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Consumer Perceptions of Health Claims in Advertisements and on Food Labels

It has been hypothesized that consumers are more skeptical of health claims made in food ads than of health claims made on food labels. Therefore, the current research explores consumers' skepticism of health claims when the source of such claims is identified as a food ad or a food label. The study also examines whether consumers' beliefs are affected by nutrition information on food labels and whether health claims that have been challenged by the Federal Trade Commission (FTC) and by consumer groups are more likely to affect consumers' beliefs than are unchallenged health claims. The findings have implications for understanding the role of education in reducing consumer misperceptions of health claims.

Advertisers use a variety of media to communicate product benefits to a target audience. For example, television commercials may be used for product demonstrations, print advertisements may be used to communicate more detailed information and to establish a brand image, and product packaging may be used to attract consumers at the point of sale (Belch and Belch 1995). The use of these media are often coordinated into a single integrated communications campaign (Schultz, Tannebaum, and Lauterborn 1993).

One reason for using different media is that they serve different functions, they involve consumers in different ways, and they have varying levels of credibility. In a study of media involvement, the majority of consumers felt that magazines provided more specific information than other media. When seeking information on food, 41 percent of the adult consumers referred to magazines, 26 percent to newspapers, and 15 percent to television (Magazine Publishers of America 1991).

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While there is a long history of research on source effects in the psychology, advertising, and communications literatures, these studies have concentrated on the impact of the competence and trustworthiness of the spokesperson (Bush, Moncrief, and Zithaml 1987; Percy 1983). There is, however, little research on relative impact of various media on consumers' assessments of credibility of advertising content. Morris, Brinberg, and Plimpton (1984) found differences in consumer perceptions of prescription drug information labeled as an advertisement and information labeled as a leaflet that the doctor had left in the waiting room for patients to review. "Leaflets may have been more thoroughly read and integrated into existing memory schema" (Morris, Brinberg, and Plimpton 1984, 76). One reason for such a difference may have been the greater credibility of the leaflet, which had the doctor's implicit endorsement.

The current study focuses on the credibility of the food label and advertising as sources of product promotion. This is an issue of considerable interest because the Federal Trade Commission (FTC) regulates the advertising of food products, while the Food and Drug Administration (FDA) regulates the labeling of food products. While the FTC has sought to harmonize its enforcement policies with FDA's food labeling regulations (FTC 1994), there are some important differences in the regulation of health claims. For example, the FDA permits only seven health claims on labels, but the FTC allows other health claims if they are substantiated. Also, while FDA's regulations authorize the use of only certain terms for nutrient content claims on labels, the FTC permits non-FDA-approved synonyms.

One researcher commented, "Implicit in the regulatory differences is that consumers respond differently depending on where they obtain their information; however, this differential response has not been systematically researched" (Caudill 1994, 215). Thus, one issue of considerable interest is the possible difference in consumers' processing of information in advertising and on product labels. There are several studies showing that consumers are skeptical of advertising claims (Calfee and Ringold 1988) and that they tend to believe government-mandated information on food labels (Heimbach and Stokes 1979; Opinion Research Corporation 1990). Therefore, consumers may be more skeptical of advertising than of labeling. However, there are no published studies comparing the credibility of health claims in food advertising and on the front panel of food labels.

Understanding consumers' processing of health claims on product

labels must take into account that some consumers read the “objective” nutrition information that appears on the label’s back panel. These required nutrition disclosures may confirm or disconfirm the health claims made on the label’s front panel. Therefore, consumers’ responses to food labels are affected by the degree to which they rely on health claims and on nutrition information.

Another factor influencing consumers’ processing of health claims is the veracity of the claim. If a health claim is true, then the nutrition information is likely to confirm consumers’ initial impressions formed by exposure to the health claim on the label’s front panel. However, if the claim is untrue, the nutrition information is likely to disaffirm consumers’ initial impressions.

While some of these issues have been discussed in the popular press and legislation regulating health claims has been proposed in Congress, there are little empirical data relevant to this topic. This paper presents the results of an experimental study designed to determine if there are differences in consumer beliefs about the health claims when the source of such claims is identified as a food ad or a food label. The study also seeks to determine if the beliefs about health claims change when nutrition information is included and if there is a difference in beliefs about health claims that have been contested by the FTC and by consumer groups and those that are uncontested.

The next section presents an overview of relevant research on consumers’ processing of nutrition information. This is followed by the results of an experimental study conducted to assess consumers’ beliefs about health claims purportedly made in food advertisements and on food labels. Finally, the conclusions and implications for research and public policy are presented.

CONSUMERS’ BELIEFS ABOUT HEALTH CLAIMS

Credibility of Health Claims

Public opinion poll data collected over two decades by the Roper Organization consistently report that consumers are skeptical of advertising claims. For example, about half of consumers claim they are “not at all confident” that they “can depend on getting the truth in most advertising.” Also, about 60 percent of the public believes that business fulfills its responsibilities of “advertising honestly” either “not too well” or “not at all well.” Finally, over 75 percent of

the population concludes that “advertising hoodwinks consumers” (Calfee and Ringold 1988).

Consumers reported that mistrust of advertising claims has carried over into their perceptions about the veracity of health claims. For example, a *Washington Post* poll found that “only three percent of Americans believe that food manufacturers never make misleading claims about the health benefits of their products, while a third believe they make them ‘a lot’ ” (Sugarman and Morin 1992, E1). Also, only 15 percent of the public thinks that advertised health claims are accurate “most of the time.” About 30 percent of those interviewed believe that health claims are “almost never true” (Mueller 1991).

Despite this reported skepticism, studies have shown that advertised health claims can have an impact on consumers’ purchasing behavior. Levy and Stokes (1987) reported that sales of high-fiber ready-to-eat cereal products were influenced by advertising for Kellogg’s All-Bran, which featured health messages about the benefits of a high-fiber, low-fat diet for preventing some types of cancer. The market share of Kellogg’s All-Bran rose 47 percent in the 24 weeks following the introduction of this campaign. In addition, Ippolito and Mathios (1991) described the distributive effects of the advertising for All-Bran. “Informationally disadvantaged” segments that had responded less to government-generated information and to media publicity about the benefits of a high-fiber diet were more responsive to Kellogg’s health claims than were other segments. However, this literature fails to distinguish between the effects of health claims on labels and in advertising.

Nutrition Information and Health Claims

Numerous studies have focused on nutrition information and health claims. Most have examined consumers’ awareness, comprehension, and use of nutrition information. For example, Jacoby, Chestnut, and Silberman found that most consumers reported that they were aware of and intended to use nutrition information on food labels. However, the authors reported that “the vast majority of consumers neither use nor comprehend nutrition information in arriving at food purchase decisions” (1977, 126).

Russo *et al.* (1986) also found that displays of cereal brands’ “nutrition quotients” failed to influence consumers’ ready-to-eat

cereal preferences; however, disclosures of cereal brands' sugar content ("negative" information) caused consumers to switch to low-sugar cereals. In addition, Moorman (1990) found that nutrition disclosures that contain arousing and specific consequence information motivate consumers to process the information and to make better decisions. Burton and Biswas (1993) found that additional nutrition information recommended by the Nutrition Labeling and Education Act (NLEA) affected nutrition attitudes, perceptions, and self-reported purchase likelihood. Thus, the information content has an impact on consumers' motivation to use the information.

Most relevant to the current study are four studies that examine the impact of nutrition information on consumers' processing of health claims in food advertising. Brucks, Mitchell, and Staelin (1984) conducted an experimental study to examine the effect of nutrition information formats in print advertising on consumers' perceptions of products' nutritional quality. They found that consumers' perceptions of products' nutritional quality were influenced by exposure to print ads with "simplified" nutrition information. However, ads containing more complex nutrition information disclosures did not affect consumers' perceptions. The authors report that "presenting a large amount of nutritional information may have resulted in an 'information overload' condition" (1984, 14). Also, only consumers who had high levels of nutritional knowledge were able to interpret and to use nutrition information to form product judgments.

Ford *et al.* (1996) reported that health claims and nutrition information on food labels have independent effects on consumers. The presence of a health claim did not influence consumers' processing of nutrition information when both sources of information were available.

In addition, Moorman (1990) found that "reference information" in the form of a recommended daily allowance (RDA) percentage for a target nutrient, such as 50 percent RDA for Vitamin B6 or sodium, was not used extensively by consumers in forming judgments about the nutritional value of products.

Finally, Scammon (1977) found that nutrition information in televised food commercials affected consumers' perceptions of the nutritiousness of different brands of peanut butter. However, consumer perceptions and product choices were affected only when nutrition information was presented in an adjectival rather than in a numerical format. The more complex numerical disclosures were difficult for

consumers to process when they appeared in television ads because consumers could not control the amount of time the disclosures appeared on the screen.

Therefore, these studies show that nutrition information affects consumers' perceptions under some circumstances. However, with the exception of the Brucks, Mitchell, and Staelin (1984) and the Ford *et al.* (1996) studies, previous research does not examine whether consumers' perceptions will change if nutrition information is in direct conflict with the health claim. Also, the studies examined health claims and nutrition information either in advertisements or on labels. However, no comparisons were made about the impact of such information presented in advertisements and on product labels.

RESEARCH QUESTIONS

While studies have examined varying formats for presenting nutrition information, research has not compared the relative impact of presenting the same information in food advertisements and on food labels. The current study was designed to determine, Are consumers more skeptical of health claims when the source is identified as a printed food advertisement rather than as a food label? Or are there no differences in consumer perceptions when the source of the health claim is identified as a printed food ad or a food label? Thus, to address this issue, the first research question is

- 1. Do consumers' beliefs about food products differ when the source of a health claim to which consumers are exposed is identified as a printed food advertisement and as a food label?**

While food labels are required to include nutrition information, some consumers ignore this information and rely primarily on advertising claims and on personal experience in forming judgments about food products. On the other hand, some consumers consult nutrition information and use this "objective" information along with advertising claims and with personal experience in making food purchase decisions. Therefore, the current study compares consumers' beliefs about food products either when consumers are exposed to health claims without nutrition information or are exposed to health claims along with nutrition information. Thus, the second research question is

2. **Do consumers' beliefs about food products differ when consumers are exposed to health claims on food labels that include nutrition information versus when consumers are exposed to health claims on food labels that do not include nutrition information?**

While consumers' processing of nutrition information and health claims has been examined previously, the nutrition information was usually consistent with the health claims presented to consumers. However, these studies do not shed much light on the problem of health claims that are perceived as potentially misleading. Therefore, the current study examines the impact on consumer beliefs of including nutrition information along with health claims that have been contested by the FTC or consumer groups. Thus, the third research question is

3. **Do consumers' beliefs about attributes that should be affected by "challenged" health claims differ when consumers are exposed to health claims that include nutrition information versus health claims that do not include nutrition information?**

METHODOLOGY

Sample

One hundred and eighty adult females who were their households' primary food shoppers were recruited at two large regional shopping malls in a major metropolitan area on the East Coast. A quota sample was used so that for each of the three treatments, half of the respondents selected were between the ages of 21 and 35 years old and half of the respondents were 35 years of age and older. This procedure was used to ensure that there was sufficient representation of both younger and older respondents. Approximately 15 percent of the respondents were African-American, Asian, or Hispanic. A lottery ticket was offered as an incentive to participate.

Design

Participants were assigned randomly to receive information that was identified as emanating from three sources: an advertisement (60

consumers), a product label¹ (60 consumers), and a product label with nutrition information (60 consumers). In each condition, subjects were exposed to ten stimuli: either ten “mock” advertisements or ten “mock” product labels, depending on the condition to which the participant was assigned. The order in which the stimuli were presented was rotated to avoid order bias. Actual product claims were utilized in the study and the brand names were constant across all three treatments.

Products and Health Claims

Two brands from each of the following product categories were selected: cereal, peanut butter, soup, frozen entrees, and margarine. For each category, one of the brands made a health claim that had been contested by a consumer group or the FTC, and one of the brands made a health claim that was uncontested.² The brands and the corresponding contested health claims were Total cereal (“An excellent source of calcium”), Jif peanut butter (“More fiber than broccoli”), Campbell’s Special Request chicken noodle soup (“A diet low in fat and cholesterol may reduce the risk of some heart disease”), Lean Cuisine oriental beef (“Never more than a gram of sodium”), and Mazola margarine (“Reduced cholesterol”).

A control brand with similar product characteristics and nutrients as the brand with the contested health claim was selected for each of the products. The control brands with Special K cereal, Peter Pan peanut butter, Pritikin chicken soup with pasta, Healthy Choice beef pepper steak, and Promise margarine.

Advertisements and Labels

The advertisements and product labels were “mockups” of actual advertisements and labels. The advertisements and labels were created from parts of actual ads and labels. The nutrition information was taken from the back panel of the food products. “Advertise-

¹A label with a health claim but without nutrition information could not occur in an actual shopping environment (before NLEA) because the existence of a health claim on a product label would “trigger” the requirement that a manufacturer disclose nutrition information on the label.

²The majority of product claims that were contested by consumer groups and/or government did have nutrition labeling.

ment” or “Product Label” was printed in large letters at the top and bottom of the ten ads and labels. Color copies of the “mock” advertisements and “mock” labels were used in the study.

Procedure

Before data collection began, a pilot test was conducted at one of the mall intercepts where the surveys were to be administered. Ten subjects were recruited and each subject was taken to an office in the mall where the questionnaire was administered. No problems were encountered with the subjects’ understanding or completion of the survey. Each respondent took eight to 12 minutes to complete the survey.

In the actual study, each subject was brought into an office and was explained the purpose of the study and the procedure. “This study involves your reaction to information taken from a number of food advertisements (labels). We will be showing you these advertisements (labels) and asking you a number of questions about them. Please take as long as necessary to become familiar with the information in these advertisements (labels).”

Then, each participant was given a copy of each stimulus and was told to look at the material for as long as she wished. Once the participant was finished looking at the stimulus, the information was removed and a series of questions were asked to measure her beliefs about the brand on nine health-related attributes: calcium, vitamins, protein, fat, calories, cholesterol, fiber, sodium, and heart disease. For example, the respondent was asked, “Based on the information in the ad (label) for Total cereal, tell me the number between one and seven that indicates how strongly you agree or disagree that Total cereal is an excellent source of calcium.”

Each respondent was shown a card with the scale points listed from one (strongly disagree) to seven (strongly agree). This procedure was repeated for each of nine attributes. However, the statement was reworded according to the attribute in question. For example, each participant was told to give a number between one and seven that indicated how strongly she agreed or disagreed that Total cereal “is low in fat” or that Total cereal “reduces the risk of heart disease.”

Next, the respondent was shown the second stimulus (ad or label) and was asked to rate the product on the same nine health-related attributes, using the same seven-point scale. The process continued

for ten products. After exposure to ten stimuli and after all belief ratings (90) were obtained, each respondent answered a series of questions about her shopping habits, such as the importance and use of nutrition information. Demographic data were collected at the end of the questionnaire.

RESULTS

The demographic characteristics of the three treatment groups were compared. ANOVA and chi-squared tests revealed that there were no statistically significant differences across treatment groups. Table 1 reports the demographic characteristics of the three treatment groups.

TABLE 1
Demographic Characteristics of Sample

Characteristic	Ad Treatment (percent) (n = 60)	Label Treatment (percent) (n = 60)	Label + Nutrition Treatment (percent) (n = 60)
<i>Age</i>			
21-29	41.7	38.3	38.3
30-49	41.7	38.3	36.7
Over 50	16.6	23.4	25.0
Total	100.0	100.0	100.0
<i>Household Income</i>			
Less than \$20,000	11.9	11.7	5.0
\$20,000-29,999	18.6	15.0	15.0
\$30,000-59,999	22.0	35.0	38.3
Over \$60,000	47.5	38.3	41.7
Total	100.0 ^a	100.0	100.0
<i>Level of Education</i>			
High school or less	18.3	8.3	16.6
1-3 years college	16.7	33.3	18.3
4 years college	31.7	35.0	36.7
Over 4 years college	33.3	23.4	28.4
Total	100.0	100.0	100.0
<i>Race</i>			
White	85.0	81.7	90.0
Black	11.7	18.3	8.3
Other	3.3	0.0	1.7
Total	100.0	100.0	100.0

^aBased on 59 responses.

TABLE 2
Average Belief Measures Across Nine Attributes

Product	Means			Statistics			
	Ads Only	Labels Only	Labels + Nutrition Information	Ads vs Labels		Labels vs Labels + Nutrition Information	
				F	p	F	p
Peanut Butter	3.79	3.96	3.63	1.10	.37	1.77	.08
Jif ^a	4.04	4.16	3.75	1.55	.15	2.07	.04*
Peter Pan	3.54	3.76	3.51	0.66	.74	1.37	.21
Margarine	3.55	3.80	3.39	1.56	.14	2.36	.02*
Mazola ^a	3.40	3.77	3.37	2.41	.02*	1.91	.06
Promise	3.69	3.83	3.41	1.89	.06	2.33	.02*
Frozen Entree	4.13	4.23	3.96	1.22	.29	5.41	.00*
Lean Cuisine ^a	4.11	4.21	3.79	1.58	.13	4.94	.00*
Healthy Choice	4.15	4.25	4.13	0.67	.71	4.16	.00*
Soup	4.19	4.30	3.90	1.17	.32	4.38	.00*
Campbell's ^a	4.09	4.21	3.70	1.03	.42	3.12	.00*
Pritikin	4.29	4.39	4.10	1.02	.43	4.07	.00*
Cereal	4.80	4.80	4.89	1.17	.32	4.12	.00*
Total ^a	4.81	4.68	4.95	1.42	.19	4.44	.00*
Special K	4.80	4.93	4.82	0.77	.65	2.00	.05*
Overall mean	4.09	4.21	3.95	0.85	.57	3.92	.00*

^aContested claim.

*Significant difference at $p \leq .05$ between two groups based on a multivariate test of the nine attributes composing the mean.

Nine measures of subjects' beliefs about each brand's nutrition content, such as calcium, fiber, and protein, were obtained for each of the ten ads or labels viewed by subjects. These nine measures form a multivariate response vector.

A multivariate analysis of variance was used to test for differences among the treatment groups. The analysis was done by using the GLM procedure of SAS, and the model statement was written to control for demographic variables. An F-statistic based on Pillai's Trace was used to assess statistical significance.

Table 2 reports the mean values (averaged across nine attributes) for each of the three treatments and across the five product categories and the ten brands. These data are shown to summarize the results; however, statistical analysis was conducted on the vector of nine attributes with the use of the GLM procedure described.

The data on the last row of Table 2 show that there was little overall difference in the average attribute ratings for the "mock" ads (4.09) and for the "mock" labels (4.21). The multivariate analysis revealed that there were no statistical differences across the two treatment groups. There were also no differences between the print ad and label groups for each of the five product categories and for nine of the ten brands. However, one statistical test (of the ten conducted) found that subjects had significantly lower beliefs for the Mazola ad than for the Mazola label. Overall, there was little difference in consumers' beliefs about food products when consumers were exposed to health claims made in "mock" food advertisements and when consumers were exposed to health claims made on "mock" food labels (Research Question #1).

There were significant differences, however, in subjects' product beliefs when they viewed health claims on labels with and without nutrition information (Research Question #2). First, there was an overall difference between the label and the label with nutrition information conditions. Second, there were significant differences in consumers' beliefs for four of the five product categories: margarine, frozen entrees, soup, and cereal. Third, there were significant differences in consumers' beliefs for eight of the ten brands tested. Fourth, there were significant differences for three of the five health claims that had been contested by consumer groups and/or the FTC. For example, belief measures about the nutritiousness of Jif, Lean Cuisine, and Campbell's declined when nutrition information was shown to consumers along with the health claim. Also, belief measures about the nutritiousness of Mazola declined, but this decline did not reach conventional levels of statistical significance ($p = .06$). Conversely, consumers' nutrition ratings of Total, a relatively nutritious brand, increased when they were exposed to the nutrition information in conjunction with the health claim.

Finally, Table 3 reports consumers' beliefs about food products on attributes that were the target of consumer group and/or FTC charges about allegedly deceptive health claims. For each of the five challenged ads, a single attribute that was the focus of the complaint was examined to determine whether consumers' beliefs on that attribute differed when consumers were exposed to health claims that did and did not include nutrition information (Research Question #3).

Because only a single attribute was examined, t-tests were used to compare the mean beliefs of consumers exposed to food labels with

TABLE 3
Average Belief Measures on Selected Attributes Contested Health Claims

Product	Means		Statistics	
	Labels Only	Labels + Nutrition Information	Labels vs Labels + Nutrition Information	
			t	p
Peanut Butter Jif (fiber)	4.38	4.02	1.33	.18
Margarine Mazola (fat)	4.00	3.23	2.60	.01*
Frozen Entree Lean Cuisine (sodium)	4.70	2.92	5.94	.00*
Soup Campbell's (sodium)	4.63	3.47	4.17	.00*
Cereal Total (calcium)	5.40	5.20	0.80	.42

*Significant difference at $p \leq .05$ between group means based on a t-test.

and without nutrition information. The data in Table 3 show that consumers' beliefs that Mazola is low in fat, that Lean Cuisine frozen entrees are low in sodium, and that Campbell's is low in sodium decreased after being exposed to nutrition information. On the other hand, beliefs that Jif is a good source of fiber and that Total is a good source of calcium did not differ significantly when consumers did and did not view the nutrition information.

DISCUSSION

First, the study found that consumers' beliefs about food products did not differ when the health claims to which consumers were exposed were identified as a printed food ad or as a food label. In the current study, information in advertising and on product labels was presented to consumers in a similar fashion, on a single sheet, in order to enhance internal validity. That is, the only difference between the ad treatment and the label treatment was that consumers were informed about the source of the material presented. However, the finding that consumers' beliefs about food products were invariant across ad and label conditions may not generalize to reading advertisements in magazines or reading health claims on actual product packages. Second, when consumers viewed health claims on product labels with and without nutrition information there were significant differences in their perceptions for four of the five product categories and for eight of the ten brands tested.

These results may be compared to studies (Brucks, Mitchell, and

Staelin 1984; Scammon 1977) that found “complex” numerical nutrition disclosures in advertisements do not have a major impact on consumers’ beliefs about the nutritiousness of food products. Differing results across studies may be due to varying methodologies. For example, Brucks, Mitchell, and Staelin (1984) and Scammon (1977) focused on advertising, while the current study explores the impact of nutrition information on product labels.

In Scammon’s (1977) study, television ads were used. The impact of numerical disclosures was attenuated because of the limited amount of time for consumers to process the information. In the Brucks, Mitchell, and Staelin study (1984), consumers were presented the ad in a portfolio; this may have encouraged consumers to devote most of their attention to the ad’s selling messages rather than to the nutrition information. In the current study, consumers were shown a “mock” label and asked a series of questions; this process was repeated for ten stimuli. Thus, consumers may have devoted increased attention to the nutrition information because of this procedure.

The current study also found that consumers tended to have lower beliefs about the nutritional value of food products with both nutrition information and the health claim as opposed to food products with only the health claim. Thus, this study supports the view that increased consumer knowledge of nutrition information may reduce consumer misperceptions. These results affirm the need to encourage consumers to devote greater attention to the nutrition information on food packages. This finding is consistent with NLEA’s goal of enhancing consumers’ understanding of nutrition information on food packages. On the other hand, another interpretation of these results is that regulation might be more lenient toward health claims as long as nutrition information is provided and is read by consumers.

Third, there were significant differences in consumers’ beliefs for the three health claims (Mazola, Campbell’s, and Lean Cuisine) that had been challenged by both the FTC and by consumer groups, such as the Center for Science in the Public Interest (CSPI). However, the differences in consumers’ beliefs for the two health claims (Jif and Total) that had been challenged by CSPI but had not been challenged by the FTC were not as pronounced.

In the case of Mazola, when nutrition information disclosed that Mazola contained 11 grams of fat per serving, consumers’ beliefs that Mazola is “low in fat” declined significantly (from 4.00 to 3.23). Also, when product labels disclosed that Campbell’s contained 440

mg. of sodium per serving, consumers' beliefs that Campbell's is "low in sodium" declined significantly (from 4.63 to 3.47).

While the Mazola and Campbell's cases were settled by means of consent agreements, a final order has been issued in the Lean Cuisine case. The FTC staff charged that Stouffer's advertisements claiming that Lean Cuisine frozen entrees "skimp" on sodium and have "less than 1 gram of sodium per entree" are false and misleading. While an FTC administrative law judge and the Commission supported the staff's complaint that the ads were deceptive, they rejected the staff's assertions that expressing the products' sodium content in grams rather than in milligrams was deceptive. In the current study, after reading a disclosure that Lean Cuisine had 900 mg. of sodium per serving, consumers' beliefs that Lean Cuisine is "low in sodium" declined significantly (from 4.70 to 2.92). Thus, the data in the current study support the allegations made by the FTC staff in the complaints against Mazola, Campbell's, and Lean Cuisine.

While neither Jif's nor Total's health claims have been challenged by the FTC, these claims have been withdrawn as a result of "pressure" from consumer groups. There were no significant differences, however, between the label and the label with nutrition information conditions for Jif and Total on fiber and calcium, respectively. Thus, the data indicate that there is a question of whether consumers were misled by these health claims.

FUTURE RESEARCH

Although this study supports the view that consumers process health claims in "mock" advertisements and on "mock" labels in a similar fashion, it does not examine the role that prior expectations about the nutritional quality of food products may have on the processing of nutrition information. Additional research needs to consider the role of consumer expectations on perceptions of health claims and of nutrition information.

Also, while prior experience plays a role in consumers' beliefs about health claims, this study did not measure whether consumers were brand loyal to any of the brands studied. Subsequent research should control for purchasing behavior relevant to the product categories and brands under study.

Finally, while this research provides empirical data about consumers' beliefs about health claims identified as emanating from

advertisements and from product labels, other factors must be considered before drawing any public policy recommendations. However, the current study provides support for those believing that health claims in advertising and on product labels are processed in a similar manner.

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