them did so after the instruction. Participants' scores improved an average of 12.2 percent in desirable food and nutrition practices and behaviors after instruction. The 12 lessons of instruction were provided by nutritional assistants, who used one-to-one or small group techniques. The following recommendations were made: (1) repeat the study, using a control group and striving for increased consistency with which data are collected and (2) study the influence of educational level on homemakers' ability to improve as a result of participation in EFNEP. (The document includes a 10-item bibliography and data collection instruments called the Expanded Food and Nutrition Education Program Family Record; the Homemaker Food Consumption 24-Hour Food Recall; and the Food and Nutrition Practice Checklist.) (CML)

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ED308283

AN EVALUATION OF THE EXPANDED FOOD  
AND NUTRITION EDUCATION PROGRAM IN KANSAS

A Thesis Submitted to the Graduate School In Partial  
Fullfillment of the Requirements for the  
Degree of Master of Science

By  
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PITTSBURG STATE UNIVERSITY

Pittsburg, Kansas

May 1989

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Finally the researcher wishes to dedicate this thesis to her parents, Mr. and Mrs. Loyd Elbrader, without their guidance, encouragement, support and unconditional love, the researcher would not have achieved her educational goals.

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## ABSTRACT TO THESIS

Kansas' Cooperative Extension's Expanded Food and Nutrition Education Program (EFNEP) is a federally funded nutrition education program to benefit low-income families. This evaluation was done to document the effectiveness of the program in Kansas.

This evaluation of Kansas EFNEP used 115 EFNEP homemakers which were selected by proportional random sampling procedures. Homemakers received nutrition instruction. Pre-evaluation and post-evaluation data from nutrition practices checklist and food intake records were compared.

A Kansas EFNEP Homemaker Demographic Characteristic Profile was determined and found to be typical of EFNEP homemakers nation-wide.

Results from the evaluation provide documentation that food and nutrition practices, behaviors and food consumption patterns are improved from pre-evaluation to post-evaluation due, in part, to EFNEP.

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## CHAPTER I

### INTRODUCTION

The Kansas Cooperative Extension's Expanded Foods and Nutrition Education Program (EFNEP) is a federally funded nutrition education program that is designed to aid low-income families. The purpose of the EFNEP, as federally mandated, is to assist hard-to-reach low-income families, concentrating on those with young children, to improve their diets by teaching them basic nutrition principles.

In November 1968, the United States Department of Agriculture (USDA) initiated the EFNEP which began operation in early 1969. The EFNEP was to function within the present framework of the Federal, State, and County Extension Service.

The Expanded Foods and Nutrition Education Program policies of October 1983, stated:

The objectives of the Expanded Food and Nutrition Education Program are to assist low-income families and youth acquiring the knowledge, skills, attitudes and changed behaviors necessary for nutritionally sound diets and to contribute to their personal development and the improvement of total family diet and nutritional welfare (1).

Participation in the Expanded Food and Nutrition Education Program should result in:

- \*Improved diets and nutritional welfare for the total family.
- \*Increased knowledge of the essentials of human nutrition.
- \*Increased ability to select and buy foods that satisfy nutritional needs.
- \*Improved practices in food production, preparation, storage, safety, and sanitation.
- \*Increased ability to manage food budgets and related resources such as Food Stamps (1).



Nutrition Assistants recruit low-income homemakers primarily through referrals from other agencies or community programs and by door-to-door contact. The Nutrition Assistants teach the homemakers basic nutrition and food preparation skills either in small groups or on a one-to-one basis.

EFNEP is the largest federally funded nutrition education program in the United States, with appropriated funds of about \$60 million for each year since fiscal 1981 (2).

There are 813 program sites, 1987, across the nation. EFNEP has enrolled approximately 2.5 million families since it began in 1968. There are presently four counties in Kansas that operate an EFNEP in 1988. Those counties were Crawford, Sedgwick, Shawnee and Wyandotte (Appendix D). From October 1, 1986, through September 30, 1987, the Kansas EFNEP served a total of 2558 homemakers.

To qualify for the EFNEP, homemakers must meet federal income guidelines which require that family income be equal to or below \$14,563 annually for a family of four (Appendix E). EFNEP guidelines are 125% of poverty guidelines and are based upon the size of family.

#### Statement of the Problem

The Expanded Food and Nutrition Education Program's primary purpose is to improve the homemakers' knowledge of nutrition, managing available resources, food safety, food sanitation, as well as preparation of economical meals. This evaluation is being conducted to examine dietary practices and nutrition knowledge of low-income homemakers; from rural and urban counties, upon entrance into and graduation from the EFNEP.

Instruments used in support of this evaluation were the EFNEP Family Record (Appendix A), Homemaker Food Consumption: 24-Hour Food Recall (Appendix B), and the Food and Nutrition Practice Checklist (Appendix C).

#### Delimitations

This evaluation included the four Kansas counties that operated an Expanded Food and Nutrition Education Program in 1988. Those counties considered were: Crawford, Sedgwick, Shawnee and Wyandotte (Appendix D).

Homemakers that participated in the program met the income guideline of 125% of poverty level (Appendix E).

#### Limitations

This evaluation was limited by the participating homemakers and their ability to give complete, accurate and honest responses on the evaluating instruments.

The evaluation is further limited when using the 24-hour Food Recall (Appendix B) by the homemakers memory and estimation of foods and amounts consumed.

Definition of Terms

- EFNEP** - The Expanded Food and Nutrition Education Program
- Homemaker/EFNEP Participant** - Primary meal planner and preparer for the low-income EFNEP family.
- Nutrition Assistant (NA) or Paraprofessional** - Individuals trained by professional Home Economist to teach in EFNEP.
- Low-Income** - Income level at or below 125% of poverty level; at or below \$14,563 annually for a family of four.
- Kansas EFNEP Counties** - The four counties in Kansas that operate an EFNEP (1988). Those counties were: Crawford, Sedgwick, Shawnee, and Wyandotte.
- EFNEP Family History Record** - Instrument used to gather demographic information about EFNEP homemaker. The instrument is used to enroll homemakers in the EFNEP.
- Food and Nutrition Practice Checklist/Behavior Checklist** - Evaluation instrument to help identify homemaker behaviors and practices concerning foods and nutrition.
- Homemaker Food Consumption: 24-Hour Food Recall** - Evaluation instrument used to document eating habits. Individual food intake is recorded for a given 24-hour period.
- EFNEP Curriculum** - Eating Right Is Basic 2; a competency-based curriculum that contains 19 lessons that cover basic nutrition principles and concerns.
- Referral Agencies/Community Program** - Agency or Program designed to maintain or improve the lives of low-income individuals.
- Eating Right Is Basic: Adult Curriculum - ERIB 2** - "Competency Based" nutrition education curriculum designed by Michigan State University Cooperative Extension especially for EFNEP.

### Significance of the Study

This evaluation was done in order to document the changes in a homemaker's ability to apply basic nutrition knowledge and improve dietary practices due to EFNEP.

Budgets are shrinking and more cost effective methods must be found if EFNEP is to reach those clients with the greatest needs. The program has the potential for maintaining and/or improving people's health through better diets and for maximizing resources through knowledgeable food purchasing (3).

The EFNEP must continue to operate efficiently. It must constantly provide documentation of its effect on the improvement of human lives; or face the reality of funding cut-backs or a curtailment of funding in the future.

Kansas EFNEP has suffered a partial phase out of county programs. These phase outs were due, in part, to the lack of funding and the Kansas Cooperative Extension Service's desire to maintain quality programs. This evaluation should provide documentation in support of the existing EFNEP in Kansas.

## CHAPTER II

### REVIEW OF LITERATURE

#### History and Development

As the Twenty-First Century approaches, the cries of hunger in America, "the land of plenty", still are heard all too frequently. Hunger in America has been a concern of many since the Great Depression of the thirties. The painful cries became even more prevalent in the early sixties (10). In response to the hunger situation of the sixties, the USDA, in the Expanded Food and Nutrition Education Program Historical and Statistical Profile stated:

During the early 1960's evidence was accumulating about the appalling living conditions endured by millions of Americans. Vivid glimpses of poverty and squalor were constantly shown by the news media. The attention of concerned Americans turned increasingly toward the plight of less fortunate Americans. And one of the most shocking realizations was that, in the midst of a land of plenty, children were going to bed unfed. A country that provided food for millions of people in other countries had somehow managed to overlook the hunger of its own citizens (4).

The poor living conditions which haunted the lives of millions of Americans in the 1960's began to surface; and the government had to respond. "It became apparent that hunger, malnutrition and starvation were not confined to any one geographic region. The problem affects whites and blacks; it appeared in the cities and rural areas" (4). It was this atmosphere that led to the creation of the Expanded Food and Nutrition Education Program (EFNEP).

There were many factors that contributed to the creation of the EFNEP. The United States Department of Agriculture's (USDA) Cooperative Extension Service, throughout the 1960's funded a series of pilot studies. The pilot studies were to identify effective and productive approaches for establishing and maintaining an educational program for low-income families.

Five studies had significant impact on the evolution of EFNEP. The Alabama five-year pilot project was the most ambitious and best documented of these studies. The results of the Alabama Project were encouraging:

Almost three-quarters of the homemakers involved improved the eating habits of their families; two-thirds improved their food preparation skills; over half increased the amount of milk consumed by their families, served more balanced meals, and used better food buying practices; and more than a third improved methods of storing, canning, and freezing goods.

Overall, this pilot effort showed that:

An educational program tailored to the interest, needs, competencies, and economic and educational levels of homemakers could be effective in changing their eating habits.

Paraprofessionals, under supervision of a professional Home Economist, could be trained to teach low-income homemakers effectively (4).

There were other federal programs active in the 1960's that were designed to help low-income Americans.

The Direct Distribution Program, which began in 1935, was still in existence in the sixties. This program was to utilize surplus farm commodities by distributing them to low-income people.

The Food Stamp Program, also, reappeared in the 1960's. The objective of this program was to provide additional economic resources to participants which would increase food buying power and provide a larger variety in food choice.

Neither of these two programs was designed to change the participants' behavior or to have a lasting beneficial effect on the participants' lives.

Since its inception, EFNEP education and instruction has been guided by the following fundamental principles:

Information must be based on the latest available research, taking into account nutrition knowledge, instruction technology and methodology for reaching and working with low-income groups. Teaching must be focused to produce measurable behavior change in the target population, and measurement of that behavior change must be an integral part of program activity (4).

In January 1968, the Office of the Secretary of Agriculture presented a report to the Extension Committee on Policy (ECOP) entitled the Nutritional Status of Low-Income Families in the United States. The Cooperative Extension Service (CES) responded to the report by proposing a comprehensive nutrition education program which would target low-income families with young children. In November 1968, the Department of Agriculture provided a ten-million dollar grant from Section 32 funds of an Act to Amend the Agricultural Adjustment Act of August 1935 (1). These initial funds provided for multiple program sites in each state and for employment of Nutrition Assistants in 513 units. The Nutrition Assistants were to use the one-to-one teaching method, as well as other methods tested in the initial pilot studies (4).

### Paraprofessionals

A professional Home Economist trains paraprofessionals to teach in the EFNEP. EFNEP Nutrition Assistants work with low-income homemakers on a one-to-one basis or in small groups. The specific responsibilities of the Nutrition Assistants in the adult EFNEP include:

- 1) Recruiting and enrolling low-income adults in EFNEP.
- 2) Teaching food and nutrition and related subject matter to the homemakers.
- 3) Evaluating the progress of the homemaker.
- 4) Identifying the potential for 4-H EFNEP youth participants from among the children of Program families.
- 5) Identifying and recruiting potential Program volunteers.
- 6) Referring families to other Extension programs or to other agencies or organizations (4).

Paraprofessionals are providing the "insider" approach to improving nutrition knowledge and changing eating habits with warmth, intuition and empathy.

### 24-Hour Recall Method

The 24-hour recall was the instrument used in this evaluation to document eating habits. The 24-hour recall provides a quick, economical, and appropriate means of monitoring food intake (5). In a report to the USDA, Burk and Pao (6), discussed the advantages and applications of the 24-hour food recall as well as the shortcomings and alternatives to it. Their evaluation is that it is a useful, valid method of obtaining diet information.



EFNEP Recommendations and Considerations

In 1979-80, the U.S. General Accounting Office carried out a limited study of the EFNEP and made several recommendations to the Secretary of Agriculture. The recommendations were:

- 1) Encourage state and local EFNEP officials to develop and test various innovative methods for reaching more families within the constraints of available resources.
- 2) Evaluate the methods that are developed and disseminate to all EFNEP officials information on those found to be feasible and effective.
- 3) Develop (1) objective and measurable standards for judging program effectiveness and (2) the evaluation and feedback tools needed to measure program performance against such standards.
- 4) Provide additional guidance and training to state and local program officials on supervisory and record-keeping requirements and responsibilities.
- 5) Develop specific criteria for state program officials to use in selecting program sites and allocating funds among the sites.
- 6) Encourage increased state and local EFNEP coordination with other nutrition-related programs for reaching more families.
- 7) Ensure adequate evaluations of the sixteen pilot projects which are exploring ways of increasing Food Stamp Families' participation in EFNEP (3).

From this limited study a federally mandated study was to be conducted by the Extension Service, Science and Education, United States Department of Agriculture (USDA). From this mandated study the following recommendations were made:

- 1) EFNEP can be best justified by linking health status to low-income families:
  - a) because of fewer resources they are at greater nutritional risk;
  - b) imbalances in consumption are linked with higher incidence of nutrition-related diseases and disorders;
  - c) low-income families can least afford the cost of health problems.
- 2) Targeting of services needs to be carefully planned by states to ensure that the "neediest" are getting the services.

- 3) Cost effectiveness needs to be improved.
- 4) A national task force needs to determine the feasibility.
- 5) Program curriculum should be developed and consideration given to program delivery methods and a definition of "completion" provided.
- 6) EFNEP should find ways to coordinate with other agencies and enhance the effects of all in reaching goals.
- 7) Paraprofessionals should be focusing their efforts on teaching.
- 8) Program reviews of units should be comprehensive, frequent and objective enough to strengthen and improve programs or to eliminate the weak and ineffective.
- 9) A national task force should re-define and re-design the record and reporting system (7).

#### Similar Evaluation Studies

A California EFNEP evaluation study conducted from 1980 to 1983 concluded that EFNEP is making a significant improvement in the eating habits, food attitudes and nutrition-related knowledge and behavior of its target audience. An evaluation study in Maryland recently showed that, even after twenty months, EFNEP graduated homemakers retained their knowledge and improved dietary habits (8). "The Orleans Parish, Louisiana, Evaluation Study (1983-86) also indicated that low-income homemakers enrolled in the program improved their dietary practices. Homemakers sustained this improvement in dietary behavior for six to twelve months after graduation and at a significant level when compared to entry" (2).

#### Kansas EFNEP

From February 1969 to August 1971, twenty-one counties in Kansas (Appendix D) had established EFNEP. Beginning in September 1972 through December 1975, thirteen of the original twenty-one counties had phased

out the EFNEP; leaving only Crawford, Douglas, Geary, Riley, Saline, Sedgwick, Shawnee and Wyandotte counties. These counties operated for the next ten years without fail. Then from May 1985 to June 1986, four other counties had their EFNEP phased out. This phase out was due, in part, from lack of funding. The remaining counties: Crawford, Sedgwick, Shawnee and Wyandotte, will be used in this evaluation study.

From October 1, 1986 through September 30, 1987, 2,558 EFNEP homemakers had been reported served by the four counties. During this same time, 888 homemakers, or approximately 35%, had graduated from the program. There were 1,229 homemakers, or 48% enrolled, that reported they received Food Stamps.

From October 1, 1987 through February 1, 1988, the four counties reported an average enrollment of 1,148 homemakers.

The Expanded Food and Nutrition Education Program, since its inception in 1968, has been continuously challenged and evaluated to determine effectiveness in meeting the program's objectives. Cost effective, productive programs are a must during difficult economic times. Documentation of program results are necessary to help ensure continued funding and the existence of a federal nutrition education program. "Indeed, it is important for any program to be self-reflective and to provide feedback so that it can improve and grow with the changing needs of the population it serves" (5).

In recent years (1982-1987), unemployment rates in the United States have dropped from about 11% to around 6%, but there has been a considerable increase in the number of people who live in poverty.

Almost 20% of U.S. jobs will not support (above poverty level) a worker with two dependents. Poor living conditions and the lack of necessary resources have forced many families to suffer from dietary inadequacies. Poverty does exist in all geographic regions. It is a global concern. The Expanded Food and Nutrition Education Program, established to respond to the poverty conditions in America in the 1960's, still, today, is encouraging change toward better nutrition and providing nutrition education to low-income families. This program has shown that education is truly the way out of poverty.

## CHAPTER III

### OVERVIEW

This evaluation examined the dietary practices and nutrition knowledge of low-income homemakers (Appendix E) enrolled in the Kansas Expanded Food and Nutrition Education Program. In each of the four participating counties (Appendix D), EFNEP homemakers were recruited by a County Nutrition Assistant and the researcher used a proportional random sampling procedure to select the subjects used in the evaluation. There were 115 Kansas EFNEP homemakers selected for this study. The 115 subjects represented approximately ten percent of the total number of homemakers enrolled in the Kansas EFNEP (January 1988). Demographic data were collected at the time the homemaker was enrolled by the Nutrition Assistant. The EFNEP Family Record Form was used to gather these data (Appendix A). The Nutrition Assistants administered the pre-evaluation instruments, which were the Homemaker Food Consumption: 24-Hour Food Recall (Appendix B) and the Food and Nutrition Practice Checklist (Appendix C), to each of the EFNEP subjects. After pre-evaluating was completed, the Nutrition Assistant began teaching the subjects using a one-to-one and/or small group approach. The curriculum used were the "competency based" Eating Right Is Basic 2, adult materials (Appendix H). Upon completion of the twelve basic ERIB 2 lessons, the Nutrition Assistants administered a post-evaluation. The post-evaluation instruments were the same as those administered in the pre-evaluation.

Sampling Procedure

The subjects used in this evaluation did not have previous EFNEP instruction. Based upon previous studies and EFNEP annual reports, the EFNEP Homemaker Characteristic Profile nationally was an individual with annual income below poverty level, 66% receive food stamps, 35% are enrolled in WIC (Women, Infant and Children Program), most have children under 5 years old, and 60% are from racial minorities. The EFNEP Family Record Form (Appendix A) was used to determine the Kansas EFNEP Homemaker Characteristic Profile.

Subjects were selected based upon each county's EFNEP homemaker enrollment in proportion to the total average Kansas EFNEP Homemaker enrollment from October 1987 to January 1988.

Percentages used to determine the sample were an average percent from October 1987 to January 1988. TABLE I shows the percentages used and the number of EFNEP subjects that were evaluated from each county.

TABLE I  
NUMBER OF EFNEP SUBJECTS FROM EACH COUNTY USED IN THE EVALUATION

Kansas-EFNEP County	Average % Total enrollment by county Oct. 1987-Jan. 1988	Number of EFNEP subjects by county
CRAWFORD	33	38
SEDGWICK	29	33
SHAWNEE	23	27
WYANDOTTE	15	17

To protect subjects' identities, identification numbers were assigned to the evaluation instruments being used by the subjects.

### Measuring Instruments

The EFNEP Family Record (Appendix A) was used to collect demographic data on each of the EFNEP Homemakers.

The EFNEP Homemaker Food Consumption: 24-Hour Food Recall (Appendix B) was used to document eating habits based upon food intake. The researcher scored the 24-Hour Recall by using the method developed by Synectics (Appendix F). The researcher also calculated the number of servings in each of the Basic Four Food groups.

Subjects were evaluated by food intake pattern: either 1-1-1-1 or 2-2-4-4, which represents numbers of servings from each of the Basic Four Food groups. The 24-Hour Recall meets the requirements of a useful research instrument. In the Framingham study (9), a correlation of 0.52 to 0.92 was determined for 24-Hour Recall with actual nutrient intake.

The Food and Nutrition Practice Checklist (Appendix C) evaluated homemakers' knowledge and behaviors concerning: nutrition knowledge; food purchasing; food storage and sanitation; food preparation; and meal planning. Each response has a pre-determined value and a total score was established for each pre-evaluation and post-evaluation. The scoring procedure is mandated by State EFNEP officials (Appendix G).

### Procedures

Each county recruited and enrolled homemakers in the EFNEP. Nutrition Assistants obtained completed EFNEP Family Records (Appendix A) which provided demographic data. Next, the homemaker completed a 24-Hour Food Recall (Appendix B) and the Food and Nutrition Practice

Checklist (Appendix C). Upon completion of all the pre-evaluation instruments, a series of twelve lessons were presented to the homemakers by each county's Nutrition Assistants. A post-evaluation was administered after completion of the education program. The post-evaluation instruments were the same as those used for the pre-evaluation. Pre-evaluation and post-evaluation scores were evaluated and comparisons made. All scoring was done by the researcher.

### Analysis of Data

Demographic information obtained from the EFNEP Family Record (for each county) (Appendix A) have been presented in table form. Selected demographic data means from the EFNEP counties in Kansas, as well as the total Kansas EFNEP were evaluated.

Pre-evaluation and post-evaluation 24-Hour Recall (Appendix B) scores and numbers of servings from the Basic Four Food Groups have been presented in table form.

Mean scores from the pre-evaluation and post-evaluation Food and Nutrition Checklist (Appendix C) were compared and results are given in table form.

Pre-evaluation and post-evaluation mean scores from the 24-Hour Recall (Appendix B) and the Food and Nutrition Checklist (Appendix C) from rural Crawford County and the more metropolitan Sedgwick, Shawnee and Wyandotte Counties in Kansas (Appendix D) were compared.

The demographic data were collected by use of the standard EFNEP Family Record (Appendix A).



## CHAPTER IV

### RESULTS

This evaluation was done to document the change in a homemaker's ability to apply basic nutrition knowledge and improve dietary practices due to EFNEP. The evaluation used 115 homemakers from Crawford, Sedgwick, Shawnee, and Wyandotte counties in Kansas. Selected demographic data means, food consumption patterns, and nutrition practices and behaviors were evaluated for four counties as well as for the state of Kansas.

The researcher was interested in the characteristic profile of the EFNEP homemakers in Kansas. Table II, below, depicts the age, monthly income and family size of those surveyed.

TABLE II  
SELECTED DEMOGRAPHIC DATA MEAN ON EFNEP HOMEMAKERS BY COUNTY AND STATE

Demographic Characteristic	County				State
	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
Age of Homemaker	39.8	28.8	27	27.6	30.8
Monthly Income	\$614.37	\$528.55	\$600.50	\$388.07	\$532.87
Family Size	3.2	3.7	4.1	3.5	3.6

The Department of Health and Human Services guidelines on poverty (May 1988) were \$808.00 a month for a family of three and \$971.00 for a family of four; EFNEP clients in Kansas have monthly incomes well below

poverty level as shown in Table II. The average age was 30.8 and family size was 3.6.

The researcher was also interested in determining how many respondents were receiving food stamps. Table III was prepared to show these data.

TABLE III  
PERCENTAGE OF EFNEP HOMEMAKERS RECEIVING  
FOOD STAMPS BY COUNTY AND STATE

Receiving Food Stamps	County				State
	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
Yes	35	62	72	73.3	61
No	65	38	28	26.7	39

The results show that 61% of those surveyed received food stamps.

The researcher was interested in determining how many were enrolled in the Women, Infant, and Children Program (WIC). Table IV was prepared to depict these data.

TABLE IV  
PERCENTAGE OF EFNEP HOMEMAKERS PARTICIPATING  
IN WIC PROGRAM

Participating In WIC	County				State
	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
Yes	19	48	66.7	76	48.9
No	81	52	33.3	24	51.1

The researcher was interested in the number of participants who had children in Child Nutrition Programs. Table V summarizes these data.

TABLE V  
PERCENTAGE OF EFNEP HOMEMAKERS WITH  
CHILDREN IN CHILD NUTRITION PROGRAMS

Children in Child Nutrition Programs	County				State
	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
Yes	35	55	61	60	52.4
No	65	45	3 <sup>a</sup>	40	47.6

The data indicate that 52.4% of the participants had children in Child Nutrition Programs.

Kansas EFNEP exists in both urban and rural areas, Table VI, below, summarizes the sizes of communities where the participants were located.

TABLE VI  
PERCENTAGE DISTRIBUTION OF EFNEP HOMEMAKERS

Size of Community	County				State
	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
Less Than 10,000	45	0	0	0	14.8
10,000 to 50,000	55	0	0	0	18.3
Over 50,000 (Central City)	0	100	100	100	66.9

The data, from Table VI on the previous page, indicates that 14.8% of the respondents live in communities of less than 10,000, 18.3% were from communities of 10,000 to 50,000 and 66.9% were located in a community of over 50,000.

The researcher was interested in the educational level of the participants. Table VII shows the data in relation to educational levels of the participants.

TABLE VII  
PERCENTAGE OF EFNEP HOMEMAKERS ATTAINING  
VARIOUS LEVELS OF EDUCATION BY COUNTY AND STATE

Education Level	County				State Kansas
	Crawford	Sedgwick	Shawnee	Wyandotte	
8th Grade or Less	35	3.4	0	0	9.8
9th-12th Grade or GED	45	9.7	77	93	78
Beyond High School	20	3.4	22.3	6.7	12.2

The data reveals that 9.8% had an 8th grade education or less, 78% had completed grade 9 to 12, and 12.2% had completed education above the 12th grade.

Another variable in regard to the participants considered in this study were their ethnic backgrounds. Table VIII summarizes the ethnic background of those surveyed.

TABLE VIII  
ETHNIC BACKGROUND OF EFNEP HOMEMAKERS IN KANSAS

	Caucasian	Black	Hispanic	American Indian	Asian Or Pacific Islander
Kansas EFNEP Homemaker	43.9	45.1	7.3	0	3.7

The table reveals that 43.9% were Caucasian and 56.1% are of those considered the racial minorities. The characteristics profile of a Kansas EFNEP Homemaker is typical of EFNEP homemakers nationally based upon previous studies and EFNEP annual reports.

Food Consumption Data

In Table IX, the means of the pre- and post-evaluations and ideal scores of the 24-Hour Food Recall (Appendix B) were presented for Crawford, Sedgwick, Shawnee, and Wyandotte counties and for the state of Kansas.

TABLE IX  
PRE- AND POST-EVALUATION MEANS AND IDEAL SCORES ON THE 24-HOUR  
FOOD RECALL (APPENDIX B) FOR KANSAS EFNEP HOMEMAKERS  
BY COUNTY AND STATE

	Ideal Score	PRE-EVALUATION				
		Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
24-Hour Recall Score	100	52.9	66	74.9	76.7	64.4
Milk Consumption	2	.96	1.1	1.6	1.4	1.3
Protein Consumption	2	1.5	2.6	1.9	1.9	2.0
Fruit and Vegetable Consumption	4	2	2.9	2.4	2.3	2.4
Bread and Cereal Consumption	4	3.3	4.2	3.2	3.6	3.6

TABLE IX (CONTINUED)

	POST-EVALUATION					
	Ideal Score	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
24-Hour Recall Score	100	69.5	86.4	79.2	89.5	80.7
Milk Consumption	2	1.8	2.0	1.7	1.5	1.8
Protein Consumption	2	1.8	3.1	1.9	2.0	2.2
Fruit and Vegetable Consumption	4	3.6	4.2	2.9	3.2	3.5
Bread and Cereal Consumption	4	3.4	5.5	3.5	3.9	4.1

It should be noted that the post-evaluation means on the 24-Hour Food Recall (Appendix B) were higher than pre-evaluation by county and state (Table 9). The number of servings consumed from each of the Basic Four Food Groups [milk, protein (meat-poultry), fruits and vegetables, and breads and cereals] improved on the post-evaluation when compared to consumption amounts of the pre-evaluation.

Food consumption patterns were evaluated by the percentage of homemakers eating at least one serving from each of the Basic Four Food Groups (1-1-1-1) and percentage of homemakers eating the recommended number of servings from the Basic Four Food Groups (2-2-4-4).

TABLE X

PRE- AND POST-EVALUATION PERCENTAGES OF EFNEP HOMEMAKERS  
WITH 1-1-1-1 OR 2-2-4-4 FOOD INTAKE PATTERN  
BY COUNTY AND STATE

Food Pattern	PRE-EVALUATION					POST-EVALUATION				
	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas	Crawford	Sedgwick	Shawnee	Wyandotte	Kansas
1-1-1-1	53.8	62	88.9	71	68.9	76.9	79.3	94.4	94.1	86.2
2-2-4-4	3.8	6.9	5.5	5.9	5.5	15.4	37.9	5.5	29.4	22.1

Food consumption patterns had improved when pre-evaluation and post-evaluation data were compared (Table 10) by county and state.



Nutrition Behavior Data

The Food and Nutrition Practice Checklist (Appendix C) was designed to measure areas of behavior change that are goals of EFNEP teaching. Each response has a pre-determined value; using the official scoring procedure (Appendix G) total scores were determined and pre-evaluation and post-evaluation means for the counties and for Kansas have been presented in Table XI.

TABLE XI

PRE- AND POST-EVALUATION MEANS AND PERCENT  
IMPROVEMENT FOR EFNEP HOMEMAKERS ON FOOD  
AND NUTRITION CHECKLIST (APPENDIX C) BY  
COUNTY AND STATE

County	Pre-Evaluation	Post-Evaluation	Percent Improvement
Crawford	83.9	89.6	5.7
Sedgwick	77.0	93.8	16.8
Shawnee	87.1	98.8	11.7
Wyandotte	80.0	94.9	14.9
<u>State</u>			
Kansas	81.6	93.8	12.2

Kansas homemakers used in this evaluation showed an average 12.2% improvement in desirable nutrition behaviors and practices upon completion of EFNEP.

## CHAPTER V

### SUMMARY

This evaluation of the Expanded Food and Nutrition Education Program in Kansas provides some documentation which indicates that food and nutrition behaviors, practices, and food consumption patterns were improved due to homemakers' participation in the nutrition education program.

A Kansas EFNEP Homemaker Characteristic Profile was determined and found to be typical of EFNEP homemakers nation-wide.

### Conclusions

The major conclusions of this evaluation were as follows:

1. There was an improvement in food consumption patterns from pre-evaluation to post-evaluation of EFNEP homemakers in Kansas.
2. EFNEP homemakers increased their number of servings from the Basic Four Food Groups from pre-evaluation to post-evaluation.
3. The greatest improvements in food consumption by homemakers were from the fruit and vegetable group and the milk group.
4. Twenty-four hour Food Recall scores showed a 16 percent improvement from pre-evaluation to post-evaluation.
5. Homemakers improved upon desirable food and nutrition practices and behaviors with a 12.2 percent from pre-evaluation to post-evaluation.

6. Crawford County EFNEP homemakers had less education than those EFNEP homemakers in Sedgwick, Shawnee and Wyandotte counties.
7. The Kansas EFNEP Demographic Characteristic Profile is typical of EFNEP homemakers nationally.

### Recommendations

The findings of the evaluation provides some indication that dietary in-take and recommended nutrition behavior and practices are improved to some extent by participation in the Expanded Food and Nutrition Education Program in Kansas. The degree of nutritional improvement from participation in EFNEP can be determined by further evaluation.

The following recommendations are made in view of the findings:

1. An evaluation of Kansas EFNEP be conducted using a control group so that the percent of nutritional improvement can be more directly related to EFNEP.
2. Nutrition Assistants should attend an orientation training by the researcher so the EFNEP Family History Record and other evaluation instruments would supply more consistent and complete data.
3. Conduct further studies on State Expanded Food and Nutrition Education Programs to provide documentation in support of continued funding for nutrition education for low-income families.
4. A study could be conducted on educational levels of EFNEP homemakers and how it influences a homemakers ability to improve from participation in the EFNEP.

**APPENDICES**

APPENDIX A

EXPANDED FOOD AND NUTRITION EDUCATION PROGRAM  
FAMILY RECORD - Part A - Description

Unit ID #    Assist. ID #   Assistant Name \_\_\_\_\_

Family ID #      Family Name \_\_\_\_\_

Date Family Enrolled \_\_\_\_\_

Mo   Day   Year   Street \_\_\_\_\_

Date Record Completed \_\_\_\_\_

Mo   Day   Year   City \_\_\_\_\_

Phone \_\_\_\_\_

**PLACE OF RESIDENCE**

1 Farm

2 Towns (rural non-farm) under 10,000

3 Places 10,000 to 50,000

4 Suburbs over 50,000

5 Central Cities

**HOMEMAKER'S RACIAL/ETHNIC CHARACTERISTICS**

1 White (Not Hispanic Origin)

2 Black (Not Hispanic Origin)

3 Hispanic

4 American Indian/Alaskan Native

5 Asian or Pacific Islander

**HIGHEST GRADE COMPLETED BY HOMEMAKER**

1 8th Grade or Less

2 9th-11th Grade

3 12th Grade or GED

4 Beyond High School

**FAMILY RECEIVED**  
(Sometime during the year)

Yes No

USDA Food Stamps

WIC/Day camp & Child care

Child Nutrition Programs (school lunch and/or breakfast, milk, Head Start)

Public Assistance (SRS-ADC)

Commodity Foods

FAMILY MEMBERS	IN SCHOOL	AGE		GENDER	
		Years		M	F
Homemaker					
Total Family Members					

**TOTAL ACTUAL INCOME FOR FAMILY LAST MONTH**  
(round to nearest dollar)

\$      .00

Note: Place one number in each box. For incomes below \$1,000, place zero(s) in the leading box(es).

1 \_\_\_ Under \$438      5 \_\_\_ \$889-\$1038

2 \_\_\_ \$439-\$588      6 \_\_\_ \$1039-\$1188

3 \_\_\_ \$589-\$738      7 \_\_\_ \$1189-\$1338

4 \_\_\_ \$739-\$888      8 \_\_\_ \$1339 & over

**ENDING DATE**

Mo.   Day   Year

**Reasons for Incompletion:**

2 Moved

3 Not Interested

4 Working, returned to school

5 Aide vacancy

6 Other \_\_\_\_\_

**Reasons:**

1 Completed Program

Did not complete program

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APPENDIX B

ASSISTANT \_\_\_\_\_

HOMEMAKER \_\_\_\_\_

B. HOMEMAKER FOOD CONSUMPTION: 24-HOUR FOOD RECALL

1. Circle number of Food Recall 1st    2nd		2. Date						
3. WHAT DID HOMEMAKER EAT AND DRINK IN THE LAST 24 HOURS? (To be filled out by Nutrition Assistant)  Kind of food and drink (Enter main foods in main dishes)	Amount	4. DAILY FOOD GUIDE (To be filled out or checked by agent)						
		Milk/ Cheese	Meat Poultry, Fish & Beans	Vit. C Rich	Dark Green or Vit. A	Other	Bread/ Cereal	Fats, Sweets & Alcohol
Morning:								
Mid-morning:								
Noon:								
Afternoon:								
Evening:								
Before bed:								
5. Total number of servings								
6. Recommended number of servings		Circle 2 / 4	2	1	1	2 = 4	4	

7. Homemaker will try to add or subtract these foods:

8. Check (✓) 2-2-4-4 Yes \_\_\_\_\_ No \_\_\_\_\_ . 1-1-1-1 Yes \_\_\_\_\_ No \_\_\_\_\_

Pregnant: Yes \_\_\_\_\_ No \_\_\_\_\_

Food Recall Pattern \_\_\_\_\_

Breast-feeding: Yes \_\_\_\_\_ No \_\_\_\_\_

Food Recall Score \_\_\_\_\_



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APPENDIX C

FOOD AND NUTRITION PRACTICE CHECKLIST

COUNTY \_\_\_\_\_

NUTRITION ASSISTANT \_\_\_\_\_

ID No. \_\_\_\_\_

\*\*\*\*\*  
 \*FOOD RECALL I SCORE \_\_\_\_\_\*  
 \*FOOD RECALL II SCORE \_\_\_\_\_\*  
 \*CHANGE (II-I) \_\_\_\_\_\*  
 \*\*\*\*\*

CHECKLIST I \_\_\_\_\_ (Date)

CHECKLIST II \_\_\_\_\_ (Date)

PARTICIPANT \_\_\_\_\_

ID No. \_\_\_\_\_

AGE \_\_\_\_\_

EDUCATION \_\_\_\_\_

RACE \_\_\_\_\_

Almost never	Less than 1/2 the time	About 1/2 the time	More than 1/2 the time	Almost always
--------------	------------------------	--------------------	------------------------	---------------

	Almost never	Less than 1/2 the time	About 1/2 the time	More than 1/2 the time	Almost always
1. How often do <u>you</u> have a morning meal that includes foods from 3 or more of the Food Groups? (Milk; Meat; Fruits & Vegetables; Bread & Cereals)					
2. How often do <u>you</u> eat a noon meal (lunch or second meal) that includes foods from 3 or more of the Food Groups?					
3. How often do <u>you</u> eat an evening meal (third meal) that includes foods from 3 or more of the Food Groups?					
4. How often do your family's snacks include juice, raw vegetables or fruit?					
5. As you think of the last 5 times you ate potatoes, how many times were they fried? (Circle the number)					
6. How often do you trim visible fat off meat before cooking?					
7. How often do you decrease the amount of salt in a recipe?					
8. How often do you "nibble" while preparing your family's food and when cleaning up afterwards?					
9. How often do your children have a morning meal that includes foods from 3 or more of the Food Groups? (Milk; Meat; Fruits & Vegetables; Bread & Cereals)					
10. How often do your children eat a noon meal (lunch or second meal) that includes foods from 3 or more of the Food Groups?					
11. How often do your children eat an evening meal (third meal) that includes foods from 3 or more of the Food Groups?					

APPENDIX C (cont.)

FOOD AND NUTRITION PRACTICES CHECKLIST  
(Continued)

	Less than 1/2 the time Almost never	About 1/2 the time	More than 1/2 the time	Almost always
12. How often do you plan for at least four or five days' meals before you go shopping for groceries?				
13. How often do you shop for food with a shopping list?				
14. How often do you "charge" your food purchases?				
15. How often do you compare prices among different brands of a food item?				
16. How often do you check food advertisements before shopping?				
17. How often do you run out of food stamps, food money or food?				
18. How often do you consider calories when planning meals?				
19. How often do you serve packaged, canned or frozen dinners as the main dish of a meal?				
20. When you have the bones of beef or poultry, how often do you use them to make soup?				
21. When preparing a recipe from scratch, how often does it turn out as you had expected?				
22. Do you leave cooked or leftover food on the table, counter, or stove for two hours or more?				
23. How often do you store cooked foods in an uncovered container in the refrigerator?				
24. How often do you exercise vigorously (for example, snow shoveling, walking briskly, mowing lawn, sports) at least 2 or 3 times a week?				
<b>ANSWER ONLY IF YOU CAN VEGETABLES.</b>				
25. How often do you use a pressure canner when canning vegetables?				

SCORE I \_\_\_\_\_

SCORE II \_\_\_\_\_

CHANGE (II-I) \_\_\_\_\_

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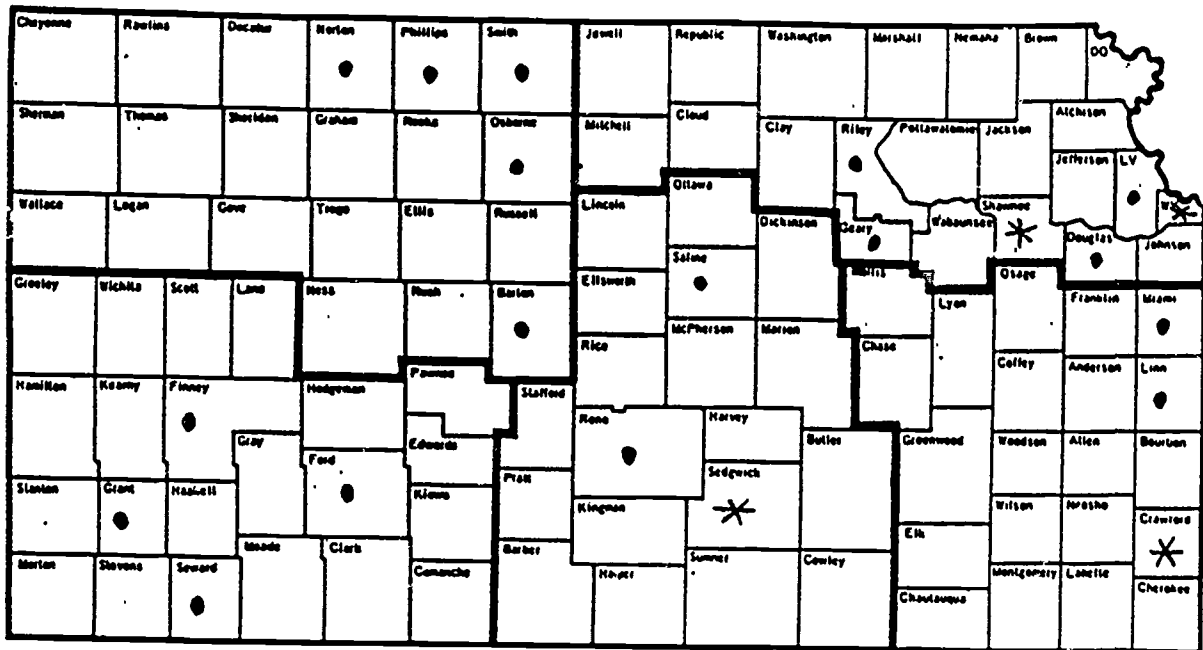
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APPENDIX D  
 Kansas Expanded Food and Nutrition  
 Education Program Unit History  
 1969 to Present



\* Kansas Counties Surveyed in the Study

COUNTY	DATE ESTABLISHED	DATE PHASED OUT
Sedgwick	2/69	
Crawford	3/69	
Douglas	4/69	5/85
Miami	4/69	6/75
Saline	5/69	6/86
Seward	6/69	6/75
Finney	7/69	6/75
Linn	10/69	6/75
Leavenworth	11/69	12/75
Riley	12/69	5/85
Ford	12/69	6/75
Norton	1/70	6/74
Barton	4/70	6/75
Reno	5/70	9/72
Wyandotte	2/71	
Grant	3/71	6/75
Osborne	7/71	6/74
Phillips	7/71	3/73
Shawnee	7/71	
Smith	8/71	8/74
Geary	8/71	6/85

## APPENDIX E

## INCOME ELIGIBILITY GUIDELINES\*

for Various Social Programs

Poverty Guidelines

Size of Family	Annual Income	Monthly Income	130% Annual Guidelines	185% Annual Guidelines
1	5,770	481	7,501	10,675
2	7,730	644	10,049	14,301
3	9,690	808	12,597	17,927
4	11,650	971	15,145	21,553
5	13,610	1,134	17,693	25,179
6	15,570	1,298	20,241	28,805
7	17,530	1,461	22,789	32,431
8	19,490	1,624	25,337	36,057
Each additional person	+1,960	+163	+2,548	+3,626

\*Guidelines are provided by the Department of Health and Human Services and published in the February 12, Federal Register (Vol. 53, No. 19; p. 4214). EFNEP counties may put these revised income guidelines into effect May 1, 1988.

These income guidelines affect several social services. The guideline at the 130 percent level (or below) will be used by the Food Stamp and free school lunch programs. Guidelines at the 185 percent level (or below) will be used by "reduced-price" school lunch, WIC, and Commodity Food programs.

SOURCE: Letter from Nancy Leidenfrost, National Program Leader, EFNEP, March 4, 1988--received 4/04/88.

Copy prepared by: Grace M. Lang, Extension Specialist,  
Expanded Food and Nutrition Education Program



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# APPENDIX F

Synectics Method of Scoring the 24-Hour Food Recall

## SCORING TABLE FOR TWENTY-FOUR-HOUR DIET

To find the Twenty-four-Hour Diet score:

1. Select the appropriate table (below) on the basis of the number of *milk* servings reported in Item 7, FAMILY RECORD-B (0, 1, ② or more). NOTE: Circled numbers ( ② , ④ ) are the highest score possible in a food group. For number of servings larger than the circled number, use the circled number. Example, for 3 servings of milk, use the ② MILK SERVINGS table.
2. Select the proper column of the table on the basis of the number of *meat* servings reported in Item 8.
3. Select the proper area of the table on the basis of the number of *vegetable/fruit* servings reported in Item 9 (0, 1, 2, 3, ④ or more).
4. Find the proper line of the table on the basis of the number of *bread/cereal* servings reported in Item 10.

The number to the right of this (in type style "74") is the Twenty-four-Hour Diet score. Enter the diet score at the appropriate "months in program" time on the homemaker's FOOD AND NUTRITION PROGRESSION RECORD.

0 MILK SERVINGS									1 MILK SERVING									② MILK SERVINGS								
0 MEAT SERVINGS			1 MEAT SERVING			② MEAT SERVINGS			0 MEAT SERVINGS			1 MEAT SERVING			② MEAT SERVINGS			0 MEAT SERVINGS			1 MEAT SERVING			② MEAT SERVINGS		
Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score	Veg. Fruit	Bread Cereal	Score
0	0	0	0	0	3	0	0	8	0	0	3	0	0	11	0	0	16	0	0	8	0	0	18	0	0	21
	1	2		1	10		1	14		1	24		1	29		1	14		1	29		1	39			
	2	4		2	12		2	17		2	27		2	37		2	17		2	37		2	43			
	3	8		3	15		3	25		3	38		3	41		3	25		3	41		3	47			
	④	8		④	23		④	29		④	39		④	45		④	29		④	45		④	51			
1	0	2	1	0	10	1	0	14	1	0	10	1	0	24	1	0	29	1	0	14	1	0	29	1	0	39
	1	9		1	22		1	27		1	42		1	52		1	27		1	52		1	58			
	2	11		2	25		2	35		2	50		2	56		2	35		2	56		2	62			
	3	13		3	33		3	39		3	54		3	60		3	39		3	60		3	66			
	④	21		④	37		④	43		④	58		④	64		④	43		④	64		④	80			
2	0	4	2	0	12	2	0	17	2	0	12	2	0	27	2	0	37	2	0	17	2	0	37	2	0	43
	1	11		1	25		1	35		1	50		1	56		1	35		1	56		1	62			
	2	13		2	32		2	39		2	56		2	62		2	39		2	62		2	68			
	3	21		3	37		3	43		3	60		3	66		3	43		3	66		3	72			
	④	25		④	41		④	47		④	64		④	79		④	47		④	79		④	88			
3	0	8	3	0	15	3	0	25	3	0	15	3	0	35	3	0	41	3	0	25	3	0	41	3	0	47
	1	13		1	33		1	39		1	54		1	60		1	39		1	60		1	66			
	2	21		2	37		2	43		2	60		2	66		2	43		2	66		2	72			
	3	25		3	41		3	47		3	64		3	79		3	47		3	79		3	88			
	④	29		④	45		④	60		④	77		④	85		④	60		④	85		④	94			
④	0	8	④	0	23	④	0	29	④	0	23	④	0	39	④	0	45	④	0	29	④	0	45	④	0	51
	1	21		1	37		1	43		1	58		1	64		1	43		1	64		1	70			
	2	25		2	41		2	47		2	64		2	79		2	47		2	79		2	86			
	3	29		3	45		3	60		3	77		3	85		3	51		3	85		3	92			
	④	33		④	58		④	65		④	82		④	91		④	65		④	91		④	100			

37  
APPENDIX G  
Score Sheet

FOOD AND NUTRITION PRACTICE CHECKLIST

COUNTY \_\_\_\_\_

CHECKLIST I \_\_\_\_\_ (Date)

NUTRITION ASSISTANT \_\_\_\_\_

CHECKLIST II \_\_\_\_\_ (Date)

ID No. \_\_\_\_\_

PARTICIPANT \_\_\_\_\_

.....

ID No. \_\_\_\_\_

FOOD RECALL I SCORE \_\_\_\_\_

AGE \_\_\_\_\_

FOOD RECALL II SCORE \_\_\_\_\_

EDUCATION \_\_\_\_\_

CHANGE (II-I) \_\_\_\_\_

RACE \_\_\_\_\_

.....

	Less than 1/2 the time	About 1/2 the time	More than 1/2 the time	Almost always
--	------------------------	--------------------	------------------------	---------------

1. How often do you have a morning meal that includes foods from 3 or more of the Food Groups? (Milk; Meat; Fruits & Vegetables; Bread & Cereals)	1	2	3	4	5
2. How often do you eat a noon meal (lunch or second meal) that includes foods from 3 or more of the Food Groups?	1	2	3	4	5
3. How often do you eat an evening meal (third meal) that includes foods from 3 or more of the Food Groups?	1	2	3	4	5
4. How often do your family's snacks include juice, raw vegetables or fruit?	1	2	3	4	5
* 5. As you think of the last 5 times you ate potatoes, how many times were they fried? (Circle the number)	5	4	3	2	1
6. How often do you trim visible fat off meat before cooking?	1	2	3	4	5
7. How often do you decrease the amount of salt in a recipe?	1	2	3	4	5
* 8. How often do you "nibble" while preparing your family's food and when cleaning up afterwards?	5	4	3	2	1
9. How often do your children have a morning meal that includes foods from 3 or more of the Food Groups? (Milk; Meat; Fruits & Vegetables; Bread & Cereals)	1	2	3	4	5
10. How often do your children eat a noon meal (lunch or second meal) that includes foods from 3 or more of the Food Groups?	1	2	3	4	5
11. How often do your children eat an evening meal (third meal) that includes foods from 3 or more of the Food Groups?	1	2	3	4	5

## APPENDIX G (cont.)

## Score Sheet

FOOD AND NUTRITION PRACTICES CHECKLIST  
(Continued)

	Less than Almost never	About 1/2 the time	More than 1/2 the time	Almost always	
12. How often do you plan for at least four or five days' meals before you go shopping for groceries?	1	2	3	4	5
13. How often do you shop for food with a shopping list?	1	2	3	4	5
*14. How often do you "charge" your food purchases?	5	4	3	2	1
15. How often do you compare prices among different brands of a food item?	1	2	3	4	5
16. How often do you check food advertisements before shopping?	1	2	3	4	5
*17. How often do you run out of food stamps, food money or food?	5	4	3	2	1
18. How often do you consider calories when planning meals?	1	2	3	4	5
*19. How often do you serve packaged, canned or frozen dinners as the main dish of a meal?	5	4	3	2	1
20. When you have the bones of beef or poultry, how often do you use them to make soup?	1	2	3	4	5
21. When preparing a recipe from scratch, how often does it turn out as you had expected?	1	2	3	4	5
*22. Do you leave cooked or leftover food on the table, counter, or stove for two hours or more?	5	4	3	2	1
*23. How often do you store cooked foods in an uncovered container in the refrigerator?	5	4	3	2	1
24. How often do you exercise vigorously (for example, snow shoveling, walking briskly, mowing lawn, sports) at least 2 or 3 times a week?	1	2	3	4	5
<b>ANSWER ONLY IF YOU CAN VEGETABLES.</b>					
25. How often do you use a pressure canner when canning vegetables?	1	2	3	4	5

\* Reverse scoring

SCORE I \_\_\_\_\_

SCORE II \_\_\_\_\_

CHANGE (II-I) \_\_\_\_\_

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## APPENDIX H

EATING RIGHT IS BASIC 2  
Adult Curriculum

No. \_\_\_\_\_

Name \_\_\_\_\_ Date Enrolled \_\_\_\_\_

Address \_\_\_\_\_ Phone No. \_\_\_\_\_

Beginning Food Recall Score \_\_\_\_\_

Ending Food Recall Score \_\_\_\_\_

Basic Lessons (check as completed)

1. Making Meals from What's on Hand \_\_\_\_\_
2. Planning Makes the Difference \_\_\_\_\_
3. Let's Make Something Simple/Home Invaders \_\_\_\_\_
4. Shopping Basics \_\_\_\_\_
5. Nutrients We Need \_\_\_\_\_
6. Fruits \_\_\_\_\_
7. Vegetables \_\_\_\_\_
8. Milk and Cheese \_\_\_\_\_
9. Bread, Cereal and Pasta \_\_\_\_\_
10. Meat, Poultry, Fish and Eggs \_\_\_\_\_
11. Dried Beans and Peas/Protein Pairs \_\_\_\_\_
12. Putting It All Together \_\_\_\_\_

Additional Lessons

13. Feeding Baby Solid Food \_\_\_\_\_
14. Feeding Your Preschool Child \_\_\_\_\_
15. Gardening \_\_\_\_\_
16. Food Preservation \_\_\_\_\_
17. Eating Right & Light \_\_\_\_\_
18. Soups \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_

**BIBLIOGRAPHY**

Bibliography

1. United States Department of Agriculture. Extension Service. Expanded Food and Nutrition Education Program Policies. Oct. 1983.
2. United States Department of Agriculture. Extension Service. "EFNEP-Nutrition Education In Action," by Nancy Leidenfrost. Extension Review (Spring 1987) Vol. 58. No. 2. p. 11.
3. United States General Accounting Office. Report to the Secretary of Agriculture. "Areas Needing Improvement In The Adult EFNEP." Washington, D. C. September 4, 1980.
4. United States Department of Agriculture. Science and Education Administration. The Expanded Food and Nutrition Education Program-Historical and Statistical Profile. Program Aide No. 1230. Washington, D. C. March 1979.
5. Block, Amy and others. California EFNEP Evaluation Study. Cooperative Extension-University of California. Division of Agriculture and Natural Resources. Berkeley, CA. 1985.
6. Burk, M. C. and E. M. Pao. "In Methodology for Large-scale Surveys of Household and Individual Diets." Home Economics Research Report 40. pp. 55-65. United States Department of Agriculture. Washington, D. C. 1976.
7. United States Department of Agriculture. Extension Service Science and Education. Implications of the Results from, "An Assessment of the Objectives, Implementation and Effectiveness of the Adult EFNEP," for Program Policy and Practice. (George W. Mayeske, project director). Washington, D. C. February 1982.
8. United States Department of Agriculture. Expanded Food and Nutrition Education Program...Teaching Nutrition to Low-Income Families. Washington, D. C. January 1984.
9. Dawber, T. R., Pearson, G., Anderson, P. et al. Dietary Assessment-The Framingham Study II. Reliability of Measurement. Am. J. Clin. Nutrition. 11:226-34. 1962.
10. Lang, Grace. College of Human Ecology. Kansas State University, Manhattan, Kansas, 1983. (Doctor's thesis.)