

CONSUMER USE OF FOOD LABELS

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CONSUMER USE OF FOOD LABELS

An Abstract
Presented to the
Graduate and Research Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Health and Physical Education

by
Marcia Santulli-Senn

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ABSTRACT

The researcher attempted to determine whether a selected population of subjects uses nutrition information on food labels, whether current information was sufficient for their use, whether these subjects would use the new proposed food label, and whether the new proposed food label would increase awareness of nutritional values in the food choices of the subjects. The participants (N=129) were surveyed at the entrance of a grocery store. A questionnaire was developed which included demographic information along with eleven questions. The first six questions were multiple choice and asked about the subject's knowledge and beliefs regarding information on food labels. Five questions asked the participants to choose all responses with which they agreed. Three of the five questions asked the subjects to compare an example of a current food label to a new proposed food label. The results revealed that subjects use nutrition information on food labels and that current food labels were sufficient for their use. Also, the results revealed that the new proposed food label was clearer, would assist the subjects in making more educated choices, and the amount of information would be more useful.

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To the Graduate and Research Council:

I am submitting herewith a Thesis written by Marcia G. Santulli-Senn entitled "Consumer Use of Food Labels." I have examined the final copy of this paper for form and content and I recommend that it be accepted for the degree of Master of Science, with a major in Health and Physical Education.

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CHAPTER 1

Introduction

During the past few years, many consumers have become increasingly concerned with nutrition and its relation to overall health. Many people are more interested in knowing how their nutrition relates to disease processes, and, as a result, consumers have found it difficult to interpret the information on current food labels. Thus, consumers have demanded a more useful label with relevant information which they can interpret easily for their own use.

Food labeling began more than 80 years ago with the passage of the Pure Food and Drug Act, 1906 (PFDA) as an attempt to curb diseases related to deficiencies in the diet (The American Dietetic Association, 1989). The Food and Drug Administration oversees all food labeling except meat, poultry, and the products which are governed by the Department of Agriculture (Crane, Behlen, Yetley, & Vanderveen, 1990).

During the 1969 White House Conference on Food, Nutrition, and Health, recommendations were made that would make food labels reflect the nutritional components of foods (Federal Register, 29488). In the early 1970s, food labeling was expanded by the creation of a formal nutrition label (Fullmer, Geiger, & Parent, 1991).

Nutrition labeling was voluntary to manufacturers except in cases when a nutrient was added or a nutrition claim was made. When this occurred, food labeling was mandatory (Federal Register, 29488). The mandate was viewed as a positive advancement in educating consumers with regard to nutritional food choices, but, as a result, the legislation spawned such health claims as "no cholesterol" (Fullmer, et al., 1991). When the Food and Drug Administration adopted the food labeling legislation in 1973, numerous requests were made to make all food labeling mandatory, but this was not approved since too little was known about the content of foods and many manufacturers were not able to make nutritional determinations of their products (Federal Register, 29491).

Many advances have been made since the 1970s legislation. In 1987, the Food and Drug Administration proposed to allow health claims on food labels if the claims were accurate and supported by scientific research (Barrett, 1987). Senator Howard Metzenbaum and Representative Henry Waxman introduced the Nutrition Labeling and Education Act of 1989 (Consumer Reports, 1990). The new law was passed and signed by President George Bush on November 8, 1990. According to the new law, nutrition labels on food products must reflect "per serving: calories, calories from fat, total fat, saturated fat, cholesterol, sodium, total carbohydrates, complex

carbohydrates, sugars, dietary fiber, and total protein" (National Dairy Council, 1991). The Act mandated that the Food and Drug Administration adopt a new food label by November, 1991, and, subsequently, that food labeling would become mandatory in May, 1993 (Federal Register, 5176).

Statement of the Problem

Many consumers felt that current food labels were insufficient for their use. Current labels were difficult to interpret for many consumer's personal use.

Purpose of the Study

The purpose of this study was to answer four specific questions relative to food labeling: (1) did the subjects use food labels, (2) is the current label sufficient for participant's use, (3) would the subjects make better use of the more detailed and pertinent information, and (4) does the new proposed label increase awareness of nutritional values in the food choices of the subjects.

CHAPTER 2

Review of the Literature

Gorman (1991) states that one-half of all consumers use food labels to assist them in the decision of which product to purchase. FDA Consumer (1990) reports over 50% of consumers look at food labels for nutrition information. Hellmich and Healy (1991) found seven out of ten shoppers look at the nutritional label the first time they buy a product. In a report prepared by the National Restaurant Association, the writer indicated that 70-80% of consumers use nutrition information on food packages (Current Issues Report, 1986).

Numerous Food and Drug Administration surveys (Lecos, 1988; Federal Register, 29487) reflect the number of consumers using ingredient lists on food labels. In 1978, 78% of consumers surveyed used ingredient lists. The figure increased by 1% in 1986, and, in 1986, 44% of consumers used ingredient lists to "avoid and/or limit " their diets as compared to 27% in 1978 (Lecos, 1988). Terry, Oakland, and Ankeny (1991) surveyed over 300 males and 38% reported use of food labels to avoid saturated fat in their diet.

As more detailed nutrition information becomes available, nutritional experts advise that the label can be

used as a tool to inform consumers of products which will enhance good health (American Dietetic Association, 1988). Other experts believe that labels on foods should be a tool for nutrition education (American Institute of Nutrition and The American Society for Clinical Nutrition, Inc., 1990). David Kessler, Commissioner of the Food and Drug Administration reported, "Consumers want, and they deserve, more accurate and useful information...FDA's job is to make sure that the information presented on the food label is balanced," (FDA Consumer, 1991, p.11). Contento and Murphy (1990) stated that many people change their diets based on nutrition information they read. The Food and Drug Administration, in the 1986 Health and Diet Survey, reported more consumers used labeling on food products to avoid preservatives, sodium, fat, and cholesterol. Of the 928 consumers surveyed, 40% stated they frequently utilize nutrition labels on foods to assist in their product selection. A majority of the readers surveyed rated current labels as fair; however, only one out of nine rated the current labels as excellent (Consumer Reports, 1990).

During the 1980s, public awareness shifted from dietary deficiencies to the relationship between diet and health (Federal Register, 29478). Fullmer, et al., (1991) asserted that if a statement appears on a food label, consumers assume it is true and correct. Selected consumers have stated that their interest in food labels

reflects their attitudes on how certain foods apply to recommendations for healthy diets (Federal Register, 29479).

The Food and Drug Administration (Federal Register, 29487) has held public hearings throughout the country to assist them in determining what changes are needed to make food labels more coherent to the American consumer. Hundreds of people testified and approximately one-third were private citizens with personal concerns. Over 7,000 written responses were received from consumers, public interest groups, professionals in related fields, state and local officials, and representatives of the food industry. Fifty district consumer exchange meetings were held in 22 states with 1500 people participating. The Food and Drug Administration specifically asked: 1) if revisions should be made for food labels, 2) should the format of labels be changes, 3) should ingredient labeling be revised, 4) should definitions for food descriptors be used, and 5) how to allow manufacturers to use health messages on food labels. As a result of these hearings, proposals for new labeling recommendations came from public comments (FDA Consumer, 1990).

The American Dietetic Association (1989) asserted the public should be able to make judgements on nutrition, and food labeling should be based on accurate information. Nutrition labeling should make it easier for the consumer

to make informed choices and promote a better nutritional status. The American Dietetic Association (1990) professed that it would be in the consumer's interest if the new legislation included a consumer education provision.

Judgments for consumer interest in food labeling are varied. Saunders and Rahilly (1990) used the Azjen and Fishbein behavioral theory model to report that many people make behavioral changes in their diet due to their social support systems. Courington (1989) reported that a new survey reflects four very diverse groups of American consumers, and the basis of groupings is in direct relation to their dietary habits and not geographical or ethnic backgrounds.

Writers evidenced that consumers utilized data on food labels although the information was considered inadequate for their use. The new proposed food label will increase consumer awareness of nutrition and will assist them in their selection of nutritional food choices.

CHAPTER 3

Methods

Design of the Study

A descriptive design was used to determine the variables related to the subjects' use of food labels. The variables considered were use of food labels by the subjects, whether labels were sufficient for subjects' use, whether the subjects would use the new proposed label, and if the new proposed label would increase awareness of nutrition in their food choices.

A questionnaire (Appendix A) was developed as a survey tool using close-ended multiple choice responses. A signed informed consent letter (see Appendix B) was obtained from each subject prior to their completion of the questionnaire. One hundred, twenty-nine subjects who shopped at Hilltop Market, a local rural grocery store, located in Clarksville, Tennessee, responded to items on the survey instrument. As each of the subjects entered the store they were asked to complete a questionnaire and sign an informed consent letter. As each subject completed the survey, the next consumer to enter the store was asked to participate. The surveys were distributed on four non-consecutive Saturdays in October and November between the hours of 11:00 a.m. and 6:00 p.m. Saturday was chosen to

reflect a more diverse population than what would be obtained at other times of the week. The goal was to obtain between 100 and 150 completed questionnaires. This was accomplished through a discussion with 165 consumers.

The first section of the questionnaire was not numbered because it was designed to gather demographic data that included household size, total family income, gender, and who performed the majority of food shopping for the family. The subjects were instructed to circle the response which best reflected their attitude toward food labeling on the first six questions. The next two questions, seven and eight, asked the respondents to circle all the responses with which they agreed. The remaining questions, nine, ten, and eleven, asked the consumer to compare an example of a current food label to an example of a new proposed food label. The last three questions also asked the respondent to circle all responses with which they agreed. The number of responses for each choice was tabulated for each question. The choices were: sufficient for your use, too much information for your use, insufficient for your use, none of the above, and don't know.

CHAPTER 4

Results

Data collected for this study consistently agreed with the literature cited. The study population (N=129) consisted of 33 (25%) males and 95 (74%) females. One respondent (1%) did not indicate gender. A total of 165 consumers were asked to participate. This yielded a response rate of 78%.

Thirty-four (26%) of the subjects were 18 to 24 years of age. Forty-nine (38%) of the respondents were 25 to 35 years of age. Twenty-two (17%) of the subjects were 36 to 45 years of age. Eleven (9%) of the respondents were 46 to 55 years of age and 13 (10%) were over 55 years old.

Fifty-nine (46%) of the respondents indicated their household size was one or two members. Fifty-three (41%) of the respondents had a household size of three or four members. Fourteen (11%) of the subjects surveyed indicated a household size over four and three (2%) did not indicate a household size.

Five (4%) of the respondents indicated their total family income was up to \$8,500. Twenty-six (20%) of the respondents indicated their total family income was between \$8,501 to \$15,500. Thirty-two (25%) of the subjects stated their total family income fell between \$15,501 and \$24,500.

Nine (7%) of the subjects indicated their family income was between \$24,501 to \$30,000. Forty-nine (38%) of the respondents surveyed stated their total family income was over \$30,000. Eight (6%) of the subjects did not indicate their total family income.

Eighty (62%) of the respondents indicated they did the majority of food shopping. Twenty-two (17%) of the subjects surveyed indicated their spouse performed the majority of food shopping and twelve (9%) indicated another person other than their spouse performed the food shopping. Fifteen (12%) of the respondents did not indicate who performed the majority of food shopping chores.

Question Number 1 asked the participants where they look for nutrition information. A large majority (ninety-three or 72%) of the subjects surveyed looked to food package labels for nutrition information. Twenty-one (16%) of the respondents stated they did not use nutrition information on food labels. Nine (7%) of the subjects indicated that other people provide their nutrition information. Four (3%) of the respondents stated they look to other areas for nutrition information than what was provided on the questionnaire. One (1%) indicated they used government pamphlets and the remaining one (1%) surveyed used courses, seminars and lectures for nutrition information.

Table 1

Manner in Which Consumers Look for Nutrition Information

Response	N	Percent
Food package labels	93	72%
Other people	9	7%
Cookbooks	0	0%
Government pamphlets	1	1%
Courses, seminars, lectures	1	1%
Don't use nutrition labeling	21	16%
None of the above	<u>4</u>	<u>3%</u>
Total	129	100%

Question Number 2 was designed to determine whether the subjects thought that current food labels was sufficient for their use. Fifty-three (41%) of the subjects surveyed indicated that current food labeling was sufficient for their use in comparison to forty-two (33%) who stated current labeling was insufficient. The number of respondents who stated they did not use food labeling was twenty-one (16%). Eight (6%) of the respondents stated there was too much nutrition labeling on food products. Four (3%) of the respondents did not know whether current food labels were sufficient and one (1%) indicated that none of the answers provided were sufficient.

Table 2

Adequacy of Current Food Labeling

Response	N	Percent
Sufficient	53	41%
Too much information	8	6%
Insufficient	42	33%
Don't use labeling	21	16%
None of the above	1	1%
Don't know	<u>4</u>	<u>3%</u>
<u>Total</u>	<u>129</u>	<u>100%</u>

Question Number 3 attempted to determine whether the subjects knew what the term "no salt/sugar added" meant in regard to the statement when it appeared on a food label. A majority of the respondents, seventy-three (57%) indicated they assume when a product is labeled "no sugar or salt added" it meant none was added during processing. Almost one quarter of the subjects, twenty-two (17%) assumed it meant there was zero sugar or salt in the product; whereas, nineteen (15%) assumed the amount of sugar or salt was very limited. A small number of respondents (ten or 8%) believed more information was needed. Three (2%) of the respondents stated they did not know, and two (1%) indicated that the natural product had zero sugar or salt before processing.

Table 3

Respondents Interpretation of "No Sugar/Salt Added"

Response	N	Percent
It contains zero	22	17%
It is very limited	19	15%
None added during processing	73	57%
Natural product has zero before processing	2	1%
More information is needed	10	8%
None of the above	0	0%
Don't know	<u>3</u>	<u>2%</u>
Total	129	100%

Question Number 4 was designed to determine whether the subjects knew what the term "light/lite" meant in regard to food labeling. Less than half of the respondents, forty-seven (36%), believed if a food label carried the claim "light/lite" it was low in calories; whereas, fifty-one (41%) of the subjects surveyed believed more information was needed. A small number, twelve (9%) stated the product would be low in saturated fat. Seven (5%) of the respondents surveyed stated the product would have no cholesterol; whereas, another seven (5%) of the respondents indicated they did not know. Four (3%) of the subjects stated that none of the answers provided were

sufficient and one (1%) indicated the product would be low in sodium.

Table 4

Interpretation of Food Labels Which Claim the Product is "Light/Lite"

Response	N	Percent
Low in calories	47	36%
More information is needed	51	41%
Low in saturated fat	12	9%
Contains no cholesterol	7	5%
Don't know	7	5%
Low in sodium	1	1%
None of the above	<u>4</u>	<u>3%</u>
Total	129	100%

Question Number 5 asked the subjects what they assumed from a product labeled "cholesterol free" with regard to the product's saturated fat content. When asked whether a product labeled "cholesterol free" could determine a product's saturated fat content, sixty-eight (53%) of the respondents stated that they thought the product would be low in comparison to twenty-eight (22%) who stated the saturated fat content would be zero. Twenty (15%) of the respondents stated more information was needed. Ten (7%) of the subjects indicated they did not know. Two (1%) stated none of the answers were sufficient

and one (1%) indicated that the saturated fat content would be high.

Table 5

Possible Assumptions When a Product is Labeled "Cholesterol Free" With Regard to Its Saturated Fat Content

Response	N	Percent
Saturated fat is low	68	53%
Saturated fat is zero	28	22%
More information is needed	20	15%
Saturated fat is high	1	1%
Don't know	10	7%
None of the above	<u>2</u>	<u>2%</u>
Total	129	100%

Question Number 6 asked the subjects to choose what was meant on a food label when the number of calories was listed. One hundred fourteen of the subjects (88%) stated the amount referred to the designated serving size. Six (5%) of the respondents believed the calories referred to the entire package. Eight (6%) of the subjects said they did not know and one (1%) stated none of the answers provided were sufficient.

Table 6

Interpretations of The Number of Calories Listed on a Food Label

Response	N	Percent
Entire contents of package	6	5%
One-half of package content	0	0%
Designated serving size	114	88%
More information is needed	0	0%
Don't know	8	6%
None of the above	<u>1</u>	<u>1%</u>
Total	129	100%

Each subject was instructed to respond to every answer agreed with for the remaining questions. Question Number 7 asked the subjects to determine how the ingredient list on a food label assisted them. Fifty-two (22%) of the respondents showed that they felt the ingredient list assisted them in limiting sugar. Sixty-five (27%) of the respondents thought that the ingredient list helped in limiting fat/cholesterol. Thirty-three (14%) of the subjects believed that the ingredient list assisted them in limiting additives/preservatives. Twenty-two (8%) of the respondents indicated they did not use the ingredient list.

Six (3%) stated none of the answers provided were sufficient and one (1%) said they did not know.

Table 7

Assistance Provided by the Ingredient List

Response	N	Percent
Limiting salt/sodium	59	25%
Limiting sugar	52	22%
Limiting fat/cholesterol	65	27%
Identifying preservatives/additives	33	14%
Don't use	22	8%
Don't know	1	1%
None of the above	<u>6</u>	<u>3%</u>
Total	238	100%

Question Number 8 instructed the subjects to determine their attitude toward diet-disease statements on a food label. There were 138 responses to Question Number 8. Forty-three (31%) of the respondents stated that if a diet-disease statement appeared on a food label it was there to influence them to buy the product. Thirty-two (23%) of the responses showed that the subjects believed the statement helped them make informed nutrition selections. Twenty-four (17%) did not use diet-disease statements in their choice of purchase. Twenty-one (15%) believed the diet-disease statement was accurate. Twelve (9%) of the

respondents thought the food label was an appropriate place for such a statement. Four (3%) of the subjects indicated none of the answers provided were sufficient and two (2%) of the respondents indicated that such a statement would be inaccurate.

Table 8

Interpretation of Diet-Disease Statements, e.g., Good Source of Fiber, Which Appear on a Label

Response	N	Percent
It is accurate	21	15%
It is inaccurate	2	2%
It is to get me to buy the product	43	31%
It is to help me make informed choices	32	23%
It is an appropriate place for a statement	12	9%
I don't use it	24	17%
None of the above	<u>4</u>	<u>3%</u>
Total	138	100%

Question Number 9 asked the participants to determine the biggest positive changes from an example of a current food label to an example of a new proposed food label. There were 175 responses to Question Number 9. Fifty-four (31%) of the subjects stated the biggest positive change when comparing the current and new proposed label would be

that the information was clearer. Forty-nine (28%) of the respondents stated that the amount of information on the new proposed label was more useful. Forty-five (26%) of the subjects indicated they could make more educated choices with the new proposed food label. Fifteen (9%) of the respondents claimed the current food label was sufficient for their use. Six (3%) of the subjects stated they did not know. Five (2%) of the respondents said there were no positive changes and one (1%) of the subjects indicated that none of the answers were sufficient.

Table 9

Interpretation of Changes from Current to New Proposed Label

Response	N	Percent
I can make more educated choices	45	26%
The information is clearer	54	31%
The information is more useful	49	28%
No positive differences	5	2%
Current label is sufficient	15	9%
Don't know	6	3%
None of the above	<u>1</u>	<u>1%</u>
Total	175	100%

Question Number 10 instructed the subjects to compare the current food label example to the new proposed food

label example. There were 165 responses to Question Number 10. Fifty-seven (34%) of the respondents indicated that the information was clearer with regard to the ingredient list on the new proposed food label. Fifty-two (32%) of the participants indicated that the information was more useful. Thirty-six (22%) of the respondents stated the ingredient list was sufficient for their use. Five (3%) of the subjects indicated there was no significant difference and another five (3%) stated they did not know. Two (1%) of the respondents stated that none of the answers provided was sufficient.

Table 10

Level of Clarity of the New Label Regarding Ingredients

Response	N	Percent
I can make more educated choices	36	22%
Information is clearer	57	35%
Information is more useful	52	32%
No significant difference	5	3%
Current label is sufficient	8	5%
Don't know	5	2%
None of the above	<u>2</u>	<u>1%</u>
Total	165	100%

Question Number 11 instructed the participants to compare the current food label example to the new proposed

food label example with regard to the fat content. There were 174 responses to Question Number 11. Fifty-three (31%) of the subjects indicated that with regard to the fat content on the new proposed food label, the information provided was clearer. Forty-nine (28%) of the respondents stated they could make more educated choices. Forty-seven (27%) of the subjects indicated that the amount of information given was more useful. Fifteen (9%) of the respondents stated the current label was sufficient for their use. Six (3%) of the respondents stated there was not a significant difference. Four (2%) of the subjects surveyed indicated they did not know.

Table 11

Level of Clarity of the New Label Regarding Fat Content

Response	N	Percent
Can make more educated choices	49	28%
Information is clearer	53	31%
Information is more useful	47	27%
No significant difference	6	3%
Current label is sufficient	15	9%
Don't know	4	2%
None of the above	<u>0</u>	<u>0%</u>
Total	174	100%

CHAPTER 5

Discussion

The author attempted to determine whether selected consumers use nutrition information on food labels, whether current labels were sufficient for their use, whether these consumers would use the new proposed label, and whether the new proposed food label would increase awareness of nutritional values in the food choices of the subjects. Based on the results of the study, a large majority of respondents stated that they look to food labels for their nutrition information. Almost one-half of the subjects surveyed indicated that current food labels were sufficient for their use; however, in comparison, when asked to compare the current food label to the new proposed label, the majority of responses were overwhelmingly positive toward the new proposed label. One-half of the respondents indicated the new information was clearer than the old. Over half of the subjects indicated that the new proposed label would be more useful and the ingredient list was clearer.

One-half of the respondents that knew if a product was labeled "no sugar or salt added" it meant none was added during the processing of the product. Those surveyed seemed to be confused about a product claiming it was

"light/lite". Less than half associated the claim with regard to calorie content; whereas, one-third stated they would need more information. As one can assume from a product with such a claim, it is not clear whether the product is low in calories, has a light texture, color or a light, not heavy, taste.

Almost one-half of the respondents incorrectly assumed that if a product was labeled "cholesterol free" it would be low in saturated fat. Almost one-quarter of the subjects believed the product would have no saturated fat content. As this one particular question shows, many respondents do not understand the difference in cholesterol and saturated fat. While a product may be very low or have no cholesterol, it may have a high saturated fat content.

Labels currently show the number of calories in a designated serving size. Of the people surveyed, almost all were knowledgeable of this practice. The responses for this question indicated that some subjects are not aware of this current labeling practice.

With regard to the ingredient list on food labels, the majority of subjects utilized them to assist in limiting salt/sodium, sugar, fat/cholesterol, additives, and/or preservatives. While no absolute deductions can be made, it can be assumed these consumers are concerned with how much salt/sodium, sugar, fat/cholesterol, additives, and/or preservatives are consumed by themselves or their families.

The results of this study serve as evidence that selected consumers do look at the information provided on food package labels for their nutrition information. From this study, it is also believed that the subjects are lacking in nutrition education. This lack of nutritional knowledge can be seen through their inconsistencies when asked about their beliefs and attitudes toward food labeling.

The researcher has demonstrated that selected consumers are interested and concerned about their choices of food selections. Although this study did not look specifically at the existing health problems of the participants, it is apparent that concerns regarding salt, sugar and fat intake do determine their specific selections. In addition, the results can be used to show that some consumers do not consider any nutrition information when purchasing food items. This lack of consideration may be related to the consumer's age, current health conditions, level of nutrition education, or total family income.

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Terry, R. D., Oakland, J. J., & Ankeny, K. (1991). Factors associated with adoption of dietary behavior to reduce heart disease risk among males. Journal of Nutrition Education, 23(4), 154-159.

What's wrong with this label? (May, 1990). Consumer Reports, pp. 325-327.

APPENDIX A

PLEASE COMPLETE THE FOLLOWING INFORMATION FOR STATISTICAL PURPOSES ONLY: (Circle your responses)

Total household size: 1-2 3-4 over 4

Total household income: up to \$8,500
 \$8,501 to \$15,500
 \$15,501 to \$24,500
 \$24,501 to \$30,000
 \$30,001 and above

Your sex: Male Female

The person who does the majority of food shopping in
 your household: Yourself Spouse Other

Your age: 18-24 25-35 36-45 46-55 over 55

PLEASE CIRCLE ONE RESPONSE:

1. Where do you look for nutrition information?
 - a. food package labels
 - b. other people
 - c. cookbooks
 - d. government pamphlets
 - e. courses, seminars, lectures
 - f. I don't use nutrition information
 - g. none of the above
2. Is the information currently provided on food labels:
 - a. sufficient for your use
 - b. too much information for your use
 - c. insufficient for your use
 - d. I don't use nutrition information on food labels
 - e. none of the above
 - f. don't know
3. If a product is labeled "no sugar or no salt added,"
 you can assume:
 - a. it contains zero
 - b. it is very limited
 - c. none was added during processing
 - d. the natural product has zero before processing
 - e. more information is needed
 - f. none of the above
 - g. don't know

4. If a current food label claims it is "light/lite," it must be low in:
- calories
 - saturated fat
 - cholesterol
 - sodium
 - none of the above
 - more information is needed
 - don't know
5. When a current product is labeled "cholesterol free," what can you assume about its saturated fat content:
- it is low
 - it is high
 - it is zero
 - more information is needed
 - none of the above
 - don't know
6. When the number of calories is listed on a current food label, it refers to:
- the entire content of the package
 - one-half of the contents of the package
 - the number of calories per designated serving size
 - more information is needed
 - none of the above
 - don't know

CIRCLE ALL THE RESPONSES YOU AGREE WITH

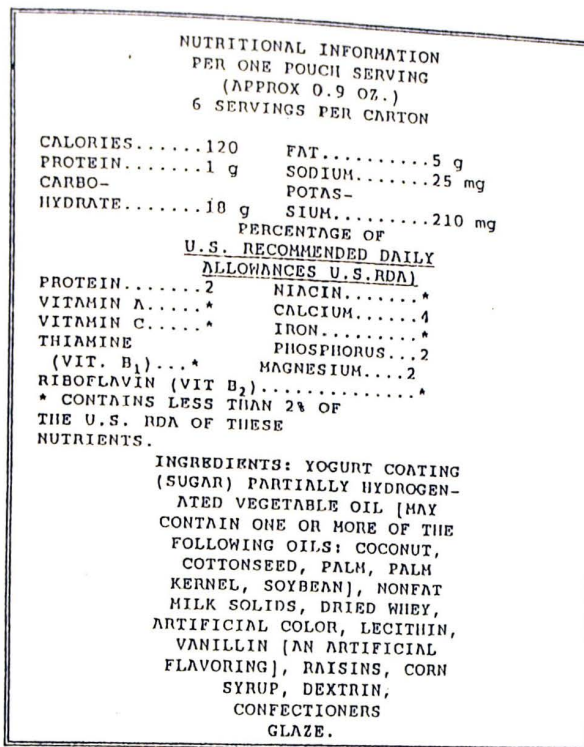
7. The ingredient list on current food labels assist me:
- in limiting salt/sodium
 - in limiting sugar
 - in limiting fat/cholesterol
 - in identifying preservative/additives
 - I don't use ingredient lists
 - none of the above
 - don't know
8. If a diet-disease statement (ie, "Good source of fiber") appears on a current food label:
- I think it is accurate
 - I think it is inaccurate
 - I think it is to get me to buy the product
 - I think it is there to help me make informed nutrition selections
 - I think it is an appropriate place for such a statement
 - I don't use it in my choice of purchase
 - none of the above

PLEASE REFER TO THE LABEL EXAMPLES ON THE LAST PAGE FOR
YOUR RESPONSE. CIRCLE ALL ITEMS YOU AGREE WITH.

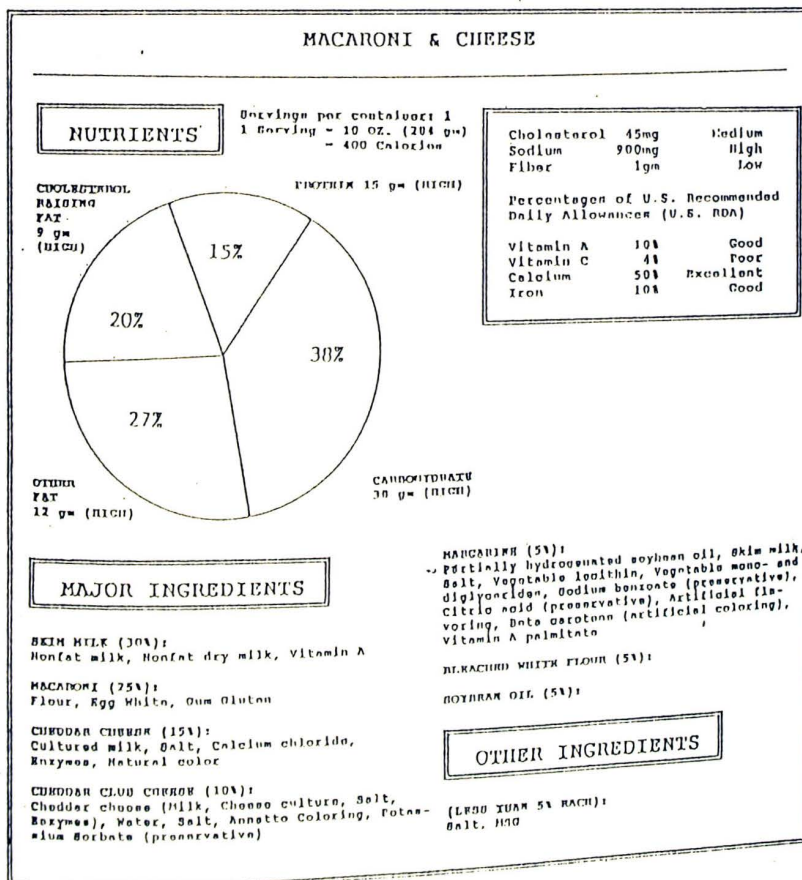
9. What do you see as the biggest positive change in the new label as compared to the current one?
 - a. I can make more educated choices
 - b. the information is clearer
 - c. the amount of information given is more useful
 - d. I do not see any positive differences
 - e. the current label was sufficient for my use
 - f. none of the above
 - g. don't know

10. With regard to the ingredient list only, with the new label:
 - a. I can make more educated choices
 - b. the information is clearer
 - c. the amount of information given is more useful
 - d. I don't see a significant difference
 - e. the current label was sufficient for my use
 - f. none of the above
 - g. don't know

11. With regard to the fat content only, with the new label:
 - a. I can make more educated choices
 - b. the information is clearer
 - c. the amount of information given is more useful
 - d. I don't see a significant difference
 - e. the current label was sufficient for my use
 - f. none of the above
 - g. don't know



EXAMPLE OF A PROPOSED FOOD LABEL



APPENDIX B

Dear Consumer:

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As a part of the research for my Master of Science degree in Health and Physical Education, I am conducting a study of consumers' use of food labels. The attached questionnaire has been designed to retrieve important information relating to your use of food labels, whether the label is sufficient for your use and whether you will use the new proposed label.

I would greatly appreciate your cooperation in completing the questionnaire. All of your responses will be confidential and anonymous. At no time will you be identified nor will anyone other than the investigator have access to your responses. Your participation is completely voluntary and you are free to terminate your participation at any time without penalty. Please do not write your name on the questionnaire. When you have completed the questionnaire, please put it in the folder labeled "RESPONSES." If you would like the results of our survey mailed to you, please complete the address portion at the bottom of this letter.

This study has been endorsed by the Departments of Health and Physical Education under the direction of Dr. A. Rae Hansberry. If you have any questions or comments, you may contact the department, Dr. Hansberry, or myself.

Thank you for your participation.

Sincerely,

Marcia G. Santulli
Graduate Student
4788 Mary Frances Lane
Cumberland City, TN 37050
(615)-387-4179

NAME (PRINT) _____

SIGNATURE _____

DATE _____

ADDRESS (OPTIONAL) _____
