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EVALUATION OF FAMILY SERVICE PROGRAM, HOME ECONOMICS DIVISION
OF COOPERATIVE EXTENSION, CLINTON COUNTY, NEW YORK.

SUPPLEMENT TO EXTENSION STUDY NUMBER 15.

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SATISFACTION, INVESTIGATIONS, EXTENSION EDUCATION, CLINTON
COUNTY, NEW YORK STATE,

COMBINED DATA ON THIRD AND FOURTH CYCLE LESSONS OF THE
CLINTON COUNTY FAMILY SERVICE PROGRAM WERE USED TO STUDY THE
SOCIOECONOMIC CHARACTERISTICS OF THE PARTICIPANTS AND TO
EVALUATE THE EFFECTS OF TEACHING. PLACE OF RESIDENCE, HOME
OWNERSHIP, AGE, EDUCATIONAL LEVEL, MARITAL STATUS, FAMILY
COMPOSITION, EMPLOYMENT, MOBILITY, INCOME, AND PARTICIPATION
WERE AMONG CHARACTERISTICS DISCUSSED. BOTH GROUPS HAD A
LARGER PERCENTAGE OF URBAN PARTICIPANTS, FEWER WOMEN FROM
OWNER FAMILIES, A LOWER MEDIAN AGE, AND A GREATER NUMBER OF
PERSONS PER HOUSEHOLD THAN THE AVERAGE COUNTY OR RURAL
POPULATIONS. THE HIGH RATINGS OF LESSONS INDICATED
SATISFACTION AND PRE AND POST TEST SCORES SHOW SIGNIFICANT
GAINS IN KNOWLEDGE. IMPLICATIONS SUGGEST THAT RECRUITMENT
SHOULD BE CONTINUED AS IT HAS BEEN SINCE BOTH GROUPS DIFFERED
IMPORTANTLY AND UNFAVORABLY FROM THE COUNTY'S TOTAL AND RURAL
POPULATION. THE FAMILY SERVICE AIDES, WHEN TRAINED BY
COMPETENT HOME ECONOMISTS, CAN TEACH PARTICIPANTS SO THAT
THEY MAKE SIGNIFICANT PROGRESS. (PT)

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EVALUATION OF FAMILY SERVICE PROGRAM
HOME ECONOMICS DIVISION OF COOPERATIVE EXTENSION
CLINTON COUNTY, NEW YORK

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Supplement to Extension Study No. 15

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PREFACE

Because of the deep interest of the Leader of the Clinton County Home Economics Division, the evaluation of the third cycle of lessons of the Clinton County Family Service Program as reported in Extension Study No. 15 was continued into the fourth cycle of lessons. The major data from the investigation of this fourth cycle have been combined with those of the third cycle in this report. In general, the combined data confirm the important findings of Extension Study No. 15. The data which were considered major and hence are presented in this supplementary report deal with the characteristics of the participants and evaluation of the effects of the Family Service Aides' teaching on the participants. It is believed that this supplementary study will add strength to the findings of the earlier study.

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SUPPLEMENT TO EVALUATION OF FAMILY SERVICE PROGRAM
HOME ECONOMICS DIVISION OF COOPERATIVE EXTENSION
CLINTON COUNTY, NEW YORK

Summary of Findings

I. Introduction

This is a supplementary report to Evaluation of Family Service Program, Home Economics Division of Cooperative Extension, Clinton County, New York. The report combines the data of the third cycle of lessons in the earlier report with those of the fourth cycle for two areas, i.e., 1) the socio-economic characteristics of the participants and 2) indications of the influence of the teaching as measured by pre- and post-testing and by post-reactions of the participants to the teaching.

II. Characteristics of the Combined Third and Fourth Cycle Participants¹

A. Place of residence

1. The participants in the two cycles of lessons lived in 10 of the county's 14 townships and in the City of Plattsburgh. Almost one fourth were from Clinton Township.
2. Sixty-eight percent of the participants came from what may be considered rural nonfarm places.

¹Data on characteristics were presented for 71 participants in the study of the third cycle of lessons, and these data were combined with similar information on 43 participants in the fourth cycle of lessons.

B. Ownership of Dwelling

1. Of the 111 on whom information was obtained, 60 percent owned their houses or trailers.

C. Age of participants and their husbands

1. The average (mean) age of the 114 participants was 36.1 years and of the husbands of those married was 39.8.

D. Years of school completed by participants and their husbands

1. The average (median) number of years of school completed by the 113 women on whom information was obtained was 9.5. Only five percent had completed less than six years, and only eight percent had any college training.
2. The average (median) number of years of school completed by the 92 husbands on whom information was obtained was 8.2. Fourteen percent of the husbands had only completed from two to six years of school, and just three percent had done college work.

E. Marital status

1. Eighty-two percent of the 114 women were married.

F. Family and household composition

1. The average (mean) number of persons at home in the 114 families of the participants was 4.9.
2. The 14-and-under age group of children in the families of the 107 women who were married or widows constituted 83 percent of the total number of children in these families.

G. Employment of husbands and participants

1. Almost one fourth (23 percent) of the 90 husbands on whom information was obtained were laborers, 17 percent were operatives, and 13 percent were craftsmen and foremen. Sixteen, or 18 percent, were classified as unemployed, among whom were five retired and three disabled persons.
2. Of the 113 participants who provided information 26, or 23 percent, were employed full- or part-time.

H. Mobility

1. Ninety-one women reported that on the average they had moved once every three years since marriage.

I. Net income per family

1. The average (median) estimated net family income in 1966 for 99 of the participants was \$4,110. Ten percent of the families had incomes under \$1,000. Only six families reported incomes of \$7,000 or more.

J. Formal participation

1. The average (mean) formal participation score of 106 women on whom information was obtained was 1.18. Forty-five, or 42 percent, of the 106 women belonged to no organization.
2. The membership of those who belonged to organizations was concentrated in the church and various auxiliary religious organizations.

K. Comparison with third cycle participants and county total and rural populations

1. The socio-economic characteristics of the combined third and fourth cycle participants were generally

fairly similar to those of the third cycle participants. The combined cycles had a larger percentage of urban participants, fewer women from owner families, and a slightly lower average (median) age.

2. In general the combined participants differed from the county's total and rural population and where the difference could be considered favorable or unfavorable, the combined participants were in an unfavorable position, i.e., on years of school completed, household size, employment of husbands, and estimated family income.

III. Evaluation of Teaching

A. Rating of lessons by combined third and fourth cycle participants

1. The average (mean) percent rating score for lessons attended of 109 participants was 83.8. Only a few (19) of the participants gave overall ratings that were under 60 percent. These ratings were similar to those given by the third cycle participants.

B. Pre- and post-testing of knowledge of combined third and fourth cycle participants

1. The average (mean) percent score on the pre-test for 58 participants whose tests were usable for both the pre- and post-tests was 69.8 and on the post-test, 83.4. The mean difference (gain) between the pre- and post-test means was highly significant (P for $t < .0005$, one-tail or $P < .001$, two-tail). The third cycle of participants had a similar record on their knowledge tests.

2. Gains in the numbers (or percentages) of those having correct answers on the post-test compared to those having correct answers on the pre-test that were significant at .05 or less level (one-tail test) occurred on 35 items out of a total of 76 items constituting the testing instrument.
3. Over 80 percent of the participants had correct answers on 30 items of the pre-test.

Implications

1. The recruitment of participants should be continued as it has been conducted since it has resulted in a combined group of women for the two cycles of lessons that is fairly similar to the group who participated in the cycle that was originally studied and which differed importantly and unfavorably, as did the first group, from the country's total and rural population.
2. The Family Service Aides when trained by competent professional home economists can teach participants so that they make significant progress in acquiring knowledge about home economics and other subject matter related to their welfare.

SUPPLEMENT TO EVALUATION OF FAMILY SERVICE PROGRAM
HOME ECONOMICS DIVISION OF COOPERATIVE EXTENSION
CLINTON COUNTY, NEW YORK

Introduction

The leader of the Clinton County Home Economics Division decided that it would be desirable to follow the evaluation of the third cycle of lessons with an evaluation of the fourth cycle. It was thought that a continuation of the evaluation would not only add numbers to the original study, but would also strengthen the program by keeping the Family Service Aides and the Home Economics staff on the alert.

The fourth cycle of lessons began in early April, 1967 and ended around the middle of July, 1967. The evaluation was limited to pre- and post-testing of the participants and interviewing of them by the Family Service Aides following the end of the teaching. The pre- and post-test was identical to the one used in the evaluation of the third cycle and the interview schedule was identical to that used for the third cycle of participants.

This supplementary report combines the data of the third cycle and the fourth cycle for two areas, i.e., 1) the socio-economic characteristics of the participants, and 2) indications of the influence of the teaching as measured by pre- and post-testing and by post-reactions to various phases of the teaching.

Characteristics of the Combined ¹
Third and Fourth Cycle Participants

¹Data on characteristics were presented for 71 participants in the study of the third cycle of lessons, and these data are combined with similar information on 43 participants in the fourth cycle of lessons. Actually, information was obtained on 64 participants in the fourth cycle, but because of misinterpretation of instructions the information on 21 was not usable.

Place of Residence

The participants in the two cycles of lessons lived in 10 of the county's 14 townships and in the City of Plattsburgh. The distribution of the 114 participants among the 10 townships and the City of Plattsburgh is given in Table 1.

Table 1

Number and Percentage Distribution of Participants
In Third and Fourth Lesson Cycles of the Family Service
Program According to Township in Which Residing

<u>Township</u>	<u>Participants</u>	
	<u>Number</u>	<u>Percent</u>
Altona	22	19.3
Ausable	5	4.4
Beekmantown	5	4.4
Black Brook	4	3.5
Champlain	14	12.3
Chazy	3	2.6
City of Plattsburgh	6	5.3
Clinton	28	24.6
Plattsburgh	13	11.4
Saranac	7	6.1
Schuyler Falls	7	6.1
Total	114	100.0

Clinton Township had the largest number of participants, 28, or 24.6 percent of the total. It was followed by Altona with 22, or 19.3 percent of the total. Two thirds (67.6 percent) of the participants came from these two townships plus two others, Champlain and Plattsburgh.

Thirty-six percent of the 113 on whom information was obtained lived in the country but not on a farm and another 32 percent lived in or near a village of less than 2,500 (Table 2). Thus, 68 percent of the women came from what may be considered rural nonfarm places. Only 10 percent of the total lived in or near the City of Plattsburgh.

Table 2
 Number and Percentage Distribution of Participants
 In Third and Fourth Lesson Cycles of the Family
 Service Program According to Place of Residence

<u>Place of residence</u>	<u>Participants</u>	
	<u>Number</u>	<u>Percent</u>
On a farm from which get half or more of income	12	11
On a farm from which get less than half of income	12	11
In the country but not on a farm	41	36
In a village less than 2,500	28	25
Near village less than 2,500	8	7
Near City of Plattsburgh	6	5
In City of Plattsburgh	<u>6</u>	<u>5</u>
Total	113	100

Ownership of Dwelling

Of the 111 on whom information was obtained, 66 or 60 percent, owned their dwellings.¹ Of the 24 who lived on farms, 83 percent owned both their dwelling and some land. However, of the 87 who did not live on a farm, only 51 percent were owners of their dwellings.

Age of Participants and Their Husbands

The average (mean) age of the 114 participants was 36.1 years (Table 3). A little over one third (37.8 percent) of the women were under 30. Only 16.6 percent were over 49 years of age. The average (mean) age of the husbands of the women who were married and whose husbands were living and a part of the family was 39.8 years. The average (mean) age of the wives of these husbands was 36.0.

¹ Three of the 66 owned trailers but rented the site on which they were located.

Table 3
Number and Percentage Distribution of
Participants in Third and Fourth Lesson Cycles
Of the Family Service Program According to Age

<u>Age</u>	<u>Participants</u>	
	<u>Number</u>	<u>Percent</u>
16 - 19	6	5.3
20 - 24	15	13.2
25 - 29	22	19.3
30 - 34	17	14.9
35 - 39	12	10.5
40 - 44	12	10.5
45 - 49	11	9.7
50 - 54	7	6.1
55 - 59	5	4.4
60 - 64	3	2.6
65 and over	4	3.5
Total	114	100.0
Mean	36.1	

Years of School Completed by Participants

The average (median) number of years of school completed by the 113 women on whom information was obtained was 9.5, or about one and a half years beyond elementary school (Table 4). Only five percent had completed less than six years. Eight percent had one or more years of college.

Special Training Received by Participants

Of the 113 participants on whom information was obtained, 27, or 24 percent, had received special training in addition to that received in public schools or colleges. About 17 different kinds of training were listed by the 27 women, several of whom listed more than one kind of training. Business and secretarial training led the list with six having received this type of training. It was followed by homemaking with five women indicating special training in this area.

Table 4
 Number and Percentage Distribution of Participants
 In Third and Fourth Lesson Cycles of the Family
 Service Program According to Years of Schooling

<u>Years of schooling</u>	<u>Participants</u>	
	<u>Number</u>	<u>Percent</u>
2	1	1
4	1	1
5	3	3
6	3	3
7	7	6
8	32	28
9	9	8
10	14	12
11	9	8
12	25	22
13	6	5
14	1	1
15	1	1
17	1	1
Total	113	100
Median	9.5	

Years of Schooling Completed by Husbands of Participants

The average (median) number of years of school completed by the 92 husbands on whom information was obtained was 8.2, just slightly above eight years of elementary school (Table 5). Fourteen percent of the husbands had completed from two to six years of school. However, 22 percent of the husbands had completed high school, and three percent had done college work.

Of the 93 husbands on whom information was obtained, 23, or 25 percent, had received some type of special training beyond public school or college. The different types of training received almost equaled the number receiving special training. Some men had received several kinds of training. The two most frequently occurring kinds of training were mechanical (5) and carpentry (4).

Table 5
 Number and Percentage Distribution of
 Husbands of Participants in Third and Fourth
 Lesson Cycles According to Years of Schooling

Years of schooling	Husbands of participants	
	Number	Percent
2	2	2
3	3	3
4	2	2
5	2	2
6	5	5
7	9	10
8	31	34
9	8	9
10	7	8
11	3	3
12	17	19
15	1	1
16	1	1
17	1	1
	Total	92
	Median	8.2

Marital Status

Eighty-two percent of the 114 women were married, 11 percent were widows, and seven percent were single.

Family and Household Composition

The mean number of persons (at home) in the 114 families of the participants was 4.9 (Table 6). Twenty-one percent of the families had either one or two members. On the other hand, 19 percent of the families were fairly large, having from eight to 12 members.

The mean number of children in the families of the 107 women who were married or widows was 3.3. There was a total of 349 children in these 107 families. Only 11, or 10 percent, of the 107 families had no children, whereas 22 percent had from six to 11 children.

Table 6

Number and Percentage Distribution of Participants
In Third and Fourth Lesson Cycles of the Family
Service Program According to Number in Family

<u>Number in family</u>	<u>Participants</u>	
	<u>Number</u>	<u>Pe cent</u>
1	9	8
2	15	13
3	19	17
4	14	12
5	13	11
6	15	13
7	8	7
8	8	7
9	5	4
10	4	4
11	3	3
12	<u>1</u>	<u>1</u>
Total	114	100
Mean	4.9	

The 349 children at home were distributed by age as follows:

<u>Age</u>	<u>Percent</u>
Under 5	27
5 - 9	32
10 - 14	24
15 - 19	14
20 and over	<u>3</u>
Total	100

The 14 and under age group constituted 83 percent of the total number, and over one fourth (27 percent) were under five years.

The mean number of persons in the 111 households on which information was obtained was 5.5. Sixty-two people other than members of the nuclear family lived in 20 of the 111 households.

Employment of Husbands and Participants

Almost one fourth (23 percent) of the 90 husbands on whom information was obtained were laborers, 17 percent were operatives,¹ and 13 percent were craftsmen and foremen² (Table 7). Eighteen percent were classified as unemployed. Among these were five, or six percent, who had retired and three, or three percent, who were disabled.

Table 7

Number and Percentage Distribution of
Husbands of Participants in Third and
Fourth Lesson Cycles According to Occupation

<u>Occupations</u>	<u>Husbands of participants</u>	
	<u>Number</u>	<u>Percent</u>
Professional and technical	1	1
Managers, officials, and proprietors	5	6
Clerical workers	2	2
Sales workers	2	2
Craftsmen and foremen	12	13
Operatives	15	17
Service workers	5	6
Laborers	21	23
Farmers	11	12
Unemployed	<u>16</u>	<u>18</u>
Total	90	100

¹Operatives include assemblers, bus and truck drivers, delivery men, auto service attendants, packers and wrappers, weavers, welders, and meat cutters.

²Craftsmen and foremen include carpenters, electricians, machinists, mechanics, plasterers, plumbers, and members of the armed forces.

Of the 113 participants who provided information, 26, or 23 percent, were employed. Twelve of the 26 women worked full-time either for others or themselves, 13 worked part-time either for others or self, and one worked part-time for self and part-time for an employer. Most (14) of those who worked for others were either service or clerical workers. And most (6) of those who worked for themselves were either service workers or laborers.

Mobility

The mobility of the women (91) since they were married was about three tenths of a move per year, or about one move every three years. The range, however, was wide, from no moves (26 percent) to over two moves (one percent) every year.

Net Income Per Family

The median estimated net family income for 99 of the participants was \$4,110 (Table 8). Ten percent of the families had incomes under \$1,000. And as high as 34.4 percent had incomes under \$3,000. Only six of the 99 families had incomes of \$7,000 or more.

Formal Participation Score¹

The mean formal participation score of the 106 women on whom information was obtained was 1.18 (Table 9). For those who received a score, or were members of at least one organization, the mean was 2.05. Forty-five, or 42 percent, of the 106 women belonged to no organization and another 35, or 33 percent, belonged to only one organization. While 54, or 51 percent were members of one to three organizations, none of these held leadership positions. Only a few of the women (7) had scores from five to nine.

¹ Formal participation score equals the number of different organizations to which one belongs plus three for each leadership position held.

Table 8

Number and Percentage Distribution of
Participants in Third and Fourth Lesson Cycles
According to Total Estimated Family Net Income: 1966

Total estimated family net income	Participants	
	Number	Percent
Less than \$1,000	10	10.1
1,000 - 1,499	6	6.1
1,500 - 1,999	5	5.1
2,000 - 2,499	4	4.0
2,500 - 2,999	9	9.1
3,000 - 3,499	3	3.0
3,500 - 3,999	9	9.1
4,000 - 4,499	16	16.2
4,500 - 4,999	5	5.1
5,000 - 5,499	11	11.1
5,500 - 5,999	7	7.1
6,000 - 6,499	3	3.0
6,500 - 6,999	5	5.1
7,000 - 7,499	1	1.0
7,500 - 7,999	--	--
8,000 - 8,499	--	--
8,500 - 8,999	1	1.0
9,000 - 9,499	1	1.0
9,500 - 9,999	1	1.0
10,000 +	2	2.0
Total	99 ^a	100.1 ^b
Median	\$4,110	

^aTwo Welfare families plus 11 others gave no information on income and three participants in the same family were counted only once.

^bNot possible to round so that a total of 100 could be obtained.

Table 9
 Number and Percentage Distribution of
 Participants in Third and Fourth Lesson
 Cycles According to Formal Participation Score

Formal participation score	Participants	
	Number	Percent
0	45	42
1	35	33
2	14	13
3	5	5
4	--	--
5	1	1
6	3	3
7	1	1
8	1	1
9	1	1
Total	106	100
Mean (including 0's)		1.18
Mean (excluding 0's)		2.05

The number of women according to the organizations to which they belonged follows:

<u>Organizations</u>	<u>Number¹ belonging</u>
Church	43
Altar and Rosary Society	15
PTA	7
4-H leaders' association or council	3
Catholic Daughters	2
Home Demonstration Unit	2
Legion Auxiliary	2
Women's C.B. Club	2
Advisory Board	1
Bowling League	1
Brownies (leader)	1
Church mothers' club	1
Church Society	1
Fireman's Auxiliary	1
Gold Star Mothers	1
Ladies of St. Anne	1
Pioneers	1
Teachers' Association	1
Women's Association	1

Memberships were concentrated in the church and various auxiliary religious organizations.

Comparison with Third Cycle Participants and County Total and Rural Populations

The socio-economic characteristics of the combined third and fourth cycles of participants were generally fairly similar to those of the third cycle participants (Table 10). The combined cycles had a larger percentage of urban participants,

¹The number of women who reported belonging to one or more organizations was 61.

fewer women from owner families, and a slightly lower median age; otherwise, the two groups differed very little.

The percent of participants in the combined cycles who lived in rural nonfarm places was somewhat larger than the percent of the total population in these places. The median age of the women in the combined cycles was a little lower than in either the rural or total county population. The median years of school completed compared to the same figure for the county's total population was a little over a year less for both the women and their husbands in the combined cycles. The combined participants were married and living with their husbands somewhat more frequently than was the case of females 14 years of age and over in the county's total and rural populations, but this was the result of the program being essentially directed to housewives. The mean number of persons per household for the combined cycles was somewhat larger than the mean of both the county's total and rural populations. The occupation with the highest percent of husbands of participants in the combined cycles was that of laborer, whereas it was operative for both the county's total and rural populations. The median estimated net family income of the combined participants in 1966 was over \$1,000 less than the median for the 1960 total population of the county and slightly over \$800 less than the median for the 1960 rural population. Only on ownership of home were the combined participants similar to the county's total and rural populations. Thus, in general the combined participants differed from the county's total and rural population and where the difference could be considered favorable or unfavorable, the combined participants were in an unfavorable position, i.e., on years of school completed, household size, employment of husbands, and estimated family income.

Table 10

Comparative Socio-Economic Characteristics of Participants in Combined Third and Fourth Lesson Cycles, Participants in the Third Lesson Cycle, and the County's Total and Rural Populations

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Characteristics	Third lesson cycle	Third and fourth lesson cycles	Clinton County ^a	
			Total	Rural
<u>Place of residence</u>	(N=70)	(N=113)	34	--
Urban--percent	5	10	56	--
Rural nonfarm--percent	70	58	10	--
Farm--percent	25	22		
<u>Tenure of households</u>	(N=68)	(N=111)	61	68
Owner--percent	68	60	39	32
Renter--percent	32	40		
<u>Age of women</u>	(N=71)	(N=114)	36.7 ^b	36.0 ^b
Median	37.2	34.1		
<u>Years of school completed</u>	(N=70)	(N=113)	10.7 ^c	--
Median for women	9.2	9.5		
<u>Median for husbands of participants</u>	(N=60)	(N=92)	9.5 ^d	--
	8.0	8.2		
<u>Special training received--participants</u>	(N=70)	(N=113)	--	--
Yes--percent	26	24		
<u>Special training received--husbands</u>	(N=60)	(N=93)	--	--
Yes--percent	25	25		
<u>Marital status</u>	(N=71)	(N=114)	66 ^e	72 ^e
Percent married and living with husband	86	82		
<u>Family size</u>	(N=71)	(N=114)	--	--
Mean	5.0	4.9		
<u>Household size</u>	(N=71)	(N=111)	3.7	3.9
Mean	5.5	5.5		

	(N=59)	(N=90)	(N=90)
<u>Employment of husbands</u>			
Occupation, class with highest percent	Laborers 18%	Laborers 23%	Operatives 17% ^f
Occupation, class with second highest percent	Farmers 17%	Operatives 17%	Craftsmen 15% ^f
	Operatives 17%		Operatives 19% ^f
	(N=60)	(N=91)	
<u>Mobility</u>			
Mean number of moves per year for married women	.3	.3	--
<u>Estimated net family income</u>			
Median	(N=61)	(N=99)	(N=99)
Percent with net income under \$2,500	\$4,023 (1966)	\$4,110 (1966)	\$5,165 (1959)
	24	25	--
<u>Formal participation score</u>			
Mean	(N=56)	(N=106)	(N=106)
Organization with highest percent of members	1.1	1.2	--
	Church 42%	Church 41%	--

^aData are from 1960 U.S. Census and for 1960 unless otherwise stated.

^bWomen 15 years and over.

^cFemales 25 years and over.

^dMales 25 years and over.

^eFemales 14 years and over.

^fMales 14 years of age and over in the labor force (employed and unemployed minus type of job not specified).

Evaluation of Teaching

Ratings of Lessons by Combined Third and Fourth Cycle Participants

When interviewed, each interviewee was asked to rate the lessons which she had attended. The qualitative ratings used in the interview schedule were very helpful, some help, and not at all helpful. Values of two, one, and zero were assigned respectively to these three qualitative ratings. A percent score for the home economics lessons plus resource lessons was calculated for each interviewee. This percent score was obtained by summing the numerical values of lessons attended, dividing by the maximum score for these lessons (which was 2 x the lessons attended) and multiplying by 100.¹

The mean percent score for lessons attended for both cycles was 83.8 (Table 11). Only a few (19) of the participants gave over-all ratings of lessons that were under 60 percent. Actually, slightly over one half of the participants gave ratings of 100 percent. The mean percent rating score for lessons attended in the third cycle of lessons was 86 with 47 percent of the women giving ratings of 100. Only a few (eight) gave over-all ratings that were under 60. Whether or not the lessons deserved such high ratings may be questioned. While the ratings of individual lessons from which the over-all ratings were determined were given in interviews done by their teachers (Family Service Aides) and hence may have been influenced by this personal relationship, it is not entirely incorrect to suggest that the high ratings can be taken as giving some indication of the participants' satisfaction with the lessons.

¹The home economics lessons included in the combined third and fourth cycles were: (1) Penny Snitchers, (2) Money Saving Meals, (3) Enjoying Your Pre-Schooler, (4) Storage Secrets, (5) Taking the Blues Out of Laundering, (6) Budget Ideas for Decorating, and (7) Buying Children's Clothes. A variety of resource lessons were offered in the two series and included: (1) Mouth-to-Mouth Breathing, (2) Shopping for Credit, (3) Gardening, (4) Planned Parenthood, (5) Lawyer, (6) Mental Health, (7) Trade School, (8) Freezing and Canning, (9) Alcoholism, (10) First Aid, (11) Christmas Slides, (12) Safety Driving, (13) School Nurse, and (14) You as a Very Important Person.

Table 11

Number and Percentage Distribution of Participants in Third and Fourth Lesson Cycles According to Ratings of All Lessons Including Home Economics and Resource Lessons

Percent rating score for all lessons	Participants	
	Number	Percent
20 and under	5	5
50 - 59	14	12
60 - 69	4	4
70 - 79	10	10
80 - 89	12	11
90 - 99	8	7
100	<u>56</u>	<u>51</u>
Total	109	100
Mean percent rating score		83.8

Pre- and Post-Testing of Knowledge of Combined Third and Fourth Cycle Participants

A test consisting of 68 items was developed for use in pre- and post-testing of the participants on the subject matter of the seven home economics lessons. The test was an objective one with true-false, multiple-choice, and fill-in-the-blank answers called for. The number of questions applicable to each of the seven home economics lessons varied from eight to 12. The segregation of the questions by lessons made it possible to calculate scores for persons who attended some lessons but were absent from others.

The pre- and post-test scores used in this section are percent scores for only those lessons which the participants reported having attended. The mean percent score on the pre-test for the 58 participants whose tests were usable for both the pre- and post-tests were 69.8 and on the post-test, 83.4 (Table 12). The mean difference (gain) between the pre- and post-test means was highly significant with P for $t < .0005$ (one-tail) or $P < .001$ (two-tail). Twenty-one percent of the 58 participants had pre-test scores of 59 and under, whereas only four percent had scores under 59 on the post-test. Four percent of the 58 had pre-test

scores of 90 or more, but 31 percent had post-test scores which were 90 or more. The mean percent score on the pre-test for the third cycle of women for the lessons which each one reported having attended was 70.5 and on the post-test, 82.0. The mean difference (gain) between the pre- and post-test means was highly significant.

Table 12

Number and Percentage Distribution of 58 Participants Taking Both Pre- and Post-Tests According to Percent Scores on Test Items for Lessons Attended

Percent score	Pre-test		Post-test	
	Number	Percent	Number	Percent
20 - 29	1	2	0	0
30 - 39	1	2	0	0
40 - 49	4	7	1	2
50 - 59	6	10	1	2
60 - 69	11	19	5	9
70 - 79	23	39	11	19
80 - 89	10	17	22	38
90 - 99	1	2	17	29
100	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>
Total	58 ^a	100	58 ^a	101 ^b
Mean percent score:		69.8		83.4

^aTwo participants eliminated; no data on lessons attended.

^bDoes not add to 100 because of rounding.

The knowledge test consisted of 68 items, four of which offered opportunities for three correct answers each. Thus, the test could be said to contain 76 items and this is the number used in this discussion of test items. Gains in the numbers (or percentages) of those having correct answers on the post-test compared to those having correct answers on the pre-test that were significant at .05 or less level (one-tail test) occurred for the following 35 items:¹

¹This level of significance was achieved on only 14 items by the participants in the third cycle, but for a number of additional items this level was approached.

No. of Item In test	Item	Number and percent giving correct answer				Differ- ences between tests		Probability of difference occurring by chance, ¹ (one tail)
		Pre-test		Post-test		No.	%	
		No.	%	No.	%			
1	A storage device which can be used to improve storage of dishes (N=47)	25	55	38	81	12	26	<.005
3	The prepared food which is less expensive to buy than it is to make (N=47)	24	51	38	81	14	30	<.005
4	The method of putting a cuff on a sock (N=37)	24	65	34	92	10	27	<.005
6	The place to store small quantities of potatoes and onions (N=47)	31	66	41	87	10	21	<.005
11	Liquids in which rice can be cooked (N=45)	22	49	41	91	19	42	<.0005
14	Whether or not muted colors provide a satisfactory background for a room (N=40)	21	52	37	92	16	40	<.0005
15	What kind of flour is used to make bread (N=45)	19	42	28	62	9	20	<.05
17a	The three basic ways to sort clothes for laundering--fabric (N=44)	11	25	21	48	10	23	<.025
17b	The three basic ways to sort clothes for laundering--color (N=44)	38	86	43	98	5	12	<.05
17c	The three basic ways to sort clothes for laundering--soil (N=44)	13	30	20	46	7	16	<.05
18	Whether or not a large number of accessories in a room add to its attractiveness (N=40)	27	68	34	85	7	17	<.05
23	What kind of flour is used to bake cakes (N=45)	40	89	31	69	-9	-20	<.025

¹ Tested by the following formula:

$$X^2 = \frac{(|A - D| - 1)^2}{A + D}, \text{ Psychological Statistics by Quinn McNemar,}$$

(New York: John Wiley & Sons, Inc. 1949), p. 207. For the application of this formula those participants who are included must have taken both the pre- and post-test.

No. of item in test	Item	Number and percent giving correct answer				Differ- ences between tests		Probability of difference occurring by chance (one-tail)
		Pre-test		Post-test		No.	%	
		No.	%	No.	%			
26	Which color makes an ob- ject appear small (N=40)	24	60	33	82	9	22	<.025
27	The item that should not be stored in cardboard boxes (N=47)	37	79	45	96	8	17	<.01
29	The person a seven year old girl likes to copy in her dress (N=37)	18	49	31	84	13	35	<.005
31	The place of kitchen equipment near which kitchen utensils should be stored (N=47)	33	70	42	89	9	19	<.01
33	The age at which a child's foot is fully developed (N=37)	23	62	33	89	10	27	<.005
35	Whether or not accessories should repeat the colors one has used in room (N=40)	24	60	31	78	7	18	<.05
35	For which meals rice is a good food (N=45)	33	73	42	93	9	20	<.01
39a	The three aspects any color has--hue (N=40)	5	12	28	70	23	58	<.0005
39b	The three aspects any color has--intensity (N=40)	8	20	25	62	17	42	<.0005
39c	The three aspects any color has--value (N=40)	3	8	15	38	12	30	<.005
41	The nutrient in which peanut butter is rich (N=45)	21	47	29	64	8	17	<.05
43	Method for removing spots and stains when washing (N=44)	30	68	39	89	9	21	<.01
45	From what shortening can be made (N=45)	27	60	37	82	10	22	<.01
51	Whether or not a stain is removed by working from inside of garment (N=43)	21	49	41	95	20	46	<.0005

No. of item in test	Item	Number and percent giving correct answer				Differ- ences: between tests		Probability of difference occurring by chance (one-tail)
		Pre-test		Post-test		No.	%	
		No.	%	No.	%			
53	What should be stored in fireproof storage devices (N=46)	38	83	43	94	5	11	<.05
57	What is a good source of iron (N=44)	28	64	37	84	9	20	<.025
58	Whether or not impulse buying is buying without plan (N=46)	39	85	45	98	6	13	<.05
61	For what the best storage space should be used (N=47)	8	17	22	47	14	30	<.005
62	Whether 4 cans of peas for \$1.00 is a better buy than 2 cans for \$.50 (N=47)	36	77	44	94	8	17	<.01
63	A requirement for trim on children's clothing (N=37)	24	65	33	89	9	24	<.005
68a	The three items recommended for removing grease stains--cigarette lighter fluid (N=44)	22	50	25	57	3	7	<.05
68b	The three items recommended for removing grease stains--Carbona (N=44)	17	39	38	86	21	47	<.0005
68c	The three items recommended for removing grease stains--Renuzit (N=44)	20	46	34	77	14	31	<.005

These 35 items are the ones which reflect the significant learning of the participants. On the pre-test 17 of the 35 items were answered correctly by less than 60 percent of the participants and as many as seven of them were answered correctly by less than 40 percent. The list provides those concerned with the subject matter of the program with an opportunity to consider whether or not these kinds of knowledge are

the ones which are of primary importance for the learners. Only four of the 35 items had 83 percent or more of the participants who had correct answers on the pre-test.

The 10 test items on which there was no or little (gain of one or loss of one in number) change in correct answers are listed below:

No Change in Correct Answers

<u>No. of item in test</u>	<u>Item</u>	Number and percent giving correct answer			
		<u>Pre-test</u>		<u>Post-test</u>	
		<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
20	Whether or not all labels should be read by buyer (N=37)	34	92	34	92
38	How one determines temperature of wash water (N=44)	44	100	44	100
40	Whether or not children should have a specific place for their toys (N=47)	47	100	47	100
66	The varieties dried split peas come in (N=45)	41	91	41	91

Gain of One in Correct Answers

<u>No. of item in test</u>	<u>Item</u>	Number and percent giving correct answer				Differences between tests	
		<u>Pre-test</u>		<u>Post-test</u>		<u>No.</u>	<u>%</u>
		<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>		
16	Whether or not stockings should fit snugly (N=37)	16	43	17	46	1	3
34a	Three criteria for a good toy--can use it in several ways (N=34)	24	71	25	74	1	3
42	A criterion for selecting a growing girl's dress (N=37)	35	95	36	97	1	2

Loss of One in Correct Answers

No. of item in test	Item	Number and percent giving correct answer				Differ- ences between tests	
		Pre-test		Post-test		tests	
		No.	%	No.	%	No.	%
2	Whether or not child-rearing authorities advise against punishing children physically (N=34)	17	50	16	47	-1	-3
24	Whether or not clothes for children should be purchased according to age not size (N=37)	32	86	31	84	-1	-2
60	What pre-schoolers like in their books (N=34)	30	88	29	85	-1	-3

Of the 10 items included in the above three classifications, 86 percent or more of the participants gave correct answers on the pre-test for seven. It would appear, therefore, that these seven items are primarily those which the participants already knew. The Aides and the agents training them should consider elimination of the topics with which these items are concerned. Of course, it is possible that these test items were so stated that the participants could hardly miss the correct answers.

Below are the 31 items that changed more than one in number of participants giving correct answers when the pre- and post-tests are compared but the change was not significant.

Test Items Changing More Than One But Not Significantly

No. of item in test	Item	Number and percent giving correct answer				Differ- ences between tests		Probability of difference occurring by chance (one-tail)
		Pre-test		Post-test		tests		
		No.	%	No.	%	No.	%	
5	The best guide for selecting toys for pre-school children (N=34)	28	82	32	94	4	12	<.15

No. of item in test	Item	Number and percent giving correct answer				Differ- ences between tests		Probability of difference occurring by chance (one-tail)
		Pre-test		Post-test		No.	%	
		No.	%	No.	%			
7	Whether or not one should shop for prepared food when hungry (N=47)	38	81	44	94	6	15	<.10
8	What the label on manufactured garments must state (N=37)	27	73	33	89	6	16	<.10
9	The requirements of a pre-school child for conversation (N=34)	30	88	33	97	3	9	<.25
10	The requirement for good color in one's room (N=40)	37	92	40	100	3	8	<.15
12	Whether or not children's shoes should be 1/2 inch longer than foot (N=37)	35	95	37	100	2	5	<.25
13	What determines the amount of detergent to use (N=44)	34	77	39	89	5	12	<.10
19	What oleo is made from (N=45)	39	87	42	93	3	6	<.25
21	Whether or not all brands of bleach are alike (N=44)	39	89	41	93	2	4	<.35
22	The most restful color combinations for a bedroom (N=40)	35	88	38	95	3	7	<.25
25	The best time to add bleach when bleaching clothes (N=44)	32	73	38	86	6	13	<.10
28	Whether or not shopping daily for groceries is recommended as a way of saving money (N=47)	42	89	44	94	2	5	<.55
30	Whether or not the real effects of play on grown-ups and children are the same (N=34)	31	91	29	85	-2	-6	<.35
32	The form of cheese that is least expensive (N=47)	30	64	36	77	6	13	<.15

No. of item in test	Item	Number and percent giving correct answer				Differ- ences between tests		Probability of difference occurring by chance (one-tail)
		Pre-test		Post-test		No.	%	
		No.	%	No.	%			
34b	Three criteria for a good toy--help teach something (N=34)	27	79	25	74	-2	-5	<.40
34c	Three criteria for a good toy--be safe and sturdy (N=34)	29	85	33	97	4	12	<.15
37	Whether or not elastic in children's slacks should be stitched to garment three times (N=37)	33	89	37	100	4	11	<.10
44	Whether or not a large amount of color is restful (N=40)	31	78	34	85	3	7	<.25
46	Whether or not money can be saved at the super-market if adequate time is allowed (N=47)	37	79	42	89	5	10	<.10
47	If protein food stains should be allowed to dry before removal (N=44)	41	87	43	92	2	5	<.25
48	Whether or not room accessories should be used for decoration only (N=40)	32	80	34	85	2	5	<.40
49	Whether or not rolled wheat may be used in same way as rolled oats (N=45)	42	93	44	98	2	5	<.25
50	Whether usually store brands are less expensive than name brands (N=47)	35	74	41	87	6	13	<.10
52	The effect on appearance of size produced by light walls in a room (N=40)	38	95	40	100	2	5	<.25
54	Whether or not housewife can save money by cutting up own chicken (N=46)	40	87	45	98	5	11	<.10
55	Whether or not the large economy box of detergent may be more expensive (N=43)	18	42	23	54	5	12	<.15

No. of item in test	Item	Number and percent giving correct answer				Differ- ences between tests		Probability of difference occurring by chance (one-tail)
		Pre-test		Post-test				
		No.	%	No.	%	No.	%	
56	Whether or not a pre-school child may not mind because he feels he is being bossed (N=33)	24	73	29	88	5	15	<.10
59	Whether or not very dirty spots can be taken care of after washing (N=44)	37	84	41	93	4	9	<.15
64	The best way to prevent a pre-school child from hurting himself (N=34)	31	91	33	97	2	6	<.25
65	Whether or not storage needs in the home change very little (N=47)	35	74	37	79	2	5	<.40
67	Whether or not children's clothes should have loose sleeves (N=37)	29	78	34	92	5	14	<.10

Nineteen of these items had 80 percent or more of the participants giving correct answers on the pre-test. These items should be examined for possible de-emphasis in teaching. Again, however, it should be recognized that the items may have been so stated that they failed to constitute a real test of the participants' knowledge.

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