

*Homemaker Orientation
Related to Marketing*

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Summary

Two sets of data consisting of 400 schedules each were collected in Houston in 1963. One set was gathered before any educational program had been used in the study. The second set was gathered after the experimental educational programs. The purpose of the study was to determine how homemakers respond to educational media. In preparing for the study, it was assumed that each consumer has basic behavioral characteristics which relate to her marketing behavior. For convenience these behavior characteristics have been termed "orientation of the homemaker." Three major types may be expected. They are 1) the homemaker who buys from habit, 2) the homemaker who rationalizes and 3) the one who buys on impulse. In order to group the homemakers in the study, questions were designed that would reflect basic behavior.

In each set of data 14 percent of the homemakers were classed as impulsive. For the other two orientation classifications, 18 percent of sample II and 23 percent of sample I were habitual while 67 percent of sample II and 63 percent of sample I had rational characteristics.

Also, in determining the homemaker's marketing behavior, it was assumed that previous marketing knowledge and nutritional knowledge (knowledge held before seeing the experimental programs) would influence her decisions. The homemakers were scored on each area of knowledge to determine their relative knowledge in each area.

Certain socio-characteristics were also used in evaluating the marketing behavior of the homemakers. These were age and education, number in the family, age of family members, sources of family income, total income and per capita income.

Three types of mass education media were used in the experimental part of the study. They were television, radio

and newspaper. Programs were given on television and radio each week for 6 weeks and stories ran in one local paper simultaneously. Gathering of data was completed in approximately 4 weeks following the experimental period.

Orientation of the homemaker was shown to be significantly related to age, education, income, race and nutritional knowledge. However, orientation was not significantly related to marketing knowledge.

Marketing knowledge and nutritional knowledge were both significantly related to education; therefore, it would seem that education is the more important factor in determining significant relationships. Marketing facts are not taught in either public schools or through advertising or other mass media to the same extent as nutrition facts. This indicates that the homemaker's marketing knowledge may be more limited than her nutritional knowledge or that additional work needs to be done on methods of determining the extent of her marketing knowledge. This also gives some indication of the reason for no significant relationship between orientation and marketing knowledge. Also, additional work needs to be done on ways of determining homemaker orientation.

No conclusive result can be reported on the response of the homemakers to the mass media educational programs. The number who saw or heard these programs was small. However, 18-27 percent of the respondents read the newspaper column and significant results were obtained for this media. The number who saw the television program or heard the radio programs regularly was small. However, percentage calculations indicated a high percentage of those who regularly listened to the TV and radio programs remembered the experimental programs. Therefore, it would seem that a study limited to those actually participating in a given type of mass media (regular listeners or viewers of a specific program) would give results from which some significant relationships could be determined.

Homemaker Orientation Related to Marketing

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Data were collected in Houston in 1963 to determine how the homemaker consumer reacts to mass educational media. Two sets of data were gathered. The first set, entitled "The Before Data," was taken before any educational program had been used in the study. The second set of data was gathered after the experimental educational programs. In each case 400 homemakers were interviewed. The homemakers were randomly drawn from the Houston city directory. The samples were drawn simultaneously. This was accomplished by assigning alternate names to each of the samples. The first 400 homemakers were interviewed in May and June of 1963. The educational program was conducted in September and October, and the second set of homemakers were interviewed in November and December of 1963. It had been previously decided that the period elapsing between the two sets of interviews should not be more than 6 months.

Orientation of the Homemaker

In preparing for this research, it was assumed that each consumer has basic behavioral characteristics which would relate to her marketing behavior. For convenience these behavior characteristics have been termed "orientation of the homemaker." Three major types may be expected. They are 1) the homemaker who buys from habit, 2) the homemaker who rationalizes and 3) the one who buys on impulse. It was further assumed that the rational homemaker would be somewhere between the habitual and the impulsive buyer. It is recognized that these are arbitrary divisions of consumer behavior. To rank the homemaker in these categories, questions were designed that would reflect her basic behavior patterns. For example, the homemaker who would always serve the evening meal at the same time of day each day would be habitually oriented. In contrast, the impulsive homemaker would change the time of service with little notice.

Five groups of questions were prepared from which each homemaker could be scored according to her answers. The questions used were developed with the aid of a social psy-

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TABLE 1. ORIENTATION OF THE HOMEMAKER FOR 800 FAMILIES IN HOUSTON, TEXAS

Orientation	Number of homemakers			
	Sample I		Sample II	
	Number	Percent	Number	Percent
Habitual	91	23	74	18
Rational	253	63	269	67
Impulsive	56	14	57	14

chologist. Scoring of the answers was developed with the aid of a statistician. Test analysis of data from sample I indicated two-thirds of all homemakers would fall in the rational group and one-third in each of the extreme groups. It was recognized that there would be a gradual fading in at both ends from the extremes and not a definite break between the groups. Results have been useful in the analysis of homemaker marketing behavior.

Scoring of data from sample I placed 91 homemakers in the habitual group, 253 in the rational group and 54 in the impulsive group. Sample II results were very similar to sample I (Table 1). In both cases 14 percent of the homemakers fell in the impulsive group. However, in sample II 74, or 18 percent, of the homemakers were in the habitual group and 269, or 67 percent, were in the rational group. This differed from sample I in that 23 percent were in the habitual group and 63 percent were in the rational group.

Homemaker Knowledge

It was assumed that the homemaker's previous marketing knowledge and nutritional knowledge would influence her food buying practices. To classify the homemaker in these areas, questions were prepared that

TABLE 2. MARKETING KNOWLEDGE SCORE AND NUTRITIONAL KNOWLEDGE SCORE OF THE HOMEMAKER FOR 800 FAMILIES IN HOUSTON, TEXAS

Marketing knowledge score	Number of homemakers			
	Sample I (400)		Sample II (400)	
	Number	Percent	Number	Percent
0	19	5	12	3
1	54	13	39	10
2	66	16	71	18
3	70	18	85	21
4	66	17	68	17
5	69	17	68	17
6	28	7	37	9
7	21	5	12	3
8	7	2	6	2
9	0	0	2	0

Nutritional knowledge score	Number of homemakers			
	Sample I (400)		Sample II (400)	
	Number	Percent	Number	Percent
1	22	6	28	7
2	103	26	97	25
3	82	20	99	25
4	115	29	101	25
5	78	20	75	19

would identify the extent of her knowledge. Again a scoring procedure was determined and the homemakers were scored. In the marketing knowledge category, the homemaker could receive a score of 0 to 9. In the nutritional knowledge category she could receive a maximum score of 36 and a minimum score of 0. Nutritional knowledge scores were ranked from 1 to 5. In both sets of data the majority of homemakers made marketing knowledge scores from 2 to 5. Approximately 17 percent of the homemakers made each of these scores (2, 3, 4 and 5) for a total of approximately 68 percent of the homemakers in each sample (Table 2). In sample I, 18 percent made a score of less than 2, and 14 percent made a score of more than 5. In sample II, 13 percent scored less than 2, and 14 percent scored more than 5.

In ranking the nutritional scores in sample I, 6 percent fell in rank 1 and 20 percent in rank 5. In sample II, 7 percent fell in rank 1 and 19 percent in rank 5. In sample II, 25 percent fell in each of the other three ranks. In sample I, 26 percent were in rank 2, 20 percent in rank 3 and 29 percent in rank 4.

The homemaker's orientation is related to her marketing knowledge scores in the following manner (Table 3). No homemakers in sample I who were impulsively oriented had scores below 2, while 27 percent of those who were habitually oriented had scores below 2. Only 19 percent of the homemakers classified as rational scored below 2. On the other hand, 16 percent of the homemakers classified as impulsive scored 7 or 8 on marketing knowledge, and only 1 percent of the habitually oriented homemakers scored as high as 7. No one made a score of 9. Seven percent of the homemakers classified as rational scored 7 or 8. The same type of progressive difference in the homemakers' scores is seen in the nutritional knowledge scores. Thirty-nine percent of the habitually oriented homemakers were in rank 1 or 2, while 66 percent of the impulsively oriented homemakers ranked 4 or 5 in nutritional knowledge. The rational homemakers tended to be in the higher rank; however, the majority of these homemakers were spread more widely through ranks 2 to 5. Twenty-five percent were in rank 2, 20 percent in rank 3, 28 percent in rank 4 and 21 percent in rank 5.

The same differences were observed in sample II but they were not as specific. For example, no habitual homemakers made the 0 score for marketing knowledge while 3 percent of the impulsive homemakers made this score. On the other hand, 54 percent of the habitual homemakers made scores of 3 or less, while only 43 percent of the impulsive homemakers made scores of 3 or less. In this sample, the rational homemakers were grouped in scores 3, 4 and 5 with 57 percent of the homemakers making these scores. A much lower per-

TABLE 3. ORIENTATION OF THE HOMEMAKER VERSUS MARKETING KNOWLEDGE AND NUTRITIONAL KNOWLEDGE FOR 800 FAMILIES IN HOUSTON, TEXAS

Marketing knowledge score	Orientation of the homemaker											
	Sample I						Sample II					
	Habitual		Rational		Impulsive		Habitual		Rational		Impulsive	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	10	11	9	4	0	0	0	0	10	4	2	3
1	15	16	39	15	0	0	9	12	23	8	7	12
2	19	21	41	16	6	11	15	20	49	18	7	12
3	21	23	37	15	12	21	16	22	60	22	9	16
4	9	10	48	19	9	11	11	15	45	17	12	21
5	14	15	41	16	14	25	12	16	47	18	9	16
6	2	2	20	8	6	11	7	10	23	9	7	12
7	1	1	14	6	6	11	1	1	9	3	2	3
8	0	0	4	1	3	5	2	3	3	1	1	2
9	0	0	0	0	0	0	1	1	0	0	1	2
Total	91	99	253	100	56	100	74	100	269	100	57	99
Nutritional knowledge score												
1	5	5	13	5	4	7	12	16	13	5	3	5
2	31	34	64	25	8	14	15	20	73	27	9	16
3	24	26	51	20	7	13	18	24	72	27	9	16
4	22	24	72	28	21	37	19	26	65	24	17	30
5	9	10	53	21	16	29	10	13	46	17	19	33
Total	91	99	253	99	56	100	74	99	269	100	57	100

centage of the homemakers in sample II made the very high scores for marketing knowledge. Only 9 percent made scores of 8 or 9. In nutritional knowledge, the impulsive homemakers in sample II had the high scores just as those in sample I. Sixty-three percent of the impulsive homemakers were in ranks 4 and 5. Only 39 percent of the habitual homemakers were in ranks 4 and 5, and 78 percent of the rationally oriented homemakers were in ranks 2, 3 and 4 (Table 3).

Socio-characteristics of the Homemaker

Other characteristics of the homemaker considered in relation to her orientation and her marketing practices were age and education, number in the family and age of family members. Also considered were sources of family income (who in the family provided the income), total family income and per capita income.

Sample I had 6 percent more homemakers under 35 than sample II, while sample II had 7 percent more homemakers in the 45-59 age group (Tables 4-5). In sample I, 1 percent of the families had no homemaker while sample II had no families with no homemaker. Fifteen percent of the homemakers in sample I had less than an eighth grade education while 20 percent in sample II had less than an eighth grade education. Almost 12 percent of the homemakers in both samples had a college education or more. A total of 53 percent of the families in sample I and 49 percent in sample II had a high school education or some additional training.

Average size of the families was about the same for both samples. Sample I averaged 4.0 and sample II 3.9 persons per family. Distribution of the homemakers by age groups also was similar for the two samples

(Table 4). A slightly higher percentage of the families in sample I had children. Also, a higher percentage of families in sample I had more than two adults 20 years of age or older living in the family group. Some of these adults were older children of the family heads. Others were parents, brothers and sisters and other relations.

Few homemakers, 3 percent in sample I and 2 percent in sample II, had the total responsibility for the family income. However, 10 percent and 18 percent, respectively, cooperated with the male head of the household in providing family income. The male head provided the only source of family income for 75 percent

TABLE 4. AGE AND EDUCATION OF HOMEMAKER FOR 800 FAMILIES IN HOUSTON, TEXAS

Age of homemaker	Number of persons in family			
	Sample I (400)		Sample II (400)	
	Number	Percent	Number	Percent
Under 25	35	9	31	8
25-34	101	25	82	20
35-44	126	31	125	31
45-49	89	22	118	29
60 or more	43	11	43	11
No homemaker	5	1	0	0
Education of homemaker				
Less than 5 grades	9	2	13	3
5 to 8 grades	50	13	66	17
9-11 grades (not graduating)	71	18	68	17
High school graduate	141	35	125	31
Some college, business or professional school	70	18	73	18
Bachelor's degree	39	10	38	10
More than a bachelor's degree	6	2	9	2
No homemaker	5	1	1	0
No information	9	2	7	2

TABLE 5. NUMBER OF PERSONS IN THE FAMILY FOR 800 FAMILIES IN HOUSTON, TEXAS

Number of persons in family	Number of families			
	Sample I (400)		Sample II (400)	
	Number	Percent	Number	Percent
2 persons	96	24	115	29
3 persons	63	16	74	18
4 persons	96	24	81	20
5 persons	65	16	71	18
6 persons	39	10	29	7
7 persons	23	6	12	3
8 persons	6	1	8	2
9 persons	12	3	10	3
Children				
Ages of children				
Under 1 year	43	11	24	6
1-6 years	166	41	145	36
7-12 years	170	42	149	37
13-19 years	128	32	115	29
No children	96	24	115	29
Adults				
Number of adults 20 years or older				
0	3	1	1	¹
1	13	3	8	2
2	329	82	346	86
3 or more	54	14	45	11
Average number in household				
	4.0		3.9	

¹Less than one percent.

of the families in sample I and 69 percent in sample II. All other families had incomes from a combination of family members which might include the homemaker with the head and children, or it might be the children alone or the male head and children or other combinations.

Total family income for both samples generally was higher than for the nation. Only 5 percent of the families in sample I and 7 percent in sample II had incomes under \$3,000, while 12 percent in sample I and 10 percent in sample II had incomes of \$15,000 or more (Table 6). In each sample, 40 percent or more of the families had incomes of \$8,000 or more. In sample I, 36 percent of the families and in sample II, 38 percent of the families had incomes under \$6,000. The median for both samples fell in the 17 percent of families that had incomes between \$6,000 and \$8,000. Fifty-one percent of sample I and 53 percent of sample II had per capita incomes of \$1,800 or more. In fact, 19 percent of sample I and 23 percent of sample II had per capita incomes of \$3,200 or more. In this connection, it may be noted that 39 percent of the male heads in both samples had some education beyond high school. However, not all of the high income families were those with a higher level of education.

Homemaker's Response to Mass Media

The three types of mass education media used in this study were television, radio and newspaper. Arrangements were made with the local agricultural exten-

sion marketing specialist to present six consecutive programs during the time she normally had a weekly marketing report on television and radio. The programs on which she regularly appeared were very early morning farm hour programs. The number of regular listeners was correspondingly small. She also had a weekly column in one of the local newspapers that was used for the experimental program. All of the educational programs were run weekly for the 6 weeks immediately preceding the gathering of the data from the homemakers in sample II. Gathering of the data was completed in approximately 4 weeks following the experimental period.

Ninety-eight percent of the families in sample I and 95 percent in sample II had televisions. Some 82 percent of all the families had radios. At least 63 percent read one daily newspaper regularly and an additional 25 percent in each sample read as many as three daily newspapers.

Only 12 percent of the families in sample I usually or sometimes saw the television program that was used for this educational material. In sample II, 7 percent of the families usually or sometimes saw this program. In sample II, 4 percent of the families said they saw the program that was given for educational purposes. This meant that 65 percent of the families who were regular watchers of this program saw the experimental educational program.

Fourteen percent of the homemakers in sample I usually or sometimes heard the radio program. In

TABLE 6. FAMILY INCOME, PER CAPITA INCOME AND SOURCES OF INCOME OF 800 FAMILIES IN HOUSTON, TEXAS

Family income	Number of families			
	Sample I (400)		Sample II (400)	
	Number	Percent	Number	Percent
Under \$2,000	10	2.5	14	3
\$2,000-2,900	10	2.5	16	4
\$3,000-3,900	35	9	46	11
\$4,000-4,900	39	10	39	10
\$5,000-5,900	51	13	39	10
\$6,000-7,900	67	17	67	17
\$8,000-8,900	48	12	59	15
\$10,000-14,900	64	16	77	20
\$15,000 or more	50	12	39	10
No information	26	6	4	1
Per capita income				
Under \$300	2	¹	2	¹
\$300-599	14	3	20	5
\$600-899	38	10	36	9
\$900-1,199	47	12	40	10
\$1,200-1,799	68	17	84	21
\$1,800-2,499	62	15	63	16
\$2,500-3,199	67	17	57	14
\$3,200 or more	75	19	94	23
No information	26	16	4	1
Sources of income				
Homemaker only	13	3	9	2
Head of household	301	75	277	69
Homemaker and head	40	10	73	18
Other combination	43	11	40	10

¹Less than one percent.

TABLE 7a. TELEVISION PROGRAMS ACTUALLY SEEN, RADIO PROGRAMS ACTUALLY HEARD AND NEWSPAPER COLUMNS ACTUALLY READ VERSUS HOMEMAKER'S MARKETING KNOWLEDGE SCORES FOR 800 FAMILIES IN HOUSTON, TEXAS

Marketing knowledge score	Number of homemakers, frequency and percentage																		
	Watched D. Compton's Farm Journal program on TV						Heard G. Roesner's program on radio						Number who read G. Clyatt's column in newspaper						
	Sample I (400)		Sample II (400)				Sample I (400)		Sample II (400)				Sample I (400)		Sample II (400)				
	Usually or sometimes		Usually or sometimes		Saw experimental program		Usually or sometimes		Usually or sometimes		Heard experimental program		Read regularly		Read column 1-5 weeks ago		Read experimental column		
Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹
0	3	16	1	8	0	0	1	5	1	8	0	0	3	16	1	8	1	8	
1	6	11	3	8	2	5	6	11	3	8	2	5	9	17	1	2	1	3	
2	10	15	5	7	3	4	11	17	6	8	1	1	20	30	9	13	11	15	
3	13	19	6	7	3	4	7	10	6	7	5	6	18	26	8	9	9	11	
4	2	3	4	6	3	4	15	23	4	6	2	3	17	26	7	10	11	16	
5	7	10	3	4	3	4	10	14	2	3	5	7	25	36	19	28	20	29	
6	2	7	3	8	1	3	5	18	1	3	0	0	4	14	14	38	15	41	
7	6	29	1	8	1	8	1	5	2	17	3	25	11	52	2	17	1	8	
8	0	0	0	0	1	17	0	0	0	0	1	17	2	28	2	33	2	33	
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	49	12 ²	26	7 ²	17	4 ²	56	14 ²	26	6 ²	19	5 ²	109	27 ²	63	16 ²	71	18 ²	

¹Percentages are figured on total responses of homemakers making the respective scores. All responses are not shown.

²Percentage figured on total sample of 400.

TABLE 7b. TELEVISION PROGRAMS ACTUALLY SEEN, RADIO PROGRAMS ACTUALLY HEARD AND NEWSPAPER COLUMNS ACTUALLY READ VERSUS HOMEMAKER'S NUTRITIONAL KNOWLEDGE SCORES FOR 800 FAMILIES IN HOUSTON, TEXAS

Nutritional knowledge score	Number of homemakers, frequency and percentage																	
	Watched D. Compton's Farm Journal program on TV						Heard G. Roesner's program on radio						Number who read G. Clyatt's column in newspaper					
	Sample I (400)		Sample II (400)				Sample I (400)		Sample II (400)				Sample I (400)		Sample II (400)			
	Usually or sometimes		Usually or sometimes		Saw experimental program		Usually or sometimes		Usually or sometimes		Heard experimental program		Read regularly		Read column 1-5 weeks ago		Read experimental column	
Rank	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹
1	2	9	1	4	0	0	1	5	3	11	1	4	4	18	0	0	1	4
2	13	13	4	4	1	1	15	15	5	5	1	1	19	18	7	7	6	6
3	11	13	7	7	3	3	9	11	6	6	3	3	20	24	10	10	13	13
4	18	16	11	11	10	10	17	15	9	9	9	9	37	32	15	15	18	18
5	5	6	3	4	3	4	14	18	3	4	5	7	29	37	31	41	33	44
Total	49	12 ²	26	7 ²	17	4 ²	56	14 ²	20	6 ²	19	5 ²	109	27 ²	63	16 ²	71	18 ²

¹Percentages are figured on total responses of homemakers making the respective scores. All responses are not shown.

²Percentage figured on total sample of 400.

sample II, 6 percent usually heard this program. Five percent in sample II reported they heard the program the day the experimental program was given. This meant that 73 percent of those who usually or sometimes heard this radio program heard the special program prepared for this study. Distribution of the small number of homemakers who had seen the television program or heard the radio program over nine scores for marketing knowledge and over five ranks for nutritional knowledge makes it difficult to evaluate the relationship of knowledge to the ones who heard or saw these programs (Tables 7a and 7b). It has been pointed out that a high percentage of those who usually heard the radio program or saw the television program remembered seeing or hearing the experimental program. Chi square analysis, to be discussed later, showed that there was some significance in marketing and nutritional knowledge to the homemakers' socio-economic characteristics. The cells were too small, however, to show a significant relationship to the specific experimental programs.

In sample I, 27 percent of the families said they were accustomed to reading the column written by the marketing specialist. In sample II, 16 percent said that they had read this column sometime during the past 5 weeks. In sample II, 18 percent said they had read the column on the day the experimental material was used. This meant that a higher percentage remembered having read the test column than those who remembered reading the regular columns written by the marketing specialist. The recall period of 4 to 5 weeks covered most of the time during which the educational material was being presented. The newspaper column used for this educational program usually appeared in the women's section of the paper.

The homemakers were asked if they read the food section of the paper. Sixty-four percent in sample I and 54 percent in sample II reported that they usually read the food section. The replies could be grouped in four general classifications. These included economy or best buys, menu planning, nutritional information and food preparation methods. This fourth classification was the most popular of the single classifications, with 16 percent in sample II looking for this type of information. However, 46 percent of the homemakers said that they found information from all four groups useful. The remaining 7 percent indicated a preference for one of the other three classifications, the highest number preferring the best buys (Table 8). The same question was asked of homemakers in sample I, and the percentage distribution of answers was similar, but a larger percentage of homemakers responded that they found this information useful. Forty-nine percent found all types of information useful, 11 percent were looking for food preparation methods, 9 percent were looking for best buys or how

to buy, 3 percent for nutritional knowledge, and 1 percent for meal planning information.

Homemakers were asked about their frequency of using recipes given on television programs, and 17 percent in sample I and 11 percent in sample II reported they had used recipes from television programs during the last 3 months. A similar question asked about the use of recipes from radio programs gave only 2½ percent from each sample that had used such recipes during the last 3 months.

Chi Square Analysis

In both samples, education of homemaker, family income, per capita income and race were significantly related at the 1 percent level to marketing knowledge and nutritional knowledge of the homemaker. In sample II age of the homemaker was not significantly related to marketing knowledge but it was significantly related at the 5 percent level to nutritional knowledge. In sample II the number who read the test column and the last time the column was read was significantly related to both nutritional knowledge and to marketing knowledge. In addition, number of newspapers read and frequency of reading the food section of the newspaper were significantly related to nutritional knowledge. The latter was significant only at the 5 percent level.

Orientation of the homemaker was significantly related to education, family income, per capita income and race in sample I. None of these showed significant relationships to orientation of the homemaker in sample II. However, in sample II, orientation of the homemaker was significantly related to frequency of reading the food section of the newspaper.

Number of newspapers read and the number reading the experimental column was significantly related to education of the homemaker in both samples. In addition, frequency of trying recipes given over televi-

TABLE 8. HOMEMAKERS' RESPONSES TO USE OF FOOD SECTION IN NEWSPAPER FOR 800 FAMILIES IN HOUSTON, TEXAS

How food section used	Number of homemakers			
	Sample I		Sample II	
	Number	Percent	Number	Percent
How to buy	8	2	0	0
How to plan meals	3	1	4	1
Nutritional information	14	3	5	1
Best buys	29	7	19	5
Food preparation method	46	11	65	16
All of these	195	49	183	46
DNA*	40	10	61	15
Multiple answer	42	11	46	12
No answer, none, don't know, not interested	23	6	17	4
Total	400	100	400	100

*Does not apply.

TABLE 9. CHI SQUARES IN SAMPLE I SIGNIFICANT AT THE 5 PERCENT AND 1 PERCENT LEVELS

Variables*	Degrees of freedom	Calculated X ²	Percentile values of X ² distribution	
			X ² .95	X ² .99
			Education of homemaker versus:	
Number of daily newspapers regularly read	4	28.3	9.5	13.2
Number read Gwendolyn Clyatt's column	3	9.7	7.8	**
Marketing knowledge versus:				
Age	12	29.6	21.0	26.2
Education	12	44.9	21.0	26.2
Family income	16	55.8	26.3	32.0
Per capita income	20	46.8	31.4	37.6
Race	7	28.7	14.1	18.5
Nutritional knowledge versus:				
Age	12	24.0	21.0	**
Education	12	83.5	21.0	26.2
Family income	15	80.3	25.0	30.6
Per capita income	15	56.9	25.0	30.6
Race	4	15.1	9.5	13.2
Orientation of homemaker versus:				
Education	8	20.4	15.5	20.0
Family income	10	27.7	18.3	23.2
Per capita income	10	25.6	18.3	23.2
Race	2	6.2	6.0	**

*Other tests gave chi squares less than X² .95.

**Chi square larger than calculated X².

sion programs and number of households with radios were significantly related to education of the homemaker in sample II.

No other variables tested by chi square analysis showed a significant relationship.

Conclusions

The following conclusions were derived concerning the orientation of the homemakers involved and their response to the various media used in the study.

Orientation of the Homemaker

The homemaker's response to various situations in daily experience was used to identify general behavior patterns. This identification has been termed "orientation." It has been shown to be significantly related to certain socio-economic characteristics—age, education, income and race—and to nutritional knowledge of the homemaker. Orientation, however, was not significantly related to marketing knowledge held by the homemaker.

It is known that education and income are directly related to age. The interdependence of all these factors would suggest their association in determining the significant relationships observed in orientation, nutritional knowledge and marketing knowledge.

Since marketing knowledge and nutritional knowledge are significantly related to education, it would seem that education is the more important factor in determining significant relationships. Marketing facts are not

taught in either public schools or through advertising or other mass media to the same extent as nutritional facts. It was therefore difficult to prepare questions that would measure the homemaker's marketing knowledge. On the other hand, preparation of questions to measure nutritional knowledge was not as difficult. More specific information was available. This suggests that additional work needs to be done on methods of determining marketing knowledge of the homemaker. Also, there may be need for more refinement of the method for determining orientation of the homemaker. In turn, significant relationships may be more directly observed. We might still assume that orientation of the homemaker is related to her marketing behavior. This has only been shown to the extent her nutritional knowledge is used in marketing. Assuming that marketing information would be more useful to her if she had more exact information we also can assume that it would then be significantly related to her orientation.

Response to Mass Media

Since the number of homemakers who saw or heard the programs and materials used in the mass media test

TABLE 10. CHI SQUARES IN SAMPLE II SIGNIFICANT AT 5 PERCENT AND 1 PERCENT LEVELS

Variables*	Degrees of freedom	Calculated X ²	Percentile values of X ² distribution	
			X ² .95	X ² .99
			Nutritional knowledge and	
Number newspapers read regularly	8	21.0	15.5	20.1
Frequency food section read	8	17.9	15.5	**
Number who read column by marketing specialist	4	51.6	9.5	13.3
Last time column by specialist was read	6	58.8	12.6	16.8
Age of the homemaker	16	29.1	26.3	**
Education of the homemaker	16	117.5	26.3	32.0
Number in the household	16	34.7	26.3	32.0
Family income	16	112.9	26.3	32.0
Per capita income	15	99.8	25.0	30.6
Marketing knowledge and				
Number who read test column	6	26.2	12.6	16.8
Last time column by specialist was read	4	20.7	9.5	13.3
Race	5	18.4	11.1	15.1
Education of homemaker	12	59.4	21.0	26.2
Family income	16	51.3	26.3	32.0
Per capita income	20	39.0	31.4	37.6
Orientation of homemaker and frequency of reading food section				
Education of homemaker and frequency recipes from TV were tried	4	10.4	9.4	**
Number of newspapers read by homemaker	4	35.8	9.4	13.3
Number who read test column	3	41.3	7.8	11.3
Number of households with radio	3	16.2	7.8	11.3

*Other tests gave chi squares less than X² .95.

**Chi squares larger than calculated X².

was small, no conclusive results can be reported. This suggests the need for a study that would be limited to those actually participating in the media programs. The success of such a study has been demonstrated by the significant relationships found with those who read the marketing column used in the experimental programs. Eighteen to 27 percent of the respondents read the column. Consequently, significant results were obtained in

the number who remembered seeing the experimental column. Smaller percentages heard the radio program and saw the TV program, and significant results were not obtained with the chi square analysis. However, percentage calculations indicated a high percentage of listeners to the programs remembered the specific experimental programs. With a larger participating sample, significant relationships might be expected.



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