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Date August 1989

MARKETING NUTRITION
IN FOODSERVICE OPERATIONS
A Survey of Current Practices and Opinions

A Thesis

Presented for the

Master of Science

Degree

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Jane Pascarella Burkhalter

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TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
	Purpose of Study	4
	Research Questions	4
	Research Hypotheses	5
	Limitations of Study	6
	Definition of Terms	7
II.	REVIEW OF LITERATURE	8
	Introduction	8
	Demographic Influences	8
	Consumer Attitudes and Behaviors Related to Nutrition	9
	Marketing Nutrition	14
	Future of Nutrition in Restaurants	20
III.	METHODS	23
	Sample	23
	Research Questionnaire	23
	Scoring	25
	Pilot Test	26
	Data Collection	26
	Data Analysis	27
IV.	RESULTS AND DISCUSSION	30
	Sample	30
	Reliability of the Research Instrument	30

Marketing Nutrition 31

Attitudes Toward Nutrition 41

Tests of Research Hypotheses 44

V. SUMMARY AND RECOMMENDATIONS 47

Summary 47

Recommendations 53

BIBLIOGRAPHY 55

APPENDIXES 58

APPENDIX A. CERTIFICATION OF EXEMPTION FROM REVIEW FOR RESEARCH INVOLVING HUMAN SUBJECTS 59

APPENDIX B. RESEARCH QUESTIONNAIRE 61

APPENDIX C. LETTER OF INTRODUCTION 66

APPENDIX D. COVER LETTER 68

APPENDIX E. SURVEY SUMMARY REQUEST POSTCARD .. 70

APPENDIX F. FOLLOW-UP POSTCARD 72

APPENDIX G. FOLLOW-UP LETTER 74

APPENDIX H. ITEM-TOTAL STATISTICS FOR ATTITUDE SCALE 76

VITA 78

List of Tables

TABLE		PAGE
1.	Nutrition Marketing Practices of Commercial Foodservice Operations	32
2.	Nutrition Information Provided to Customers .	35
3.	Sources of Nutrition Information	37
4.	Other Sources of Nutrition Information	38
5.	Nutrition Training Programs Used in Foodservice Organizations	40
6.	Mean Scores for Nutrition Attitude Items	42

ABSTRACT

The purpose of this study was to determine the attitudes of restaurant corporate Research and Development Directors about nutrition and to determine how successful foodservice operations use nutrition to market their menus, its impact on sales, what nutrition information is provided to consumers, sources of nutrition information used in developing nutrition programs and new menu ideas, and type of nutrition-related training available for staff. The highest volume restaurants and institutions in the United States were surveyed. All restaurants in the top 400 Restaurants and Institutions' listing were surveyed. A questionnaire was sent to the Research and Development Director of each corporation. Analyses were done to describe current nutrition marketing practices, to determine the reliability of the attitude items, and to test research hypotheses. A final response rate of 35% was achieved.

A positive relationship was found between attitudes toward nutrition and nutrition marketing practices in foodservice operations. Surprisingly, no relationship was found between the type of foodservice operation and the attitudes of Research and Development Directors toward nutrition. Eighty five percent of all respondents currently market nutrition in their foodservice

operation, with a small percentage providing nutritional analysis of menu items for consumers. The majority had plans to add nutritious menu items to their menus. Registered dietitians, who are the credentialed authorities in the field of nutrition, received limited use as sources of nutrition information. Nutrition-related training for waitstaff and chefs appeared to be limited.

Because of the positive relationship between attitudes toward nutrition and nutrition marketing practices, implications are indicated for nutritionists, consumers, and restaurateurs. The results seem to indicate that foodservice industry Research and Development Directors recognize the need and importance of nutrition in the industry, although it is not a high volume item. A need exists for registered dietitians to market their skills and expertise in the field of nutrition. Research and Development Directors have an opportunity to develop and market nutritious menu items.

CHAPTER I

INTRODUCTION

In the restaurant industry, nutrition and health are currently acknowledged as the marketing opportunity of the 1980's (Carlson, 1986). The first Surgeon General's Report on Nutrition and Health (U.S. Department of Health and Human Services [DHHS], 1988) links relationships among specific dietary practices and specific disease states. Of the ten leading causes of death in the United States in 1987, diet plays a role in five (DHHS, 1988). With scientific data to support the relationship between diet and disease, consumers are more interested in nutrition than ever. According to a 1983 survey conducted by Gallup for the National Restaurant Association (Rosenbloom, 1986), six out of ten consumers had changed their eating habits to reflect nutritional concerns and to follow the Dietary Goals for the United States proposed by the Senate Select Committee on Nutrition and Human Needs (U.S. Department of Agriculture [USDA] and DHHS, 1980). The specific dietary changes were: 25% reduced salt intake or ordered low salt meals, 20% consumed more fish and seafood, 18% consumed more vegetables, 18% consumed more salads, and 20% consumed less refined sugar. Of this

group, four out of ten reported that they had improved their eating habits while dining out (Regan, 1987a).

The changing structure of the American family has increased meal consumption away from home. First, more than half of the married women in the U.S. are employed outside the home, yet they are not relieved from meal preparation (Davis, 1984). Second, the rising divorce rate has caused single parents who are working to have limited time available for meal preparation. A third change is the increasing number of young adults and elderly people who live alone and are unwilling or unable to cook for themselves. Due to these changes, Americans spend nearly half of their food dollars on meals away from home (Perl, 1980).

A 1986 National Restaurant Association survey determined that 23 percent of restaurant operators are featuring health and nutrition promotions (Regan, 1987b). Nutrition programs in the hospitality industry continue to grow in number, sophistication, and creativity. Although not all consumers are interested in nutrition while dining out, most operators realize it is increasingly important to give consumers healthful food choices.

With nutrition and health being addressed in varying degrees by the restaurant industry, menu modifications are assisting customers interested in

weight control and those with other health-related diet concerns. The impact of healthful and nutritious menu choices has done more than just change the menu. This emphasis has changed the method of developing, preparing, and serving menu items (Carlson, 1986). The restaurant industry is currently incorporating healthful foods into their menus by using more fresh and low fat, low calorie foods, changing food preparation techniques, providing nutrition information, and using special promotions for health and nutrition (VanLenten, 1983).

This attitude toward healthful and innovative dining has been incorporated into training for chefs. Two of the prominent culinary institutions, the Culinary Institute of America and American Culinary Federation Educational Institute are now incorporating mandatory nutrition courses into their curricula (Regan, 1987a). Addressing nutrition in the restaurant industry requires a combination of the knowledge and finesse of the chef, dietitian, food technologist, and management team.

PURPOSE OF STUDY

The purpose of this study was to determine the attitudes of restaurant corporate Research and Development (R&D) Directors about nutrition and to determine how successful foodservice operations use nutrition to market their menus, sources of nutrition information used in developing nutrition programs and new menu ideas, and type of nutrition-related training for staff. In addition, the percent of total annual sales for menu items labeled and marketed as "nutritious" was determined.

RESEARCH QUESTIONS

The following research questions were addressed:

1. What are the attitudes of restaurant R&D Directors about the importance of nutrition to consumers and the role of restaurants in providing nutritious menu items?
2. Is nutrition marketed in these operations and, if so, how?
3. For what day parts are special nutritious menu items promoted?

4. How many items on the menu are labeled and marketed as "nutritious" items?
5. Are nutritional analyses of menu items provided for customers?
6. What source(s) of information is/are used to develop nutrition programs and menu items?
7. What type of training related to nutrition is provided for managers, chefs, and employees?
8. What percentage of total sales is accounted for by healthful and nutritious menu items?
9. Based on the response of customers to nutritious menu items, are there plans to add additional items?

RESEARCH HYPOTHESES

The following research hypotheses were tested:

I. There is no relationship between the type of foodservice operation and the attitudes of Research and Development Directors toward nutrition.

II. There is a positive relationship between attitudes toward nutrition and nutrition marketing practices in foodservice operations.

III. There is no relationship between the type of foodservice operation and nutrition marketing practices in foodservice operations.

LIMITATIONS OF THE STUDY

Several limitations of this study should be acknowledged. One limitation is that access to the appropriate person within the foodservice corporation was difficult. Another limitation is that a corporate spokesperson may answer questions with the optimal response, rather than with what is actually occurring in the operation. Because of time constraints of corporate R&D Directors, response to the questionnaire may have been limited. Also, managers may feel the information is proprietary and may have chosen not to respond. The sample was drawn from high volume foodservice operations (Restaurants and Institutions Top 400), rather than a population of all operations; thus, results must not be generalized to all operations. Finally, the perceptions of what is considered "nutritious" by one person may be different from another person's perception of nutrition. Perceptions will vary based on knowledge and education.

DEFINITION OF TERMS

To improve the understanding of this research, the following terms are defined:

Day parts - Pertains to food served during a specific part of the day related to time, such as breakfast, lunch, and dinner.

Marketing - The advertising and promotional tactics used to introduce and promote menu items to a target market of consumers.

"Nutritious" Menu Items - Healthful menu items that are low in calories, fat, cholesterol, sugar, and/or sodium. The cooking method is low fat, such as grilling, baking, broiling or steaming. Fish, seafood, poultry, and vegetables are among menu selections.

Foodservice Operations - Restaurants, including full-service, cafeteria style, quick service, and fast-food restaurants. This also includes hotel, university, and hospital, healthcare, and retirement home facilities operating under foodservice management companies.

CHAPTER II

REVIEW OF LITERATURE

INTRODUCTION

Consumers' interest in nutrition has increased in accordance with the increased consumption of meals away from the home. This has occurred in the midst of a health and fitness trend in the United States (Carlson and Tabacchi, 1986). As a result, nutrition must be considered by restaurateurs and may provide increased marketing opportunities in the future. This review of literature will present the impact of nutrition on restaurants as evidenced by demographic influences, consumer attitudes and behaviors related to nutrition, strategies for marketing nutrition, and predictions about the future impact of nutrition on the restaurant industry.

DEMOGRAPHIC INFLUENCES

Expenditures for food away from home increased 7.6% between 1984 and 1985 compared to an increase of 3.5% for food at home according to the Bureau of Labor Statistics' 1985 Consumer Expenditure Study (Washington

Weekly, 1987). One reason for this increase may be the decline of the traditional family, which consists of a working husband, a homemaker wife, and two children. In 1987, only 3.7% of the U.S. population was comprised of the traditional family (Washington Weekly, 1987). The most common family (20%) was a working husband and a working wife with no children under the age of 18. The second most common type was two working parents with one child under 18, followed by two working parents with two children under 18 (Washington Weekly, 1987). Households with two wage earners spent 37% of their food dollar for food away from home. On an average, in 1985, 3.7 weekly meals were consumed away from home, and the rate was even higher for men (Regan, 1987a). Working people who live alone spend a greater percentage of their food dollar for food away from home (59%) than do households of two or more with one earner (29%). Households with two wage earners spend 37% of their food dollar on food away from home (Washington Weekly, 1987).

CONSUMER ATTITUDES AND BEHAVIORS RELATED TO NUTRITION

It is important to review research on consumers' attitudes and behaviors related to nutrition to understand consumer preferences and expenditures on food. By understanding consumers' attitudes and

behaviors within the nutrition market, restaurant operators can better meet consumers' food and information needs.

With advice so abundant on what Americans should or should not be eating, the public's dilemma was summed up by Sanford A. Miller, Ph.D., director of the Food and Drug Administration's Center for Food Safety and Applied Nutrition:

> Realistic, reliable guidance is critically needed to help the public sift and weigh this barrage of information, to make intelligent nutrition choices among the thousands of attractive foods in supermarkets, and to select food in the many places where it is consumed away from home (Lecos, 1985).

Since consumers are eating out regularly, they are bringing their nutritional expectations with them. There is strong interest in restaurants specializing in diet or "light" menu items. A National Restaurant Association study conducted in 1986 reported 40% to 42% of adults surveyed had tried or were likely to try restaurants that offer healthful choices, with the noon meal cited as the time that people most want nutritious meals (Regan, 1987c). This survey also revealed that four out of ten consumers have changed their eating habits to reflect their nutritional concerns (Tougas, 1987).

Another important finding of this survey, is that 77% of consumers indicated they were more interested in nutrition than they were a year ago. In addition, 75 to 85% of patrons surveyed rated nutrition as somewhat to very important in their decision as to where to dine (Carlson and Tabacchi, 1986).

The highest menu item growth area reflects the fact that consumers are choosing more nutritious foods when dining out (Carlson and Tabacchi, 1986). An illustrative example of the trend toward healthful dining is seen in the menu mix of the USACafes' Bonanza restaurants (Weinstein, 1987). In 1983, 80% of the entrees ordered at Bonanza were red meat. In 1987, red meat accounted for only 33% of orders. Chicken and fish once accounted for 6% of entrees, compared to 25% in 1987. Salad bars grew from 7% of orders to 35%. These examples illustrate that consumers have a tremendous interest in nutrition and are changing their eating behavior. The Restaurants and Institutions annual Tastes of America survey reports that consumers are looking for restaurants to offer foods low in sodium, fat, cholesterol, and calories (Backas, 1988). Thus, changes must be made by restaurant operators to address consumer preferences.

The increasing nutrition market is important for restaurant operators to understand so they can meet

consumers' food and information needs, and understand consumer attitudes and behaviors within the nutrition market. Food attitudes in the nutrition market have been categorized into four groups: 1) nutrition/ fitness (32%); 2) conventional taste (22%); 3) convenience (22%); and 4) dieters (20%) (Carlson and Tabacchi, 1986). Expanding on this area, research has also been done on the buying behavior of consumers interested in nutrition. Buying behavior of this subgroup has been divided into five groups: 1) restrictive dieters; 2) those who require diet modifications due to health concerns; 3) those interested in fitness and long-term health benefits; 4) the elderly; and 5) vegetarians (Carlson and Tabacchi, 1986).

An empirical study conducted by Granzin and Bahn (1988) revealed four separate market segments for food served outside the home. Individuals in Segment A have the attitude that nutrition is important when eating out and emphasize nutrition and a pleasant, high-quality eating experience. They feel that progress is being made by restaurants serving healthier foods and that restaurants should supply nutrition information on their menus. Segment B consumers have a pessimistic viewpoint in their belief that good-tasting food is not nutritious. They feel the only way to get a balanced meal is to make it themselves and strongly agree that

restaurants should feature nutrition information on their menus. Segment C consumers want nutrition information on menus and believe that Americans are more health oriented and that restaurants serve healthier foods than they did five years ago. They do not believe that you have to prepare food yourself to get a well-balanced meal and are optimistic about nutrition with respect to restaurants' offerings. Consumers in Segment D disagree that restaurants now serve healthier foods, although they do not want nutrition information on menus. They do agree that Americans are more health oriented than previously. These findings provide an important basis for understanding how to improve the nutritional intake of Americans by understanding their attitudes toward nutrition, which influence choice of restaurant (Granzin and Bahn, 1988).

Consumers' Attitudes and Eating Behaviors

Several studies have shown an inconsistency between consumers' attitudes and their actual eating behaviors. Findings from a study of consumer attitudes indicate consumers are worried about health, salt, and cholesterol, but buying behavior is actually dominated by such factors as easy preparation, taste, package size, and appeal to children (Mueller, 1989). An American Health study identified four common "food

styles" among its readers: the semi-gourmet restaurant consumer, vegetarian, weight-conscious Epicurean, and fast-food fans. Even though respondents in all but the last category professed a strong interest in a healthful or low-calorie diet, an analysis of the actual foods consumed revealed that fat intake was well above the recommended level of 30% of calories, fiber below the recommended 20 to 30 grams a day, and cholesterol more than the recommended 300 milligrams daily (Lydecker, 1988).

With inconsistency between consumer attitudes and behaviors related to nutrition, restaurant operators can help fulfill the consumer's expressed desire for more nutrition information (Lydecker, 1988). By understanding the attitudes and buying behaviors of the nutrition market, foodservice operators can better understand how to incorporate and market nutrition in their menu.

MARKETING NUTRITION

According to a 1986 National Restaurant Association survey, 23% of restaurant operators feature health and nutrition promotions (Regan, 1987b). Of the restaurant operators who do promote nutrition on their menu, 37% use a special section, 12% have their waitstaff make

presentations on nutritious items, 10% use a special symbol by nutritious items, and 9% use separate menus. There appears to be no one best way to market nutritious items on menus.

Sources of Nutrition Information

To develop nutritious menu choices, many restaurant operators rely on their own staff, while others seek help from nutrition professionals or professional organizations. Of the restaurant operators surveyed in the 1986 NRA survey, 24% of those who featured nutritious items on their menu used a plan endorsed by a medical or health group to market their healthful menu items (Regan, 1987b). The American Heart Association sponsors such a program, Creative Cuisine, through its national headquarters and local chapters. Restaurants can comply with the American Heart Association's dietary guidelines if menu items are carefully selected and prepared (Rubin, 1987). In addition, the American Heart Association has expanded its "Eating Away from Home" program. The program evaluates existing menu items to see what qualifies under their new guidelines. This new national program began with single-unit, small restaurants and has moved on to chain restaurants. The American Heart Association will also help design menus and write brochures for

operators (Backas, 1988).

Other sources of nutrition consultation include registered dietitians and the American Dietetic Association, which maintains a directory of consulting dietitians by region (Regan, 1987c). A foodservice professional organization, the National Restaurant Association, has developed a nutrition guide for restaurateurs. Also, universities with nutrition curricula, culinary schools, and food distributors are sources of nutrition information. The more progressive food distributors now have a staff nutrition marketing specialist (Regan, 1987b). Many food distributors also have registered dietitians on staff to consult with clients. Since most restaurant operators have limited training in nutrition, these consultants can assist in designing and implementing nutrition marketing programs.

Nutrition Training

Recently, however, nutrition has been incorporated into the curricula of hotel, institutional and restaurant management programs, and culinary schools (Tougas, 1987). The American Culinary Federation now requires its members to include a 16-hour course in nutrition in order to receive credit toward advancement (Rosenbloom, 1986). Previously only two courses were required: sanitation and supervisory management. In

nutrition courses for chefs, emphasis is placed on how to modify existing recipes to reduce calories, fat, cholesterol, and sodium since these are the changes of most interest to consumers. The challenge that lies ahead is to provide a satisfying dining experience and sufficient menu variety to attract a range of customers while enabling customers to limit their calories and fat, cholesterol, and sodium intake (Call, 1979).

Nutrition in Menu Planning

In the Annual Restaurants and Institutions Menu Census, more than a third of restaurant operators surveyed said nutrition is a factor of growing importance in menu planning (Backas, 1988). When developing nutritious menu choices, operators have three choices: to use existing selections, to modify existing selections or to create new menu items (Regan, 1987c). In altering recipes, fat and salt are reduced and usually a change in the cooking method is required. Cooking methods most often used are grilling, baking, broiling or steaming. The emphasis on nutrition, low-fat cooking methods, and vitamin retention has been incorporated into training for chefs (Regan, 1987a).

Nutrition Programs

Only 23% of restaurant operators surveyed by the National Restaurant Association in 1986 promoted health and nutrition on their menu (Regan, 1987b). The majority of these operators offered a few healthy items and accommodated specific requests, but few had thoroughly planned successful promotions (Carlson, 1987). Carlson cited five factors that influence customers' perceptions of nutrition promotions:

> 1) employees' attitudes toward and responses to inquiries about nutritious menu items; 2) the extent to which nutritious menu items complement the restaurant's existing menu offerings and atmosphere; 3) the price of nutritious food items, relative to the price of regular menu items; 4) the configuration and presentation of nutritious menu items, and 5) the advertising and promotion of nutritious items (Carlson, 1987).

The nutrition and healthful food trend is now being supported by governmental agencies, physicians, and consumers. Evidence of this support is clear in the first Surgeon General's Report on Nutrition and Health (DHHS, 1988). The report focused on the relationship between diet and chronic diseases, providing supporting evidence for the U. S. Dietary Guidelines for Americans. Diet is linked to obesity, cancer, coronary heart disease, dental diseases, gastrointestinal diseases,

high blood pressure, infections and immunity, kidney disease, skeletal diseases, and neurological disorders. In summary, the Surgeon General cited the primary problem of Americans as overconsumption, especially of high-fat foods, with insufficient intake of foods high in fiber and complex carbohydrates. Since such a high percentage of meals are eaten away from home, the Surgeon General points to foodservice programs as having "important opportunities for improving health and providing dietary education" (DHHS, 1988). Thus, by improving the nutritional balance of meals offered in foodservice operations, the health of the nation can be expected to improve. According to the Surgeon General's Report, areas of particular emphasis are to increase the availability of low fat, high fiber, low sodium, and low-calorie foods in foodservice operations. The critical menu items to decrease are those high in saturated fat and cholesterol. In addition, nutrition education should be a responsibility of foodservice operations. The general principles of sound nutrition and the nature and problems with dietary fads and frauds should be emphasized in foodservice nutrition education (DHHS, 1988).

Nutrition programs are essential in restaurants for them to remain competitive in today's market. Nutrition programs are not only providing consumers the healthful

choices they wish, but also enhancing consumer goodwill toward the operation. Nutrition is not a fad, but apart of the lifestyle changes occurring now in the United States.

FUTURE OF NUTRITION IN RESTAURANTS

In 1988, the National Restaurant Association (Foodservice Industry 2000, 1988) conducted a futuristic study of the foodservice industry in the year 2000. The Delphi method of research was used to identify and analyze issues by subjective judgment. A panel of experts was selected to provide judgments on what conditions are likely to be in the foodservice industry in the year 2000. The panel included the National Restaurant Association Board of Directors and a variety of other foodservice experts, including quality assurance directors, architects and engineers, financial officers, training directors, educators, executive chefs, and consultants. The topics addressed by the panel were industry structure, finance, the work force, foodservice facilities and operations, technology, food and menu, government, marketing, and external issues.

One of the sixteen highlights of the Delphi panel concerned nutrition in foodservice operations. It was agreed that "nutritional concerns will be critical in

all types of foodservice operations" (Foodservice Industry 2000, 1988). In addition, the following projections related to nutrition were made:

1. Nutrition will be critical to menu development in all types of foodservice operations.
2. More fish, poultry, lower fat beef, and wholesome, fresh, natural foods will be offered at restaurants.
3. Menu items will contain less fat, cholesterol, calories, and salt.
4. Less consumption of beef and game will occur.
5. Food preparation will include fewer sauces.

Of the ten most likely developments in food, menus, and marketing, the perceived number one most likely development was lower calorie menu items becoming more common. The second most likely development was projected to be that nutrition concerns will be critical to menu development in all types of foodservice. The seventh most likely development also pertained to nutrition; richer flavors will be achieved without the use of fats and salt. A nutrition area of increasing importance was the relationship of specific foods, food groups, and nutrients to the occurrence of diseases, especially cancer. An increased knowledge of the link between diet and disease will undoubtedly lead to promotion of a healthy lifestyle, preventive health measures, and wellness programs. The up and coming area

in foodservice operations, is clearly an ever increasing focus on nutrition and health.

Summary

Changing demographics as well as consumer attitudes and expectations have impacted the marketing of nutrition. The increasing awareness of the link between diet and disease has supported the trend toward health, nutrition, and fitness. The nutrition market is important for restaurant operators to understand so they can meet consumers' food and information needs. By understanding the attitudes and buying behaviors of consumers in the nutrition market, foodservice operators can better understand how to incorporate and market nutrition in their menu development. Since consumers are spending more of their food dollar on meals consumed away from home than ever before and the interest in nutrition and health is at an all time high, restaurant operators have a marketing opportunity to appeal to consumers interested in nutritious menu choices. Nutrition in foodservice will receive more attention and marketing emphasis in the future. Thus, research is needed to determine attitudes and behaviors related to nutrition and to determine the effectiveness of nutrition marketing efforts.

CHAPTER III

METHODS

SAMPLE

The Restaurant and Institutions' listing of the top 400 organizations in the hospitality industry, ranked according to sales figures from 1987 was obtained (400: Ranking, 1988). All restaurants (n=200) in the top 400 listing were surveyed, including full-service restaurants, cafeterias, and fast-food restaurants. This also included foodservice management companies who manage these types of foodservice operations. A research questionnaire was mailed to the R&D Director of each foodservice organization.

Because this research involved human subjects, review and approval by the Human Subjects Research Review Committee was obtained prior to collection of data (Appendix A).

RESEARCH QUESTIONNAIRE

The research questionnaire is provided in Appendix A. The questionnaire consisted of three parts:

Part I had one demographic question to identify

whether the foodservice operation was a full-service restaurant, cafeteria, fast-food restaurant, or other. Respondents answering more than one category were asked to estimate the percentage of volume for each category.

Part II consisted of questions to determine how the operation was currently marketing nutrition, what sources of nutrition information were used, how sales of special nutrition items were promoted, and what type of training was available to staff.

Part III included twelve statements designed to determine the attitudes of R&D Directors toward their responsibility to provide nutritious menu choices in their operation and to educate consumers about nutrition, the importance of nutrition to consumers, and the importance of nutrition in menu development. Sources of attitudinal statements were the Surgeon General's Report on Nutrition and Health and Foodservice Industry 2000 report published by the National Restaurant Association. Attitudinal statements were given with item responses made on a five-point rating scale with the following descriptive anchors: strongly agree, neutral, and strongly disagree.

SCORING

For Part I, frequency and percentage were calculated for the type of foodservice operation represented by respondents.

For Part II, frequencies and percentages were calculated for each item. A total "marketing nutrition" score was calculated by adding the responses to questions 1-6. For questions 1, 2, 5, and 6, a score of 0 was given if no responses were marked, and 1 was given if any of the responses were marked. For question 3, a score of 1 was assigned if the response was 1 or greater, otherwise a score of 0 was assigned. For question 4, "no" was scored as 0 and "yes" was scored as 1. Thus, scores for "marketing nutrition" could range from zero to six.

Responses for each attitudinal statement in Part III were made on a five-point scale with strongly disagree being assigned a score of one and strongly agree a score of five. An attitude score was calculated by summing responses to the twelve items and a total score could range from 12 to 60.

PILOT TEST

A pilot test was conducted with the Research Manager and Nutritionist of the National Restaurant Association, Washington, DC. A professor of statistics with a background in survey research and three professors in the Nutrition and Food Sciences Department, who are registered dietitians with doctorates, also reviewed the questionnaire. Feedback was provided concerning the congruence, clarity, and perceptions of questions. Revisions were made based on suggestions/feedback.

DATA COLLECTION

Data collection took place during March - June 1989. Prior to sending the research questionnaire (Appendix B), an initial letter of introduction was mailed to each Research and Development Director explaining the purpose of the study, requesting responses, guaranteeing the confidentiality of responses, and explaining the procedure to be used by the researcher (Appendix C). Mailing of the letter of introduction occurred approximately two weeks prior to the mailing of the questionnaire.

A cover letter was enclosed with each questionnaire (Appendix D). The letter explained the questionnaire and emphasized the importance of participation for success of the study. A self-addressed, postage-paid envelope was included for ease in returning the questionnaire. A stamped postcard was included for participants to request a summary of the study results (Appendix E). The postcards could be returned separately from the questionnaire to insure anonymity in responses.

Two weeks after mailing the questionnaire, a follow-up postcard (Appendix F) was sent to all participants, except those for whom addresses were received on postcards requesting survey results.

Two weeks after the follow-up postcards were sent, a follow-up letter (Appendix G) was sent with another questionnaire and a self-addressed, postage-paid envelope.

DATA ANALYSIS

The data were analyzed using several statistical procedures. Analyses were done to describe current nutrition marketing practices, to determine the reliability of the attitude items, and to test research hypotheses.

Frequency and percentage were determined for the type of foodservice operation in Part I. Descriptive statistics were done for the items included in Part II of the questionnaire. Frequency counts for each item were used to describe current practices of marketing nutrition, sources of nutrition information, staff training, and sales attributed to nutrition items. All descriptive statistics were done using the Statistical Analysis System (SAS, 1985).

The Cronbach's alpha reliability coefficient (Cronbach, 1951) was determined for the twelve attitude items included in Part III of the questionnaire. The Statistical Package for the Social Sciences (SPSSX, 1986) was used to calculate the scale reliablity coefficient and to determine the item-total reliability statistics.

The mean and standard deviation for each of the twelve attitudinal items and the total of the items were calculated (SAS, 1985). Hypothesis I, there is no relationship between the type of foodservice operation and attitudes of Research and Development Directors toward nutrition, was tested using analysis of variance. Hypothesis II, there is a positive relationship between attitudes toward nutrition and nutrition marketing practices in foodservice operations, was tested using simple linear regression analysis. Hypothesis III,

there is no relationship between the type of foodservice operation and nutrition marketing practices in foodservice operations, was tested using an analysis of variance. All analysis of variance and regression analysis were done using the Statistical Analysis System (SAS, 1985). The 0.05 probability level was used for tests of significance.

CHAPTER IV

RESULTS AND DISCUSSION

SAMPLE

Seventy of the 200 R&D Directors responded for a final response rate of 35%. The initial response rate was 18%, which was increased to 35% after the follow-up letter and second questionnaire. Of the respondents, 37% represented full-service restaurants, 33% represented fast-food restaurants, 14% represented cafeterias, and 16% represented the "other" category, of which the majority were self-described as hospital and retirement home foodservice, pizza restaurants, and specialty bakeries.

RELIABILITY OF THE RESEARCH INSTRUMENT

The Cronbach's alpha reliability coefficient (Cronbach, 1951) for the twelve items related to attitudes toward nutrition was 0.77. The item-total statistics indicated that the alpha would not significantly increase if any of the twelve items were omitted (Appendix H).

MARKETING NUTRITION

Current practices related to marketing nutrition in commercial foodservice operations were determined. Items in the questionnaire related to how nutrition was marketed and its impact on sales, nutrition information provided to customers, sources of information on nutrition used by the foodservice operations, and training on nutrition provided to employees. Results related to each of these areas are presented.

Methods Used to Market Nutrition

Several strategies were used to market nutrition in foodservice operations. Table 1 summarizes current marketing practices of the survey respondents. Descriptive copy of menu items was the most used method of marketing nutrition (49% of respondents). The next most common method (23% of respondents) was special symbols to designate nutritious items. Together, these two methods accounted for 72% of all methods surveyed. The least common way to market nutrition by respondents was to use a separate menu, with only 3% utilizing this method. It appears that foodservice operations are integrating nutrition into the theme of their restaurants. For ease and comfort of their patrons, nutritious menu items were incorporated into menus, and

Table 1. Nutrition Marketing Practices of Commercial Foodservice Operations

	Frequency	Percent
Methods of Marketing Nutrition*		
Special Section on Menu	12	17%
Separate Menu Used	2	3%
Waitstaff Informs Customers	5	7%
Special Symbols Designate	16	23%
Statement on Menu Encourages Special Requests	12	17%
Descriptive Copy Promotes Items	34	49%
None	11	16%
Other	15	21%
Meals in which Nutrition Marketed		
Breakfast	0	0%
Lunch	1	1.5%
Dinner	0	0%
Catering	1	1.5%
Breakfast & Lunch	2	3%
Lunch & Dinner	28	40%
All	12	17%
None	26	37%
Plans to Add Nutritious Menu Items		
Yes	44	63%
No	22	31%
N/A**	4	6%
Approximate Percentage of Total Annual Sales for Nutritious Items		
0-10%	46	66%
11-20%	10	14%
21-30%	5	7%
31-40%	1	1.5%
41-50%	0	0%
51-60%	0	0%
61-70%	0	0%
71-80%	0	0%
81-90%	1	1.5%
91-100%	2	3%
N/A**	5	7%

* Respondents may have chosen more than one response

** Respondents wrote in not applicable

were not separated from the rest of the menu. Under "other", which accounted for 21% of responses, methods described were point of purchase advertising, such as table tents, charts, and posters on display in restaurant, nutritional information brochures available upon request, and nutrition information available on touch screen of computer available in restaurant.

The most frequent meals for marketing nutrition were lunch and dinner, which accounted for 40% of responses. Seventeen percent marketed nutrition at all meals. Thirty seven percent of respondents indicated that nutrition was not marketed. Seventeen percent marketed nutrition at all meals. Overall, 64% did market nutrition at some meal; with 37% not marketing nutrition at any meal. Interestingly, only 17% marketed nutrition at all meals, thus, it appears that little was done related to the breakfast meal even though there are many nutrition marketing opportunities for that day part.

The majority of respondents, 63%, did plan on adding nutritious menu items to their menus (Table 1). Thirty one percent had no plans to add nutritious menu items, and 6% responded as not applicable.

Nutritious Menu Items Impact on Sales

A small percentage of total sales was accounted for by items marketed as nutritious. The most frequent response, under the approximate percentage of total annual sales for menu items labeled and marketed as nutritious (Table 1), was 66% of respondents had annual sales from 0-10% for nutritious menu items. Fourteen percent had annual sales of 11-20%, and 7% had annual sales of 21-30% for nutritious menu items. Seventeen percent responded as not applicable.

Nutrition Information Provided to Customers

Nutrition information was provided to customers by 39% of survey respondents (Table 2). The most common method of providing nutrition information, accounting for 56% of responses, was a separate brochure. Thirty seven percent responded to "other" methods. Some methods written in under "other" were: menu boards or posters hanging in dining room; information available by request but not printed material; entree description cards; mail or telephone requests via a toll-free phone number; computer screen in restaurant; presentations; and telephone requests to the research and development department at corporate office. In general, consumers must aggressively seek nutrition information, thus, only the most nutritionally aware and concerned consumers

Table 2. Nutrition Information Provided to Customers

	Frequency	Percent
Nutritional Analysis Provided for Customers	27	39%
Method of Providing Analysis		
On Menu	2	7%
On Separate Brochure	15	56%
Other	10	37%
Nutritional Information Provided*		
Calorie Count	26	96%
Sodium Content	20	74%
Fat Content	23	85%
Cholesterol Content	20	74%
Other	13	48%

* Respondents may have chosen more than one response

will have access to nutrition information from restaurants.

The type of nutritional information provided to customers varied. Of the 39% of respondents who provided nutritional information to customers, 96% provided calorie counts and 74% provided sodium and cholesterol content. Eighty five percent provided data on fat content. Forty eight percent provided "other" information, such as percentage of protein, fat, and carbohydrate listed for all items, vitamins A and C, iron, niacin, thiamin, riboflavin, potassium, calcium, fiber, the percent of USRDA, diabetic exchanges, and type of fat.

Sources of Nutrition Information

Table 3 identifies sources of nutrition information used in menu development. Respondents could choose more than one source of nutrition information used to develop nutrition programs and new menu ideas. Sources of information from both individuals and groups were identified. For the category of individual sources, most respondents (29%) indicated "no" sources of nutrition information. Under this category, "other" sources of information accounted for 26% and are listed in Table 4.

Table 3. Sources of Nutrition Information

	Frequency	Percent
Individuals Consulted to Develop Nutrition Programs and Menu Items*		
Registered Dietitian on Staff	12	17%
Registered Dietitian Consultant	14	20%
Independent Nutritionist	3	4%
Executive Chef on Staff	14	20%
Other	18	26%
None	20	29%
Sources of Information to Develop Nutrition Programs and Menu Ideas*		
American Heart Association (AHA)	35	50%
AHA's Program "Creative Cuisine"	9	13%
Other Health Organizations	3	4%
Hospital or Medical Center	7	10%
Food Distributor	17	24%
Developed Entirely In-House	37	53%
Other	10	14%
None	11	16%

* Respondents may have chosen more than one response

Table 4. "Other" Sources of Nutrition Information*

American Cancer Association
American Diabetes Association
Food scientist/technologist
Health conscious dining trends
Industry trends
Laboratory analysis
Manufacturers
National Restaurant Association's Nutritionist
Practorcare (a commercial computer software system)
Research and Development Directors with a MS in Nutrition and Food Science
Research provided by franchisor
Staff member with BS in nutrition (not a registered dietitian)
Suppliers and brokers
Trade journals and periodicals
Universities
USDA Handbook #8

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* All "other" sources were written in by respondents

The second most common source of nutrition information was a Registered Dietitian consultant accounting for 20%. Also, Executive Chefs on staff were used by 20% of respondents. Registered dietitians on staff were used by 17%. The least used source of nutrition information was Independent Nutritionists, used by only 4% of respondents.

For the category of group sources of nutrition information, the most common source of information was in-house developed programs, accounting for 53% of respondents. The next most common source of information was the American Heart Association, with 50% of respondents consulting them. Twenty four percent of respondents used their food distributors to supply them with nutrition information. "Other" sources of nutrition information, written in by respondents accounted for 14% and are listed in Table 4.

Nutrition Training Provided to Employees

Nutrition training programs used in foodservice organizations for staff appeared to be limited (Table 5). The most common training method was to train servers about special requests that the restaurant could accommodate, such as no salt, sauce on the side, and cooking without butter, salt, or oil. Forty nine percent of respondents trained their servers according

Table 5. Nutrition Training Programs Used in Foodservice Organizations

	Frequency	Percent
For Servers*		
Corporate Training Program	4	6%
Unit Manager's Discretion	15	21%
Servers Trained on Special Requests Accomodated	34	49%
None	25	36%
For Chefs/Lead Cooks*		
Corporate Training Program	7	10%
Unit Manager's Discretion	24	34%
None	40	57%

* Respondents may have chosen more than one response

to this method whereas thirty six percent of respondents had no training on nutrition for their servers. Only 6% of respondents had corporate training programs.

On the availability of training programs for chefs and lead cooks, 57% responded that none were available. Thirty four percent of respondents had nutrition training which was left up to the discretion of the unit manager. Only 10% of respondents had corporate-sponsored training programs on nutrition for chefs and lead cooks.

ATTITUDES TOWARD NUTRITION

The mean score and standard deviation for each item measuring attitudes toward nutrition are given in Table 6. The highest score of agreement received was 4.0 ± 0.7 for "consumers are more concerned with how foods taste than with their nutritional content". The next highest scoring item was 3.9 ± 0.6 for "in recipe development richer flavors should be achieved without adding fat and salt". Finally, two other items were on the agree end of the rating scale: 3.7 ± 0.8, "our organization should promote healthy menu items to our consumers", and 3.7 ± 1.0, "it is the responsibility of

Table 6. Mean Scores for Nutrition Attitude Items (n=70)

Item	Mean ± Standard Deviation
It is the responsibility of our organization to provide nutrition education to consumers.	3.0 ± 1.0
It is the responsibility of our organization to provide low-calorie, low-fat, and low cholesterol options on our menu.	3.7 ± 1.0
Our organization should promote healthy menu items to our consumers.	3.7 ± 0.8
When eating away from home, customers are not really interested in nutrition.**	3.2 ± 1.0
Our organization has a responsibility for promoting a healthy lifestyle for our consumers.	3.0 ± 0.9
We have the responsibility for improving the health of our customers.	2.5 ± 0.9
Nutrition concerns are critical to menu development.	3.4 ± 0.9
We should increase the number of low calorie menu items offered.	3.5 ± 0.7
In recipe development, richer flavors should be achieved without adding fat and salt.	3.9 ± 0.6
Nutrition is an important factor in determining where people eat meals away from home.	2.6 ± 0.9
Consumers are more concerned with how foods taste than with their nutritional content.**	4.0 ± 0.7
We should strive to use more nutritious ingredients, even at extra cost.	3.3 ± 0.8

Table 6 (Continued)

* A five-point rating scale was used with scores ranging from 1 (strongly disagree) to 5 (strongly agree).

** Asterisked items were reverse scored.

our organization to provide low-calorie, low-fat, and low cholesterol options on our menus".

Only two of the twelve nutrition attitude items scored in the area of disagreement. The lowest mean score was 2.5 $\pm$ 0.9, "we have the responsibility for improving the health of our customers". The other item of disagreement scored at 2.6 $\pm$ 0.9, "nutrition is an important factor in determining where people eat meals away from home".

Overall, of the twelve mean scores for nutrition attitude items, nine scored in the 3.0 range of neutral. The total mean score for the nutrition attitude scale was 37.9 $\pm$ 5.4. This, too, was at the neutral point of the rating scale. Based on these responses, it appears that nutrition was not viewed by R&D Directors as critical in making decisions related to menu items and recipes. If R&D Directors do not think that nutrition is important to consumers in making choices for eating away from home, little may be done to improve the nutritional quality of menus.

TESTS OF RESEARCH HYPOTHESES

Three research hypotheses were tested to determine the relationship between nutrition marketing practices and attitudes toward nutrition.

Hypothesis I: There is no relationship between the type of foodservice operation and attitudes of Research and Development Directors toward nutrition.

The nutrition attitudes of R&D Directors were not different due to the type of foodservice operation (full-service restaurant, cafeteria, or fast-food restaurant). Thus, hypothesis I was accepted.

Hypothesis II: There is a positive relationship between attitudes toward nutrition and nutrition marketing practices in foodservice operations.

The model testing the relationship between attitudes toward nutrition and marketing nutrition was significant ($F=6.48$. $p=0.013$). Thus, hypothesis II was accepted. Because of the positive relationship between attitudes toward nutrition and nutrition marketing practices, several implications are indicated for nutritionists, consumers, and restaurateurs. Nutrition educators are challenged to educate both consumers and restaurant managers about the importance of nutritious choices and the impact those choices have on health. For professionals in restaurants, nutrition educators also need to present menu planning principles, integration of nutritious choices on menus, and production of menu items.

Consumers must be encouraged to provide feedback to restaurants about their interest and concern for nutrition. They should also support nutritious menu

items by selecting them when they eat away from home. Consumers should also provide feedback about nutrition information that they need to make knowledgeable choices.

Restaurateurs must be attuned to consumers' needs and expectations. This can be accomplished by providing customer feedback systems in the restaurant and carefully evaluating that feedback. Additionally, reading trade and professional journals and attending focused seminars will help the restaurateur know trends in food choices. To meet the challenge of implementing nutrition in menus, restaurateurs may also need continuing education in nutrition.

This relationship also verifies the decision to incorporate more nutrition in the coursework of chefs and restaurant managers. Seminars should be planned as continuing education for practitioners.

Hypothesis III: There is no relationship between the type of operation and nutrition marketing practices in foodservice operations.

Hypothesis III was accepted because the relationship was not significant.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

SUMMARY

Nutrition in the foodservice industry has become a topic of growing importance. Both demographic and lifestyle changes within the United States have resulted in consumer demand for nutrition in the foodservice industry.

In surveying the highest volume restaurants and institutions in the United States in 1987 (400: Ranking, 1988) it appears that foodservice operators are following the trend toward healthful and nutritious dining. Sixty four percent of all foodservice operators surveyed currently market nutrition in their foodservice operation. This is significantly higher than the 1986 NRA survey (Regan, 1987b) which found only 23% of respondents featured health and nutrition promotions. In a recent Restaurant and Institutions' (Backas, 1988) survey more than a third of restaurant operators indicated that nutrition is becoming increasingly important in menu planning. The high rate of response to marketing nutrition is evidence of its importance in the foodservice industry. Several differences in nutrition

marketing practices were found when comparing the results of this study with an earlier study. The 1986 National Restaurant Association's survey of operators (Regan, 1987b) found that 37% of operators have a special section for marketing nutrition on the menu, 12% have their waitstaff explain choices to consumers, 10% indicate nutritious items with a special symbol, and 9% use a separate menu. In the current study, 17% used a special section, 7% relied on the waitstaff to communicate choices to customers, 23% used special symbols, and only 3% used separate menus. These differences could result from a change over time or a difference in the samples studied.

The majority of respondents, 66%, estimated the percentage of total annual sales for menu items labeled and marketed as nutritious to be only between 0-10%. This is in contrast to the trend of increased meal consumption away from home (Regan, 1987a, Washington Weekly, 1987) and the high rate of consumers reported that nutrition was important as to where to dine (Carlson and Tabacchi, 1986). Even with the majority answering only 0-10% of annual sales, 63% of this group had plans to add nutritious menu items to their menus. This seems to indicate that foodservice R&D Directors recognize the need to expand in this area, although it does not represent a large percentage of their total

sales volume.

Forty percent of respondents reported marketing "nutritious" items at both lunch and dinner and none reported marketing those items at breakfast. This is in congruence with an earlier study (Regan, 1987c) in which consumers reported that they were most concerned about having "nutritious" menu choices at the noon meal.

Findings are somewhat contradictory, reflecting the variety of customers served. For example, although R&D Directors agreed that consumers are more concerned with how foods taste than with their nutritional content, they also agreed that their organization should promote healthy menu items, and it is the responsibility of their organization to provide low-calorie, low fat, and low cholesterol options on their menus. It appears they realized that although not all customers are interested in nutrition while dining away from home, there is a segmented market that is interested in eating nutritious foods. Therefore, it is their responsibility to insure that healthful and nutritious menu choices are available.

R&D Directors disagreed (2.6 ± 0.9) that nutrition is an important factor in determining where people eat meals away from home. This is in contrast to a study where 75 to 85% of consumers reported that nutrition was important in deciding where to dine (Carlson and

Tabacchi, 1986).

The second highest attitudinal score was 3.9 ± 0.6, for the item for "in recipe development, richer flavors should be achieved without adding fat and salt". The high response to this item could be related to the fact that R&D Directors were the group surveyed. Since this is their area of expertise, they may have been inclined to be positive in their response to a question of this nature, concerning menu item development.

Respondents disagreed (2.5 ± 0.9) that foodservice organizations have "the responsibility for improving the health of our customers". The Surgeon General's Report on Nutrition and Health (DHHS, 1988) addressed this issue. The Surgeon General stated that foodservice organizations have important opportunities for improving health and providing nutrition education. By improving the nutritional balance of meals offered in foodservice operations, the health of the nation can be expected to improve. In the future, focus on this area should cause foodservice organizations to become more responsible for improving the health of consumers.

Thirty nine percent of respondents did provide nutritional analysis of menu items for customers. Of this group providing nutrition information, 56% provided a separate brochure, with 37% responding to "other" category. Written responses of "other" methods to

provide nutrition information indicated that the majority were using point of sale marketing. Methods mentioned were entree cards, posters and flyers in restaurants, and even a computer with a touch screen for nutrition information. It appears that these operators are marketing nutrition aggressively. They are visually demonstrating the importance of having nutritious and healthy foods available to their customers. This is also evident in that the least common method to market nutrition was using a separate menu (3%). It appears that marketing nutrition is integrated with most restaurant menus. It is apparent restaurant operators want nutrition to be a part of their concept. It also puts a customer more at ease and increases acceptance in ordering nutritious choices because customers on a special diet or those seeking nutritious menu items do not have to feel different by being given a separate menu.

Sources of nutrition information that corporate R&D Directors utilize are varied. The majority of respondents (54%) utilize programs developed by a health-related organization such as the American Heart Association. This is higher than the 24% who reported to consult such sources in an earlier study (Regan, 1987b). Twenty one percent of respondents surveyed used registered dietitian consultants as their source of

nutrition information. The use of registered dietitians, adding both consultants and those on staff in foodservice organizations was only 37% total. Twenty-nine percent responded they used "no" source of nutrition information, and 26% listed "other" sources. Many write-in's under "other" indicated that R&D Development Directors used trade journals and dining trends as their sources of nutrition information. Other popular sources of information were food technologists/scientists and laboratory analysis of menu items. With 63% of respondents planning to expand the nutritious offerings on their menu, registered dietitians have an opportunity to offer their expertise to foodservice operators.

Nutrition training programs are needed in foodservice operations. Respondents indicated that 36% of servers and 57% of chefs and lead cooks received no nutrition training. An opportunity exists for registered dietitians to design and implement training programs on nutrition for local foodservice staff.

The model testing hypothesis II, "there is a positive relationship between attitudes toward nutrition and nutrition marketing practices in foodservice operations" was significant ($F=6.48$, $p=0.013$). This relationship suggests that R&D Directors' attitudes toward nutrition directly influence the current

nutrition marketing practices occurring in their organizations.

Surprisingly, in testing whether or not nutrition marketing practices and attitudes toward nutrition differ based on the type of foodservice operation (restaurant, fast-food, cafeteria and other) no differences were found. Sixty three percent of the operations responding indicated an intention to add nutritious menu items. Therefore, nutrition in foodservice organizations will receive greater emphasis in the future as the trend toward nutrition, health, and fitness becomes increasingly integrated into the American lifestyle. R&D Directors have an opportunity to develop and market nutritious menu items.

RECOMMENDATIONS

Registered dietitians need to market their skills to restaurants since many restaurant operators lack the nutritional background and formal training to develop and implement their own nutrition programs. With 63% of respondents planning to add nutritious menu items, and a total of only 37% of respondents utilizing registered dietitians, as either consultants or as staff members, as a source of nutrition information, an opportunity exits for registered dietitians to work closely with

foodservice operators in developing nutrition programs. An opportunity also exists for staff training programs on nutrition to be developed by registered dietitians. The number of corporate training programs needs to be increased so knowledge and preparation of nutritious menu items are uniform in foodservice organizations across the United States.

Related Research Needed

Research related to the effectiveness of training programs is needed. Other areas of research could include what are customer expectations concerning nutrition and the potential dollar contributions of marketing nutrition. In addition, the relationship between consumer attitudes and actual buying behavior should be studied. In order for foodservice organizations to spend their marketing dollars wisely, research is needed to determine what nutrition information is most useful to consumers, and what marketing medium is most effective in conveying nutrition information.

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APPENDIXES

APPENDIX A

CERTIFICATION OF EXEMPTION FROM REVIEW FOR RESEARCH INVOLVING HUMAN SUBJECTS

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

Office of the
Vice Provost
for Research

CRP #: 2890 A DATE: 03/22/89

Title: Marketing Nutrition in Foodservice Operations

Burkhalter, Jane W.
Nutrition & Food Sciences
229 Jessie Harris Bldg.
Campus

Sneed, Dr. Jeannie
Nutrition & Food Sciences
229 Jessie Harris Bldg.
Campus

Dear Ms. Burkhalter:

The project listed above has been certified exempt from review by the Committee on Research Participation and is approved.

This certification is for a period ending one year from the date of this letter. Please make timely submission of renewal or prompt notification of project termination (see item #2 below).

The responsibilities of the project director include the following:

1. Prior approval from the Vice Provost for Research must be obtained before any changes in the project are instituted.

2. Submission of a Form D at 12-month intervals attesting to the current status of the project (protocol is still in effect, project is terminated, etc.).

We wish you success in your research endeavors.

Sincerely,

Edith M. Szathmary

Edith M. Szathmary
Coordinator of Compliances

cc: Dr. William C. Morris
229 Jessie Harris Bldg.
CRP file

Attachment: Copy of Form A

APPENDIX B

RESEARCH QUESTIONNAIRE

MARKETING NUTRITION IN FOODSERVICE OPERATIONS

Department of Nutrition and Food Sciences
College of Human Ecology
The University of Tennessee, Knoxville

PART I. We would like to know which of the following best describes your operation. If more than one applies, please estimate a percentage of volume for each type of operation. Answer the survey according to the greatest percentage assignment.

____ Full-service restaurant
____ Cafeteria
____ Fast food restaurant
____ Other, please specify _____

PART II. Read the following questions about how nutrition may be incorporated into foodservice. For each question, please indicate what your organization is currently doing.

1. Which of the following methods are used to market nutrition in your foodservice operation? Please check all responses that apply.

___ Special section of the menu is used
___ Separate menu used
___ Waitstaff informs consumers about special nutritious menu items
___ Special symbols are used to designate nutritious items
___ Statement on the menu encourages special requests, such as no sauce or a special method of cooking
___ Descriptive copy is used to promote menu items (i.e., how cooked)
___ Other, please specify _____

2. For what meals do you promote special nutritious menu items?

___ Breakfast
___ Lunch
___ Dinner
___ Catering

3. Please approximate what percentage of items on the menu are labeled and marketed as nutritious items? _____ Please list some examples.

4. Do you provide nutritional analysis for consumers?

___ No

If no, go to question 7.

___ Yes

If yes, please answer questions 5 and 6.

5. Nutritional analysis is provided for consumers:

___ on menu
___ on a separate brochure
___ other, please specify _____

6. Do you provide any of the following nutritional information? Check all that apply.

___ calorie count
___ sodium content
___ fat content
___ cholesterol content
___ Other, please specify _____

7. Do you consult with any of the following individuals for information on developing nutrition programs and menu items? Check all that apply

___ Registered Dietitian on staff
___ Registered Dietitian consultant
___ Independent Nutritionist (not a R.D.)
___ Executive chef on staff
___ Other, please specify _____

8. What source(s) of information are used to develop nutrition programs and menu items? Check all that apply

___ The American Heart Association
___ The American Heart Association's program, "Creative Cuisine"
___ Other health organization, please list if applicable _____
___ Hospital or medical center dietary departments
___ Food distributor
___ Program/menu items developed entirely in-house by chef or food and beverage department
___ Other, please specify _____

9. Which of the following training programs are used in your organization. Please check all that apply.

For Servers:
___ Corporate training program on nutrition is required for all servers
___ Nutrition training left up to discretion of Unit Managers
___ Servers trained on special requests that the restaurant will accommodate, such as no salt, sauce on side, etc.

For Chefs/Lead Cooks:
___ Corporate training program on nutrition is required for all chefs/head cooks
___ Nutrition training left up to discretion of unit manager

10. Approximately what percentage of total annual sales is for menu items labeled and marketed as nutritious?

___ 0-10%	___ 31-40%	___ 61-70%	___91% or more
___ 11-20%	___ 41-50%	___ 71-80%	
___ 21-30%	___ 51-60%	___ 81-90%	

11. Based on the response to nutrition on your menu, do you have plans to add items?

_____ Yes _____ No

If yes, what type of items?

12. If you are associated with a hotel, does it feature a health/nutrition/fitness promotion or program for customers?

_____ Yes _____ No

PART III. Each of the following statements relate to nutrition and its importance to your operation. For each statement, circle the response that best represents your beliefs.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It is the responsibility of our organization to provide nutrition education to consumers.	SD	D	N	A	SA
It is the responsibility of our organization to provide low-calorie, low-fat, and low cholesterol options on our menus.	SD	D	N	A	SA
Our organization should promote healthy menu items to our consumers.	SD	D	N	A	SA
When eating away from home, customers are not really interested in nutrition.	SD	D	N	A	SA
Our organization has a responsibility for promoting a healthy lifestyle for our consumers.	SD	D	N	A	SA
We have the responsibility for improving the health of our customers.	SD	D	N	A	SA
Nutrition concerns are critical to menu development.	SD	D	N	A	SA
We should increase the number of low calorie menu items offered.	SD	D	N	A	SA
In recipe development, richer flavors should be achieved without adding fat and salt.	SD	D	N	A	SA
Nutrition is an important factor in determining where people eat meals away from home.	SD	D	N	A	SA
Consumers are more concerned with how foods taste than with their nutritional content.	SD	D	N	A	SA
We should strive to use more nutritious ingredients, even at extra cost.	SD	D	N	A	SA

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

APPENDIX C

LETTER OF INTRODUCTION

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

College of
Human Ecology

Nutrition and
Food Science

March 9, 1989

Dear Research and Development Director:

Little research has been done on the marketing of nutrition, the sources of nutrition information, and attitudes toward nutrition of managers in the hospitality industry. Your organization has been randomly selected to participate in a research study being conducted by The University of Tennessee, Knoxville. We are asking for approximately 15 minutes of your time to complete a questionnaire. This questionnaire will be mailed to you in two weeks.

Your participation in this study is critical to the success of the study. The survey will NOT be identified in any way by name or number to ensure complete anonymity. Neither your organization nor your name will be identified. All data will be compiled and presented as group data. We will be happy to provide all study participants with a copy of the results of the study, upon request.

We feel certain the results of this study will be useful to you and other managers in the foodservice and hospitality industry. We appreciate your cooperation and contribution in this study.

Sincerely,

Jane P. Burkhalter
Jane Pascarella Burkhalter
Graduate Teaching Assistant

Jeannie Sneed
Jeannie Sneed, Ph.D., R.D.
Assistant Professor

1215 West Cumberland Avenue, Room 229 Knoxville, Tennessee, 37996-1900 (615) 974-5445, 974-3491

APPENDIX D

COVER LETTER

THE UNIVERSITY OF TENNESSEE
KNOXVILLE



College of
Human Ecology

Nutrition and
Food Science

March 27, 1989

Dear Research and Development Director:

Hopefully you received our introductory letter explaining that your organization was randomly selected to participate in a research study on the current practices of marketing nutrition in foodservices operations. This study is being conducted at the University of Tennessee, Knoxville. The research questionnaire and a self-addressed, postage-paid envelope are enclosed.

As promised, we will be happy to provide all study participants with a copy of the nationwide results of our study, titled "Marketing Nutrition in Foodservices Operations." Simply fill out your name and address on the postcard provided in this mailing, and a copy of the results will be sent to you. Again, may we assure you of complete confidentiality. All data will be compiled and presented as group data.

With your support and input, we feel certain the results will be useful to you and others in the foodservice and hospitality industry. Please return the questionnaire at your earliest convenience. Thank you for your time and your care in responding to this study.

Sincerely,

Jane P. Burkhalter

Jane Pascarella Burkhalter
Graduate Teaching Assistant

Jeannie Sneed

Jeannie Sneed, Ph.D., R.D.
Assistant Professor

Enclosures: Questionnaire
Summary Request

1215 West Cumberland Avenue, Room 229 Knoxville, Tennessee, 37996-1900 (615) 974-5445, 974-3491

APPENDIX E

SURVEY SUMMARY REQUEST POSTCARD

I am interested in the results of your survey on "Marketing Nutrition in Foodservices Operations". Please send me a summary of the results.

Name _____

Title _____

Address _____

_____

_____



America the Beautiful USA 15

Jeannie Sneed/Jane Burkhalter
Department of Nutrition & Food Sciences
1215 Cumberland Avenue
Knoxville, TN 37996-1900

APPENDIX F

FOLLOW-UP POSTCARD

April 12, 1989

Dear Research and Development Director,

You recently received a questionnaire on marketing nutrition in foodservice operations. Results of this study will be used to determine the current practices and attitudes toward nutrition in the foodservice industry.

If you have already completed and returned the questionnaire, please accept our sincere thanks. If not, please take a few minutes to complete it and return it to us.

Your response is greatly valued and needed. Thank you for your time and consideration!

Sincerely,

Jane P. Burkhalter

Jane P. Burkhalter
Graduate Teaching Assistant

Jeannie Sneed

Jeannie Sneed, Ph.D., R.D.
Assistant Professor

APPENDIX G

FOLLOW-UP LETTER

THE UNIVERSITY OF TENNESSEE
KNOXVILLE



College of
Human Ecology

Nutrition and
Food Science

May 3, 1989

Dear Research and Development Director:

Little research has been done on the marketing of nutrition, the sources of nutrition information, and attitudes toward nutrition of managers in the hospitality industry. Your organization was randomly selected to participate in a research study being conducted by The University of Tennessee, Knoxville. An initial mailing was sent to you, and if you have already completed and returned the questionnaire, we thank you! However, our response rate was only 20%. In order to make this a significant study, we are attempting to increase our response rate. If you have not already completed the questionnaire, please take a moment to complete and return the questionnaire.

Your participation in this study is critical to the success of the study. The survey will NOT be identified in any way by name or number to ensure complete anonymity. Neither your organization nor your name will be identified. All data will be compiled and presented as group data.

We feel certain the results of this study will be useful to you and other managers in the foodservice and hospitality industry. We appreciate your cooperation in and contribution to this study.

Sincerely,

Jane P. Burkhalter

Jane Pascarella Burkhalter
Graduate Teaching Assistant

Jeannie Sneed

Jeannie Sneed, Ph.D., R.D.
Assistant Professor

1215 West Cumberland Avenue, Room 229 Knoxville, Tennessee, 37996-1900 (615) 974-5445, 974-3491

APPENDIX H

ITEM-TOTAL STATISTICS FOR ATTITUDE SCALE

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
A1	34.8551	23.7140	.5179	.3921	.7462
A2	34.1594	23.3419	.6267	.4354	.7317
A3	34.2029	25.6053	.5490	.4401	.7460
A4	34.6522	24.7008	.4852	.2879	.7504
A5	34.8261	25.0870	.4897	.5079	.7500
A6	35.3478	25.2890	.5003	.4257	.7492
A7	34.4203	26.1002	.4018	.2829	.7600
A8	34.3913	27.6535	.2957	.3233	.7699
A9	34.0145	28.6321	.2345	.2605	.7740
A10	35.2464	27.1590	.2805	.2675	.7728
A11	35.8696	27.4974	.3122	.2179	.7684
A12	34.5797	28.1296	.1985	.1360	.7795

RELIABILITY COEFFICIENTS 12 ITEMS

ALPHA = .7746 STANDARDIZED ITEM ALPHA = .7655

VITA

Jane Wallace Pascarella was born in Pittsburgh, Pennsylvania. In 1976 she graduated from Fox Chapel High School. In November 1980 she graduated from Pennsylvania State University with a Bachelor of Science in Administrative Dietetics.

Several different positions were held in the foodservice industry prior to graduate work. Following graduation she worked for Sky Chefs in a variety of supervisory positions in the airline catering industry, for three years. Next, she was employed by Gladieux Corporation as U.S. Air Account Manager in charge of administration and quality control of a major airline account. After moving to Tennessee for the next three years she was employed by The University of Tennessee Food Services Department, as an Assistant Manager and then as Staff Assistant. In the fall of 1988 she began a teaching assistantship at The University of Tennessee, Knoxville in the Nutrition and Food Sciences Department. She received a Master of Science Degree in August 1989.