Winter 2007

The Effect of Nutrition Information on Menu Selection When Eating Food Away From Home

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THE EFFECT OF NUTRITION INFORMATION ON MENU SELECTION

WHEN EATING FOOD AWAY FROM HOME

by

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A Dissertation submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

BUSINESS ADMINISTRATION

OLD DOMINION UNIVERSITY
DECEMBER 2007

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ABSTRACT

THE EFFECT OF NUTRITION INFORMATION ON MENU SELECTION WHEN EATING FOOD AWAY FROM HOME

Rebecca Foster Hochradel
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As the number of Americans diagnosed with heart disease, diabetes, and excessive weight continues to increase, providing information to allow consumers to choose healthier foods becomes imperative. The number of consumers eating food away from home (EFAH) is rising. Although nutrition information is required on food products purchased for home use, it is not required when EFAH. How can a consumer know what is healthy if nutrition information is not provided? Policy makers and restaurateurs are in conflict regarding the provision of nutrition information on the menu. Policy makers want this information to be provided while restaurateurs say providing this information is too costly and consumers do not request it. This research seeks to determine whether or not consumers would use nutrition information to make a healthier menu selection when EFAH.

To date, no research has been conducted offering nutrition information at the time of ordering the meal to determine the effect this nutrition information has on menu selection. This dissertation contributes to the literature by experimentally manipulating nutrition information availability, occasion for eating food away from home, meal time, and the healthiness of the dining companion's meal during the menu selection process and then investigating the healthiness of the consumer's menu selection. This dissertation develops and utilizes a healthiness quotient in order to assess the healthiness

of each menu item. Differences in consumer characteristics and healthiness of the menu selections will be analyzed using multivariate analysis techniques.

A total of 71, 277, and 185 consumers were surveyed in Study 1, Study 2 and Study 3, respectively. Results indicate that consumers with high levels of perceived nutrition knowledge, health consciousness, self-efficacy, goal directed behavior, and engagement in health prevention measures not only select healthier menu items when EFAH, but use the available nutrition information to select even healthier menu items when EFAH. Risk perception and consumer decision making styles did not appear to be useful determinants in the selection of healthy menu choices. The consumer's ability to understand the nutrition information appears to influence its use. Study limitations and directions for future research are also presented.

This dissertation is dedicated to my husband, Ted,
and my daughters, Erika and Margaret,
who were willing to sacrifice for me.

ACKNOWLEDGEMENTS

As with any great undertaking, many people contributed to the successful completion of this degree, and in particular, this dissertation. Foremost, I would like to thank Jesus Christ, my Lord and Savior, who is my source of strength and my help in time of need. I particularly thank Him for putting the right people in my life at the right time as I press on toward the high calling...

First, I would like to thank the members of my dissertation committee who were willing to work with me and my accelerated timetable in providing valuable insight, guidance, and helpful suggestions. In particular, I want to express my deepest gratitude to my chair extraordinaire, Dr. Mahesh Gopinath. His willingness to meet with me whenever and wherever throughout the summer to assist me in setting up and conducting the electronic survey, interpreting the results, and just helping me think through the process in general, enabled me to complete this dissertation under a tight time frame. His challenges to me throughout this process would not let me settle for 'adequate,' but caused me to reach for the stars. I would also like to express my deepest appreciation to Dr. Anusorn Singhapakdi for his support, not only a member of my dissertation committee, but also throughout my entire tenure as a doctoral student. His encouragement and support allowed me to not only accomplish this great undertaking, but provided the guidance I needed in juggling a full time work load with a demanding student schedule. I will always be grateful that Dr. Joan Mann was willing to serve on my dissertation committee. Her insightful comments and support were generously provided and served to improve this dissertation. Her encouragement motivated me to not only finish the race, but to finish with a dissertation in which I could be proud.

No student completes a doctoral program without the help of various faculty members. I feel fortunate that I was able to pursue this degree at Old Dominion University's School of Business and Public Administration. The faculty that I studied under is truly knowledgeable and excited about their fields of study and is willing to work patiently with each student to help them grow in the discipline. Particularly, I would like to thank Dr. John Ford for pushing me to 'think like an academian' in seeing the theoretical issues, not only the practitioner ones. His encouragement helped me persevere when I felt overwhelmed. Dr. Kiran Kirande patiently explained, and re-explained, many methodological concepts and kept telling me to be bold...that even though I doubted myself, he showed me that I really did have an understanding of the methodology. I am grateful to Dr. Edward Markowski and Dr. Steve Rhiel for providing a listening ear and guidance when I had questions regarding analysis and the intricacies of SPSS and AMOS. Many thanks, Dr. Kirande and Dr. Markowski, for allowing me to sit in extra classes just to hear the information again! I appreciate the valuable insight from Dr. Shaomin Li, Dr. Anil Nair, and Dr. Yuping Liu regarding international business, strategic management, and current marketing concepts, respectively. I am thankful to Dr. John Doukas and Dr. Charlie Turner who explained international finance and international trade concepts, respectively, in such a way that I understood them!

I would also like to thank the 'behind-the-scenes' members of ODU. Dr. Sylvia Hudgins provided a graduate assistantship when I needed it most, Ms. Katrina Davenport made sure I was registered for classes and had all the forms completed as needed, and Ms. Kathy Hines helped make sure I had processed my syllabi, grades, and obtained my

class textbooks in a timely manner! Thank you to everyone who was willing to contribute to my success.

No student completes a Ph. D. program alone in the classroom. I wish to express my deep gratitude to my fellow classmates Dr. Terri Kirchner, Eyad Youssef, and Altaf Merchant for the collaboration and support they provided. You three have truly been good friends throughout this process...from study notes, study sessions, advice, support, and co-authorship opportunities. You were great classmates and I am thankful we were in this together!

I would also like to thank Norfolk State University and various faculty members who supported me during this process. In particular, I would like to thank the Dean of the School of Business, Dr. Gary Whaley, for being a good friend and supporter by allowing me to have a teaching schedule that complemented by ODU schedule. Dr. Paulette Edmunds and Dr. Reddy Dondeti have been colleagues, supporters, and encouragers during these past five years. In particular, I would like to thank NSU's Department of Research for generously funding the consumer panel used in this research.

Last, but definitely not least, I would like to thank my family, without whose sacrifice and support this degree would have never been realized. To my parents, John and Doris Foster, your encouragement is gratefully appreciated. Thanks for understanding that I could not visit as frequently as I wished due to the demands on my time. To my daughters, Erika and Maggie, thank you for 'picking up the slack' when I had a paper to write, an assignment to grade, a test to prepare, comps to study for, and all the other things that seemed to come first. Your willingness to sacrifice for me showed great selflessness and maturity...hopefully we now have time to play!

Words cannot begin to express the appreciation I have for my husband, Ted. He has continually sacrificed for me and has not pressured me to perform any household tasks that would take away from the completion of this degree. His encouragement was always readily provided and he knew exactly what to say when I needed that encouragement the very most. The years of love and support he has shown me can never be repaid. Ted, I hope the future allows you to have a turn in the spotlight!

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CHAPTER 1

STATEMENT OF THE PROBLEM

Introduction of the Problem

Are we truly what we eat? The adage 'you are what you eat' has been embraced as truth over the years as it is often noted that over time, people who eat healthier diets tend to be healthier and people who eat less healthy diets tend to be less healthy. The number of Americans diagnosed with heart disease, diabetes, and excessive weight continues to increase (Heron & Smith, 2007). These causes of death are linked to nutrition (American Dietetic Association, 2002). Thus, the health of the consumer may be based on the provision of nutrition information in order to allow the consumer to choose healthier foods.

The marketing adage 'let the buyer beware' is associated with the buying and selling process. However, this adage does not apply to the food industry when purchasing food for home consumption. Consumers expect to know what is in the food they are eating. In the United States, food products are required to have a nutrition label informing consumers of not only the ingredients in the food, but also the nutritional value of these ingredients. The purpose of the food label is for food manufacturers to communicate with consumers in order to inform them about the nutritional value of the food product (Nutrition Labeling and Education Act (NLEA) of 1990). Over time, consumer's change their level of interest in various nutrients. For example, nutrients of interest in recent years include salt, fiber, cholesterol, sugar, carbohydrates, and fat, to

name a few (Brody, 2004). When purchasing products for home use, the nutrition label provides this information on the food package. The purpose of this information is to help consumers know what they are consuming and this information, in turn, will allow the consumer to follow the recommended Dietary Guidelines for Healthy Americans (NLEA, 1990). In January 2005, the United States Department of Agriculture (USDA), in conjunction with the United States Health and Human Services (HHS), released the sixth edition of Dietary Guidelines for Healthy Americans. According to the USDA (Health and Human Services, 2005):

> "These new *Dietary Guidelines* represent our best science-based advice to help Americans live healthier and longer lives. The report gives action steps to reach achievable goals in weight control, stronger muscles and bones, and balanced nutrition to help prevent chronic diseases such as heart disease, diabetes and some cancers. Promoting good dietary habits is key to reducing the growing problems of obesity and physical inactivity, and to gaining the health benefits that come from a nutritionally balanced diet."

Adhering to these guidelines may be more difficult than it seems. In April 2005, the United States Food and Drug Administration (FDA), the agency responsible for the oversight of the food labels, asked for public comment on decisions regarding the nutrition label (Center for Food Safety and Applied Nutrition, 2005). The subsequent

change to the nutrition label enacted by the FDA was the inclusion of trans-fat information (Center for Food Safety and Applied Nutrition, 2006).

Although the nutrition information allows the consumer to know the nutrient content of the food, this information is only required for foods manufactured for home use. Recent legislation in New York, NY and King County, WA will now require the provision of nutrition information in some restaurants (Allen, 2007), yet this information is generally not required when eating ready to eat food or when eating food away from home (EFAH). In 2005, consumers spent 47% of their food dollars, a record $476 billion, eating away from home, an increase of 5% from the previous year (Horovitz, 2005). The most popular foods eaten away from home are hamburgers, French fries and pizza; foods typically not thought of as healthy (Horovitz, 2005). According to research conducted by the NPD Group, Inc. (Portnoy, 2007), although approximately one third of consumers say they would like healthier options on the menu, only 10% of the consumers reported eating a healthy meal during their most recent EFAH experience. This may be due to the fact that convenience, not health, is often cited as the reason consumers eat in restaurants (Portnoy, 2006). Special interest groups, such as the Center for Science and the Public Interest, continue to lobby Congress to require restaurants with 10 or more locations to provide nutrition information for their standard items. Many restaurateurs argue that the cost of this information is excessive, approximately $220 per menu item. These restaurateurs also argue that the cost is not worth it as 69% of consumers state they eat 'fair to poor' diets when EFAH while 39% of consumers state they eat 'fair to poor' diets when eating at home, although the NLEA has been enforced since 1993 (Horovitz, 2005).

One purpose of this dissertation is to determine whether or not consumers would use nutrition information, if it were available on the menu, to select a healthier menu item when EFAH. EFAH is often thought of as 'eating out' or eating in restaurants. But consumers also EFAH in other locations, such as at sporting events, movie theaters, convenience stores, school, and even on cruise ships. However, this dissertation will focus on consumers EFAH in casual dining restaurants.

How do consumers make choices? Research indicates that not all consumers will choose to eat healthy (Horovitz, 2005). Research also indicates that consumers use different decision-making styles during shopping situations (Sproles & Kendall, 1986). These different decision-making styles include the dimensions of perfectionism, brand consciousness, recreational/hedonism, confused by overchoice, impulsiveness, novelty/fashion consciousness, price consciousness, and habitual/brand loyal. These dimensions characterize the various approaches used by the consumer when shopping. Sproles and Kendall (1986) suggest that consumers may not use the same decision-making style in every context. Consumers are not robots and are not expect to perform every shopping task identically. Sproles and Kendall (1986) expect variation with consumers shopping behavior and suggest that these decision-making styles should be further researched in various contexts. These decision-making styles have not been studied in the context of EFAH. Yet with the high incidence of eating out, choices regarding menu item selection when EFAH is a decision that consumers frequently make. But would all consumer decision-making styles use nutrition information on the menu if it were available? This dissertation seeks to investigate this issue in order to determine

whether or not there are specific consumer characteristics associated with the decision-making style used when EFAH.

Although consumers make a menu choice when EFAH, it cannot be assumed that all consumers seek to make a healthy menu choice when selecting a menu item. Oftentimes there is a conflict within the consumer regarding the healthiness of an item and the tastiness of an item. Although these two components can co-exist in a food item, if consumers have to make a choice between a healthy item and a tasty item, the choice will be the tasty item (Lewis, 2005). This research found that consumers are not willing to compromise what product they want to eat for health benefits. Therefore, another aspect of this dissertation will seek to determine which consumer characteristics are used when selecting a healthier menu item versus when making a choice for a tastier item.

Is food buying behavior a planned or reasoned process? The theory of planned behavior notes that attitude, social norms, and perceived behavioral control lead to intention which leads to behavior. This behavior does not always indicate a positive behavior or, in the context of this dissertation, a healthful behavior, will be selected; only a behavior will be selected. This dissertation utilizes the basic premise that this theory occurs during the meal selection process when EFAH. This dissertation will seek to determine what effect, if any, nutrition information, the occasion for EFAH, the meal time itself, and the healthiness of the menu item selection of a dining companion will have on the purchase intention of the consumer.

Purpose of the Dissertation Research Topic

The American Marketing Association defines marketing as "an organizational function and a set of processes for creating, communicating, and delivering value to

customers and for managing customer relationships in ways that benefit the organization and its stakeholders" (Gronroos, 2006, p. 395). Would the inclusion of nutrition information on a menu provide value to the customer when EFAH? Would the provision of nutrition information on a menu benefit the organization and its stakeholders? Would the health of the consumer, and thus the health of the nation, improve if consumers were able to make meal selections based on provided nutrition information? Should government agencies require restaurants to provide nutrition information to their customers? Would restaurants provide more healthful choices when the nutritional value of the restaurants' offerings is disclosed to the consumers? Will restaurants market their menu items based on the healthiness of the choices instead of the tastiness of the choices? The purpose of this dissertation is to address the above micro- and macro-marketing issues. Although the complete investigation of some of these issues are beyond the scope of this dissertation, the importance of many of these issues will be determined by the findings of this dissertation regarding whether or not consumers will use available nutrition information in order to select a healthier item when EFAH, and if so, the factors that influence the use of the available nutrition information in order to select a healthier item when EFAH.

Specifically, first this paper will review the literature regarding the use of nutrition information for food eaten both at home and away from home. As previously mentioned, only 31% of consumers select what they perceived to be 'good' food when eating at restaurants. But is this food really good? Research indicates that perception of healthy food is not always accurate (Burton, Creyer, Kees, & Huggins, 2006). In addition, this research indicates that because a person perceives he or she has an

understanding of nutrition, it does not mean that the person actually understands nutrition. Assessing a person's actual nutrition knowledge in all facets of nutrition is beyond the scope of this dissertation. Thus, this dissertation will seek to determine the consumer's self-perception of nutrition knowledge.

Byrd-Bredbenner (2000) found that only 29% of consumers always read nutrition labels and 51% of consumers sometimes read nutrition labels when purchasing food for home consumption. This dissertation seeks to determine whether or not consumers would read and use nutrition label information when EFAH. Other research indicates that nutrition information use varies within different demographic groups. Consumers that are less likely to use nutrition information are less educated, have a lower income, are older, are men, and are non-white (Cole & Balasubramanian, 1993 and Variyam & Smallwood, 1996). Would label usage when EFAH be consistent with this previous research? This dissertation seeks to identify the characteristics, if any, that may indicate increased nutrition information usage when EFAH.

The second focus of this dissertation will investigate the different types of consumer decision making styles proposed by Sproles and Kendall (1986). In their seminal work they classify consumer decision making styles into eight dimensions using their Consumer Styles Inventory (CSI). These eight dimensions include 1) perfectionistic, 2) brand conscious, 3) novelty-fashion conscious, 4) recreational/hedonistic, 5) price conscious, 6) impulsive, 7) confused by overchoice, and 8) habitual. These decision making styles have been studied from a variety of aspects, including type of consumer good, culture, country of origin, age, and gender as differentiating variables to determine the generalizability of these eight factors. No one,

though, has studied these consumer decision making style when EFAH. This dissertation seeks to investigate whether or not all factors exist when eating food away from home and how these factors influence a person's food choice when ordering from a menu. Additionally, this dissertation will seek to determine which styles would be more likely to use nutrition information. Does it matter what consumer decision making style one uses for nutrition information to be a factor in the decision making process? For example, are consumers who are considered perfectionistic when making a decision more likely to use nutrition information since they shop more carefully, more analytically, and by comparison than consumers who are considered habitual when making a decision since they have formed habits and choose items repeatedly? The latter group may not even bother to read the menu at all since they have already previously decided what they are going to order before they enter the restaurant. Prior to this particular investigation, though, will be to determine what factors a consumer considers when ordering a menu item and adapting the CSI to better describe shopping behavior when EFAH.

The third focus of this dissertation will be to determine what impact other factors have on the consumer's use of nutrition information. Factors, such as the consumer's risk perception, health consciousness, and social setting will be investigated. A consumer's risk perception deals with the fact that consumers may consider the benefit analysis when making the food choice. A common expression used by those watching their weight is 'a moment on the lips, forever on the hips.' Do consumers view the selection of a particular meal as affecting their health or weight? Or do they wish to select whatever they desire, regardless of the risk? This dissertation seeks to determine if these consumers, who may perceive the risk that a food choice may have undesired consequences, are more likely to

use nutrition information when making their food selections. Health conscious consumers are those who consider their health to be something they have to consider, to work toward achieving. These consumers do not consider good health to 'just happen.' Health conscious consumers consider all their activities in terms of how it will affect their health. This dissertation will seek to determine whether or not health conscious consumers will use nutrition information and whether or not these consumers will select healthier items from the menu more frequently when EFAH. Another factor that will be investigated will be effect that the social setting, or who the consumer is eating with, has on the consumer's use of nutrition information when EFAH. Do people choose different items based on their dining companion? For example, would a person choose a healthier item when eating with a business colleague than when eating with close friends or family? Or would they select more healthy items when eating with a close friend or family member who is encouraging them to eat healthier than with a business colleague with whom they rarely eat? Would the provision of nutrition information be more or less likely to be used? Would it make a difference based on which consumer decision making style is used by the consumer? Research has found that males are less likely to be interested in food shopping are less likely to be sensitive to their friends' opinions when making food choices (Bakewell & Mitchell, 2006). Another stream of literature focuses on the use of food to lift one's spirit or decrease frustration or anxiety (see French, Blair, & Booth, 1994). In these instances, the social setting did not appear to have an impact on the food selection. However, neither of these studies focused on EFAH. When EFAH, the consumer is in a 'glass bowl' and the food consumption occurs in a public, not private, setting. Thus, this dissertation will investigate whether or not this social setting

has an impact on the buying behavior when EFAH. Additionally, this dissertation will seek to determine whether or not the healthiness of the item selected by the dining companion will have an impact on the healthiness of the item selected by the consumer.

A person's diet cannot be determined by one meal choice. One aspect to consider in this dissertation is the fact that consumers may view their diet as a whole and decide what they want to eat based on the choices offered. This dissertation does not only seek to determine which consumers will use nutrition information to make healthier choices from the menu, but whether or not consumers will use the nutrition information when making the menu selection whether or not a healthier choice was selected. A consumer, while possibly choosing a less healthy item, may use the nutrition information to alter his/her eating behavior during subsequent meals. This modification of the diet may allow the consumer to experience an overall healthy diet while allowing the consumer to choose a less healthy item when EFAH. This concept, although not the main focus of this dissertation, will be investigated.

Nutrition Label Background

Prior to the 1990s, consumers did not use nutrition labels. Insufficient nutrition knowledge, problems associated with the labels themselves, the absence of need, and shopping practices or buying habits contributed to the low use of nutrition label information (Klopp & MacDonald, 1981). These researchers found that 79% of the participants who stated they did not use nutrition labels cited absence of need as the reason for not using the nutrition labels because they "trusted their ability to select nutritious foods without using the label information" (p. 314). While finding that users of nutrition labels had higher self-assessed levels of nutrition knowledge and higher

education levels; age, employment status, and gender were not predictors of label usage (Klopp & MacDonald, 1981).

Although not attempting to solve all the issues related to non-label usage, in 1990 the government enacted the NLEA. Enforcement of the NLEA began in 1993. Making sweeping changes in the way nutrition information is provided to the consumer, the purpose of the NLEA was to make information available to the consumer in a consistent manner, thereby increasing the usefulness of the information in the food selection process. The purpose of the NLEA is to allow consumers to make food decisions that positively impact their welfare since health status and nutrition intake are linked (Levy, Fein, & Stephenson, 1993). The key component that is emphasized by the NLEA is education. It is this component that allows consumers to use the nutrition label information to make food choices and purchasing decisions resulting in dietary changes that will reduce their risk of diet-related diseases (Byrd-Bredbenner, 2000). Greater awareness regarding the benefits of good nutrition leads to healthier eating habits of Americans (Putnam, 1993).

When purchasing food for home use, consumers typically look at a product for 2.5 seconds during an average shopping trip (Coulston, 1998). This is not enough time to adequately evaluate all the nutrition information provided on the label. The challenge, then, for nutritionists, food manufacturers, food marketers, and the government is to determine what information consumers will use to help them decide which products to purchase in such a short amount of time (Coulston, 1998). Lewis, Crane, Moore, and Hubbard (1994) describe the nutrition label as the bridge between general dietary guidelines and specific food choices. The nutrition label is the mechanism that provides

the nutrition information that allows consumers to improve or protect their health or comply with dietary recommendations required by their health care professionals (Byrd-Bredbenner, Wong, & Cottee, 2000). Location and frequency of exposures are two essential ingredients that marketers use to successfully communicate nutrition information. Food labels maximize these ingredients (Coulston, 1998). Consistency in the message is necessary for effective nutrition communication (American Dietetic Association, 2002). However, nutrition labeling is not required when EFAH. It is very likely that the consumer typically spends more than 2.5 seconds making a food purchase decision when EFAH, yet the nutrition information is not usually part of this decision making process as it is usually not available. Therefore, consumers who desire to comply with the dietary recommendations must utilize their prior nutrition knowledge of nutrient content from the labels of items purchased for home consumption, nutritional information of the food item prior to arriving at the restaurant, or by asking about the nutritional information while at the restaurant. However, many times only the food preparation information is available, not the nutrient content information. This information may or may not be accurate depending on the source of the information and the similarity between the nutrition information obtained and the actual food prepared.

There are health benefits in following a nutritious diet. There are health consequences in following a less healthful diet or a diet with excessive or inadequate amounts of certain nutrients. The purpose of the food label is to allow the consumer to make an informed decision by improving the consumer's understanding of the nutritional content of a product. For products purchased for home use, there are five mandatory components to the nutrition label that the Food and Drug Administration (FDA) regulates

and requires on all packaged foods: statement of identity, the net contents of the package, the name and address of the manufacturer, list of ingredients, and nutrition information. The product specific nutrient information is known as the 'Nutrition Facts' panel. Research regarding nutrition label usage usually uses the 'Nutrition Facts' panel as the basis of what is being researched (Burton & Andrews, 1996). However, the consumer first notices the messages which usually appear on the front of the label. These messages include health claims (e.g., 'whole grain foods reduce the risk of heart disease and certain cancers'), structure/function claims (e.g., 'calcium builds strong bones'), and nutrient content claims (e.g., words such as healthy, low, good source, or free). These terms have also been the focus of nutrition label usage research (see Burton & Creyer, 2004).

The new nutrition labeling information has been viewed positively by consumers. These changes in the nutrition label format enacted by the NLEA, known as the Nutrition Facts panel, have caused an increase in the percentage of consumers who use it regularly (see Byrd-Bredbenner et al., 2000). However, restaurants are not required to provide any nutrition information on the menu. Hence, consumers are not able to assess the nutrient value of the menu item. Burton et al. (2006) noted that when asked to estimate the number of calories consumed in a restaurant meal, consumers vastly underestimated the amount of calories, fat, and saturated fat in the food item selected. This research found that the provision of nutrition information significantly influenced the consumer's attitude, intention, and behavior. However, this information was provided to the consumer after the consumer indicated the food item he or she intended to order and was then asked if he or she would change his or her order based on the new information.

Other research regarding consumer's inability to accurately measure portions and nutrient content has been well researched (see Schwartz & Byrd-Bredbenner, 2006, Bryant & Dundes, 2005, Wansink & Cheney, 2005, Schwartz & Byrd-Bredbenner, 2004 and Raghubir & Krishna, 1999). This inability to accurately measure portions results in the consumer's increasing portion consumption which leads to obesity and health related diseases. Drichoutis, Lazaridis, & Nayga (2006) noted in their review of nutrition label usage that research in the EFAH context is limited and there is a need for further research regarding the consumers' desire for nutrition information when EFAH, their use of nutrition information when EFAH, and the conditions under which these events will occur. This dissertation seeks to address these issues by determining if the provision of nutrition information on the menu will increase the likelihood that consumers will select healthier foods when EFAH, and if so, under what conditions.

Organization of the Dissertation

Chapter 1 introduces the frequency of EFAH and the problems that result from this frequent consumption of food that the consumer has not prepared nor has been provided any nutrition information regarding the food that has been consumed, the background on the nutrition labeling legislation, and a description of the problem that is being investigated. Chapter 2 presents the conceptual model of the problem being investigated as well as the literature review of perceived nutrition knowledge, health consciousness and preventive health behaviors, subjective norms, self-efficacy, risk perception, consumer decision making styles, and a review of demographic characteristics and their effect on use of nutrition information. A review of the literature regarding goal directed behavior and meal time on meal selection behavior when EFAH

is also included. This chapter also includes the proposed hypotheses for each of these contexts. Chapter 3 includes the description of the preliminary study conducted, the descriptions of Study 1, Study 2 and Study 3, including the manipulations, the scales, the samples, and the statistical techniques used to test the hypotheses. Chapter 3 also describes the determination of the menu and the development of the healthiness quotient used to determine the healthiness of one menu selection versus another. Chapter 4 describes the results of the data analysis and hypotheses testing. Chapter 5 concludes this dissertation with of a description of the findings, the implications/contributions of the findings, the limitations of the study, and directions for future research.

CHAPTER 2

LITERATURE REVIEW

Research Questions

This study tries to answer three basic research questions. The focus of the first question is whether or not consumers would use nutrition information when making a meal selection when EFAH. The focus of the second question is whether or not the use of the nutrition information, if provided on the menu, would lead to a healthier food choice. The third question deals with the identifying consumers who would 1) use the nutrition information to select a healthier menu item, 2) use the nutrition information to select an unhealthy item, or 3) not use the nutrition information when selecting a menu item.

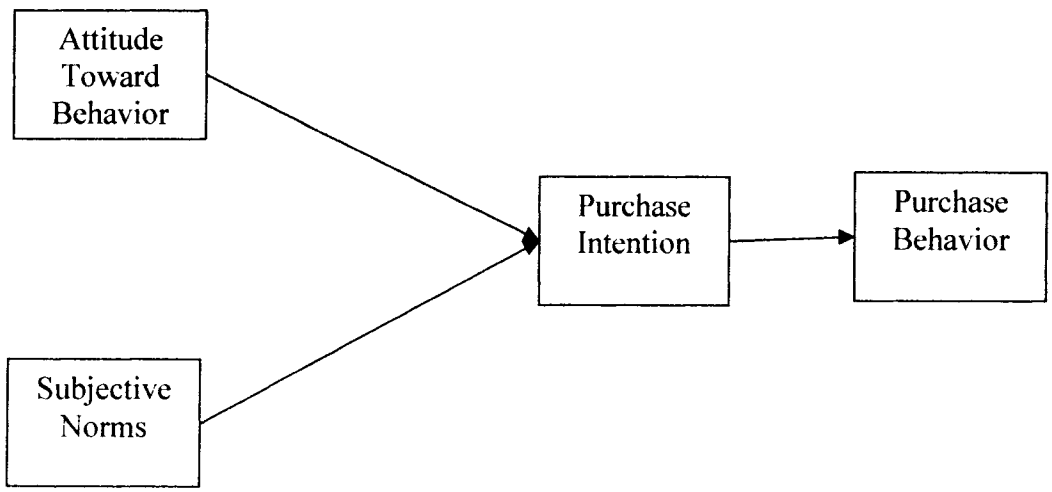
Theory of Planned Behavior

Marketers have long been interested in predicting consumer behavior. In 1975, Fishbein and Ajzen proposed the theory of reasoned action (see Figure 1) out of the goal directed behavior of the 1950s (see Meier & Albrecht, 2003). Central to this theory is the concept that behavior intention leads to the actual behavior. According to these authors, the behavior intention, or motive to adopt a particular behavior, is formed by the consumer's attitude toward the behavior and his/her subjective norms. Azjen (1985) notes that a consumer's attitude toward a behavior is developed by the consumer's beliefs and values that a particular behavior will produce certain outcomes. This attitude toward the behavior can be either positive or negative and results in a positive or negative intention to perform the behavior. Subjective norms, according to Fishbein and Ajzen

(1975), are the consumer's perception regarding how others think the consumer should behave. These perceptions result in the motivation to comply with others' expectations. These subjective norms include both normative beliefs, the consumer's perception that others want them to select a particular behavior, and informational beliefs, which correlate to the relative importance of that person, or persons, in the consumer's life. Ajzen & Fishbein (1980) note that subjective norms are based on the consumer's perception of the others' beliefs and do not necessarily accurately reflect these beliefs. Although this theory was not specifically developed solely for marketing, this dissertation will seek to determine how consumers use this theory in determining food choice when EFAH.

Figure 1

Theory of Reasoned Action

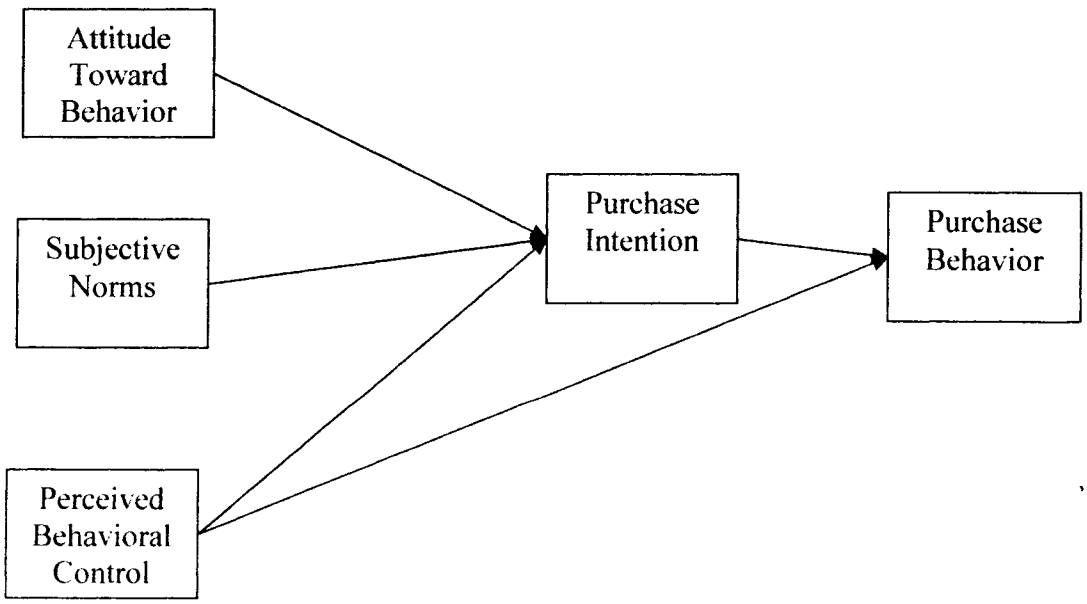


Source: Fishbein & Azjen (1975)

In 1991, Ajzen modified the theory of reasoned action. The first modification of the theory was to include the component of perceived behavioral control and rename the theory to the theory of planned behavior (see Figure 2). Ajzen (1991) described this new component of perceived behavior as the consumer's perception regarding the ease or difficulty the consumer has of performing the behavior due to uncertainty, context, and information biases. The strength of the perceived behavior control will then influence the consumer's intention to perform a particular behavior. The second modification of this theory of planned behavior is the direct link from the perceived behavioral control and the purchase behavior. Thus, Ajzen (1991) concludes that consumers are more likely to perform the desired behavior when they perceive that they have the necessary resources, knowledge, and opportunities in order to perform the behavior.

Figure 2

Theory of Planned Behavior



Source: Azjen (1991)

The theory of planned behavior has been researched from a variety of contexts including online purchase behavior (see George, 2004, Chih-Chung & Chang, 2005 and Zhang, Prybutok, & Strutton, 2007) and motivation to learn (see Wiehoff, 2004). This theory of planned behavior has also been tested in the context of purchasing organic food (Tarkiainen & Sundqvist, 2005). However, it has not been used in the context of EFAH. This dissertation will seek to utilize this theory of planned behavior in the EFAH context and determine what factors determine the consumer's attitude, social norms, and perceived behavior control which will then determine the consumer's intentions, leading to the consumer's behavior. This dissertation will also determine what impact, if any, the provision of nutrition information will have on this process. See Figure 3 for a conceptual model of this dissertation.

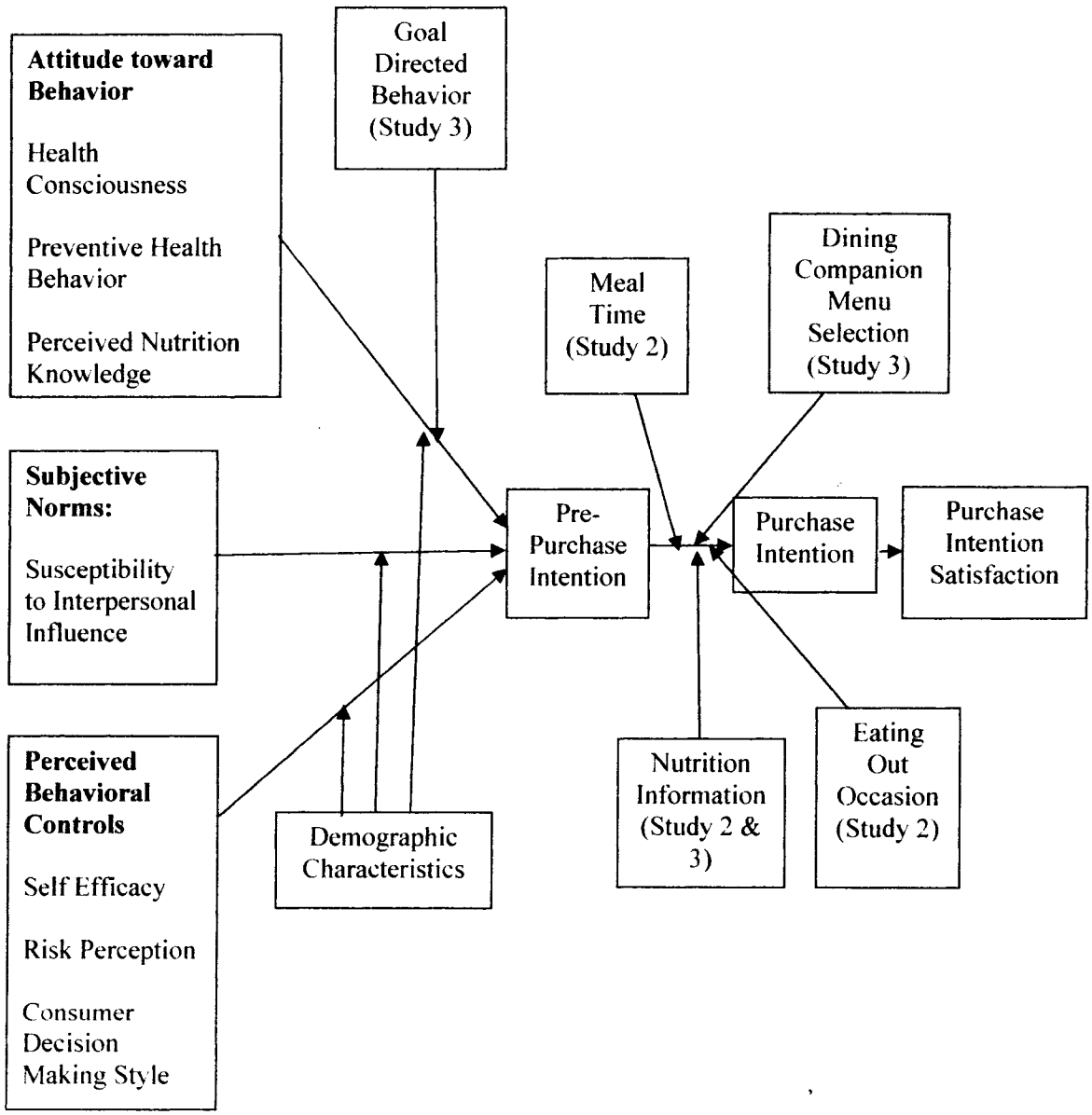
Attitude Toward Behavior

The first component of the theory of planned behavior is the attitude toward behavior. As previously discussed, Azjen (1985) notes that a consumer's attitude toward a behavior is developed by the consumer's beliefs and values that a particular behavior will produce certain outcomes. This attitude toward the behavior can be either positive or negative and results in a positive or negative intention to perform the behavior. Eagly and Chaiken (1993) define an attitude as enduring and unified state of response readiness (see also Cohen & Reed, 2006). Thus, an attitude is a summary evaluation that is stored in a person's memory. This stored evaluation is utilized to guide behavior in response to a stimulus (Cohen & Reed, 2006). This theory does not specify how the attitude is formed. Bagozzi, Dholakia, and Basuroy (2003) note that attitudes are formed though

learning. This learning creates an automatic response in the presence of the particular decision making opportunity.

Figure 3

Conceptual Model



Stored attitudes are used to trigger a response to a decision making opportunity. One aspect of this dissertation will be to determine the antecedents to this attitude formation. The research question is simply 'what reasons create the attitude the consumer uses in order to determine what item to select on the menu when EFAH?' Why restaurants are chosen has been researched (see Moschis, Curasi, & Bellenger, 2003 and Pedraja & Yague, 2001), yet there has been no research regarding the reasoning used by the customer to select a particular food item on the menu. Moschis et al. (2003) did find that one of the reasons consumers select a restaurant is that it offers menu items that are familiar to the consumer. A second reason that consumers select a particular restaurant, noted in this research (Mochis et al., 2003), was that consumers were concerned with the restaurant's offering of menu items that are suitable to the consumer's health needs and their food tastes.

What attitudes determine what food item a person selects when eating out? Attitudes are formed through learned information and consumers appear to be concerned with their health and consider this when selecting a restaurant (Moschis et al., 2003). However, is this same process involved in the selection of the menu item itself? Although the attitude toward behavior is not directly measured in this dissertation, according to the theory of planned behavior, the attitude toward the product contributes toward the development of the purchase intention. This dissertation will use perceived nutrition knowledge, health consciousness, and participation in preventive health behaviors as proxies for attitude toward the behavior.

Perceived Nutrition Knowledge and Food Consumption Behavior

Heart disease, stroke, and diabetes are the leading causes of death in the United States. These are exacerbated by the increasing level of obesity within the population. But what is contributing to this rise in obesity? Doctors and dietitians alike agree that the cause is simply a matter of a greater intake of calories than the expenditure of calories. Thus, the two main ways to decrease the rate of obesity is to encourage people to exercise more and/or eat fewer calories.

As previously noted, in the United States food products are required to have a nutrition label. The purpose of the food label is to be the communication tool food manufacturers use to inform consumers about the product's nutrition information. However, the number of people eating food away from home is on the rise. Although food labels are required for products purchase for home use, there are currently no federal requirements for nutrition labeling information for foods prepared for immediate consumption (for example, EFAH) unless there is a nutritional claim made about the product (US Department of Health and Human Services, Food and Drug Administration (USDHHSFDA), 2001). For example, if a food carries a nutrition or health claim, such as 'low in fat,' it must provide the appropriate information, such as '2 grams of fat per serving' to substantiate that claim (USDHHSFDA, 2001). Several reasons have been cited for this lack of legislation, including the high cost of analyzing and reprinting menus with this information and the accuracy of the information when chefs alter the food item due to ingredient unavailability, careless measuring, and improper portioning of the food.

Knowledge is power and increased information increases knowledge. Since the sweeping changes in the NLEA were enacted in the early 1990s, have consumers made changes in their food purchase behavior based on increased information? People often eat what they are used to eating or what they like to eat. In the research of consumer and nutrition label information, one stream of the literature investigated nutrition label formats (see Burton & Andrews, 1996 and Burton, Biswas, & Netemeyer, 1994). The 'Nutrition Facts' panel, or the nutrition information commonly found on the side or the back of the label, has been researched from a variety of perspectives. Shine, O'Rielly, and O'Sullivan (1997) found that over half of the consumers who read labels believe they have an excellent or good knowledge of nutrition. Szykman, Bloom, and Levy (1997) found that perceived diet effectiveness, the use of claims, and the use of nutrition labels were positively related to increased levels of knowledge. The higher the level of personal nutrition knowledge, the greater the likelihood that the person will use nutrition labels and product claims in order to select the food product (Moorman & Matulich, 1993). This research was supported by Derby and Fein (1994) who found that the use of food labels and nutritional intake was found to be related to an increased knowledge and awareness of nutrition and Burton, Garretson, and Velliquette (1999) who found that higher levels of nutrition knowledge were related to label usage. A more recent study conducted by Burton and Creyer (2004) found that nutrient value estimates, disease risk perceptions, source credibility judgments, attitudes, and purchase intentions are affected by the provision of nutrition information, the presence of a health claim, and the nutrition frame or context in which the menu item is presented. However, not all consumers who read food labels will select the healthiest food all the time. Mann and Ward (2001) found

that consumers who desired to avoid foods were more likely to avoid the food than consumers who were told they were prohibited from eating a particular food. Edwards and Meiselman (2005) found that when a particular item was desired, the consumer would select that item regardless of the provision of additional information. These studies, though, did not investigate the consumer's level of objective or perceived nutrition knowledge.

There has also been limited research focused on the nutrition claims that food companies place on the front of the label (see Brody, 2004). Examples of this information include statements such as 'low fat,' 'a good source of vitamin C,' and 'reduces the risk of heart disease' are provided on the front panel of the product. These messages shift depending on the current public health concerns of the consumer. Although it may appear that these messages are prompted by a concern for the general welfare of the population, often these messages are provided to draw the attention of the consumer toward the product and thus potentially increase selection and sales. Although these claims are regulated in the United States by the FDA, the agency's reaction to false or misleading claims may be slow (Brody, 2004).

The nutrition-disease relationship has been the focus of many studies since the enactment of the NLEA (see Kozup, Creyer, & Burton, 2006, Kim, Nayga, & Capps, 2000, Variyam, Blaylock, & Smallwood, 1995, and Wang, Fletcher, & Carley, 1995). These researchers have found that consumers who consistently read food labels when purchasing food have increased their knowledge regarding the specific nutrients listed on the Nutrition Facts panel and have reduced their intake of those nutrients, such as cholesterol, sodium, and fat, that have been linked with disease. These researchers have

also found that consumers who regularly read nutrition labels have increased their intake of nutrients, such as fiber, which have been shown to lower the risk of certain diseases.

No one, though, has researched how the provision of nutrition information of certain specific nutrients on a menu will impact the actual behavior of a consumer when EFAH. Although Burton and Creyer (2004) found that consumers would change their mind when provided information regarding the meal selection when EFAH, this research focused on reactive behavior after selecting a meal and then being provided nutrition information, compared to proactive behavior of having the nutrition information on the menu during the meal selection process. This dissertation will investigate this proactive use of nutrition information on a menu when EFAH. Burton and Creyer's (2004) research did not determine whether or not the consumer was satisfied prior to learning of the nutrition information. Since consumers select foods for the taste rather than the nutritional value (Lewis, 2005), it is assumed that regardless of the consumers' level of perceived nutrition knowledge, these consumers will be satisfied with the meal selected whether or not nutrition information is provided. Consumers who indicate a greater level of nutrition knowledge will also be satisfied with the meal selected when nutrition information is available as they will not only select the healthier meal, they will be satisfied that they selected the healthier meal. It is anticipated that consumers with lower levels of nutrition knowledge will make healthier selections when provided nutrition information. However, this menu selection, although satisfying from the health aspect, may not be as satisfying from a taste aspect. Therefore, even though these consumers may be satisfied with their menu selection in this situation, the increase will not be as

great as these consumers often believe that to eat healthier they must sacrifice taste (Lewis, 2005).

The focus of this dissertation, regarding nutrition information being provided on a menu when EFAH, is two-fold. The first aspect seeks to determine which consumers will utilize the nutrition information and the second aspect seeks to determine which consumers will use the nutrition information to select a healthier meal. Therefore, the following hypotheses are posited:

> H1a: Consumers with higher levels of perceived nutrition knowledge will select healthier menu items.
> H1b: Consumers will be satisfied with their menu selection regardless of their level of nutrition knowledge.
> H1c: Consumers with lower levels of perceived nutrition knowledge will select healthier menu items when they use the available nutrition information on the menu.
> H1d: Inclusion of nutrition information on the menu will result in a larger increase in the selection of healthier food items for consumers with higher levels of perceived nutrition knowledge than for consumers with lower levels of perceived nutrition knowledge.
> H1e: Inclusion of nutrition information on the menu will result in a lower increase in satisfaction for consumers with lower levels of perceived nutrition knowledge than for consumers with higher levels of perceived nutrition knowledge.

Health Consciousness and Preventive Health Behaviors

Health consciousness is defined as the awareness one has toward health concerns and the degree to which these concerns are incorporated into the consumer's daily activities (Jayanti & Burns, 1998). Kraft and Goodell (1993) note that health conscious consumers engage in a 'wellness-oriented' lifestyle which includes "a set of personal activities, interests, and opinions related to one's health" (p. 18). These authors note that health conscious consumers integrate behaviors such as eating healthy foods and

exercising regularly. In order to improve or maintain their quality of life, these consumers are proactive and engage in preventative health behaviors rather than relying on medications to correct the negative consequences of their behavior. These consumers believe that their actions, or health prevention measures, impact their health status and by engaging in healthful behaviors, their status of health will be at its optimal level. Although these consumers realize they cannot guarantee excellent health status, they do believe that their behavior will reduce the likelihood of disease, especially diet related diseases.

Thus, health consciousness and engagement in health prevention measures can be considered two proxies for attitude toward behavior. These proxies indicate the attitude consumers have toward obtaining or retaining a positive health status and thus forming the behavior toward the intention eat healthy. The presence of health consciousness and engagement in health prevention measures could be considered overt acts of concrete goals (Kraft & Goodell, 1993 and Jayanti & Burns, 1998). As a consequence of this high level of health consciousness, these consumers are more likely to engage in general preventive health care measures, including the desire to select a healthier item for food consumption when EFAH. Consumers who are health conscious and engage in health prevention measures desire to arrive at the correct solution (Kraft & Goodell, 1993). These consumers want to select the correct food, or the food that that is most likely to help them achieve the goal of being healthy. The inclusion of nutrition information on the menu will only impact their decision when they have not reached the correct solution based on their previous knowledge. Since these consumers will consistently attempt to select a healthy food item, they will be more satisfied with their behavior.

Consumers who are not health conscious and do not engage in health prevention measures are not motivated to arrive at a predisposed solution (Kraft & Goodell, 1993 and Jayanti & Burnes, 1998). These consumers are not proactive regarding their health (Kraft & Goodell, 1993). Many of these consumers do not practice proactive health behaviors, but rely on medicine to restore health rather than using medical knowledge to prevent disease. As a result, these consumers do not consider their behavior as impacting their health status, particularly their current health status (Kraft & Goodell, 1993). Therefore, these consumers are more likely to select a food they desire, regardless of the healthiness of the item. These consumers will not be affected by the inclusion of nutrition information on the menu because they will only select foods they desire, not the healthy items, as these consumers are more interested in the taste of the item than in the healthiness of the food item. However, like the health conscious consumers, these non-health conscious consumers will be satisfied with their food choice, regardless of the availability of nutrition information, since they selected a food item based on desire and taste, rather than on the nutritional value.

Based on these previous findings, the following hypotheses are posited:

H2a: Consumers with higher levels of health consciousness will select healthier menu items.
H2b: Consumers, regardless of their level of health consciousness, will be satisfied with their menu selection.
H2c: Consumers who engage in health prevention measures will select healthier menu items.
H2d: Consumers, regardless of their level of engagement in health prevention measures, will be satisfied with their menu selection.
H2e: Consumers with higher levels of health consciousness will select healthier menu items when nutrition information is included on the menu.

H2f: Consumers who engage in health prevention measures will select healthier menu items when nutrition information is included on the menu.
H2g: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers with higher levels of health consciousness than for consumers with lower levels of health consciousness.
H2h: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers who engage in health prevention measures than for consumers who do not engage in health prevention measures.

Subjective Norms

The second component of the theory of planned behavior is subjective norms. Subjective norms, according to Fishbein and Ajzen (1975), are the consumer's perception regarding how others think the consumer should behave. Theorists have often believed that behavior is motivated and driven by emotions (Passyn & Sujan, 2006). An emotion is an intense state of readiness arising from evaluations that is relevant to the well being of the consumer, including a behavior one performs or an outcome of a behavior that one has performed (Bagozzi, Gopinath, & Nyer, 1999). According to these authors, behavior is not only deliberate or conscious, but can also be automatic and unconscious. Emotions lead to actions and attainment of goals, yet are not stored and retrieved like attitudes.

Social situations and emotions are related. French, Blair, and Booth (1994) found that the occasion influences eating behavior. Eating is often viewed as pleasurable. Consumption of food, and those with whom the food is consumed, is viewed as satisfying. Prior research in this area notes that mood and food consumption research includes investigating one's thoughts and feelings before and after consumption. With regard to food consumption, women have been found to be more concerned with physical

appearance, weight and dieting, and restrained eating behavior (see Spangenberg & Sprott, 2006). Males are less likely to be interested in food shopping are less likely to be sensitive to their friends' opinions (Bakewell & Mitchell, 2006).

Not all consumers are influenced by others the same way or to the same degree. Research has shown that a person who is susceptible to influence by others under one condition will likely be susceptible to influence by others under other conditions (see Bearden, Netemeyer, & Teel, 1989). According to these authors, interpersonal influence is manifested in two ways. The first manifestation of interpersonal influence is normative, or the propensity that one will conform to other peoples' expectations. The second manifestation of interpersonal influence is informational, or the propensity that one will accept other peoples' information as substantiation of reality.

Normative influence consists of value expressive and utilitarian influences (Bearden et al., 1989). The focus of the value expressive component is the referent group, or the group that the consumer wishes to be apart of or identify with and is manifested in the adoption of behaviors of the referents. The goal is simply to be like the referent groups and each decision is made based on what those members of the referent group would do. Utilitarian influence focuses on complying with the referent group in order to not just meet other peoples' expectations in order to belong, but to meet other peoples' expectations in order to avoid punishment or to gain rewards.

Informational influence consists of either obtaining information from those the consumer believes to be knowledgeable or by making inferences from the observed behavior of others (Bearden et al., 1989). The consumer's decision is then based on this information. Research indicates that informational influence has been found to affect

consumers' decisions on product selections (see Netemeyer, Bearden, & Teel, 1992 and Bearden & Etzel, 1982), product evaluations (see Pincus & Waters, 1977), and individualistic orientation (see Mourali, Laroche, & Pons, 2005 and Kropp, Lavack, & Silvera, 2005).

When making a public decision versus a private decision, Ratner and Khan (2002) and Ariely and Levav (2000) found that consumers will seek more variety due to their desire to favorably impress others. However, in the context of EFAH, would this behavior be manifested in eating healthier food? The basis of interpersonal influence is the referent group. Netemeyer et al. (1992) found that consumers with higher levels of attributional sensitivity, or inferences made by others regarding one's behavior, were more likely to be susceptible to interpersonal influence. In this research, consumers were found to be more likely to select products which they believed would cause others to evaluate them positively and avoid selecting products which they believed would cause others to evaluate them negatively.

Although their research dealt with why consumers select the restaurant, and not the specific meal selection, Moschis et al. (2003) found that consumers select restaurants based on the social aspects and the menu. Interpersonal orientation was found by Lalwani (2002) to influence visiting a fine dining restaurant. Mason (1981) found, when investigating prestige products, that consumers are often motivated by their ability to pay a high price and their desire to impress others. Thus, these consumers are more likely to be stimulated by the social utility of the product instead of the physiological or economic utility of the product. Thus, socially acceptable food selections will be more desirable.

Investigating the difference in consumption of fruit, fruit juices, and vegetables with Swedish consumers, Lindstrom, Hanson, Wirfalt, and Ostergren (2001) found that consumers with lower levels social participation consumed less of these items than consumers with higher levels of social participation. These authors defined social participation as "participation in the activities of formal and informal groups in society" (p. 52). These findings indicate that consumers who identify with a particular group will consumer foods similar to that group's food consumption.

A consumption and mood framework (CMF) was developed by Gould (1997) with regard to the relationship between feeling-good products and self regulation. His framework found that products are used for tools to regulate moods and achieve goals. Gould noted that the purchase itself is not the focus as much as the involvement with the product itself. In this research, Gould found that gender, ethnicity and personality act as moderators.

When investigating food choice behavior, Thompson, Haziris, and Alekos (1994) found that beliefs about the outcome and the likelihood that the choice will result in the given outcome determined the consumer's attitude which in turn determined the behavior. The other influence on behavior, found by these researchers, were the subjective norms, or those beliefs about what referents would advise. These researchers found that consumers were more likely to engage in a behavior which complied with the advice of the referents.

When making a public decision versus a private decision, Ratner and Khan (2002) and Ariely and Levav (2000) found that consumers will seek more variety due to their desire to favorably impress others. However, in the context of EFAH, would this

behavior be manifested in eating healthier food? The basis of interpersonal influence is the referent group. Consumers eating with family and friends do not feel the need to impress, as they are people who know the person well. However, when consumers eat with co-workers or business acquaintances, they feel the need to impress as they believe these people do not know them well. Thus they feel the need to impress them at all times, including while EFAH. When consumers are celebrating their birthday, the need is to celebrate, not impress. Oftentimes diets are ignored in order to fully celebrate the occasion. For consumers who are susceptible to interpersonal influence, not only who they are eating with makes a difference in what they order, but what other people are ordering makes a difference in what they order. This situation applies to consumers who are eating the meal with members of their referent group. Thus, based on the literature, the following hypotheses are posited:

H3a: Consumers eating with family and friends will select a less healthy menu item.
H3b: Consumers eating with co-workers and business acquaintances will select a healthier menu item.
H3c: Consumers eating to celebrate their birthday will select a less healthy menu item.
H3d: When eating with others who select healthy menu items, consumers who are susceptible to interpersonal influence will select healthier menu items.
H3e: When eating with people who select healthy menu items, consumers who are susceptible to informational interpersonal influence will select healthier menu items.

Perceived Behavioral Control

The third component of the theory of planned behavior is perceived behavioral control. Perceived behavioral control, according to Ajzen (1991), is the consumer's perception regarding the ease or difficulty the consumer has of performing the behavior

due to uncertainty, context, and information biases. The strength of the perceived behavior control then influences the consumer's intention to perform a particular behavior. Ajzen (1991) concludes that consumers are more likely to perform the desired behavior when they perceive that they have the necessary resources, knowledge, and opportunities in order to perform the behavior.

What resources does the consumer use to determine what food item he or she will select when eating out? Resources that the consumer draws from are those internal resources that determine whether or not the consumer believes he or she can make the decision, how important it is for the consumer to make the 'right' decision, the consumer's belief about the riskiness of making the 'wrong' decision, and how the consumer makes a decision in general.

Although perceived behavioral control is not directly measured in this dissertation, according to the theory of planned behavior, the perceived behavioral control toward the product contributes toward the development of the purchase intention. This dissertation will use self-efficacy, risk perception, and consumer decision making styles as proxies of perceived behavioral control toward purchase intention.

Self-Efficacy

In 1977, Bandura proposed the social learning theory from which self-efficacy emanates. This social learning theory is defined as "the belief in one's capabilities to organize and to execute the courses of action required to produce given attainments" (Bandura, 1997, p. 2). Self-efficacy is defined as "people's judgments of their own competence to complete a specific task" (Peterson & Arnn, 2005, p. 7). According to

these authors, self-efficacy differs from self confidence and self esteem causing the 'can do' belief to thoroughly impact the person's thoughts, motivation, and actions.

Self-efficacy is the basis of one's ability to bring about control and to produce the desired results (Peterson & Arnn, 2005). Self-efficacy impacts the goals people set for themselves, in that the goals are perceived to be attainable, and brings about the actions required to meet these goals. These actions are accomplished by planning ahead considering the situation in which the consumer will find him/herself and pre-determining the actions needed to achieve the goal (Peterson & Arnn, 2005).

Self-efficacy is foundational to a person's behavior in that it influences a person's actions. Pajares (2002) found that the incentive to act is based on the person's belief they are able to produce the desired outcome and avoid acting in situations when they do not believe they are capable of performing the task. According to Bandura (1997), it is people's beliefs, not objective facts, that determine their actions. Perseverance is related to this construct in that people persevere only in those tasks they believe they can accomplish (Kurbanoglu, 2003).

Self-efficacy is a perceived construct since in involves one's belief in attaining a goal. Thus, the circumstances of the situation or the domain affect the construct. According to Cassidy and Eachus (1998), the self-efficacy construct must reflect the context of the situation. According to Kurbanoglu (2003), the circumstances determine the person's level of self-efficacy in that a person may exhibit a high level of self-efficacy in one situation but a low level of self-efficacy in another situation. Attitudes and experience are reflected in self-efficacy in that Bandura (1986) found that the skills and experience gained over time increase the confidence one has in attaining the goal,

thereby increasing one's self-efficacy. Jayanti and Burns (1998) modified a self-efficacy scale to assess health care issues.

Self-efficacy has been studied relating to several variables including gender, computer technology use, career selection, substance abuse, sports anxiety, and staff development (see Peterson & Arnn, 2005). However, self-efficacy has not been studied when determining food choice when EFAH. Self-efficacy in and of itself cannot determine eating behavior since everyone eats and everyone believes they are capable of selecting food and eating. In this context, self-efficacy must be regarded in the belief that one can 'stick with a healthy diet' and can choose healthy foods when EFAH. Therefore the following hypotheses are posited:

> H4a: Consumers with higher levels of self-efficacy will select healthier menu items.
> H4b: Health conscious consumers with higher levels of self-efficacy will select healthier menu items.
> H4c: Consumers with higher levels of perceived nutrition knowledge and higher levels of self-efficacy will select healthier menu items.
> H4d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of self-efficacy with the inclusion of nutrition information on the menu will lead to a healthier menu selection.

Risk Perception

Much of the literature regarding risk preference and risk aversion focuses on consumer behavior regarding monetary choices (see Chapman & Weber, 2006). Using the theory of magnitude and peanuts effect, researchers have found that consumers are more willing to take risks when the stakes are small (peanuts effect) than when the stakes are large (magnitude effect) (see Chapman & Weber, 2006). Do consumers view one

meal as a small risk (peanuts), both in health consequences or taste experience, or do they see this meal selection as a large risk (magnitude effect)?

A person's cognitive system consists of cognitive content, or what information is stored, and cognitive structure, or how sophisticated the structure is in organizing the information (Zinkhan & Braunsberger, 2004). The higher the level of each of these components, the greater the level of cognitive complexity. Researchers have found that the more experience or knowledge one has, the greater the level of cognitive complexity (see Piaget, 1969, Hunsberger, Pratt, & Pancer, 1994, and Zinkham & Braunsberger, 2004). These authors indicate that much of the consumer behavior research in this area has focused on the cognitive complexity utilized when making a purchase decision in various contexts, such as purchasing cameras versus purchasing a calculator. In this dissertation, the context remains the same: making a menu choice while EFAH. If the context is the same, as it is with this dissertation, then experience and knowledge make the difference between the levels of cognitive complexity of the various consumers. Higher education levels are found to be associated with information acquisition and healthy behaviors (Moorman & Matulich, 1993). Based on this theory of cognitive complexity, consumers with higher levels of education will have more information stored and a more sophisticated method of storing this information. Therefore, consumers with higher levels of education will choose healthier items in the presence of nutrition information availability.

According to the selectivity hypothesis (Meyers-Levy, 1989, Meyers-Levy & Maheswaran, 1991, and Meyers-Levy & Sternthal, 1991), men and women process information differently when the task does not encourage a specific type of processing

strategy to be used. In these situations, men process overall message themes while women process detailed elaboration of messages (Putrevu, 2001). Thus, research in this area indicates that women attempt to assimilate the available information before making a decision while men seek salient cues before making a decision. Women tend to favor objective claims when selecting a moderate risk product while risk perception was not a factor influencing the use of information for men (Darley & Smith, 1995). Bakewell and Mitchell (2006) found that males make decisions more quickly than females. These researchers believe this is due to the fact that males simplify the decision making process and are more willing to take risks. Weber, Blais, and Betz (2002) found that the degree to which someone is likely to take a risk is domain specific and is associated with the person's perception of the risk. These researchers also found that women were less likely to engage in risky behavior than men.

Consumer behavior results from a combination of attitudes regarding quality, value, and satisfaction. Klerck and Sweeney (2007) found that the greater the degree of perceived risk, the greater the tendency to search for information. Consumers who are more highly involved in the purchase decision are more careful during the search for information and in processing information (Cronin, Brady, & Hult, 2000).

Shimp and Bearden (1982) found that consumers with low risk aversion are more likely to not feel as threatened by situations which are either ambiguous or novel. These consumers are more likely to purchase products which are new and different. Consumers who are more risk averse are less likely to purchase these new products as these products are considered unknown. Therefore, consumers who are more risk averse are more likely

to choose foods which are familiar when EFAH. Bao, Zhou and Su (2003) confirmed these findings.

Slovic (1987 and 1993) defines risk characteristics as consisting of psychological and social qualities which are the foundation of consumer concerns. Sandman (1987) found that the immediacy of the risk and the likelihood that the risk will create a major catastrophe explained the variation in the degree of risk that consumers tolerate. McCarthy, Brennan, Ritson, and de Boer (2006) note that consumers who perceive low risk believe the risk to be delayed or indirect while consumers who perceive high risk believe the risk to be imminent or direct. Verhoef (2005) found that Dutch consumers purchased organic meats due to both rational economic motives and emotional motives. Fear, in particular, appeared to be a compelling emotion when explaining perceived healthy behavior Consumers who do not associate the food they eat with the likelihood of imminent poor health are less likely to perceive the risk of the food selection.

EFAH can be considered a risky behavior. Although standard recipes are used in restaurant, meals do not always maintain absolute taste consistency every time it is experienced. This may be due to the variances in the cooking process, the time it takes for the meal to arrive, or the consumer him/herself. For example, a consumer with a cold may not experience the taste of the meal as fully as a consumer without a cold. Trying a new menu item creates an uncertain outcome since the consumer may or may not enjoy the meal during consumption. Thus, trying to select the tastiest meal when EFAH can be considered somewhat risky. Yet factors such as the inconsistency of the cooking process can affect the tastiness and the healthiness of a meal. One recipe which has had more

butter added, for example, can increase the amount of calories, fat, saturated fat, and cholesterol in the meal item, yet can provide greater satiety.

This dissertation will seek to determine whether or not consumers will evaluate nutrition information, if available, to order a healthier menu item and decrease the risk of health issues. Other factors, such as the type of meat and how the animal was fed can impact the nutrient content as well. For example, did the milk used have human growth hormone added? Although this particular issue is beyond the scope of this dissertation, it contributes to the consumer's interpretation of the riskiness of the menu item selection. Thus, based on the literature, the following hypotheses are posited:

> H5a: Consumers with higher levels of risk perception will select healthier menu items.
> H5b: Health conscious consumers with higher levels of risk perception will select healthier menu items.
> H5c: Consumers with higher levels of perceived nutrition knowledge and higher levels of risk perception will select healthier menu items.
> H5d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of risk perception with the inclusion of nutrition information on the menu will lead to a healthier menu selection.

Consumer Decision Making Styles

Why do consumers choose what they choose in the marketplace? For years, researchers have focused attention on answering this complex question. One aspect of this research that has garnered much attention is consumer decision making styles. Sproles and Kendall (1986) define a consumer decision-making style as "a mental orientation characterizing a consumer's approach to making choices" (p. 268). It includes both cognitive and affective characteristics. Leo, Bennett, and Härtel (2005) define a consumer's decision making style as their mental orientation toward making

choices. Sproles and Kendall (1986) note previous research indicates there are three approaches characterizing consumer decision-making styles. The first approach is consumer typology which categorizes consumers based on retail patronage (see Bellenger & Korgaonkar, 1980). The second approach is psychographic/lifestyle which characterizes consumers based on general personality traits, needs or values associated with lifestyle interests or activities (see Darden & Ashton, 1974 and Darden & Reynolds, 1971). The third approach is cognitive/affective which characterizes consumers based on cognitive and affective orientations in order to determine their decision-making style. It is this third approach that is the basis of their seminal work in which Sproles and Kendall (1986) developed a Consumer Styles Inventory (CSI) which allows the researcher to profile a consumer based on eight style characteristics, or dimensions. This CSI consists of a 41 item questionnaire which are rated on a five point Likert scale in which one (1) is strongly disagree and five (5) is strongly agree. These eight style characteristics are (pp. 271-274):

- Perfectionistic, high-quality conscious consumer—consumers shop for the best quality of products; they shop more carefully, more analytically, and by comparison
- Brand conscious, 'price equals quality' consumer—consumers believe that higher price means better quality; look for familiar well known brands
- Novelty-fashion conscious consumer—consumers gain pleasure and excitement by seeking out new things
- Recreational, hedonistic consumer—consumers shop for recreation and enjoyment
- Price conscious, 'value for money' consumer—consumers are conscious of low prices and are concerned with getting the best value for their money
- Impulsive, careless consumer—consumers do not plan ahead; they are unconcerned about how much they spend or 'best buys'
- Confused by overchoice consumer—consumers have difficulty deciding and are overwhelmed by information

- Habitual, brand loyal consumer—consumers have formed habits and choose these items repeatedly

Sproles and Kendall (1986) propose that these dimensions are stable over time and should therefore be considered basic attitudes for buying-decision-making, or shopping, behavior that consumers use regardless of the purchase situation. Although the initial research used high school students as their sample, subsequent research has found these characteristics to be useful to determine consumer behavior, thus allowing for the segmentation of markets.

In cross cultural research, not all eight dimensions have been consistently supported and some new dimensions have been proposed. One of the earliest research endeavors into cross-cultural generalizability of the CSI, when comparing consumers in the U. S. and Korea, Hafstrom, Chae, and Chung (1992) found that all eight dimensions were similar in both countries. In fact, the dimensions of brand consciousness, perfectionism, and recreational/hedonism consciousness were found to be in the top four decision-making styles in both cultures.

In studying New Zealand consumers, Durvasula, Lysonski, and Andrews (1993) found that perfectionism, novelty/fashion consciousness, and recreation/hedonism consciousness were similar as compared to U. S. consumers. The dimensions of brand consciousness, confusion by overchoice and impulsiveness were found to be affected by culture. Habitual/brand loyal and price/value consciousness were not analyzed due to lack of reliability.

Walsh, Mitchell, and Hennig-Thurau (2001) and Walsh, Hennig-Thurau, Mitchell, and Wiedmann (2001) found that found six dimensions to be appropriate in German consumers: brand consciousness, perfectionism, recreational/hedonism,

confused by overchoice, impulsiveness, and novelty-fashion consciousness. In addition, these researchers found a new dimension, variety seeking, appropriate for German consumers. The dimensions of price consciousness and habitual/brand loyal were not found to be relevant to these consumers.

When researching consumers in China, Hiu, Siu, Wang, and Chang (2001) found that five of the dimensions in the CSI were consistent: perfectionism, novelty-fashion consciousness, recreational/hedonism, price consciousness, and confused by overchoice. The other three dimensions, impulsiveness, habitual, and brand consciousness, were not found to be consistent. These authors suggest that these dimensions might be improved by the addition of more items. Wang, Siu, and Hui (2004) found that consumer decision-making styles could be used to profile Chinese consumer segments for imported versus domestic clothing.

Leo et al. (2005) found that cultural differences did not exist between consumers in Singapore and Australia in the dimensions of perfectionism, recreation/hedonism, and brand loyalty. Cultural differences were found between consumers in these countries in brand consciousness, innovativeness, and confusion by overchoice. Impulsivity and price consciousness were not tested.

In addition to investigating consumers' decision-making styles in various cultures, the CSI has been used as the basis of investigating decision-making styles based on age (Bakewell & Mitchell, 2003) and gender (Bakewell & Mitchell, 2006). Both of these studies found that all eight dimensions were common to all groups. However, when studying gender, three additional dimensions were found for males: store-loyalty and low-price seeking, confused time-restricted, and store-promiscuity.

Sproles and Sproles (1990) investigated the relationship between the eight dimensions of consumer decision-making styles and individual learning styles. These researchers found that concrete learners, or those who are detail oriented, are more likely to use the perfectionism dimension when making decisions. Novelty/fashion consciousness dimension shoppers are more likely to use a passive learning style in which learning is absorbed rather than actively sought. Habitual and brand loyal shoppers use an analytic learning style where careful thought leads to selection based on past outcomes. Shoppers who use other dimensions, such as price consciousness and confusion by overchoice, use a variety of learning styles while recreational/hedonism shoppers do not appear to use any particular learning style. These authors note, however, that only associations between learning styles and consumer decision making styles were noted, not causal relationships.

Although much research regarding the CSI has been focused on the generalizability across cultures, product independence and CSI has not been well researched. For many years, the basis of the research regarding consumer decision-making styles has focused on shopping behavior. But are the consumer decision-making styles product independent? In their seminal work, Sproles and Kendall (1986) suggested that consumers may exhibit different consumer decision making styles for each product category. Although they suggested further research in this area, Bauer, Sauer, and Becker (2006) only recently investigated this question. In their research, these authors utilized different product categories in order to investigate the relationship between the dimensions of the consumer decision-making styles and product involvement. Using literature reviews, content analysis of text documents, and appropriate procedures for

evaluating a measurement model (see Churchill, 1979, Malhotra, 1981, and Nunnally & Bernstein, 1994), these authors modified and tested the CSI. According to these researchers, extensive purchase decision making includes the dimensions of perfectionism and innovativeness as consumers making these types of purchases often utilize intense cognitive involvement. Limited purchase decision making reduces the need for cognitive involvement as only a subset of information is needed. Bauer et al. (2006) suggest that this type of decision making includes the dimensions of brand consciousness and price/value consciousness as these factors would provide the consumer with the limited information required when making the purchase decision. Habitual purchases require the consumer to use little cognitive decision making processes as these purchase decisions are made routinely based on previous experience. Thus, these authors believe that habitual purchases include the dimensions of brand/store loyalty and variety seeking. Impulsive purchase decisions do not require any cognitive involvement as these purchases are not planned. According to these researchers, this category of purchases utilizes the dimension of spontaneity. Therefore, this new CSI, as proposed by Bauer et al. (2006), includes the original dimensions of perfectionism, brand consciousness, price/value consciousness, brand/store loyalty, and spontaneity and the proposed new dimensions: innovativeness and variety-seeking. The dimensions of confusion by overchoice, recreational/hedonism, and novelty/fashion consciousness were eliminated as part of their study. When conducting their study, wristwatches were used as a high involvement product and yogurt was used as a low involvement product. Although this study produced mixed results in these dimensions, the overall value of the study

suggested that consumer decision-making styles are product-dependent and are impacted by the consumer's level of product involvement.

As noted, these decision making styles have been studied from a variety of aspects. Many researchers have used type of consumer good, culture, country of origin, age, and gender as differentiating variables to determine the generalizability of these eight factors. No one, though, has studied these consumer decision making style when EFAH. This dissertation seeks to investigate whether or not all factors exist when EFAH and how these factors influence a person's food choice when ordering from a menu. Although Bauer et al. (2006) noted that consumer decision making styles are product dependent and are impacted by the product involvement level of the consumer, this dissertation will be considering only one classification of product: food selection when EFAH. This dissertation will investigate whether or not different consumers use different decision making styles when selecting food away from home. Thus, this dissertation holds constant the type of product, the type of shopping behavior, and involvement level. Therefore the decision making style can be identified. According to Bauer et al. (2006), if the product is the same, and the product involvement level is the same, all consumers should exhibit the same consumer decision making style as it is the level of involvement that drives the consumer decision making styles of brand/store loyalty, variety seeking, and spontaneity.

Yet these researchers eliminate the dimension of recreation/hedonism. Hirschman and Holbrook (1982) consider hedonistic consumption as behavior that encourages the multisensory, fantasy, and emotional aspects of consumption. These researchers note that hedonistic consumption is concerned with fulfilling sensory stimulation. This aspect of

the CDMS is of great importance when EFAH as consumers often choose food based on what tastes good, what they like, and what they want to eat now.

There is a stream of literature focuses on body image. This stream of literature (see French et al., 1994) includes the indulgence of food—the concept of 'naughty to eat but nice to indulge.' The literature regarding body image itself is beyond the scope of this dissertation as the concept of body image requires the consumer to consider the entire diet and exercise completely. Eating one meal away from home, or eating any one particular menu item, cannot cause a person to be fat or slim in and of itself. However, consumers who are concerned with body image strive for what they perceive as perfection, or the best image they can obtain. Thus, these consumers are more likely to select foods eaten away from home in view of which foods will help them meet this 'perfect' body image. Thus, this dissertation believes that consumers that are focused on body image will be captured in the perfectionist CDMS as these consumers are concerned with making the perfect choice.

Another stream of literature focuses on the use of food to lift one's spirit or decrease frustration or anxiety (see French et al., 1994). As these two uses of food are temporary, these uses will be characterized by the impulsive decision making style. There has been much research focused on impulsivity and purchasing behavior. Impulse purchase behavior is considered an exposure to a specific stimulus which results in an unplanned action. Impulse purchase behavior has been studied from a variety of frameworks, such as a response to product arrangement (Cox, 1964) and an emotional response to a scenario (Weinberg & Gottwald, 1982).

Although all consumers occasionally engage in impulse purchase behavior, research indicates that there are differences between consumers who engage in occasional impulse purchase behavior and those who engage in frequent impulse purchase behavior. Self-control and self-regulation are two consumer characteristics in which, if present, allow consumers to control their impulse purchasing tendencies. Factors that influence impulse purchase behavior include sales person persuasiveness and sales promotion (Zhang et al., 2007)

Similar to unplanned purchasing behavior, impulse purchasing behavior is manifested by the rapid compulsion, without further evaluation, to purchase a product or service, regardless of need. Delight and gratification are often associated with impulse purchase behavior, but not necessarily, although consumers who engage in impulse purchasing behavior are more likely to be more emotionalized than those who do not (Zhang et al., 2007).

Hedonists value pleasure. Pleasure is often though of as only being derived from sensory experiences. Yet non-sensory experiences, such as the feeling of doing something good, can be valued by hedonists (Ronnow-Rasmussen, 2002). Hedonists will not consider the healthiness of the item as a criterion for menu selection; these consumers deliberately select the item they desire regardless of the nutritional aspect of the food item.

When the decision process is influenced by previous options, Simonson and Tversky (1992) refer to this as background contrast effects. When ordering food away from home, it is believed that many consumers with a habitual consumer decision making style will use this background contrast effect as they will base their food selection on

what they have previously ordered and liked from the restaurant. Local contrast effects occur when the current set of alternatives influence the decision. In this dissertation, it is believed that local contrast effects should help consumers who are confused by overchoice to select among the alternatives being offered. This local contrast effect would be used by these consumers to select the tastiest item on the menu. The unavailability of information does not lead to confusion by overchoice. Lurie (2004) found that the amount of information to be processed can lead to information overload. Bao et al. (2003) found that information created more confusion to consumers which are confused by over choice since the influx of additional information creates more confusion rather than alleviating confusion.

Habits are defined as "behaviors performed frequently and consistently in stable contexts" (Khare & Inman, 2006, page 567). These behaviors are performed using fewer cognitive processes. Consumers eat daily; therefore eating is a repetitious process, a necessary condition in forming habitual behavior. These consumers will order what they like, regardless of the nutritional value of the meal.

Researching CDMS in the context of EFAH has not been investigated. This dissertation seeks to determine whether or not these styles exist when making a menu selection, whether or not these styles effect the selection of healthier menu items, whether or not the styles will effect the use of nutrition information when making a menu selections, and if so, how. Therefore, although CDMS have never been researched in the context of EFAH, the literature indicates the following hypotheses should be posited:

H6a: Perfectionistic, high quality conscious consumers will select healthier menu items.

H6b: Health conscious consumers with higher levels of perfectionistic, high-quality consciousness will select healthier menu items.
H6c: Consumers with higher levels of brand "price equals quality" consciousness will select the more expensive items.
H6d: Consumers with higher levels of novelty-fashion consciousness, impulsiveness, confusion by overchoice, and habitual buying behavior will select items they find tastier.
H6e: Consumers with higher levels of price consciousness will select the least expensive items.
H6f: Consumers with higher levels of recreational or hedonistic consciousness will select less healthy items.
H6g: When nutrition information is included on the menu, health conscious consumers with higher levels of perfectionistic, high-quality consciousness will use the information to select a healthier menu item.
H6h: When nutrition information is included on the menu, consumers with higher levels of brand "price equals quality" consciousness, novelty-fashion consciousness, price consciousness, impulsiveness, confusion by overchoice, habitual, and recreational hedonistic consumer decision making styles will not use the information when selecting a menu item.

Nutrition Information Usage and Demographic Characteristics

While a key determinant of health and behavior development is nutrition, eating behavior is complex. It is determined by a mixture of political, economic, cultural, social and cognitive reasons. Utilizing scanner data to evaluate food product purchase, Mathios (1996) focused solely on the demographic characteristics of education, income, age, and gender to determine whether or not a relationship exists between demographic factors and the consumers' types of food choices. He found that younger, female, higher income, and higher educated consumers were less likely to purchase high fat salad dressings.

Wardle (1993) found that lower income, or less socioeconomically privileged consumers, ate less nutritionally than higher income populations. This study also indicated that women place a higher value on eating healthy than men.

Age has been studied as a determinant in determining the consumer's ability to process information (see Brucks, Mitchell, & Staelin, 1984, Cole & Gaeth, 1990, and John & Cole, 1986). Byrd-Bredbenner (2000) found that 90% of college-aged women believed they were either somewhat or very informed about nutrition. Eighty percent of these respondents stated they either always read (29%) or sometimes read (51%) nutrition labels. Neale and Langnase (1998) found that British teenagers were more likely to reduce fat consumption when school meals included nutrition labeling information. Many studies have found that age is negatively correlated with the use of nutrition information. Information processing skills are frequently citied as the potential explanation for older consumers' lack of nutrition label usage (see Cole & Balasubramanian, 1993, and Fusillo & Beloian, 1977). Other research links older consumers to less nutrition knowledge (Fischer, Crockett, Heller, & Skauge, 1991), decreased information recall (Heroux, Laroche, & McGown, 1988), and less utilization of the nutrition label (Moorman, 1990). Klopp and McDonald (1981) and Gould and Lin (1994) found no relationship between age and health knowledge.

Other research indicates that nutrition information use varies within other different demographic groups. Hupkens, Knibbe, and Drop (2000) found that the diets of consumers with higher levels of income are more likely to follow the recommended dietary guidelines. In this study, levels of income were used as a proxy for social class. Gerhardy, Hutchins, and Marshall (1995) did not find gender, household income,

education level, and age to be strong discriminators of differences in food consumptions in British households. These researchers noted that the best discriminator of differences in consumption was whether or not there were children in the home. This study utilized food diaries of 102 households regarding the food eaten at home. Foods eaten away from home were not included in this study.

Again, considering only food eaten at home, and using level of income as a proxy for social class, Hupkens et al. (2000) found that higher class European consumers have diets more inline with dietary recommendations. This study found that consumers in the higher social class are more concerned with the health of the food while consumers in the lower social class are more concerned with the price of the food.

Although household income often correlates with higher levels of education, the stream of literature researching the relationship between income and healthy behaviors, including food consumption, has been mixed. In their exhaustive review of linking household income to health behavior and health knowledge, Moorman and Matulich (1993) found in 72% of the research income had either a positive effect or no effect on health behavior. The remaining studies found a negative relationship. When investigating the link between nutrition knowledge and income, income level was found to be positively correlated to the knowledge of the link between diet and disease (Cotugna, Subar, Heimendinger, & Kahle, 1992). Low income levels and low levels of nutrition knowledge were found to be correlated by Michel, Korsland, Finan, and Johnson (1994). This study, however, used participants in the WIC program, all of whom have lower levels of income.

Using the Food and Drug Administration Health and Diet Surveys, Bender and Derby (1992) found that consumers with higher levels of education were positively correlated with higher levels of nutrition label usage.

While investigating health messages related to disease, both Fullmer, Geiger, and Parent (1991) and Ippolito and Mathios (1991) found that there was a positive relationship between higher levels of education and greater knowledge regarding the relationship between diet and disease. Ippolito and Mathios (1995) also found a positive relationship between higher education levels and lower fat consumption. These studies, though, did not investigate the relationship between education level and the use of nutrition information when making a food choice while EFAH.

Limited research has been conducted on perceived nutrition knowledge, use of nutrition information and nutrition label usage while considering a consumer's ethnicity as a determinant. These few studies have found that whites are more likely to use nutrition labels that any other ethnic group (see Cole & Balasubramanian, 1993 and Variyam & Smallwood, 1996).

Several researchers have found that females are more likely to read nutrition information (see Bender & Derby, 1992 and Fusillo & Beloian, 1977). However, most research does not even address this issue (Mathios, 1996).

Although the results in the literature regarding the relationship between nutrition information usage and demographic characteristics are somewhat mixed, there is support that, generally, consumers that are less likely to use nutrition information are less educated, have a lower income, are older, are men, and are non-white (Cole & Balasubramanian, 1993 and Variyam & Smallwood, 1996). Demographic characteristics

affect all facets of planned behavior. Each consumer is influenced by culture, history, knowledge, availability of funds, and so forth when making decisions in every aspect of his or her life. Consumers EFAH are no different and are affected in the meal choice decision based on these factors as well. Thus, based on this previous research, the following hypotheses are posited:

> H7a: When nutrition information is included on the menu, younger consumers will select healthier menu items.
> H7b: When nutrition information is included on the menu, consumers with higher levels of income consumers will select healthier menu items.
> H7c: When nutrition information is included on the menu, consumers with higher levels of education will select healthier menu items.
> H7d: When nutrition information is included on the menu, white consumers will select healthier menu items.
> H7f: When nutrition information is included on the menu, female consumers will select healthier menu items.

Goal Directed Behavior

Often the term goal directed behavior is used for any type of behavior that is associated with trying to accomplish a goal. However, some researchers make a distinction between volitional behavior and goal directed behavior (Bay & Daniel, 2003). Volitional behavior is seen as any behavior that is completely under the control of the decision maker. It is this distinction that is the basis of theory that Fishbein and Ajzen (1975) used to develop the theory of reasoned behavior. Many decisions, though, are not solely at the decision maker's discretion. Some decisions are impacted by others' actions or impacted by circumstances beyond the control of the decision maker. Due to this complication to the decision maker, Ajzen (1991) included the perceived behavioral control component. Both volitional behavior and goal directed behavior can be exhibited

in the EFAH experience. Volitional behavior is exhibited in the menu item chosen by the consumer; goal directed behavior is also exhibited by the choice of menu item, but may not be completely controlled by the decision maker as the cooking process is not under the control of the decision maker. Therefore, this dissertation seeks to determine if goal directed behavior is increased, or supported, by the inclusion of nutrition information on the menu.

Goals can also drive consumer behavior. Research regarding goal directed behavior effects both the decision making process and the search and use of information. Gutman (1997) found that goals lead to actions and these actions lead to outcomes. He refers to this process as the laddering technique in which the linkages are determined by the consumer's hierarchy of goals. Thus, the more likely the consumer believes that the action will lead to the achievement of the desired goal, the more likely the consumer will choose this course of action. The accomplishment of these goals will then, in turn, cause the consumer to select more goals whereby the consumer will then need to determine the actions that will then lead to these new goals (Bagozzi, 1997a and Bagozzi, 1997b).

Since the 1930s, theorists have noted that changes in external stimuli have modified how people behave (Pervin, 1989). Thus, both situational and person variables must be considered when investigating behavior. While researching his goal directed behavior model, he found that behavior is the result of the interaction between various goals. According to Pervin (1989), behavior is the result of three factors: 1) which goal is most important in the situation, 2) the perception of the environment's reward structure, and 3) the person's ability to change their behavior in various ways. Behavior

is also influenced by others' expectations of their behavior, especially the expectations of the relevant person in the situation.

Peterman (1997) found that the type of goal made a difference in the type of information search, encoding and judgment formation. Utilizing brands as the basis of her research, when goals are concrete, she found that consumers search for specific attribute information and store this information at the product attribute level. Abstract goals, however, lead a consumer to seek more general information and encode and store this information at a more conceptual level. Regardless of the type of goal or the type of information sought and stored by the consumer, both result in judgments regarding the product.

Motivation research in the 1970s focused on explaining motivation due to information processing or social-environmental factors. Mitchell (1982) defines motivation as "those psychological processes that cause the arousal, direction, and persistence of voluntary actions that are goal directed" (p. 81). The three main components of motivation are individual, intentional, and multifaceted. The individual component deals with the fact that everyone is unique and will look at each situation, goal, and so forth differently and will react differently. The intentional component indicates that the behavior selected is one that the person has chosen to do. The multifaceted component consists of two factors: arousal, which activated and energizes behavior, and direction, or choice, of behavior. Research in the area of arousal finds that it must be current and related to the situation, either social or task (Mitchell, 1982). Much of this early research was conducted in an organizational context.

Park, Sohi, and Marquardt (1997) investigated the motivational factors in the decision making process. Using the framework of organizational buying, their research looked at how the basis of the motive of the solution or decision affected the consideration set. When the motivation of the goal is accuracy, the motive of the decision is to arrive at the correct solution. When the motivation of the goal is directional, the motive of the decision is to arrive at a predisposed solution. The perception of importance of the goal determines whether or not the goal motive is accuracy or directional. When consumers' goals are perceived to be of high importance, these goals will result in goal accuracy motivation and when goals are perceived to be moderately important, these goals will result in goal directional motivation. The research did not find task familiarity to have any impact on this process.

Bagozzi, et al. (2003) describe goal intention as a result of a deliberate process based on evaluation of the desire of the goal and the feasibility of the goal. Goal intention is defined as "the decision maker's self-commitment to achieve a chosen goal" (Bagozzi et al., 2003, p. 275). Goal desire includes both goal desire, or the decision maker's state of mind regarding his or her motivation to achieve the goal, and goal desirability, or the value the decision maker places on the outcome of the particular goal (Bagozzi et al., 2003). The second aspect of goal intent is goal feasibility, or the belief the consumer has regarding how difficult or how easy the attainment of the goal appears (Bagozzi et al., 2003).

So can consumers achieve their goals when EFAH? Food decisions are considered low involvement purchase decisions. According to Dholakia and Bagozzi (2002) and Bagozzi et al. (2003), these types of decisions are considered intuitive and

thus the outcomes are emphasized more than the conscious decision making process. Consumers with high levels of health consciousness will be directed to seek nutrition information and use this nutrition information when making their food purchase selection in order to select a healthy food choice. Hedonistic decision makers may, in contrast, use nutrition information in order to select an unhealthy food choice when making their food purchase selection, since their goal may be based on taste rather than healthiness. Consumers who are not considered health conscious and are not hedonistic decision makers would not have specific goals when making their food purchase selection. These consumers would be considered to have abstract goals and although they may look at the nutrition information if it is available, they would not seek specific information nor would they use this information when making a food purchase decision. Thus, goals appear to impact behavior. Previous research has not investigated goal directed behavior in conjunction with perceived nutrition knowledge or health consciousness. This dissertation seeks to determine if the combination of goal directed behavior in combination with perceived nutrition knowledge or health consciousness will result in the selection of a healthier menu item. In addition, this dissertation seeks to determine if the presence of nutrition information on the menu will increase the likelihood of a healthier item being selected by consumers with higher levels of goal directed behavior, perceived nutrition knowledge, and health consciousness. Therefore, based on the literature, the following hypotheses are posited:

> H8a: Consumers with higher levels of goal directed behavior to eat healthy will select healthier menu items.
> H8b: Health conscious consumers with higher levels of goal directed behavior will select healthier menu items.

H8c: Consumers with higher levels of perceived nutrition knowledge and higher levels of goal directed behavior will select healthier menu items.
H8d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of goal directed behavior with the inclusion of nutrition information on the menu will lead to a healthier menu selection.

Meal Time

While income is the demographic characteristic most strongly associated with the frequency of eating out (Murcott, 1997), hunger, the food itself, convenience, and work avoidance were also cited as reasons consumers ate food away from home. Sociability, though, ranked highest as the reason consumers choose to EFAH. Nutrition of the food itself was not explicitly cited as a reason.

Lunch and dinner are different types of meals. Lunch is usually consumed during the midst of the work day and time is often limited to the length of the lunch break. When eating food on the road, business travelers typically eat soup, sandwich, and a soft drink for lunch while consuming meat, salad, potato or rice, and tea for dinner. Lunch is the most frequent meal eaten away from home. Lunch foods consist of those items that are easy: easy to prepare, easy to serve, and easy to eat (Ryan, Stephenson, & Straus, 1992). These authors note that sandwiches, subs, and salads are frequently ordered. Lunch is a functional eating experience while dinner is a more sensory experience. Khare and Inman (2006) found that eating behavior becomes more habitual when associated with situational cues. Therefore, this dissertation will consider both lunch and dinner as situational cues when EFAH in order to determine the impact of the mealtime itself on habitual eating behavior. Are consumers more likely to perform actual or typical

behaviors during one meal versus another? For example, consumers may not choose a sandwich alternative at dinner, not because of the nutrition information provided, but because they do not eat sandwiches at dinner, or not choose an entrée at lunch, not because of the nutrition information provided, but because they do not eat entrées at lunch. Therefore, based on this information, the following hypotheses are posited:

H9a: Consumers will select salads and sandwiches more frequently at lunch that at dinner.
H9b: Consumers will select entrées more frequently at dinner than at lunch.
H9c: Consumers eating lunch will select healthier menu items than consumers eating dinner.
H9d: Inclusion of nutrition information on the menu will make a greater impact for consumers eating lunch than for consumers eating dinner.

CHAPTER 3

METHODOLOGY

Introduction

Chapter 1 introduced the concept for the dissertation and Chapter 2 presented the literature concerning the variables involved in the decision making process when EFAH. Chapter 2 also presented the literature regarding the use of nutrition information and discussed the effect the provision of nutrition information on the menu will have on the menu item selection, including the presentation of the research hypotheses. Chapter 3 explains the methodology used to collect and analyze the data to test the hypotheses. Questionnaire development, healthiness quotient development, menu development, and scenario development are also presented. Sample group selection and data collection method are also discussed. Prior to any research being conducted, approval was sought and granted by the Human Subjects Research committee at Old Dominion University's School of Business and Public Administration according to the guidelines established by the University's Human Subjects Institutional Review Board.

Research Strategy

This dissertation utilizes a mixed methodology research strategy. The experimental design method was used in order to control the condition of nutrition information availability on the menu, the meal time, the eating companion, and the healthiness of the dining companion's order. The survey portion was used to obtain results for the measured variables.

First, a preliminary study was conducted in order to explore various issues when EFAH. This study used a survey design strategy which included open-ended and closed-ended questions. The results of this preliminary study, in conjunction with the review of the literature, were used to develop the questionnaire and the manipulated variables for the subsequent studies. Dining companions were determined to be either close family and friends, co-workers and business acquaintances, or to celebrate their birthday. Meal times were determined to be lunch and dinner.

Next, Study 1 was conducted in order to determine the validity of the healthiness quotient (HQ), the manipulation of the menu and the main effects of the independent variables. Study 1 utilized a mixed design strategy of a survey to ascertain the findings for the measured variables and an experimental design to manipulate the availability of nutrition information. All respondents were provided a scenario of eating lunch with close family and friends. Although limited in scope, the findings of Study 1 verified that the manipulation of nutrition information availability was recognized by the consumers and different consumer characteristics affected the use of the available nutrition information.

Next, Study 2 was conducted. This study allowed for the full factorial design of the manipulated variables of nutrition information availability, dining companion, and meal time and a survey to ascertain the results of the measured variables. The findings of this study indicated that not all consumer characteristics affect the use of the nutrition information and there are possible consumer characteristics which may affect the use of the nutrition information. Thus, Study 3 was indicated.

Finally, Study 3 was conducted. Study 3 utilized the same mixed methodology format as in Study 1 and Study 2. Study 3 adapted the survey used by Study 1 and Study 2 by adding questions in order to determine goal directed behavior and removing questions based on the CDMS of Study 1 and Study 2. Additionally, since the focus of Study 3 was to determine the effect of susceptibility to interpersonal influence on the use of available nutrition information and the selection of a healthier menu item, Study 3 only manipulated the availability of nutrition information and the healthiness of the dining companion's order. The meal time was dinner since it is considered a more sensory meal and the findings in Study 2 did not indicate differences in the menu selections between lunch and dinner. Regarding the dining companion, Study 3 provided a scenario where each respondent was dining with co-workers and business acquaintances since the findings in Study 2 indicated that consumers were more likely to eat differently when eating with these dining companions. The remaining survey questions from the previous studies were collected.

The focus of this dissertation, the use of nutrition information on menu selection when EFAH, has not been well researched. Therefore, the purpose of the preliminary study and three experimental studies was to identify the consumer characteristics that affected the use of nutrition information on the menu and to build on the previous results by adapting the manipulations and the questionnaire portion of the study. This process allowed for this dissertation to explore various circumstances that may directly affect the use of nutrition information when EFAH while limiting the number of manipulations in order to reduce the effect of collinearity (see Farley, Lehmann, & Mann, 1998). Further specific details will be provided in subsequent sections.

Preliminary Study

The first aspect of this research was to explore various issues when EFAH. Specifically, the purpose of the preliminary study was to determine who consumers usually eat with when EFAH, why they select the meals they select, why they EFAH, whether or not they seek nutrition information prior to eating out, whether or not they seek nutrition information at the restaurant, and if so, where they obtain this information. In addition, demographic data was collected during the preliminary study to determine if there were any differences in these answers among the various groups of consumers.

A convenience sample of consumers participated in the preliminary survey administered through two universities in a large mid-Atlantic region of the country. One university was a large state university while the other university was a small, state historically black college and university (HBCU). The survey was administered using an electronic survey format. Undergraduate students at the two universities were given the opportunity to earn extra credit by completing the survey themselves and by sending the survey link to others. Students were encouraged to send the link to consumers with different demographic characteristics than themselves in order to obtain a broader sample. The questions on the survey included both open-ended and close-ended questions. The complete survey questions are found in Appendix A.

Experiment Development

The following sections discuss the selection of the scales used to determine health consciousness, preventive health behaviors, perceived nutrition knowledge, susceptibility

to interpersonal influence, self-efficacy, risk perception, CDMS, and goal directed behavior.

Scales and Reliability

Each study begins with questions ascertaining the consumer's level of perceived nutrition knowledge, health consciousness, engagement in health prevention measures, susceptibility to interpersonal influence, self-efficacy, goal directed behavior (Study 3), risk perception, CDMS (Study 1 and Study 2), and demographic characteristics. All scales have been previously developed and used in other research. When needed, slight wording modifications were made to adapt the scale to the current context of EFAH. A summary of the scale, number of items, Likert score, and Cronbach's alpha for each scale is found in Table 1.

The first component of this dissertation is to determine the attitude toward behavior of the consumer. This attitude is ascertained by assessing the levels of health consciousness, preventive health behavior, and perceived nutrition knowledge of each consumer. All scales used were previously established with slight wording modifications to fit eating out behaviors and situations (see Appendix B). In order to determine the consumer's level of health consciousness, this dissertation adopted Jayanti and Burns' (1998) health consciousness scale. Adapted from the health consciousness scale used by Kraft and Goodell (1993), this health consciousness scale consists of six items utilizing a five point Likert scale anchored by strongly disagree (1) to strongly agree (5) (see Jayanti & Burns, 1998). This scale was found to have a Cronbach's alpha of .75. Preventive health behavior is measured by adopting the preventive health care behaviors scale used by Jayanti and Burns (1998) which was adapted from a scale used by Moorman and

Matulich (1993). This modified scale consists of 13 items which answer the question, "How often do you undertake the following items?" This three point scale was anchored

Table 1

Previous Research Summary of Scales

Scale	Number of Items	Likert Score	Cronbach's Alpha
Health consciousness	6	Five point scale	.75
Preventive health behavior	13	Three point scale	.81
Perceived nutrition knowledge	2	Five point scale	.87
Susceptible to interpersonal influence			
Normative	8	Five point scale	.88
Informational	4	Five point scale	.82
Self-efficacy	5	Five point scale	.72
Risk perception	9	Five point scale	.76
Consumer decision making style			
Perfectionistic	8	Five point scale	.74
Brand conscious	7	Five point scale	.75
Novelty-fashion conscious	5	Five point scale	.74
Recreational-hedonic	5	Five point scale	.76
Price conscious	3	Five point scale	.48
Impulsive	5	Five point scale	.48
Confused by overchoice	4	Five point scale	.55
Habitual	4	Five point scale	.53
Goal directed behavior			
Goal desire	3	Seven and five	.78
Goal feasibility	2	point scales	.76

by never (1) to always (3) (see Jayanti & Burns, 1998). This scale was found to have a Cronbach's alpha of .81. Perceived health knowledge was measured using a two item, five point scale anchored by strongly disagree (1) and strongly agree (5) (see Burton et al., 1999 and Mothersbaugh, Herrmann, & Warland, 1993). This scale measures self-perception of nutrition knowledge, not an objective measure of nutrition knowledge. Burton et al. (1999) indicated a Cronbach's alpha of .87 for this scale.

The second component of this dissertation is to determine the subjective norms of the consumer. These subjective norms are ascertained by assessing the levels of susceptibility to interpersonal influence of the consumer. The scale used was previously established with slight wording modifications to fit eating out behaviors and situations (see Appendix C). In order to determine the consumer's level of susceptibility to interpersonal influence, this dissertation adopted the susceptibility to interpersonal influence scale that was developed by Bearden et al. (1989). This scale consists of eight items measuring normative susceptibility to interpersonal influence, with a Cronbach's alpha of .88 and four items measuring informational susceptibility to interpersonal influence, with a Cronbach's alpha of .82 (Bearden et al., 1989). This five point scale was anchored by strongly disagree (1) to strongly agree (5) (see Bearden et al., 1989).

The third component of this dissertation is to determine the perceived behavioral controls. Perceived behavioral controls are ascertained by assessing the consumer's level of self-efficacy, risk perception, and the consumer decision making style of each consumer (see Appendix D). The consumer's level of self-efficacy was measured using a health focused scale developed by Jayanti and Burns (1998). These authors developed this scale utilizing past literature and found the Cronbach's alpha of the scale to be .72. The scale consists of five items which are measured using a five point scale anchored by strongly disagree (1) to strongly agree (5). Since the context determines the level to which consumers perceive risk, and consumers do not perceive the same level of risk in every context, Weber et al. (2002) developed context specific scales to measure risk. This dissertation uses the health/safety risk scale developed by these authors. This scale consists of nine items which respond to the statement, "For each of the following

statements, please indicate the likelihood of engaging in each activity." This five point scale was anchored by extremely unlikely (1) to extremely likely (5) and has a reliability of .76.

The consumer's decision making style was determined using a 41 item scale to determine one of eight consumer decision making styles. This five point scale was anchored by strongly disagree (1) to strongly agree (5) (see Sproles & Kendall, 1986). Reliability was determined for each individual style and are as follows: perfectionistic (.74), brand consciousness (.75), novelty-fashion consciousness (.74), recreational-hedonistic (.76), price consciousness (.48), impulsive (.48), confused by overchoice (.55), and habitual (.53). Although not all individual CDMS exhibit optimal reliability levels, these were all measured as these scales have never been used in the context of EFAH. The CDMS of the consumer was only measured in Study 1 and Study 2.

The interaction component of goal directed behavior was ascertained by assessing the consumer's level of goal desire and goal feasibility (see Appendix C) as measured by Bagozzi et al. (2003). Goal desire utilized a three item scale. The items used both a five-point and a seven-point Likert scale. The first item asked the consumers to state whether their goal regarding their eating behavior was healthy or tasty and was measured using a seven point scale anchored by no desire at all (1) to very, very strong desire (7). The second item dealt with the strength of their desire to attain their goal and was measured using a seven point scale anchored by does not describe me at all (1) to describes me very well (7). The third item asked the consumers to state their wish regarding their goal desire and then rate the wish on a five point scale anchored by no wish at all (1) to very strong wish (5). These authors found the Cronbach's alpha for the items in the scale to be

.78. Two items were used to measure goal feasibility. The first item was measured using a seven-point scale anchored by highly infeasible (1) and highly feasible (7). The second item was measured on a five-point scale anchored by very difficult (1) and very easy (5) as the response choices. A Cronbach's alpha of .76 was noted for this scale. The consumer's goal directed behavior was only measured in Study 3.

The final component of the survey portion of this dissertation was to determine the consumer's demographic characteristics. Generally used demographic characteristics such as gender, age, education level, income level and nationality were collected. See Appendix E for a complete itemization of the demographic categories.

Menu Development

The menu items were selected from several national chain, casual dining restaurants. Each restaurant was consulted regarding the popularity of the items on its menu. The more popular items were selected for inclusion on the menu. Similar to the menu offered by the various casual dining restaurants, the menu was developed with the name of the menu item and a description of the item. Menu items were worded the same or similar to the descriptions found on these casual dining menus. Since the meal time was lunch or dinner, the menu offered three salads, four sandwiches and 10 entrées. There were variations within the items, such as a salad that offered fried chicken, grilled chicken, or no chicken, but the basic item remained the same. The side dishes served with each menu item were the same regardless of the variation offered. There were two menus available for the manipulation. One menu contained the name of the item with a description of the item, but without any specific nutrition information (see Appendix F). The other menu contained these same items and descriptions as well as the specific

nutrition information for the nutrients analyzed (see Appendix G). Approximately one half of the consumers were given a menu item with the nutrition information and one half of the consumers were given menu items without nutrition information. The consumer did not select which menu he or she received; it was automatically selected by the online survey program based on the birth month of the respondent. In this dissertation, the values of the nutrient for the various food items were calculated using nutrient analysis software based on recipes similar to popular food items served in nationwide casual dining restaurants. Specific nutrient values include calories, protein (in grams), carbohydrates (in grams) (carbs), fiber (in grams), fat (in grams), sodium (in milligrams), and saturated fat (in grams). No evaluative information, such as Weight Watcher's™ points, was included in the nutrition information. The serving size was considered the entire menu item. Appetizers, desserts, and beverages were beyond the scope of this dissertation and were not included on the menus.

Healthiness Quotient Development

Restaurants are shifting their menus to incorporate more healthy items. What constitutes as healthy menu choice? If a food choice is low in calories, but high in sodium and fat, is this menu choice considered a healthy item? What about a food choice that is high in calories and fat content, but low in sodium, cholesterol, and protein? There is some confusion, as what means 'healthy' to one consumer and what means 'healthy' to another consumer may be vastly different. For example, healthy food may be considered low calorie, low fat, low carbs, or even organic. Many consumers have adopted these 'healthful' eating habits, yet there is some evidence that not all of these behaviors provide the desired results (Klara, 2004). A nutritious diet is one that is considered well

balanced. The benefits of this type of diet not only help maintain optimal health, but also increase productivity (Wolff, 1985). For example, this author notes that a diet high in fiber and low in fat increases brain function and maintains a steady energy level.

One aspect of this research was to determine the healthiness of each menu item. There is a general assumption that a food low in calories is healthier than a food higher in calories. However, according to this idea, one could assume that a teaspoon of butter at 45 calories is healthier than an apple at 70 calories. The butter derives all of its calories from fat. In addition, butter also contains saturated fat and cholesterol. The apple derives its calories from carbohydrates. In addition, the apple also provides fiber to the diet, a necessary nutrient to maintain proper digestion. Thus, calories alone cannot be the sole determining factor of the healthiness of a food item.

In order to determine the healthiness of a food choice, this dissertation developed a scoring mechanism which calculates a composite score for each of the food choices on the menu. This author developed a (HQ) in order to determine the healthiness of one menu item versus another. Upon development of the premise of the HQ, this author consulted with two other registered dietitians (L. Burley, personal communication, May 25, 2007 and M. Hochradel, personal communication, May 24, 2007) regarding the HQ concept and validity. Once reviewed and refined, this score was calculated based on the nutritional value of the menu items using the nutrients listed on the menu provided to the research participants. These nutrients were selected based on the preliminary study and the fact that these nutrients are listed on the Nutrition Facts panel of food products purchased in grocery stores; therefore, these nutrients are familiar to consumers. The analysis and score were based on the entire menu item or one serving.

After each menu item was analyzed, a total for each nutrient was obtained. Since dietary recommendations are for a full day, and not by meal, each nutrient was calculated to be a percent of the recommended levels of daily nutrients. These daily totals are 2000 calories, 66 grams of fat, 22 grams of saturated fat, 250 grams of carbs, 100 grams of protein, 25 grams of fiber, and 2300 milligrams of sodium. The 2000 calorie total was selected as the current nutrition food label provides nutrient information utilizing 2000 calories per day, so this level is considered to be 'average' and familiar to any consumer who reads food labels (see Russo, Staelin, Nolan, Russell, & Metcalf, 1986 and Burton et al., 1999). The levels used in the calculations for fat, saturated fat, carbs, and protein based on the dietary recommendations for a 2000 calorie diet. The levels use in the calculations for fiber and sodium are based on the Dietary Reference Intakes (DRIs) for individuals.

To calculate the caloric nutrient, the number of calories in the menu option was divided by an average daily allotment of 2000 calories per day. To calculate the remaining nutrients, a score similar to calculating a food's nutrient density was determined. The nutrient density of a food is calculated by determining the percentage of the DRI of a particular nutrient of a given food item divided by the standard caloric amount. Thus, the nutrient density of a food that is equal to 1.00 means that the food contains 100% of the DRI for a given food. The recommended daily amount of the nutrient was used in the calculation as a proxy for the standard caloric amount of the individual food items. This research calculated the menu item healthiness quotient for the listed nutrients as a whole, rather than for each ingredient since the entire menu items was considered the serving size.

An overall rating was developed in order to provide a composite HQ for the menu items. Since the typical American diet contains an excessive amount of the analyzed nutrients except fiber, the percentages of calories, fat, saturated fat, carbs, protein, and sodium were added together and the percentage of fiber was subtracted to determine the overall score for the menu selection (see Russo et al., 1986). Thus, a score of 5.00 is equivalent to an entire day's recommended intake. Since it is not recommended that a person consume the entire daily intake in one meal, the lowest score is considered the healthiest item. It is this summary score that is used as the food selection variable for the purposes of determining the 'healthiness' of the menu item (see Appendix H) for the healthiness quotient for each individual menu selection.

Study 1

Study 1 consisted of a 2 (availability of nutrition information) x 1 (eating with family and friends) x 1 (eating lunch) between-subjects design. The purpose of Study 1 was to determine the validity of the HQ, the manipulation of the menu, and the main effects of the independent variables. The study was provided to a convenience sample of consumers through an electronic invitation to participate in an on-line study regarding eating out. The link to the study was included in the electronic invitation and all the consumers had to do to participate in the study was to 'click' on the link. The opening page of the study asked the consumer the month of his or her birth. Based on the month of their birth, these consumers were directed to one of the two scenarios offered.

The survey began with the measures to ascertain health consciousness, engagement in preventive health behaviors, perceived nutrition knowledge, susceptibility to interpersonal influence, self-efficacy, risk perception, and CDMS. Upon the

completion of the survey portion of this dissertation, consumers were given the scenario that they were eating lunch with close friends and family members. The consumers were asked what they planned to order, before being provided with the menu, and then were provided a menu either with or without nutrition information. The menu consisted of salads, sandwiches, and entrées. Other than the inclusion of specific nutrition information, these menus were identical. The consumers were then asked to select the meal they would like to order. Following the selection, the consumers were asked to imagine how satisfied they were with the meal and asked several follow-up questions in order to verify the manipulation and determine the use of the specific nutrient information.

Study 2

Study 2 consisted of a 2 (availability of nutrition information) x 3 (occasion when EFAH) x 2 (meal time) between-subjects design. The study was provided to a convenience sample of consumers through an electronic invitation to participate in an on-line study regarding eating out. The electronic invitation was sent to consumers using a consumer research firm. This research firm included the link to the study in the electronic invitation and all the consumers had to do to participate in the study was to 'click' on the link. The opening page of the study asked the consumer the month of his or her birth. Based on the month of their birth, these consumers were directed to one of the 12 scenarios offered. Once a scenario obtained at least 25 responses, the link to that scenario was deactivated and the subsequent survey participants were connected to a scenario which needed more responses. The survey was deactivated once the requested number of responses for each scenario was obtained.

The survey began with the measures to ascertain health consciousness, engagement in preventive health behaviors, perceived nutrition knowledge, susceptibility to interpersonal influence, self-efficacy, risk perception, and CDMS. Upon the completion of the survey portion of this dissertation, consumers were given one of 12 scenarios based on a 2 (nutrition information) x 3 (occasion for EFAH) x 2 (meal time) design. The manipulations were presented in the scenarios and the menu provided. The scenarios described the occasion of the meal and the meal time. The occasion of the meal was one of three conditions: eating with close friends/family, eating with co-workers/business acquaintances, and eating in order to celebrate the consumer's birthday. These three occasions were selected as they were consistently noted as reasons for EFAH in the preliminary study.

The meal time was noted in the scenario as either lunch or dinner. These meals were selected for several reasons. First, consumers eat lunch and dinner away from home more frequently than breakfast. Second, lunch and dinner involve different eating patterns. Lunch meals are usually quick service types of meals, such as salads and sandwiches and consumers frequently eat more habitually at this meal time. It is expected that the consumers will select more sandwiches and salads at lunch than at dinner. Dinner meals are usually entrée type meals and consumers frequently seek more variety at these meals. These differences allowed this research to determine if these different eating behaviors had any influence on utilizing nutrition information on the menu.

The menu consisted of salads, sandwiches, and entrées, regardless of the meal time. The consumers were asked what they planned to order, before being provided with

the menu, and then were provided a menu either with or without nutrition information. Other than the inclusion of specific nutrition information, these menus were identical. The consumers were then asked to select the meal they would like to order. Following the selection, the consumers were then asked to imagine how satisfied they were with the meal and then asked several follow-up questions in order to verify the manipulations and determine the use of the specific nutrient information. Study 3 was designed after analyzing the data from Study 2.

Study 3

Study 3 consisted of a 2 (availability of nutrition information) x 2 (dining companion menu selection) between-subjects design. The third manipulated variable was one of two survey variables. The first manipulated survey variable was determined by the responses to the susceptibility to interpersonal influence scores and the second manipulated survey variable was determined by the goal directed behavior scores. Adaptations to the survey included adding questions in order to determine goal directed behavior and removing questions based on CDMS. The remaining survey questions and demographic information from the previous studies were collected.

Upon the completion of the survey portion of this dissertation, consumers were given one of four scenarios based on their birth month as described earlier. The consumers were told they were eating dinner with co-workers and whether the other person in their party was ordering a healthy or an unhealthy meal. Dinner was selected as the meal as Study 2 did not indicated differences in menu item selections between lunch and dinner and dinner is considered a more sensory eating experience. Co-workers were

selected as the dining companion for Study 3 as Study 2 indicated that consumers will eat differently with co-workers than with close friends and family members.

As with Study 2, consumers were asked what they planned to order, before being provided with the menu, and then were provided a menu either with or without specific nutrition information. The consumers were then asked to select the meal they would like to order. Following the selection, the consumers were then asked to imagine how satisfied they were with the meal and then asked several follow-up questions to verify the manipulations and the use of the specific nutrition information on the menu.

Analysis of the Data

The survey responses were downloaded from the electronic survey. Since the data was entered by the respondents to the survey, no data entry errors occurred due to data entry by the researcher. The manipulations, determined by the specific survey completed by the consumer, were coded. For Study 1, Study 2, and Study 3, consumers who did not receive specific nutrition information on their menu were coded as '0' and consumers who did receive specific nutrition information on their menu were coded as '1'. For Study 2, lunch was coded as '0' and dinner was coded as '1' and eating with family and friends was coded as '0', eating with co-workers and business acquaintances was coded as '1' and eating in order to celebrate their birthday was coded as '2.' For Study 3, consumers eating with a dining companion ordering an unhealthy meal was coded as '0' and consumers eating with a dining companion ordering a healthy meal was coded as '1.'

For each measured scale, a factor analysis was conducted in order to determine whether or not any underlying factors existed. As the hypotheses were developed in

order to determine the differences between consumers who exhibited high levels of a particular behavior versus consumers who experienced low levels of a particular behavior, the means of the underlying factors and the total scales were then determined. The consumers were placed in either a high category (coded as '1') or low category (coded as '0') for each of the underlying factors and total scale based on the results of the mean split. The underlying factors and scales are found in Appendix I.

CHAPTER 4

RESULTS

Introduction

Chapter 4 discusses the results of the Preliminary Study, Study 1, Study 2 and Study 3. Results of each component of the research will be analyzed, including frequencies and statistical analysis. Manipulation checks will be noted for each manipulated variable. This chapter will also note the support or lack of support for the various proposed hypotheses.

Preliminary Study

As previously noted, a preliminary study was conducted using a convenience sample of undergraduate students at two mid-Atlantic region universities. A total of 221 surveys were completed. The survey response characteristics are found in Table 2. The summary results of this study are found in Appendix J.

The majority of the respondents (81.4%) ate out for dinner one to three times per week. Income was the only demographic characteristics found to be significant regarding frequency of EFAH ($F=3.239$, $p=0.073$). Opposite of the hypothesis, this finding indicates that lower income consumers EFAH more frequently than higher income consumers (Mean = 2.74 and 2.32, respectively). This may be due to the fact that many of the respondents are college students, who, although they have lower levels of income, typically EFAH frequently. Only 14% of the consumers sought nutrition information prior to going to the restaurant. A chi-square analysis was conducted on this item and gender, specifically female, was found to be the only characteristic that was significant ($\chi^2_{(1, N=31)} = 14.226$, $p=0.000$). This preliminary study also found that 27% of the

Table 2

Preliminary Survey: Respondent Characteristics

Demographic Information:	**N**	**Percent**
Gender:		
Male	148	67.0
Female	73	33.0
Age:		
Under 20	15	6.8
20-29	100	45.2
30-39	33	14.9
40-49	39	17.6
50-59	28	12.7
60 and older	6	2.7
Ethnicity:		
White, not Hispanic	113	51.1
Black/African American	83	37.6
Hispanic	4	1.8
Asian/Pacific Islander	8	3.6
Other	13	5.9
Education:		
Currently attending or did not complete High School	3	1.4
High School Diploma or GED	31	14.0
Attended College	96	43.4
College Graduate	52	23.5
Post Graduate Degree	20	9.0
Other	19	8.6
Income:		
Less than $10,000	24	10.9
$10,000-$19,999	17	7.7
$20,000-$29,999	24	10.9
$30,000-$39,999	19	8.6
$40,000-$49,999	28	12.7
$50,000-$59,999	33	14.9
$60,000 and over	76	34.4

consumers actually inquired about nutrition information while at the restaurant. A chi-square analysis was conducted on this item and gender and income were found to be significant characteristics. Specifically, females were more likely to ask for nutrition information at the restaurant ($\chi^2_{(1, N=27)} = 10.704$, $p=0.001$) and consumers with higher

levels of income were more likely to ask for nutrition information at the restaurant ($\chi^2_{(1, N=27)} = 4.481$, $p=0.034$).

Most consumers (62.4%) EFAH in order to avoid cooking or for convenience. The social aspect of eating food and the food itself (13.3% and 22.5%, respectively) were also noted as reasons for eating out as 71% of the respondents indicated they never ate alone. Although this preliminary study indicated a low number of consumers seek nutrition information, this study found that 80.1% of the respondents would favorably view the provision of nutrition information on the menu. However, only 22.6% viewed the restaurant negatively for not including nutrition information on the menu. The remaining 77.4% were indifferent regarding the inclusion of nutrition information on the menu.

In this preliminary study, consumers ordered food based on the tastiness of the food itself (40.7%) or the price of the food (22.2%). Only 12.7% of the respondents noted they considered the healthiness or nutrition aspect of the item when making a food choice. Yet 27.3% of the respondents said that they would eat healthier based on who they were eating with while another 27.3% of the respondents said they would change their food choice in order to eat what others are eating.

Study 1

Study 1 was conducted to determine the readability of the questionnaire, to verify the manipulation of the nutrition availability on the menu, and usability of the HQ. A convenience sample of consumers was contacted via electronic invitation to participate in an online survey. A sample of respondents was contacted to obtain comments regarding

the survey. According to these respondents, the questionnaire and the format of the menu were understandable.

A total of 72 surveys were completed. One respondent did not indicate a menu item selection and was deleted from the analysis as this was the basis for the dependent variable. A total of 71 usable surveys were used in the analysis. Due to the fact that Study 1 only manipulated the availability of nutrition information, a minimum of 20 responses were needed in each group for the analysis. Specifically, 43 respondents did not receive specific nutrition information on the menu and 28 respondents received specific nutrition information on the menu. The specific demographic breakdown of these respondents is summarized in Table 3.

A manipulation check was performed for the manipulated variable of the availability of nutrition information. An ANOVA was conducted and the findings indicated a difference between those respondents who received the specific nutrition information on the menu and consumers who did not receive the specific information on the menu. Specifically, the results were $F=12.798$, $p=0.001$.

An analysis was conducted for those hypotheses in which information was collected. In Study 1, meal occasion, meal time, and dining companion meal healthiness were not manipulated, so the hypotheses for these manipulations were not analyzed. Additionally, goal directed behavior information was not collected, so the hypotheses for this variable was also not analyzed.

One of the basic research questions is whether or not consumers will use nutrition information if it is available on the menu. An ANOVA was conducted and based on the findings, consumers were not more likely to use the available nutrition information when

Table 3

Study 1 Survey: Respondent Characteristics

Demographic Information:	**N**	**Percent**
Gender:		
Male	22	31.0
Female	49	69.0
Age:		
Under 20	1	1.4
20-29	20	28.2
30-39	11	15.5
40-49	15	21.1
50-59	13	18.3
60-69	47	5.6
70 and older	7	9.9
Ethnicity:		
White, not Hispanic	66	93.0
Black/African American	4	5.6
Hispanic	0	0
Asian/Pacific Islander	0	0
Other	1	1.4
Education:		
Currently attending or did not complete High School	3	4.2
High School Diploma or GED	2	2.8
Some college	19	26.8
Bachelor's Degree	33	46.5
Some Graduate School	3	4.2
Completed Graduate School (Master's)	9	12.7
Some Post Graduate School	0	0
Completed Terminal Degree (Ph. D., M.D.)	2	2.8
Income:		
Less than $10,000	5	7.0
$10,000-$19,999	1	1.4
$20,000-$29,999	5	7.0
$30,000-$39,999	7	9.9
$40,000-$49,999	5	7.0
$50,000-$59,999	4	5.6
$60,000-$69,999	6	8.5
$70,000-$79,999	10	14.1
$80,000 and over	28	39.4

making their menu selection (F=0.007, p=0.935). Another basic research question is whether or not consumers would use the available nutrition information to choose a healthier menu item when nutrition information is available on the menu. An ANOVA was conducted and based on the findings, consumers were more likely to use the available nutrition information to select a healthier menu item (F= 5.311, p=0.029).

The hypotheses investigating the differences between consumers who indicate a higher level of perceived nutrition knowledge and consumers who indicate they do not have a high level of nutrition knowledge were analyzed. As previously mentioned, the mean of the results of the survey responses to the questions regarding perceived nutrition knowledge were obtained. The respondents were split based on the mean; consumers at or below the mean were noted as low perceived nutrition knowledge and consumers above the mean were noted as higher perceived nutrition knowledge. The analysis was conducted using the mean split scores. The results of the analysis of the hypotheses relating to perceived nutrition knowledge are found in Table 4.

The hypotheses investigating the differences between consumers who indicate they are more health conscious or exhibit engagement in health prevention measures and consumers who do not indicate a high level of health consciousness or exhibit engagement in health prevention measures were analyzed. The mean results of the scale items that measure health consciousness and engagement in health prevention measures were used to create a mean split between the groups. These groups were used to for the analysis of the hypotheses. The results are found in Table 5.

Table 4

Study 1: Perceived Nutrition Knowledge Hypotheses Results

Hypotheses: Perceived Nutrition Knowledge	**F**	**Sig.**	**Result**
H1a: Consumers with higher levels of perceived nutrition knowledge will select healthier menu items.	24.794	0.000**	Supported
H1b: Consumers will be satisfied with their menu selection regardless of their level of nutrition knowledge.	0.050	0.824	Supported
H1c: Consumers with lower levels of perceived nutrition knowledge will select healthier menu items when they use the available nutrition information on the menu.	5.718	0.020*	Supported
H1d: Inclusion of nutrition information on the menu will result in a larger increase in the selection of healthier food items for consumers with higher levels of perceived nutrition knowledge than for consumers with lower levels of perceived nutrition knowledge.	2.602	0.118	Not Supported
H1e: Inclusion of nutrition information on the menu will result in a lower increase in satisfaction for consumers with lower levels of perceived nutrition knowledge than for consumers with higher levels of perceived nutrition knowledge.	.537	0.468	Not Supported

*$p \leq 0.02$ **$p \leq 0.000$

The hypotheses investigating the differences between consumers who indicate a high level of self-efficacy and consumers who do not were analyzed. Again, a mean split was determined using the mean value of the survey results. Consumers at or below the mean were considered to exhibit low self-efficacy and consumers above the mean were considered to exhibit high self-efficacy. The survey responses were then analyzed to determine which consumers exhibited high levels of health consciousness and high levels of self-efficacy, high levels of perceived nutrition knowledge and high levels of self-efficacy, and high levels of health consciousness, high levels of self-efficacy, and high

Table 5

Study 1: Health Consciousness/Health Prevention Hypotheses Results

Hypotheses: Health Consciousness	F	Sig.	Result
H2a: Consumers with higher levels of health consciousness will select healthier menu items.	3.811	0.055*	Supported
H2b: Consumers, regardless of their level of health consciousness, will be satisfied with their menu selection.	.149	0.701	Supported
H2c: Consumers who engage in health prevention measures will select healthier menu items.	3.130	0.081*	Supported
H2d: Consumers, regardless of their level of engagement in health prevention measures, will be satisfied with their menu selection.	1.063	0.306	Supported
H2e: Consumers with higher levels of health consciousness will select healthier menu items when nutrition information is included on the menu.	.000	0.993	Not Supported
H2f: Consumers who engage in health prevention measures will select healthier menu items when nutrition information is included on the menu.	9.357	0.005**	Supported
H2g: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers with higher levels of health consciousness than for consumers with lower levels of health consciousness.	2.335	0.135	Not Supported
H2h: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers who engage in health prevention measures than for consumers who do not engage in health prevention measures.	7.409	0.010**	Supported

*$p \leq 0.10$ **$p \leq 0.01$

levels of perceived nutrition knowledge. In each of these instances, the respondent had to exhibit a high level in every category being assessed to be classified as exhibiting a high level of a multiple category. Once these assessments were made and the groups were identified, these groups were used to for the analysis of the hypotheses. The results are found in Table 6.

Table 6

Study 1: Self-Efficacy Hypotheses Results

Hypotheses: Self-efficacy	F	Sig.	Result
H4a: Consumers with higher levels of self-efficacy will select healthier menu items.	13.296	0.001***	Supported
H4b: Health conscious consumers with higher levels of self-efficacy will select healthier menu items.	5.690	0.020**	Supported
H4c: Consumers with higher levels of perceived nutrition knowledge and higher levels of self-efficacy will select healthier menu items.	17.983	0.000***	Supported
H4d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of self-efficacy with the inclusion of nutrition information on the menu will lead to a healthier menu selection.	3.348	0.079*	Supported

*p≤0.10 **p≤0.02 ***p≤0.001

The hypotheses investigating the differences between consumers who indicate a high level of risk perception and consumers who do not were analyzed. Again, a mean split was determined using the mean value of the survey results. Consumers at or below the mean were considered to exhibit low levels of risk perception and consumers above the mean were considered to exhibit high levels of risk perception. The survey responses were then analyzed to determine which consumers exhibited high levels of health consciousness and high levels of risk perception, high levels of perceived nutrition knowledge and high levels of risk perception, and high levels of health consciousness, high levels of risk perception, and high levels of perceived nutrition knowledge. In each of these instances, the respondent had to exhibit a high level in every category being assessed to be classified as exhibiting a high level of a multiple category. Once these assessments were made and the groups were identified, these groups were used to for the analysis of the hypotheses. The results are found in Table 7

Table 7

Study 1: Risk Perception Hypotheses Results

Hypotheses: Risk Perception	F	Sig.	Result
H5a: Consumers with higher levels of risk perception will select healthier menu items.	.004	0.952	Not Supported
H5b: Health conscious consumers with higher levels of risk perception will select healthier menu items.	.395	0.532	Not Supported
H5c: Consumers with higher levels of perceived nutrition knowledge and higher levels of risk perception will select healthier menu items.	4.388	0.040*	Supported
H5d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of risk perception with the inclusion of nutrition information on the menu will lead to a healthier menu selection.	1.902	0.172	Not Supported

*$p \leq 0.05$

The hypotheses investigating the differences between consumers who indicate high levels of the various CDMS and consumers who do not were analyzed. Again, a mean split was determined for each CDMS using the mean value of the survey results. Consumers at or below the mean were considered to exhibit low levels of the particular CDMS and consumers above the mean were considered to exhibit high levels of the particular CDMS. In order to be classified as a consumer with a high level of health consciousness and a high perfectionistic CDMS, the respondent had to score high in both categories. Once these assessments were made and the groups were identified, these groups were used to for the analysis of the hypotheses. When analyzing whether or not the consumers selected more expensive or less expensive items, the price that was indicated on the menu was used as the dependent variable. These prices were identical on both menus, regardless of the availability of nutrition information. The results are found in Table 8.

Table 8

Study 1: CDMS Hypotheses Results

Hypotheses: CDMS	Specific Style	F	Sig.	Result
H6a: Perfectionistic, high quality conscious consumers will select healthier menu items.	Perfectionistic	5.077	0.027*	Supported
H6b: Health conscious consumers with higher levels of perfectionistic, high-quality consciousness will select healthier menu items.	Health Consciousness/ Perfectionistic	5.918	0.018*	Supported
H6c: Consumers with higher levels of brand "price equals quality" consciousness will select the more expensive items.	Brand Consciousness	.274	0.602	Not Supported
H6d: Consumers with higher levels of novelty-fashion consciousness, impulsiveness, confusion by overchoice, and habitual buying behavior will select items they find tastier.	Novelty/Fashion Impulsive Confused Habitual	.033 2.424 .362 1.335	0.857 0.124 0.549 0.252	Not Supported
H6e: Consumers with higher levels of price consciousness will select the least expensive items.	Price Consciousness	8.193	0.006*	Supported/ Opposite
H6f: Consumers with higher levels of recreational or hedonistic consciousness will select less healthy items.	Recreational/ hedonistic	.863	0.359	Not supported
H6g: When nutrition information is included on the menu, health conscious consumers with higher levels of perfectionistic, high-quality consciousness will use the information to select a healthier menu item.	Perfectionistic	.567	0.458	Not Supported
H6h: When nutrition information is included on the menu, consumers with higher levels of brand "price equals quality" consciousness, novelty-fashion consciousness, price consciousness, impulsiveness, confusion by overchoice, habitual, and recreational hedonistic consumer decision making styles will not use the information when selecting a menu item.	Brand Novelty/Fashion Price Impulsive Confused Habitual Recreational	1.390 3.709 .013 2.712 .220 .060 5.465	0.252 0.068** 0.911 0.115 0.644 0.809 0.030*	Supported NS Supported Supported Supported Supported NS

*$p \leq 0.10$ **$p \leq 0.05$

The hypotheses investigating the demographic differences between consumers were analyzed. For age, education level, and income level, a mean split was determined for each group using the mean value of the survey results. Consumers at or below the mean were considered to low and consumers above the mean were considered high for each of these demographic groups. For ethnic groups, each respondent was classified as either 'white' or 'non-white' due to the development of the hypothesis. Gender remained either male or female based on the response the consumer provided. Once these assessments were made and the groups were identified, these groups were used to for the analysis of the hypotheses. The results are found in Table 9.

Table 9

Study 1: Demographic Hypotheses Results

Hypotheses: Demographic Information	**F**	**Sig.**	**Result**
H7a: When nutrition information is included on the menu, younger consumers will select healthier menu items.	.141	0.711	Not supported
H7b: When nutrition information is included on the menu, consumers with higher levels of income consumers will select healthier menu items.	.572	0.456	Not Supported
H7c: When nutrition information is included on the menu, consumers with higher levels of education will select healthier menu items.	6.160	0.020*	Supported
H7d: When nutrition information is included on the menu, white consumers will select healthier menu items.	.481	0.494	Not supported
H7f: When nutrition information is included on the menu, female consumers will select healthier menu items.	.009	0.926	Not supported

*$p \leq 0.02$

Further analysis indicates that regardless of availability of nutrition information, consumers with higher levels of education are more likely to select healthier meals

(F=3.267, p=0.075). In addition, older consumers are more likely to use available nutrition information when making a menu selection (F=3.313, p=0.080).

Study 2

Study 2 consisted of a between-subjects 2 (nutrition information availability) x 3 (occasion for eating out) x 2 (meal time) design. A consumer marketing research firm was used to distribute the surveys for Study 2. This firm issued an electronic invitation to participate in a study on eating out. The respondent was provided a link to the study and all he or she had to do was 'click' on the link. Once this occurred, the respondent was asked to 'click' on the link for the month or his or her birth and then the respondent was sent to one of twelve scenarios based on the manipulations. Once the survey scenario reached a minimum of 20 responses, the link to the survey was deactivated and subsequent respondents were linked to a survey scenario that needed more responses. A minimum number of 240 responses were needed. Once the required number of responses for each scenario was obtained, the study was deactivated.

A total of 285 consumers participated in Study 2. Eight consumers did not indicate a menu selection and their responses were eliminated from the analysis. A total of 277 consumer responses were analyzed for Study 2. The specific demographic breakdown of these respondents is summarized in Table 10. All manipulated variables and demographic characteristics were fairly well distributed except for ethnicity. The majority of the respondents (89.5%) to this first study noted they were 'White, not Hispanic' while the remaining ethnic groups only consisted of 2.5% to 2.9% of the respondents. The three manipulated variables, nutrition information availability, eating situation, and meal time were fairly well distributed, as found in Table 11. The

Table 10

Study 2: Survey Respondent Characteristics

Demographic Information		N	Percent
Gender:	Male	129	46.6
	Female	148	53.4
Age:	Under 20	8	2.9
	20-29	53	19.1
	30-39	45	16.2
	40-49	57	20.6
	50-59	64	23.1
	60-69	39	14.1
	70 and older	11	4.0
Ethnicity:	White, not Hispanic	248	89.5
	Black/African American	7	2.5
	Hispanic	7	2.5
	Asian/Pacific Islander	8	2.9
	Other	7	2.5
Education:	Currently attending or did not complete High School	3	1.1
	High School Diploma or GED	68	24.5
	Some college	81	29.2
	Bachelor's Degree	80	28.9
	Some Graduate School	8	2.9
	Completed Graduate School (Master's)	26	9.4
	Some Post Graduate School	3	1.1
	Completed Terminal Degree (Ph. D., M.D.)	8	2.9
Income:	Less than $10,000	7	2.5
	$10,000-$19,999	27	9.7
	$20,000-$29,999	40	14.4
	$30,000-$39,999	38	13.7
	$40,000-$49,999	24	8.7
	$50,000-$59,999	28	10.1
	$60,000-$69,999	22	7.9
	$70,000-$79,999	20	7.2
	$80,000 and over	71	25.6

manipulations for each of these variables were significant, as noted in Table 11. Each of the twelve scenarios consisted of 20 to 31 respondents, or 7.2% to 11.2%, respectively. The results for the total number of surveys in each scenario are noted in Table 12.

The scales were analyzed based on the same mean split process as with Study 1. Each scale was summed and the mean obtained with those respondents above the mean

classified as 'high' in a particular characteristic and those respondents at or below the mean were classified as 'low' in a particular characteristic. Based on the factor analysis conducted on each scale, the scales, if indicated to have one or more factors,

Table 11

Study 2: Distribution of Manipulated Variables

	N	Percent	F	Sig.
Nutrition Information:				
Without specific nutrition information	143	51.6	171.499	0.000*
With specific nutrition information	134	48.4		
Situation/Eating Companions:				
Friends and family	95	34.3	101.646	0.000*
Co-workers and business acquaintances	86	31.0		
Celebrating birthday	96	34.7		
Meal: Lunch	152	54.9	188.874	0.000*
Dinner	125	45.1		

*p≤0.000

. **Table 12**

Study 2: Distribution of Scenarios

		Family and Friends	Co-Workers and Business Acquaintances	Celebrating Birthday
Nutrition Information Available	Lunch	27 (9.8%)	23 (8.3%)	22 (7.9%)
	Dinner	20 (7.2%)	20 (7.2%)	22 (7.9%)
Nutrition Information Not Available	Lunch	26 (9.4%)	23 (8.3%)	31 (11.2%)
	Dinner	22 (7.9%)	20 (7.2%)	21 (7.7%)

were divided based on the mean split as with the scale as a whole. Where indicated, these factor splits were also analyzed. See Appendix I for the factor split information

The basic research question regarding whether or not consumers would use nutrition information when it is available on the menu was analyzed. An ANOVA was conducted and based on the findings, consumers were more likely to use available nutrition information ($F=3.122$, $p=0.078$). When the consumer stated they used the available nutrition information, they selected a healthier meal compared to those consumers who did not use the nutrition information on the menu ($F=16.845$, $p=0.000$). Also, when a consumer stated that he or she used the available nutrition information on the menu to select a healthier meal, a more healthy menu item was selected compared to consumers who did not use the available nutrition information to select a healthier meal ($F=7.659$, $p=0.006$).

The hypotheses comparing the differences between consumers who perceive they have a high level of nutrition knowledge and consumers who do not have this perception were analyzed. The ANOVA was conducted on this mean split variable as the factor analysis did not indicate any factors for this variable. The results are found in Table 13.

The hypotheses regarding the concepts of health consciousness and health prevention behaviors were analyzed. Each respondent was classified as to whether or not he or she had a high or low level of health consciousness and whether or not he or she had a high or low level of engagement in health prevention measures. Factor analysis indicates that two underlying factors exist for health consciousness: extrinsic health consciousness and intrinsic health consciousness. Extrinsic health consciousness includes factors that are focused on those items that can actually be harmful to the body.

such as chemicals in food and drinking water quality. Intrinsic health factors concerns awareness of health issues.

Table 13

Study 2: Perceived Nutrition Knowledge Hypotheses Results

Hypotheses: Perceived Nutrition Knowledge	F	Sig.	Result
H1a: Consumers with higher levels of perceived nutrition knowledge will select healthier menu items.	3.866	0.050*	Supported
H1b: Consumers will be satisfied with their menu selection regardless of their level of nutrition knowledge.	1.946	0.164	Supported
H1c: Consumers with lower levels of perceived nutrition knowledge will select healthier menu items when they use the available nutrition information on the menu.	2.080	0.048*	Supported
H1d: Inclusion of nutrition information on the menu will result in a larger increase in the selection of healthier food items for consumers with higher levels of perceived nutrition knowledge than for consumers with lower levels of perceived nutrition knowledge.	1.426	0.235	Not Supported
H1e: Inclusion of nutrition information on the menu will result in a lower increase in satisfaction for consumers with lower levels of perceived nutrition knowledge than for consumers with higher levels of perceived nutrition knowledge.	1.043	0.310	Not Supported

*$p \leq 0.05$

Factor analysis indicates there are three underlying factors for engagement in preventive health behaviors. These factors are intake focused, general health focused, and stress reduction focused. Consumers who are found to be high in the intake focused factor engage in preventive health behaviors related to reducing their dietary intake of foods such as salt and sugar. Consumers who are found to be high in general health focused factor engage in preventive health behaviors that are noted for maintaining good health, such as visiting their dentist regularly and consuming a well balanced diet, rich in foods that are noted for having a positive impact on health. Consumers who are found to

be high in stress reduction engage in preventive health behaviors that allow them to get enough rest, exercise, and sleep. These factors are analyzed where appropriate and are indicated in Table 14.

Table 14

Study 2: Health Consciousness/Health Prevention Hypotheses Results

Hypotheses: Health Consciousness/Health Prevention	Factor	F	Sig.	Result
H2a: Consumers with higher levels of health consciousness will select healthier menu items.	hctotal	10.998	0.000****	Supported
	extrinsic	21.846	0.000****	
	intrinsic	2.906	0.089*	
H2b: Consumers, regardless of their level of health consciousness, will be satisfied with their menu selection.	hctotal	.537	0.464	Supported
	extrinsic	2.132	0.145	
	intrinsic	1.689	0.195	
H2c: Consumers who engage in health prevention measures will select healthier menu items.	phbtotal	17.566	0.000****	Supported
	intake	8.330	0.004***	Supported
	general	.099	0.754	NS
	stress	4.193	0.042**	Supported
H2d: Consumers, regardless of their level of engagement in health prevention measures, will be satisfied with their menu selection.	phbtotal	4.116	0.043**	NS
	intake	8.007	0.005***	NS
	general	.393	0.531	Supported
	stress	.072	0.789	Supported
H2e: Consumers with higher levels of health consciousness will select healthier menu items when nutrition information is included on the menu.	hctotal	3.623	0.059*	Supported
	extrinsic	13.405	0.000****	Supported
	intrinsic	.810	0.370	NS
H2f: Consumers who engage in health prevention measures will select healthier menu items when nutrition information is included on the menu.	phbtotal	17.372	0.000****	Supported
	intake	4.436	0.037**	Supported
	general	1.647	0.202	NS
	stress	11.029	0.001***	Supported
H2g: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers with higher levels of health consciousness than for consumers with lower levels of health consciousness.	hctotal	.107	0.744	Not Supported
	extrinsic	1.151	0.285	
	intrinsic	.001	0.973	
H2h: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers who engage in health prevention measures than for consumers who do not engage in health prevention measures.	phbtotal	3.220	0.075*	Supported
	intake	.144	0.706	NS
	general	2.381	0.129	NS
	stress	5.892	0.017**	Supported

*p≤0.10 **p≤0.05 ***p≤0.005 ****p≤0.000

The hypotheses describing the anticipated differences in healthful eating behavior based on with whom the consumer is eating were analyzed. Only the first three of the hypotheses are analyzed during Study 2. This study manipulated the dining companion of the consumer, but not the healthiness of the meal of the consumer's dining companion. This aspect of the research is conducted during Study 3. The analyses of the hypotheses are found in Table 15.

Table 15

Study 2: Dining Companion Hypotheses Results

Hypotheses: Dining Companion	**F**	**Sig.**	**Result**
H3a: Consumers eating with family and friends will select a less healthy menu item.	.416	0.519	Not Supported
H3b: Consumers eating with co-workers and business acquaintances will select a healthier menu item.	4.385	0.037*	Supported
H3c: Consumers eating to celebrate their birthday will select a less healthy menu item.	1.909	0.168	Not Supported

*$p \leq 0.05$

The hypotheses investigating the differences between consumers with high levels of self-efficacy and consumers with low levels of self-efficacy were analyzed. Factor analysis indicated that self-efficacy consisted of two factors: personal accountability and general consciousness. Personal accountability focuses on what the consumer actually does, such as attempting to eat a well balanced diet while general consciousness indicates the consumer's general view regarding the relationship between what people can generally do to maintain good health rather than specific actions one can take to maintain good health. An example of general consciousness is "In the long run, people who take care of themselves stay healthy." These factors will be analyzed for H4a only, as it is the

only hypothesis that investigates self-efficacy in isolation. For the remaining hypotheses, a respondent had to score high in all the variables noted in the hypothesis to be considered high. If the consumer scored low in at least one of the variables, he or she was considered low for the combined variable. High and low, as with other variables, were based on a mean split of the scores for all respondents. The results of the analyses for this set of hypotheses are found in Table 16.

Table 16

Study 2: Self-Efficacy Hypotheses Results

Hypotheses: Self-efficacy	**Factor**	**F**	**Sig.**	**Result**
H4a: Consumers with higher levels of self-efficacy will select healthier menu items.	setotal	5.205	0.023*	Supported
	persact	9.857	0.002**	Supported
	gencons	.471	0.493	NS
H4b: Health conscious consumers with higher levels of self-efficacy will select healthier menu items.		6.335	0.012*	Supported
H4c: Consumers with higher levels of perceived nutrition knowledge and higher levels of self-efficacy will select healthier menu items.		1.532	0.217	Not Supported
H4d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of self-efficacy with the inclusion of nutrition information on the menu will lead to a healthier menu selection.		2.283	0.133	Not Supported

*$p \leq 0.05$ **$p \leq 0.005$

The hypotheses investigating the differences between consumers with high and low levels of risk perception were analyzed. Factor analysis indicates that consumers can either have a high, moderate, or low level of risk perception. These factors will be analyzed for H5a only as it is the only hypothesis that investigates risk perception in isolation. Again, as previously described, the respondent had to score high in all the

variables noted in the hypothesis to be considered high. If the consumer scored low in at least one of the variables, he or she was considered low for the combined variable. High and low, as with other variables, were based on a mean split of the scores for all respondents. The results of the analyses for this set of hypotheses are found in Table 17.

Table 17

Study 2: Risk Perception Hypotheses Results

Hypotheses: Risk Perception	**Factor**	**F**	**Sig.**	**Result**
H5a: Consumers with higher levels of risk perception will select healthier menu items.	rptotal	1.989	0.160	
	low	.675	0.412	Not
	moderate	1.392	0.239	Supported
	high	2.441	0.119	
H5b: Health conscious consumers with higher levels of risk perception will select healthier menu items.		.000	0.982	Not Supported
H5c: Consumers with higher levels of perceived nutrition knowledge and higher levels of risk perception will select healthier menu items.		.003	0.856	Not Supported
H5d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of risk perception with the inclusion of nutrition information on the menu will lead to a healthier menu selection.		1.404	0.238	Not Supported

Table 18 indicates the findings of the hypotheses investigating the differences between consumers who indicate high levels of the various CDMS and consumers who do not. Again, a mean split was determined for each CDMS using the mean value of the survey results. Consumers at or below the mean were considered to exhibit low levels of the particular CDMS and consumers above the mean were considered to exhibit high levels of the particular CDMS. In order to be classified as a consumer with a high level

Table 18

Study 2: CDMS Hypotheses Results

Hypotheses: CDMS	Specific Style	F	Sig.	Result
H6a: Perfectionistic, high quality conscious consumers will select healthier menu items.	Perfectionistic	.395	.530	Not Supported
H6b: Health conscious consumers with higher levels of perfectionistic, high-quality consciousness will select healthier menu items.	Health Consciousness/ Perfectionistic	.511	0.475	Not Supported
H6c: Consumers with higher levels of brand "price equals quality" consciousness will select the more expensive items.	Brand Consciousness	4.050	0.045*	Supported
H6d: Consumers with higher levels of novelty-fashion consciousness, impulsiveness, confusion by overchoice, and habitual buying behavior will select items they find tastier.	Novelty/Fashion Impulsive Confused Habitual	.820 2.362 1.997 8.257	0.366 0.125 0.159 0.004*	NS NS NS Supported
H6e: Consumers with higher levels of price consciousness will select the least expensive items.	Price Consciousness	.421	0.517	Not Supported
H6f: Consumers with higher levels of recreational or hedonistic consciousness will select less healthy items.	Recreational/ hedonistic	.004	0.951	Not Supported
H6g: When nutrition information is included on the menu, health conscious consumers with higher levels of perfectionistic, high-quality consciousness will use the information to select a healthier menu item.	Perfectionistic	.006	0.938	Not Supported
H6h: When nutrition information is included on the menu, consumers with higher levels of brand "price equals quality" consciousness, novelty-fashion consciousness, price consciousness, impulsiveness, confusion by overchoice, habitual, and recreational hedonistic consumer decision making styles will not use the information when selecting a menu item.	Brand Novelty/Fashion Price Impulsive Confused Habitual Recreational	1.685 .686 .226 2.048 .227 .986 .637	0.198 0.410 0.636 0.156 0.635 0.324 0.428	Supported

*$p \leq 0.050$ **$p \leq 0.005$

of health consciousness and a high perfectionistic CDMS, the respondent had to score high in both categories. Once these assessments were made and the groups were identified, these groups were used to for the analysis of the hypotheses.

The hypotheses investigating the demographic differences between consumers were analyzed. As with Study 1, age, education level, and income level, were determined by a mean split for each group using the mean value of the survey results. Consumers at or below the mean were considered to low and consumers above the mean were considered high for each of these demographic groups. For ethnic groups, each respondent was classified as either white or non-white due to the development of the hypothesis. Gender remained either male or female based on the response the consumer provided. Once these assessments were made and the groups were identified, these groups were used to for the analysis of the hypotheses. The results are found in Table 19.

Table 19

Study 2: Demographic Hypotheses Results

Hypotheses: Demographic Information	**F**	**Sig.**	**Result**
H7a: When nutrition information is included on the menu, younger consumers will select healthier menu items.	2.882	0.092*	Supported (opposite)
H7b: When nutrition information is included on the menu, consumers with higher levels of income consumers will select healthier menu items.	6.722	.011**	Supported
H7c: When nutrition information is included on the menu, consumers with higher levels of education will select healthier menu items.	8.367	.004***	Supported
H7d: When nutrition information is included on the menu, white consumers will select healthier menu items.	.775	0.380	Not Supported
H7f: When nutrition information is included on the menu, female consumers will select healthier menu items.	5.158	0.025**	Supported

*p≤0.10 **p≤0.05 ***p≤0.005

Further analysis indicates that regardless of nutrition information availability, consumers who have higher levels of education (F=3.281, p=0.071), higher levels of income (F=3.401, p=0.066), and are female (F=3.953, p=0.048) are more likely to select healthier menu items. When nutrition information is available on the menu, consumers who have higher levels of education (F=4.009, p=0.047), higher levels of income (F=5.694, p=0.018), and are non-white (F=3.402, p=0.067) are more likely to use the available nutrition information to make a menu selection.

Table 20 indicates the results of the hypotheses investigating the differences between the meal time: lunch or dinner, and the types of food offered: salads, sandwiches, and entrées. Again, this dissertation seeks to determine if there is a difference between the healthiness of the meal based on the meal time and whether or not certain types of items, such as salads and sandwiches are ordered more frequently at one meal time rather than another. For the analysis of the differences between the type of the order, salads, soups, and entrées, and the meal time, lunch or dinner, a chi-square analysis

Table 20

Study 2: Meal Time Hypotheses Results

Hypotheses: Meal Time	**X^2**	**Sig.**	**Result**
H9a: Consumers will select salads and sandwiches more frequently at lunch that at dinner.	.166	0.684	Not Supported
H9b: Consumers will select entrées more frequently at dinner than at lunch.	3.841	0.050*	Supported
	F	**Sig.**	**Result**
H9c: Consumers eating lunch will select healthier menu items than consumers eating dinner.	.542	0.462	Not Supported
H9d: Inclusion of nutrition information on the menu will make a greater impact for consumers eating lunch than for consumers eating dinner.	1.169	0.281	Not Supported

*$p \leq 0.05$

was conducted. For the analysis regarding the healthiness of the menu item selected, the meal time, and the availability of the nutrition information provided, an ANOVA was conducted.

Study 3

Study 3 consisted of a between-subjects 2 (nutrition information availability) x 2 (healthiness of dining companion's meal selection) design. The third manipulation was a measured variable of goal directed behavior and susceptibility to interpersonal influence. A consumer marketing research firm was used to distribute the surveys for Study 3. This firm issued an electronic invitation to participate in a study on eating out. The respondent was provided a link to the study and all he or she had to do was 'click' on the link. Once this occurred, the respondent was asked to 'click' on the link for the month or his or her birth and then the respondent was sent to one of four scenarios based on the manipulations. Once the survey scenario reached a minimum of 40 responses, the link to the survey was deactivated and subsequent respondents were linked to a survey scenario that needed more responses. A minimum number of 160 responses were needed. After the minimum required number for each scenario was reached, the survey was deactivated.

A total of 191 consumers participated in Study 3. Six consumer responses were eliminated due to lack of selection of the menu item. The remaining 185 consumer responses were analyzed. The specific demographic breakdown of these respondents is summarized in Table 21. All manipulated variables and demographic characteristics were fairly well distributed except for ethnicity. The majority of the respondents (88%) to this second study noted they were 'White, not Hispanic' while the remaining ethnic groups only consisted of 1.6% to 4.7% of the respondents.

Table 21

Study 3: Survey Respondent Characteristics

Survey Respondent Characteristics: Demographic Information	N	Percent
Gender:		
Male	90	48.6
Female	95	51.4
Age:		
Under 20	6	3.2
20-29	43	23.2
30-39	28	15.1
40-49	32	17.3
50-59	44	23.8
60-69	21	11.4
70 and older	11	5.9
Ethnicity:		
White, not Hispanic	162	87.6
Black/African American	9	4.9
Hispanic	8	4.3
Asian/Pacific Islander	3	1.6
Other	3	1.6
Education:		
Currently attending or did not complete High School	2	1.0
High School Diploma or GED	47	25.4
Some college	67	36.2
Bachelor's Degree	39	21.1
Some Graduate School	8	4.3
Completed Graduate School (Master's)	11	5.9
Some Post Graduate School	7	3.8
Completed Terminal Degree (Ph. D., M.D.)	4	2.2
Income:		
Less than $10,000	9	4.9
$10,000-$19,999	16	8.6
$20,000-$29,999	24	13.0
$30,000-$39,999	31	16.8
$40,000-$49,999	18	9.7
$50,000-$59,999	17	9.2
$60,000-$69,999	18	9.7
$70,000-$79,999	15	8.1
$80,000 and over	37	20.0

The three manipulated variables, nutrition information availability, eating situation, and meal time were fairly well distributed, as found in Table 22. The

manipulations for each of these variables were significant, as noted in Table 22.

Table 22

Study 3: Distribution of Manipulated Variables

	N	Percent	F	Sig.
Nutrition Information:				
Without specific nutrition information	95	51.4	62.161	0.000*
With specific nutrition information	90	48.6		
Dining Companion Meal Selection:				
Healthy	84	45.4	117.449	0.000*
Unhealthy	101	54.6		
Goal Directed Behavior				
High	87	47.0	Measured Variable	
Low	98	53.0		
Susceptibility to Interpersonal Influence				
High	85	45.9	Measured Variable	
Low	100	54.1		

*$p \leq 0.000$

Each of the four scenarios for consumers plus the four cells to include goal directed behavior consisted of 18 to 32 respondents, or 9.5% to 16.8%, respectively. Each of the four scenarios for consumers plus the four cells to include susceptibility to interpersonal influence consisted of 18 to 30 respondents, or 9.5% to 15.7%, respectively. The results for the total number of surveys in each scenario are noted in Table 23.

The scales were analyzed based on the same mean split process as with Study 1 and Study 2. The same factor analysis was used as was described with Study 2. Where indicated, these factor splits were also analyzed. See Appendix I for the factor split information.

Table 23

Study 3: Distribution of Scenarios

	Dining Companion Meal	Goal Directed Behavior		Susceptibility to Interpersonal Influence	
		High	Low	High	Low
Nutrition Information Available	Healthy	21 (11.4%)	23 (12.4%)	19 (10.3%)	25 (13.5%)
	Unhealthy	24 (13.0%)	22 (11.9%)	16 (8.6%)	30 (16.2%)
Nutrition Information Not Available	Healthy	18 (9.7%)	22 (11.9%)	21 (11.3%)	19 (10.3%)
	Unhealthy	24 (13.0%)	31 (16.7%)	29 (15.7%)	26 (14.1%)

Again, as with the previous studies, the basic research question of whether or not consumers use nutrition information when it is available on the menu was analyzed. An ANOVA was conducted and the findings indicate no differences ($F=2.000$, $p=0.159$) between the groups. However, findings indicate that consumers choose a healthier menu item when they use the available nutrition information on the menu ($F=3.761$, $p=0.056$). Also, when a consumer stated that he or she used the available nutrition information on the menu to select a healthier meal, a more healthy menu item was selected compared to consumers who did not use the available nutrition information to select a healthier meal ($F=5.867$, $p=0.017$).

The hypotheses comparing the differences between consumers who perceive they have a high level of nutrition knowledge and consumers who do not have this perception were analyzed. The ANOVA was conducted on this mean split variable as the factor analysis did not indicate any factors for this variable. The results are found in Table 24.

Table 24

Study 3: Perceived Nutrition Knowledge Hypotheses Results

Hypotheses: Perceived Nutrition Knowledge	F	Sig.	Result
H1a: Consumers with higher levels of perceived nutrition knowledge will select healthier menu items.	14.027	0.000**	Supported
H1b: Consumers will be satisfied with their menu selection regardless of their level of nutrition knowledge.	2.337	0.128	Supported
H1c: Consumers with lower levels of perceived nutrition knowledge will select healthier menu items when they use the available nutrition information on the menu.	3.948	0.048*	Supported
H1d: Inclusion of nutrition information on the menu will result in a larger increase in the selection of healthier food items for consumers with higher levels of perceived nutrition knowledge than for consumers with lower levels of perceived nutrition knowledge.	.220	0.640	Not Supported
H1e: Inclusion of nutrition information on the menu will result in a lower increase in satisfaction for consumers with lower levels of perceived nutrition knowledge than for consumers with higher levels of perceived nutrition knowledge.	.192	0.662	Not Supported

*$p \leq 0.05$ **$p \leq 0.000$

The hypotheses regarding the concepts of health consciousness and health prevention behaviors were analyzed. Each responded was classified as to whether or not he or she had a high or low level of health consciousness and whether or not he or she had a high or low level of engagement in health prevention measures. Extrinsic health consciousness and intrinsic health consciousness are used based on the factor analysis as described in Study 2. The factors previously described for engagement in preventive health behaviors, intake focused, general health focused, and stress reduction focused, are also utilized in the analysis of the hypotheses in Study 3. These factors are analyzed where appropriate and are indicated in Table 25.

Table 25

Study 3: Health Conscious/Health Prevention Hypotheses Results

Hypotheses: Health Consciousness/Health Prevention	Factor	F	Sig.	Result
H2a: Consumers with higher levels of health consciousness will select healthier menu items.	hctotal	13.211	0.000****	Supported
	extrinsic	.767	0.382	NS
	intrinsic	13.872	0.000****	Supported
H2b: Consumers, regardless of their level of health consciousness, will be satisfied with their menu selection.	hctotal	4.044	0.046**	NS
	extrinsic	3.219	0.074*	NS
	intrinsic	1.785	0.183	Supported
H2c: Consumers who engage in health prevention measures will select healthier menu items.	phbtotal	36.672	0.000****	Supported
	intake	12.049	0.001****	Supported
	general	16.836	0.000****	Supported
	stress	2.353	0.127	NS
H2d: Consumers, regardless of their level of engagement in health prevention measures, will be satisfied with their menu selection.	phbtotal	1.005	0.317	Supported
	intake	3.013	0.084*	NS
	general	2.335	0.128	Supported
	stress	4.986	0.027**	NS
H2e: Consumers with higher levels of health consciousness will select healthier menu items when nutrition information is included on the menu.	hctotal	.149	0.700	Not Supported
	extrinsic	.008	0.930	
	intrinsic	.875	0.352	
H2f: Consumers who engage in health prevention measures will select healthier menu items when nutrition information is included on the menu.	phbtotal	2.119	0.142	NS
	intake	2.767	0.100*	Supported
	general	1.639	0.203	NS
	stress	.941	0.336	NS
H2g: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers with higher levels of health consciousness than for consumers with lower levels of health consciousness.	hctotal	4.930	0.029**	Supported
	extrinsic	.015	0.903	NS
	intrinsic	7.680	0.007***	Supported
H2h: Inclusion of nutrition information on the menu will result in an increase in the selection of healthier food items for consumers who engage in health prevention measures than for consumers who do not engage in health prevention measures.	phbtotal	25.875	0.000****	Supported
	intake	11.162	0.001****	Supported
	general	11.294	0.001****	Supported
	stress	1.871	0.175	NS

*p≤0.10 **p≤0.05 ***p≤0.01 ****p≤0.001

The hypotheses describing the anticipated differences in healthful eating behavior based on the healthiness of the dining companion's order were analyzed. Only the fourth and fifth of the hypotheses are analyzed during Study 3 as this study was the only study to manipulate the dining companion's order. The analyses of the hypotheses are found in Table 26.

Table 26

Study 3: Dining Companion Hypotheses Results

Hypotheses: Dining Companion	**F**	**Sig.**	**Result**
H3d: When eating with others who select healthy menu items, consumers who are susceptible to interpersonal influence will select healthier menu items.	.038	0.845	Not Supported
H3e: When eating with people who select healthy menu items, consumers who are susceptible to informational interpersonal influence will select healthier menu items	.336	0.564	Not Supported

The hypotheses investigating the differences between consumers with high levels of self-efficacy and consumers with low levels of self-efficacy were analyzed. As with Study 2, factors indicating self-efficacy's two factors, personal accountability and general consciousness, were analyzed for H4a only, as it is the only hypothesis that investigates self-efficacy in isolation. The remaining hypotheses were analyzed the same as both Study 1 and Study 2, in that a respondent had to score high in all the variables noted in the hypothesis to be considered high. If the consumer scored low in at least one of the variables, he or she was considered low for the combined variable. High and low, as with other variables, were based on a mean split of the scores for all respondents. The results of the analyses for this set of hypotheses are found in Table 27.

Table 27

Study 3: Self-Efficacy Hypotheses Results

Hypotheses: Self-efficacy	Factor	F	Sig.	Result
H4a: Consumers with higher levels of self-efficacy will select healthier menu items.	setotal	14.983	0.000*	Supported
	persact	20.240	0.000*	Supported
	gencons	.002	0.967	NS
H4b: Health conscious consumers with higher levels of self-efficacy will select healthier menu items.		15.159	0.000*	Supported
H4c: Consumers with higher levels of perceived nutrition knowledge and higher levels of self-efficacy will select healthier menu items.		14.559	0.000*	Supported
H4d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of self-efficacy with the inclusion of nutrition information on the menu will lead to a healthier menu selection.		18.510	0.000*	Supported

*$p \leq 0.000$

The hypotheses investigating the differences between consumers with high and low levels of risk perception were analyzed. As with Study 2, this study also investigates whether or not there are any differences between consumers with high, moderate, or low levels of risk perception. These factors will be analyzed for H5a only as it is the only hypothesis that investigates risk perception in isolation. Again, as previously described, the respondent had to score high in all the variables noted in the hypothesis to be considered high. If the consumer scored low in at least one of the variables, he or she was considered low for the combined variable. High and low, as with other variables, were based on a mean split of the scores for all respondents. The results of the analyses for this set of hypotheses are found in Table 28.

Table 28

Study 3: Risk Perception Hypotheses Results

Hypotheses: Risk Perception	Factor	F	Sig.	Result
H5a: Consumers with higher levels of risk perception will select healthier menu items.	rptotal	2.478	0.117	NS
	low	.002	0.966	NS
	moderate	4.114	0.044**	Supported
	high	3.549	0.061*	Supported
H5b: Health conscious consumers with higher levels of risk perception will select healthier menu items.		.725	0.396	Not Supported
H5c: Consumers with higher levels of perceived nutrition knowledge and higher levels of risk perception will select healthier menu items.		1.122	0.291	Not Supported
H5d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of risk perception with the inclusion of nutrition information on the menu will lead to a healthier menu selection.		1.850	0.175	Not Supported

*$p \leq 0.10$ **$p \leq 0.05$

The hypotheses investigating the demographic differences between the consumers were analyzed. As with Study 1 and Study 2, age, education level, and income level, were determined by a mean split for each group using the mean value of the survey results. Consumers at or below the mean were considered to low and consumers above the mean were considered high for each of these demographic groups. For ethnic groups, each respondent was classified as either white or non-white due to the development of the hypothesis. Gender remained either male or female based on the response the consumer provided. Once these assessments were made and the groups were identified, these groups were used to for the analysis of the hypotheses. The results are found in Table 29.

Table 29

Study 3: Demographic Hypotheses Results

Hypotheses: Demographic Information	F	Sig.	Result
H7a: When nutrition information is included on the menu, younger consumers will select healthier menu items.	.631	0.429	Not Supported
H7b: When nutrition information is included on the menu, consumers with higher levels of income consumers will select healthier menu items.	.005	.945	Not Supported
H7c: When nutrition information is included on the menu, consumers with higher levels of education will select healthier menu items.	.426	0.515	Not Supported
H7d: When nutrition information is included on the menu, white consumers will select healthier menu items.	1.391	0.241	Not Supported
H7f: When nutrition information is included on the menu, female consumers will select healthier menu items.	.803	0.373	Not Supported

The hypotheses investigating the differences between consumers who exhibit a high level of goal directed behavior and consumers who do not were analyzed. The scales used to assess goal directed behavior included both five point scales and seven point scales. In order to compare the results of these scales, a standardized score (z-score) was obtained. Once the z-score was calculated, it was used to determine which consumers exhibited high levels of goals directed behavior and which consumers did not. As with the other variables, the high and low levels of goal directed behavior was determined by the mean split with consumers above the mean considered to have high levels of goal directed behavior and consumers at or below the mean to considered to have low levels of goal directed behavior. For those hypotheses that assessed more than one variable, again, as previously described, the respondent had to score high in all the variables noted in the hypothesis to be considered high. If the consumer scored low in at least one of the variables, he or she was considered low for the combined variable. High

and low, as with other variables, were based on a mean split of the scores for all respondents. The results of the analysis for the hypotheses related to goal directed behavior are found in Table 30.

Table 30

Study 3: Goal Directed Behavior Hypotheses Results

Hypotheses: Goal Directed Behavior	**F**	**Sig.**	**Result**
H8a: Consumers with higher levels of goal directed behavior to eat healthy will select healthier menu items.	25.043	0.000*	Supported
H8b: Health conscious consumers with higher levels of goal directed behavior will select healthier menu items.	26.105	0.000*	Supported
H8c: Consumers with higher levels of perceived nutrition knowledge and higher levels of goal directed behavior will select healthier menu items.	23.491	0.000*	Supported
H8d: Higher levels of health consciousness, higher levels of perceived nutrition knowledge, and higher levels of goal directed behavior with the inclusion of nutrition information on the menu will lead to a healthier menu selection.	22.995	0.000*	Supported

*$p \leq 0.000$

CHAPTER 5

CONCLUSIONS

Introduction

Chapter 5 concludes this dissertation by discussing the findings. This discussion will be conducted based on the concepts presented in this dissertation. Following the discussion of the results, this chapter will then discuss the contributions and implications of these findings. This chapter also discusses the limitations of the study. Directions for future research are also denoted in this chapter.

Discussion of Results

Eating out is an activity that occurs frequently. The preliminary study found that 81.4% of the respondents ate dinner away from home one to three times a week. This number does not include the number of breakfasts, lunches, and snacks eaten away from home in a given week. However, most consumers do not search for nutrition information, either prior to going to the restaurant nor while at the restaurant (14% and 27%, respectively). So should restaurants provide nutrition information for their customers? Would the provision of this new information be used? Should the government require the provision of nutrition information on menus, similar to the newly enacted legislation in New York City and King County (Seattle), WA (Allen, 2007)? Although the provision of nutrition information on the menu would be viewed as a process that communicates and delivers value to customers, and thus an enactment of the marketing concept, would this information be used by the customer?

The purpose of this dissertation was to investigate these questions and the basic finding of this dissertation is that the presence alone of nutrition information does not

always result in a change in the healthiness of the menu order. A consumer needs to actually use the available information in order to select a healthier menu item. Thus, this dissertation found that placing the nutrition information on the menu is not enough, it must be used by the consumer in order for a healthier menu item to be selected. Another finding of this dissertation is that the provision of nutrition information would be welcomed and used by certain types of consumers, but not all consumers. These differences are noted in the following discussion of the hypotheses results.

Perceived Nutrition Knowledge

The hypotheses regarding whether or not consumers with a high level of perceived nutrition knowledge would use nutrition information if it was made available on a menu when EFAH indicate that for all three studies, Study 1, Study 2, and Study 3, (see Tables 4, 13, and 24) consumers with higher levels of perceived nutrition knowledge are, in fact, more likely to select a healthier menu item and are more likely to use the nutrition information when it made available on the menu. These results also indicate that consumers with low levels of perceived nutrition knowledge will use the nutrition information if it is made available on the menu.

Although consumers with low levels of perceived nutrition knowledge do not believe they know as much about nutrition as other consumers, they may feel they know something and look for particular nutrition information to help them make a decision rather than all the nutrition information provided. Further analysis found that when nutrition information was made available on the menu, consumers with lower levels of perceived nutrition knowledge did make healthier menu selections in Study 1 and Study 3 (mean difference was -0.060 and -.33, respectively), yet these differences were not found

to be significant. It appears that consumers are using the nutrition information when it is made available on the menu, but do not appear to utilize all of the nutrition information to make a decision that will make the greatest impact. These consumers do not appear to have the confidence that they understand the nutrition information as they self-assess themselves to not possess nutrition knowledge. Thus it appears that these consumers use what limited information they have to try to make a healthier menu selection. Additional analysis found that in Study 2, consumers with lower levels of perceived nutrition knowledge select menu items with increased amounts of fiber when nutrition information is available on the menu ($F=4.744$, $p=0.031$).

As with consumers who have a low level of perceived nutrition knowledge, the consumers with a higher level of perceived nutrition knowledge are satisfied with their menu selection.

Although not hypothesized, consumers with higher levels of perceived nutrition also showed a propensity to select healthier menu items when nutrition information was present. These changes in Study 1, Study 2, and Study 3 (mean difference -0.71, -0.40, and -0.151, respectively), however, were not found to be significant. These consumers are already choosing healthier menu items, and although they use the nutrition information to improve the healthiness of their menu selection, they are not able to make as great of change in the healthiness of the menu selection as consumers who initially make a less healthy choice.

Nutrition information availability did not seem to create change in the consumer's level of satisfaction in the three studies. Therefore, it appears that consumers are only willing to order healthy or healthier menu items as long as they are equally satisfied with their choice.

Health Consciousness and Health Prevention Behaviors

Consumers with higher levels of health consciousness were found to select healthier menu items, and were more likely to select healthier menu items when nutrition information was included on the menu than consumers with lower levels of health consciousness. See Tables 5, 14, and 25 for specific results. Although the selection of the menu item was healthier for consumers with higher levels of health consciousness in Study 2 and Study 3 (mean difference -.09 and -.13, respectively), these differences were not found to be significant. Consumers who exhibited higher levels of extrinsic consciousness were also more likely to select healthier menu items. This may be due to the fact that these consumers are more likely to relate their own actions to the state of their health rather than just having knowledge about what makes one healthy or unhealthy.

In Study 1 and Study 2, consumers, regardless of their state of health consciousness, were just as likely to be satisfied with their menu selection. In Study 3, health conscious consumers were more likely to be satisfied with their menu selection.

Consumers who engage in health prevention measures appear to select healthier food items. Consumers who exhibit higher levels of intake consciousness were also found to select healthier menu items. These consumers are concerned with reducing the intake of nutrients which have been found to have negative health consequences, such as salt, fat, and sugar intake. Further analysis indicates that consumers more likely to engage in preventive health behaviors ordered even healthier menu items when nutrition information was included on the menu during all three studies, (mean difference -1.35,

-.51, -1.79, respectively), and were found to be significant in all three studies (F=7.409, p=.0010, F=3.220, p=0.075, and F=25875, p=0.000, respectively).

Dining Companions

Does whether or not with whom you eat or what the dining companion orders cause the consumer to order a healthier menu item? In Study 2, the dining companion was one of the manipulated variables. This study found that consumers who eat with co-workers and business acquaintances ordered healthier menu items (see Table 15). There were no differences found between the healthiness of the menu items ordered when eating with close family and friends and eating to celebrate one's birthday. These results support the idea that consumers will select what they want, regardless of the healthiness of the item when eating with those close to them or to celebrate their birthday, but will select healthier items when eating with those who do not know their normal eating patterns. The means calculated for these three different eating situations indicate that consumers eat most healthy when eating with co-workers and business acquaintances and least healthy when eating to celebrate their birthday. Eating with close family and friends is somewhat in the middle. The mean scores are 2.73, 3.29, and 3.18, respectively. Again, the lower the score, the healthier the menu item.

In Study 3, the hypotheses indicating that consumers susceptible to interpersonal influence will select healthier items when their dining companions select healthier items were not supported (see Table 26). Further analysis found that consumers susceptible to interpersonal influence, susceptible to informational interpersonal influence, and susceptible to normative interpersonal influence selected healthier menu items than consumers who are not susceptible to these three types of interpersonal influence, (mean

difference -.30, -.56, and -.37, respectively). Additionally, further investigation found consumers susceptible to informational interpersonal influence and normative interpersonal influence were more likely to select a healthier menu item when eating with a business acquaintance or co-worker who is consuming an unhealthy meal ($F=4.440$, $p=0.036$ and $F=4.616$, $p=0.034$, respectively) Considering that each of the respondents were told that they were eating with co-workers and business acquaintances, and Study 2 indicated that consumers tend to eat healthier in this situation, these results indicated that the interpersonal influence may be affected by who the dining companion is more than what the dining companion orders.

Self-Efficacy

In all three studies, consumers who exhibit higher levels of self-efficacy select healthier menu items than consumers who exhibit lower levels of self-efficacy. In addition, consumers that exhibit the personal accountability consciousness factor also select healthier menu items (see Tables 6, 16, and 27). Consumers with higher levels of personal accountability consciousness believe their actions affect their health. Support was found in Study 1 and Study 3 that consumers with higher levels of self-efficacy, perceived nutrition knowledge, and health consciousness select healthier menu items and will also select healthier menu items when nutrition information is included on the menu. The mean differences with and without nutrition information on the menu are -.35 and -.25 for Study 1 and Study 3, respectively. It appears that not only do these consumers select healthier menu items, they select even healthier menu items when they are provided nutrition information on the menu. Although not hypothesized, further analysis finds, in Study 2 and Study 3, when nutrition information is provided on the menu,

consumers with high levels of self-efficacy, perceived nutrition knowledge, and engagement in health prevention measures will select healthier menu items (F=3.776, p=0.054 and F=15.273, p=0.000, respectively).

Risk Perception

Risk perception concerns overall perception of activities that can be considered risky to one's health, not just the riskiness of consuming, or not consuming, certain foods. The results for the analyses of these hypotheses are found in Tables 7, 17, and 28. Only in Study 3 were consumers with higher levels of risk perception found to select healthier menu items, and this difference was found only with consumers who are classified as not having 'moderate' and 'high' levels of risk perception. These findings, in opposition to the hypothesis, may be due to the fact that consumers do not necessarily view one meal as risky and are willing to consume a less healthy meal when EFAH.

In Study 1, consumers with higher levels of risk perception and higher levels of perceived nutrition knowledge were found to select healthier menu items. However, the inclusion of nutrition information on the menu did not appear to impact the selection of healthier menu items for consumers with higher levels of risk perception. Again, this result may be due to the fact that many consumers do not appear to view the intake of food, and one meal in particular, as risky to their health. Even though consumers may realize nutrition intake impacts their health, because this impact may not appear for years, even decades, the risk of the menu selection to their health is not imminent and therefore may be discounted. This finding appears to support the theory of magnitude and peanuts effect in that consumers are more willing to take risks and select a less healthy item when

EFAH as the stake to one's health regarding the consumption of one meal is considered small (peanuts effect) (see Chapman & Weber, 2006).

Consumer Decision Making Styles

The impact that CDMS has on menu selection were analyzed. These CDMS were only evaluated in Study 1 and Study 2 (see Tables 8 and 18). The analysis of these CDMS provided very limited significant results, indicating that the conclusions reached by Bauer et al. (2006) that the product involvement level impacted the usefulness of these styles are also found in this dissertation. Selecting a menu item when EFAH is considered a low involvement purchase. The results of this dissertation indicate that consumers do not put forth much effort in making a decision for low involvement purchases and therefore the CDMS does not appear to impact the decision process. Although Study 1 indicated that consumers with higher levels of perfectionistic CDMS and higher levels of both perfectionistic CDMS and health consciousness were more likely to select healthier menu options, this result was not found in Study 2.

Brand conscious consumers were not found to select more expensive items in either study, but price conscious consumers were found to select more expensive items in Study 1. This selection may be due to the interpretation that there is more food on the more expensive items, typically entrées, and these consumers have a need to believe they 'got their money's worth' when making their selections. However, this finding was not apparent in Study 2. On a whole, the CDMS were not useful discriminators in determining which consumers would use nutrition information and which consumers would select healthier menu items.

Demographic Characteristics

The demographic characteristics of gender, age, ethnicity, education, and income were analyzed. These characteristics were evaluated in all three studies. See Tables 9, 19, and 28 for specific results. In Study 1, only higher levels of education were found to be a significant demographic characteristic for determining which consumers were more likely to select healthier menu items. In this study, consumers with higher educational levels were found to select healthier menu items when nutrition information was included on the menu than consumers with lower educational levels. All other demographic characteristics in this study were not found to be useful in determining which consumers were most likely to select healthier menu options when nutrition information was included on the menu.

Study 2 indicated that all demographic characteristics except ethnicity were significant in determining which consumers were more likely to select healthier menu items when nutrition information was included on the menu. In this study, older consumers were more likely to select healthier menu items rather than younger consumers. This result is in contrast to the hypothesis. This finding may be due to the fact that older consumers are more likely to be diagnosed with health problems that are impacted by nutrition intake and are more likely to be making menu selections based on limiting or increasing their intake of certain nutrients. However, this dissertation did not ask the consumers whether or not they were limiting or increasing their intake of specific nutrients. This study found that consumers with higher levels of education, higher levels of income, and females selected healthier menu items when nutrition information was provided on the menu. The lack of support for ethnicity may have been due to the fact that there are not differences, or that a much higher number of respondents were white.

Study 3 did not support the findings in Study 2. None of the demographic characteristics were found to be useful indicators of consumers who select healthier menu items when nutrition information is provided on the menu.

One reason for the conflicting results in the three studies may be due to the fact that the information age allows consumers, regardless of their characteristics, to become equally familiar with the nutrition label. In addition, reasons for reading a nutrition label are not only applicable to one characteristic. Health status and one's concern regarding personal health status is not limited to one demographic characteristic, or one group of consumers within a demographic characteristic. Therefore, consumers have many reasons to use the nutrition information and many opportunities to become familiar with nutrition information resulting in no differences in groups who do use the nutrition information and groups who do not use the nutrition information when EFAH.

Goal Directed Behavior

The hypotheses focusing on the differences between consumers with higher levels of goal directed behavior and consumers with lower levels of goal directed behavior were analyzed. This variable was only measured in Study 3 and the results are found in Table 30. All four of the hypotheses were supported, indicating that consumers with higher levels of goal directed behavior select healthier menu items and even healthier menu items when nutrition information is available. Consumers who have both high levels of goal directed behavior and high levels of health consciousness and consumers who have both high levels of goal directed behavior and high levels of perceived nutrition knowledge are also found in this study to select healthier menu items. Thus, it appears

that consumers who have goals make decisions that help them achieve their goals, including selecting menu items that are considered healthier.

Meal Time

The difference that meal time has on the selection of healthier menu items was investigated. This variable was only investigated during Study 2 and the results are found in Table 20. The findings in this study did not support the hypotheses that consumers select more salads and sandwiches at lunch, but did support the hypothesis that consumers select more entrées at dinner.

Study 2 did not support the hypothesis that consumers will select healthier menu items at lunch than at dinner. It appears that consumers selecting healthier menu items will do so regardless of the meal time. The provision of nutrition information had no impact on the menu selection based on the meal time. Again, it appears that consumers who use nutrition information to select healthier menu items will do so regardless of the meal time. Thus, meal time itself does not appear to be useful in determining which consumers will select healthier menu items nor which consumers will use the nutrition information if it is provided on the menu.

Contributions and Implications of the Dissertation

Public policy makers in the United States indicate that Americans are at war to stem the increase of heart disease, diabetes, and obesity rates in the country. These public policy makers have suggested that due to the increasing number of meals a consumer eats away from home, restaurateurs should provide nutrition information for their menu selections on the menu. Restaurateurs, however, argue that the inclusion of this information would be costly, and in their viewpoint, a waste of money as consumers

do not request this information and do not appear to desire it. The purpose of this dissertation was to investigate whether or not consumers would use nutrition information to select healthier items if it was provided on the menu and if so, what consumer characteristics would determine the use of the nutrition information in the selection of healthier items.

This dissertation found that although consumers do not request nutrition information, there are certain groups of consumers using nutrition information, and using the nutrition information to select a healthier menu item, when nutrition information is made available on the menu. The findings of this dissertation indicate that the availability of nutrition information on the menu will result in a healthier menu selection, even if the change is not significantly different. Any improvement in one's diet, even a minor improvement, can reduce the risk of disease, decrease the occurrence of disease, and lead to improvement in overall health status of the consumer. For example, increasing one's level of exercise, weight loss, and a more healthful diet have been shown to decrease the incidence of diabetes (Diabetes Prevention Program Research Group, 2002). The inclusion of nutrition information on the menu will result in healthier menu items being selected and will, in turn, improve the overall healthiness of one's diet.

Chronic diseases such as heart disease and diabetes cost the American economy $1.3 billion per year. This amount includes not only treatment of disease, but the cost of lost productivity due to missed work days and poor performance (Zwillich, 2007). The cost of analyzing and including the nutrition information is a small price to pay for compared to the cost of disease, financially, emotionally, and physically.

One of the major contributions of this dissertation is the creation of the HQ. Previous research has used calories or fat grams to distinguish between healthy and

unhealthy food choices. Although these categories do distinguish food items, this singular view of the food items limits the evaluation of the food item as a whole. The development of the HQ considers seven nutrients: calories, fat, saturated fat, carbohydrates, protein, fiber, and sodium to evaluate the healthiness of the food item. The selection of food items when EFAH is often a trade off between taste and nutrition or between nutrient and nutrient. When the consumer chooses to select more nutritious foods, the trade off often is between specific nutrients, as a menu item is rarely offered that has optimum levels of all nutrients. The nutrition information provides the information for the consumer to make the choice based on his or her particular concerns. The HQ allows the researcher to evaluate the nutritional value of the consumer's selection as a whole and as a point on a continuum in comparison to the other foods in the choice set without having to determine the weight that the consumer places on each nutrient in evaluating each selection.

This dissertation found that consumers are willing to select healthier menu items and use nutrition information when it is provided to make healthy menu selections. However, this dissertation did find that not all consumers, and not all consumers under some circumstances, are willing to select healthier menu items or use the nutrition information when it is provided.

This dissertation also found that not every consumer is willing to use the available nutrition information when it is provided on the menu. However, this dissertation found that consumers with higher levels of perceived nutrition knowledge, health consciousness, self-efficacy, goal directed behavior, and engagement in health prevention measures select healthier menu items and use nutrition information when it is made available on the menu. Therefore, this dissertation found that consumers who are

actively participating in improving or maintaining their health status use the nutrition information to make healthier menu selections.

Yet the consumers described above are more likely the consumers that would not benefit as much from the provision of the nutrition information on the menu. Although this dissertation did not ask consumers about their current health status, according to the description of these constructs, one must actively participate in maintaining or improving their health status to be classified as having a 'high' level of the construct. Often consumers who are actively engaging in behaviors to maintain or improve their health status actually have better levels of health. What about the consumers who do not have high levels of these behaviors? The provision of the nutrition information will allow consumers the option to use this information. By making nutrition information available on the menu, the consumer may subtly or even subconsciously encourage consumers who are not actively engaging in behaviors that maintain or improve their health status to begin using the information to select healthier items. Small changes can result in small successes, which may, in turn, result in greater changes.

This dissertation only ascertained the consumer's prescriptive attitude or behavior towards the construct. This dissertation did not determine the satisfaction level of the consumer regarding the attitude toward the construct. Although the results indicated that, for example, consumers with lower levels of perceived nutrition knowledge selected healthier menu items when nutrition information was made available, the results suggest that simply the provision of the nutrition information is not enough. If policy makers wish to require that restaurateurs provide nutrition information on the menus, these policy makers should also provide an educational component to the consumers to help them be able to utilize this information in order to allow them to select healthier menu items.

In addition, it appears there needs to be more efforts to increase the consumer's willingness to actively participate in improving or maintaining their optimal health status. Thus, policy makers may need to consider looking to a variety of outlets such as public service announcements, workplace initiatives, educational curriculum, adult education outlets, health care providers, and social organizations to provide the educational component allowing them to accurately interpret the nutrition information as it appears on the menu. Cost of providing this information will be an issue. The education initiative is a preventive health measure, not only a reactive health measure. Therefore policy makers and health insurance companies could work together to help consumers pay for the educational component.

Limitations of the Dissertation

As with any research, this dissertation contains limitations. The first limitation is that consumers were asked to place themselves in a restaurant and make the menu decision only in their mind. Consumers may be more likely to provide a desired answer to the research question rather than an actual answer to the research question because they do not actually have to consume the selected meal. In addition, satisfaction with the meal, again, occurs only in the mind and does not take into consideration whether or not the meal arrived in a timely manner, at the correct temperature, provided a pleasing appearance, and actually met the taste expectations of the consumer. Additionally, this limitation did not allow for the consumer to actually eat more or less than the menu item as it was describe on the menu.

Another limitation to this dissertation is that the menu only provided for the meal selection of salads, sandwiches, and entrées. The menu did not include appetizers,

desserts, or beverages, each of which may have an impact on the healthiness of the item selected. For example, a consumer may choose to eat a healthier entrée because he or she has decided to order another items, such as a dessert, that would contribute to the overall unhealthiness of the meal. Additionally, this research did not explore the other items consumed during the day (or preceding or forthcoming days). A consumer may make a menu selection that is less healthy knowing that they have eaten more healthy earlier in the day or in the preceding days. The reverse may be true in that a consumer may select more healthy items know they have recently consumed less healthy items in the recent past or are planning to consume less healthy items in the near future.

The type of restaurant used in this study was described as a chain, casual dining restaurant such as Chili's™, Applebee's™, or Ruby Tuesday ™. Other types of restaurants, such as quick dining or fine dining, were not evaluated. In addition, other types of EFAH experiences, such as at a sporting event or on a cruise ship, were not evaluated. Therefore, the results of this dissertation cannot be generalized beyond the scope of casual dining restaurants.

When investigating the effect that susceptibility to interpersonal influence had on the consumer's decision, only one type of dining companion was presented. This study did not investigate whether or not other referents would impact the menu selection for consumers who are susceptible to interpersonal influence.

The format in which the nutrition information was provided was consistent in all the studies conducted for this dissertation. However, one limitation to this study is that it did not investigate the readability or the understandability of how the nutrition information was provided. It may be possible that the consumers did not use the nutrition

information because they did not understand the format and not simply that they chose not to use the nutrition information.

Directions for Future Research

As with any research, the finding in one study leads to more research questions, which leads to future research. One area of future research is to survey patrons of an actual restaurant. This type of research would measure the actual purchase behavior rather than only the purchase intention. Consumers would be actually eating what they order and would be more likely to order an item they desire versus an item that they believe the researcher wants them to order. An additional beneficial aspect to this research would be a more accurate assessment of purchase satisfaction. It must be noted, however, that satisfaction would need to be measured as not only a measure of overall satisfaction, but also to specific levels of satisfaction with the food itself, including, but not limited to, appearance of the food, tastiness of the food, appropriate temperature of the food, and so forth. Satisfaction toward the service of the food should also be measured.

The format of the provision of nutrition information should be investigated. Do consumers want to see nutrition information presented in a factual manner to include specific values of the nutrients or would they rather see symbolic interpretation of the nutrition information, such as either green for healthy, yellow for moderately healthy, and red for unhealthy items? A similar research area would be to determine what specific nutrients consumers use to evaluate the healthiness of the menu item. In this dissertation, common nutrients that are found on the Nutrition Facts panel of foods purchased for consumption at home were used. However, not all nutrients provided on the Nutrition

Facts panel were used. Future research should determine whether or not the nutrients used in this dissertation are the only nutrients of interest to the consumer.

Future research should also investigate all items on a menu, not just the items normally selected as the main course. Appetizers, desserts, and beverages affect menu selection. In addition, alternative side dishes should be included in the research as not everyone desires or consumes the side dishes that are included with each meal. The choice of side dishes may change the healthiness of the menu selection.

Adjustments in portion size should also be research. Which consumers actually purchase items that are offered as smaller portions? Do these consumers select equally healthy items when selecting a smaller portion? Or, do these consumers select less healthy items and justify their selection because a small portion is offered? This is an area of portion size research that has not been investigated.

The findings of this research indicate that consumers are more likely to select healthier menu items when eating with co-workers and business acquaintances. Further research should investigate whether or not the menu selections of other referents, such as close family and friends, result in a selection of a healthy or unhealthy menu item. Susceptibility to interpersonal influence and the referent for this interpersonal influence needs to be investigated in a variety of settings with a variety of dining companions. Would a consumer choose to eat healthier in a situation where his or her dining companion is eating healthier, even if the situation is one in which the consumer would generally choose to eat less healthy, such as in a birthday celebration? This is another area for future research.

Other types of restaurants and EFAH experiences should be investigated. Do consumers choose their menu selection similarly in quick service restaurants as they do in

casual dining restaurants? Do these patterns also hold for consumers eating at fine dining restaurants? What if the consumer is on vacations and/or on a cruise ship? Do consumers view EFAH differently when eating at a sporting event? Would consumers who choose a healthier menu item at a restaurant also choose a healthier menu item during different EFAH experiences? These concepts need further investigation.

Consumers eat food away from home for many reasons, and the selection of the restaurant may impact the way the decision is made regarding the menu selection. Consumer concept of the restaurant may also be a factor. For example, if a consumer views the menu of a quick service restaurant as unhealthy, is he or she more likely to select an unhealthy meal? Would this viewpoint, if it exists, change if the consumer were provided nutrition information? Further study is needed.

Portion distortion, or the consumer's inability to accurately judge the serving size has been researched. However, would the inclusion of nutrition information help consumers accurately determine portion size? Would an accurate determination of the portion size change the consumer's menu selection? Or do consumers actually desire larger portions to feel as if they are 'getting their money's worth' and would be more willing to split the menu portion and take some of it home for another meal if they realized how large the portion really was, nutritionally speaking? Future research would be able to answer these questions.

The impact of emotions on eating is another avenue for future research. Food can often be viewed as a function or as a form of comfort. Consumers who eat for comfort may select menu items completely differently from consumers who eat for function. Determining the emotional state of the consumer and its impact on the menu selection is an area that has not been well researched. Future research may help consumers

determine why they eat, when they eat, how much they eat, and the relationship their emotions have on their eating behavior, especially when eating food away from home.

As consumers continue to increase the number of meals eaten away from home, the lack of knowledge regarding the nutritional content of the menu selection will continue to impact consumers. Although consumers may try to estimate the nutritional value of the foods selected, consumers many not be aware of all the ingredients used in preparing the menu item. These 'unknown' ingredients impact the nutritional value, and thus the healthiness, of the menu item. For example, consumers may believe they are selecting a healthy menu item, such as steamed vegetables, yet the vegetables may have had butter and salt added in the cooking process, making the menu item less healthy than it appears. The inclusion of nutrition information on the menu would allow the consumer to make an informed decision when eating food away from home. This decision can result in the maintenance or improvement of the overall health of the consumer, and thus, the overall health of the nation.

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APPENDIX A

Exploratory Survey Questions

1. On average, how many times do you eat dinner in a restaurant during the week?
   a. Answer could range from 0-7
2. List the top three reasons, in order of importance, you choose to eat out for dinner.
   a. Open ended
3. Once you are at the restaurant for dinner, list three reasons, in order of importance, you choose the menu item you will order?
   a. Open ended
4. Does who you are eating with change the answer to the above question in any way?
   a. Answer could be "Yes" or "No"
      i) If "Yes", the next question was "Please Explain" which was open ended
      ii) If "No", the next question was number 5
5. Complete the following sentence: "I eat out because ..."
   a. Open ended
6. Complete the following sentence: "To me, eating out means ..."
   a. Open ended
7. Do you look for nutritional information about the menu items before you go to the restaurant?
   a. Answer could be "Yes" or "No"
      i) If "Yes", the next question was "Where do you look for this information?" which was open ended
      ii) If "No", the next question was number 8
8. When you are at the restaurant, do you ask anyone about nutrition information when making a menu selection?
   a. Answer could be "Yes" or "No"
      i) If "Yes", the next question was "Who do you ask?" which was open ended
      ii) If "No", the next question was number 9
9. How do you feel about a menu that provides nutrition information?
   a. Open ended
10. How do you feel about a menu that does not provide nutrition information about their menu items?
    a. Open ended
11. What nutrition information would you look for on a menu? (Be specific)
    a. Open ended
12. How often do you:
    a. Eat alone?
    b. Eat with girl/boy friend?
    c. Eat with people you live with?
    d. Eat with extended family?
    e. Eat with friends?
    f. Eat with co-workers?
    g. Eat with business acquaintances?
       i) All of the above could be answered 0-7

APPENDIX A continued

13. Who else do you eat with and how often?
    a. Open ended
14. Age?
    a. Range provided
15. Gender?
    a. Male or female
16. Level of education?
    a. Range provided
17. Ethnic Background?
    a. Groups provided
18. Current household income?
    a. Range provided
19. Last name
    a. Used to provide extra credit
20. First name
    a. Used to provide extra credit

APPENDIX B

Attitude toward Behavior Scales

Health Consciousness Scale:
(Cronbach's alpha: .75)
Five point scale: strongly disagree (1) to strongly agree (5)
I worry that there are harmful chemicals in my food
I am concerned about my drinking water quality
I usually read ingredients on food labels
I read more health-related literature than I did 3 years ago
I am interested in information about my health
I am concerned about my health all the time
Source: Jayanti and Burns, 1998

Preventive Health Behaviors Scale:
(Cronbach's alpha: .81)
Three point scale: always (1) to never (3)
Question: How often do you undertake the following activities?
Eat a well balanced diet
See your dentist for regular checkups
Eat fresh fruits and vegetables
Reduce amount of salt in your diet
Watch for salt content in diet
Exercise regularly
Watch the amount of fat you consume
Pay attention to your sugar intake
Pay attention to the amount of red meat you eat
Cut back on snacks and treats
Avoid food with additives and preservatives
Get enough rest and sleep
Reduce stress and anxiety
Source: Jayanti and Burns, 1998

Perceived Nutrition Knowledge Scale:
(Cronbach's alpha: .87)
Five point scale: strongly disagree (1) to strongly agree (5)
I know a lot about nutrition
Compared to most people, I am quite knowledgeable about nutrition
Source: Burton et al., 1999 and Mothersbaugh et al., 1993

APPENDIX C

Subjective Norms Scales

Susceptibility to Interpersonal Influence Scale:

Nine item scale: strongly disagree (1) to strongly agree (9)

Normative

(Cronbach's alpha: .88)

I rarely purchase the latest fashion styles until I am sure my friends approve of them

It is important that others like the products and brands I buy

When buying products, I generally purchase those brands that I think others will approve of

If other people can see me using a product, I often purchase the brand they expect me to buy

I like to know what brands and products make good impressions on others

I achieve a sense of belonging by purchasing the same products and brands others purchase

If I want to be like someone, I often try to buy the same brands that they buy

I often identify with other people by purchasing the same products and brands they purchase

Informational

(Cronbach's alpha: .82)

To make sure I buy the right product or brand, I often observe what others are buying and using

If I have little experience with a product, I often ask my friend about the product

I often consult other people to help choose the best alternative available from a product class

I frequently gather information from friends or family about a product before I buy

Source: Bearden et al., 1989

APPENDIX D

Perceived Behavioral Control

Self Efficacy Scale:

(Cronbach's alpha: .72)

Five point scale: strongly disagree (1) to strongly agree (5)

I usually make an attempt to eat a well-balanced diet
I usually make an attempt to exercise regularly
In the long run, people who take care of themselves stay healthy
People's ill health result from their own carelessness
In general, I do things that make me healthy

Source: Jayanti and Burns, 1998

Risk Perception Scale:

(Cronbach's alpha: .76)

Five point scale: strongly disagree (1) to strongly agree (5)

For each of the following statements, please indicate the likelihood of engaging in each activity

Eat "expired" food products that still "look okay"
Binge drink frequently
Ignore some persistent physical pain by not going to the doctor
Take a medical drug that has a high likelihood of negative side effects
Never use sunscreen when you sunbathe
Never wear a seatbelt
Not have a smoke alarm outside your bedroom
Ride a bicycle without a helmet
Smoke a pack of cigarettes per day

Source: Weber et al., 2002

Consumer Style Characteristics Scale:

Five point scale: strongly disagree (1) to strongly agree (5)

Perfectionist, High-Quality Conscious Consumer

(Cronbach's alpha: .74)

Getting very good quality is very important to me
When it comes to purchasing products, I try to get the very best or perfect choice
In general, I usually try to buy the best overall quality
I make special effort to choose the very best quality products
I really don't give my purchases much thought or care
My standards and expectations for products I buy are very high
I shop quickly, buying the first product or brand I find that seems good enough
A products doesn't have to be perfect, or the best, to satisfy me

APPENDIX D continued

Brand Consciousness, "Price Equals Quality" Consumer
(Cronbach's alpha: .75)

The well-known national brands are best for me
The more expensive brands are usually my choices
The higher the price of a product, the better its quality
Nice department and specialty stores offer me the best products
I prefer buying the best-selling brands
The most advertised brands are usually very good choices
A product doesn't have to be perfect, or the best, to satisfy me

Novelty-Fashion Conscious Consumer
(Cronbach's alpha: .74)

I usually have one or more outfits of the very newest style
I keep my wardrobe up-to-date with the changing fashions
Fashionable, attractive styling is very important to me
To get variety, I shop different stores and choose different brands
It's fun to buy something new and exciting

Recreational, Hedonistic Consumer
(Cronbach's alpha: .76)

Shopping is not a pleasant activity to me
Going shopping is one of the enjoyable activities of my life
Shopping the stores wastes my time
I enjoy shopping just for the fun of it
I make my shopping trips fast

Price Conscious, "Value for Money" Consumer
(Cronbach's alpha: .48)

I buy as much as possible at sale prices
The lower price products are usually my choice
I look carefully to find the best value for money

Impulsive, Careless Consumer
(Cronbach's alpha: .48)

I should plan my shopping more carefully than I do
I am impulsive when purchasing
Often I make careless purchases I later wish I had not
I take the time to shop carefully for best buys
I carefully watch how much I spend

Confused by Overchoice Consumer
(Cronbach's alpha: .55)

There are so many brands to choose from that often I feel confused
Sometimes it's hard to choose which stores to shop
The more I learn about products, the harder it seems to choose the best
All the information I get on different products confuses me

APPENDIX D continued

Habitual, Brand-Loyal Consumer

(Cronbach's alpha: .53)

I have favorite brands I buy over and over
Once I find a product or brand I like, I stick with it
I go to the same stores each time I shop
I change brands I buy regularly

Source: Sproles and Kendall, 1986

APPENDIX E

Survey Questions

I worry that there are harmful chemicals in my food I am concerned about my drinking water quality I usually read ingredients on food labels I read more health-related literature than I did 3 years ago I am interested in information about my health I am concerned about my health all the time I usually make an attempt to eat a well-balanced diet I usually make an attempt to exercise regularly In the long run, people who take care of themselves stay healthy People's ill health result from their own carelessness In general, I do things that make me healthy Getting very good quality menu items is very important to me When it comes to purchasing menu items, I try to get the very best or perfect choice In general, I usually try to buy the best overall quality menu items I make special effort to choose the very best quality menu items I really don't give my menu item purchases much thought or care My standards and expectations for the menu items I buy are very high I decide quickly, buying the first menu item I find that seems good enough A menu item doesn't have to be perfect, or the best, to satisfy me The well-known chain restaurants are best for me The more expensive menu items are usually my choices The higher the price of the menu item, the better its quality Nice restaurants offer me the best meals I prefer buying the most popular menu items The most advertised menu items are usually very good choices I usually have one or more outfits of the very newest style I change my diet based on the latest health information Ordering something different is very important to me To get variety, I select a different menu item each time I eat out It's fun to order something new and exciting Deciding what to order is not a pleasant activity to me Eating out is one of the enjoyable activities of my life Eating out wastes my time I select my menu item based on what I want to eat I make my decision on what to order fast I buy as much food as possible at the lowest price The lower price menu items are usually my choice	Answer: *Five point scale: strongly disagree (1) to strongly agree (5)*

APPENDIX E continued

I look carefully to find the best value for money when deciding what to order I should make my menu selection more carefully than I do I am impulsive when deciding what to order Often I make careless menu selections I later wish I had not I take the time to select my menu items carefully for the best buys I carefully watch how much I spend when making my meal selection There are so many menu items to choose from that often I feel confused Sometimes it's hard to choose which menu items to select The more I learn about nutrition, the harder it seems to choose the best menu item All the information I get on different foods confuses me I have favorite menu items I buy over and over Once I find a menu item I like, I stick with it I go to the same restaurant each time I eat out I change the menu items I buy regularly. I know a lot about nutrition Compared to most people, I am quite knowledgeable about nutrition	Answer: *Five point scale: strongly disagree (1) to strongly agree (5)*
For each of the following statements, please indicate the likelihood of engaging in each activity Eat "expired" food products that still "look okay" Binge drink frequently Ignore some persistent physical pain by not going to the doctor Take a medical drug that has a high likelihood of negative side effects Never use sunscreen when you sunbathe Never wear a seatbelt Not have a smoke alarm outside your bedroom Ride a bicycle without a helmet Smoke a pack of cigarettes per day	Answer: *Five point scale: (1) extremely unlikely to (5) extremely likely*

APPENDIX E continued

Question: How often do you undertake the following activities? Eat a well balanced diet See your dentist for regular checkups Eat fresh fruits and vegetables Reduce amount of salt in your diet Watch for salt content in diet Exercise regularly Watch the amount of fat you consume Pay attention to your sugar intake Pay attention to the amount of red meat you eat Cut back on snacks and treats Avoid food with additives and preservatives Get enough rest and sleep Reduce stress and anxiety	Answer: *Three point scale: never (1) to always (3)*
I rarely purchase my menu item until I am sure those I am eating with approve of it It is important that others like the menu items I buy When buying menu items, I generally purchase those items that I think others will approve of If other people can see me eating the item, I often purchase the item they expect me to buy I like to know what menu items make good impressions on others I achieve a sense of belonging by purchasing the same menu items others purchase If I want to be like someone, I often try to buy the same menu item that they buy I often identify with other people by purchasing the same menu item they purchase To make sure I buy the right menu item, I often observe what others are ordering If I have little experience with a menu item, I often ask my friend about it I often consult other people to help choose the best menu item available from a menu I frequently gather information from friends or family about a menu item before I buy	Answer: *Seven point scale: strongly disagree (1) to strongly agree (7)*

APPENDIX E continued

Demographic Characteristics

Sex:
Male
Female

Age:
Under 20
20-29
30-39
40-49
50-59
60-69
70 and over

Ethnicity:
White, Not Hispanic
Black, Not Hispanic
Hispanic
Asian, Pacific Islander
Other

Education:
Am currently attending or did not complete HS
High School or GED
Attended college
College Graduate
Attended graduate school
Post Graduate Degree (e.g., Master's)
Attended post graduate school
Terminal Degree (e.g., Ph.D., M.D.)

Income:
Below $10,000
$10,000-$19,999
$20,000-$29,999
$30,000-$39,999
$40,000-$49,999
$50,000-$59,999
$60,000-$69,999
$70,000-$79,999
Above $80,000

APPENDIX F

Menu – No Nutrition Information

Salads

Southwestern Salad $ 7.79

Boneless crispy chicken breast with corn relish, hickory smoked bacon, diced eggs, mixed cheeses, pico de gallo. Served with spicy dressing.

With Grilled Chicken	$ 7.79
Without Chicken	$ 6.79

Caesar Salad $ 9.29

A bed of crisp romaine lettuce tossed in our special Caesar dressing with croutons and Parmesan cheese.

With Grilled Chicken	$ 8.29
With Garlic and Lime Shrimp	$ 9.29

Grilled Island Salad $ 6.59

A bed of mixed lettuce topped with fresh pico de gallo, juicy pineapple, mandarin oranges, and crispy tortilla strips. Served with honey lime dressing.

With Grilled Chicken	$ 7.59
With Garlic & Lime Shrimp	$ 8.59

Sandwiches

Over the Top Burger $ 8.49

Mouth watering burger on a toasted bun served with hickory smoked bacon, lettuce, tomato, pickle, onion, mayonnaise, ketchup, and mustard. Served with French fries.

With Cheese	$ 8.99
Veggie Burger	$ 8.49

Chicken Deluxe $ 7.29

Marinated grilled chicken on a toasted bun, hickory smoked bacon, lettuce, tomato, Swiss cheese, and honey mustard dressing. Served with French fries.

Spicy Chicken Wrap $ 6.99

Sliced golden fried chicken, mixed greens, cabbage, tomatoes, cheese, and almonds lightly tossed in a spicy dressing and wrapped in a flour tortilla. Served with French fries.

Cheese Steak Sandwich $ 7.99

Marinated sirloin steak strips grilled with onions, peppers, mushrooms, and smothered in melted Provolone cheese. Served on a hoagie roll and with French fries

APPENDIX F continued

Entrées

Jack Chicken $ 12.49

Grilled chicken breast and hickory smoked bacon smothered in melted cheeses and tomatoes. Served with mashed potatoes and gravy and seasonal grilled vegetables.

Crispy Chicken $ 8.99

Strips of hand battered chicken fried to perfection. Served with sweet corn on the cob and French fries.

Classic Sirloin Steak $ 11.99

8 oz. sirloin marinated in our special seasoning and cooked to perfection. Served with our house salad (your choice of dressing), and a baked potato with butter and sour cream.

Dressings:

Regular: *Blue Cheese, Honey Lime, Honey Mustard, Ranch, and Thousand Island*

Low Fat: *Balsamic Vinaigrette, Honey Mustard, Ranch*

Rockin' Rib-Eye $ 15.49

14 oz. rib-eye steak marinated in our special seasoning and cooked to perfection. Served with our house salad (your choice of dressing) and a baked potato with butter and sour cream.

Dressings:

Regular: *Blue Cheese, Honey Lime, Honey Mustard, Ranch, and Thousand Island*

Low Fat: *Balsamic Vinaigrette, Honey Mustard, Ranch*

Baby Back Ribs $ 15.49

Tender and tasty baby back ribs rubbed with our special spices and basted with our tangy sauce. Served with our creamy cole slaw and French fries.

Shrimp Alfredo $ 10.99

Plump, juicy shrimp on a bed of fettuccine tossed with fresh broccoli and a creamy garlic Alfredo sauce. Topped with diced tomatoes and shredded Parmesan cheese.

Meatless, With Broccoli $ 8.99

Grilled Salmon $ 11.99

8 oz. salmon fillet seasoned with garlic and herbs. Served with black beans and grilled seasonal vegetables with Parmesan cheese.

Eggplant Parmigiana $ 9.49

Lightly breaded and fried eggplant on a bed of spaghetti smothered with a thick, rich marinara sauce. Topped with shredded Parmesan cheese and served with a house salad with your choice of dressing.

Dressings:

Regular: *Blue Cheese, Honey Lime, Honey Mustard, Ranch, and Thousand Island*

Low Fat: *Balsamic Vinaigrette, Honey Mustard, Ranch*

APPENDIX G

Menu – Nutrition Information

Salads		Calories	Fat (g)	Sat. Fat (g)	Carbs (g)	Protein (g)	Fiber (g)	Sodium (mg)
Southwestern Salad	$ 7.79	800	47	12	52	46	9	2330
Boneless crispy chicken breast with corn relish, hickory smoked bacon, diced eggs, mixed cheeses, pico de gallo. Served with spicy dressing.								
With Grilled Chicken	$ 7.79	600	37	8	32	45	9	1280
Without Chicken	$ 6.79	310	16	5	29	15	8	950
Caesar Salad	$ 9.29	340	34	6	20	8	4	690
A bed of crisp romaine lettuce tossed in our special Caesar dressing with croutons and Parmesan cheese.								
With Grilled Chicken	$ 8.29	1010	76	13	39	38	7	1910
With Garlic & Lime Shrimp	$ 9.29	980	77	13	39	31	7	1900
Grilled Island Salad	$ 6.59	570	29	4	68	7	6	1690
A bed of mixed lettuce topped with fresh pico de gallo, juicy pineapple, mandarin oranges, and crispy tortilla strips. Served with honey lime dressing.								
With Grilled Chicken	$ 7.59	710	32	5	68	34	6	1750
With Garlic & Lime Shrimp	$ 8.59	680	33	5	68	27	6	1740
Sandwiches								
Over the Top Burger	$ 8.49	1455	88	21	113	52	7	2403
Mouth watering burger on a toasted bun served with hickory smoked bacon, lettuce, tomato, pickle, onion, mayonnaise, ketchup, and mustard. Served with French fries.								
With Cheese	$ 8.99	1570	97	27	113	59	7	2578
Veggie Burger	$ 8.49	730	32	6	106	10	20	1148
Chicken Deluxe	$ 7.29	1330	73	17	116	52	6	2868
Marinated grilled chicken on a toasted bun, hickory smoked bacon, lettuce, tomato, Swiss cheese, and honey mustard dressing. Served with French fries.								
Spicy Chicken Wrap	$ 6.99	1120	102	14	97	27	6	2118
Sliced golden fried chicken, mixed greens, cabbage, tomatoes, cheese, and almonds lightly tossed in a spicy dressing and wrapped in a flour tortilla. Served with French fries.								
Cheese Steak Sandwich	$ 7.99	1500	81	29	131	65	8	3428
Marinated sirloin steak strips grilled with onions, peppers, mushrooms, and smothered in melted Provolone cheese. Served on a hoagie roll and with French fries								

APPENDIX G continued

Entreés	Calories	Fat (g)	Sat. Fat (g)	Carbs (g)	Protein (g)	Fiber (g)	Sodium (mg)
Jack Chicken $ 12.49 *Grilled chicken breast and hickory smoked bacon smothered in melted cheeses and tomatoes. Served with mashed potatoes and gravy and seasonal grilled vegetables.*	1710	105	37	121	82	14	4700
Crispy Chicken $ 8.99 *Strips of hand battered chicken fried to perfection. Served with sweet corn on the cob and French fries.*	1930	129	25	148	67	8	3688
Classic Sirloin Steak $ 11.99 *8 oz. sirloin marinated in our special seasoning and cooked to perfection. Served with our house salad (your choice of dressing), and a baked potato with butter and sour cream.*	1180	82	49	58	48	6	1287
Rocking' Rib-Eye $ 15.49 *14 oz. rib-eye steak marinated in our special seasoning and cooked to perfection. Served with our house salad (your choice of dressing) and a baked potato with butter and sour cream.*	1610	128	65	58	52	6	1487
Baby Back Ribs $ 15.49 *Tender and tasty baby back ribs rubbed with our special spices and basted with our tangy sauce. Served with our creamy cole slaw and French fries.*	2092	122	31	197	51	19	5612
Shrimp Alfredo $ 10.99 *Plump, juicy shrimp on a bed of fettuccine tossed with fresh broccoli and a creamy garlic Alfredo sauce. Topped with diced tomatoes and shredded Parmesan cheese.*	1310	72	37	102	66	5	5120
Only Broccoli $ 8.99	1100	58	34	105	45	8	4160
Grilled Salmon $ 11.99 *8 oz. salmon fillet seasoned with garlic and herbs. Served with black beans and grilled seasonal vegetables with Parmesan cheese.*	700	33	8	53	48	5	1420
Eggplant Parmigiana $ 9.49 *Lightly breaded and fried eggplant on a bed of spaghetti smothered with a thick, rich marinara sauce. Topped with shredded Parmesan cheese and served with a house salad with your choice of dressing.*	682	28	11	76	31	6	1106

APPENDIX G continued

Dressings:								
Regular:	*Blue Cheese*	330	35	6	1	2	0	420
	Honey Lime	270	22	3	17	1	0	340
	Honey Mustard	260	28	4	2	1	0	510
	Ranch	240	25	4	3	4	0	370
	Thousand Island	270	26	4	9	1	0	600
Low Fat:	*Balsamic Vinaigrette*	50	0	0	9	0	0	530
	Low Fat Honey Mustard	90	1	0	14	0	1	650
	Low Fat Ranch	110	6	1	12	1	0	480

APPENDIX H

Healthiness Quotient

Salads	2000	66	22	250	100	25	2300	
Southwestern Salad	Cal	Fat g	Sat Fat g	CHO g	Pro g	Fiber g	Na mg	HQ
Regular								
Salad	650	32	10	49	43	8	2090	
Dressing	150	15	2	3	3	1	240	
Total	800	47	12	52	46	9	2330	
	0.4	0.712	0.545	0.208	0.46	0.36	1.013	2.978
Grilled Chicken								
Salad	450	22	6	29	42	8	1040	
Dressing	150	15	2	3	3	1	240	
Total	600	37	8	32	45	9	1280	
	0.3	0.552	0.364	0.128	0.45	0.36	0.557	1.991
Without Chicken								
Salad	310	16	5	29	15	8	950	
Dressing	150	15	2	3	3	1	240	
Total	460	31	7	32	18	9	1190	
	0.23	0.47	0.318	0.128	0.18	0.08	0.517	1.763
Caesar Salad	Cal	Fat g	Sat Fat g	CHO g	Pro g	Fiber g	Na mg	
Salad	340	34	6	20	8	4	690	
	0.17	0.515	0.273	0.08	0.08	0.16	0.3	1.258
With Chicken	1010	76	13	39	38	7	1910	
	0.505	1.152	0.591	0.156	0.38	0.28	0.83	3.334
With Shrimp	980	77	13	39	31	7	1900	
	0.49	1.167	0.591	0.156	0.31	0.28	0.826	3.26
Grilled Island Salad	Cal	Fat g	Sat Fat g	CHO g	Pro g	Fiber g	Na mg	
Without Chicken or Shrimp								
Salad	300	7	1	51	6	6	1350	
Dressing	270	22	3	17	1	0	340	
Total	570	29	4	68	7	6	1690	
	0.285	0.439	0.182	0.272	0.07	0.24	0.735	1.743
With Chicken								
With Chicken	440	10	2	51	33	6	1410	
Dressing	270	22	3	17	1	0	340	
Total	710	32	5	68	34	6	1750	
	0.355	0.485	0.227	0.272	0.34	0.24	0.761	2.2
With Shrimp								
With Shrimp	410	11	2	51	26	6	1400	
Dressing	270	22	3	17	1	0	340	
Total	680	33	5	68	27	6	1740	
	0.34	0.5	0.227	0.272	0.27	0.24	0.757	2.126

APPENDIX H continued

Sandwiches		2000	66	22	250	100	25	2300	
		Cal	Fat	Sat Fat	CHO	Pro	Fiber	Na	HQ
Cheese Steak Sandwich			g	g	g	g	g	mg	
	Sandwich	1010	55	24	72	61	4	2510	
	Fries	430	26	5	43	4	4	250	
	Ketchp	60	0	0	16	0	0	668	
	Total	1500	81	29	131	65	8	3428	
		0.75	1.227	1.318	0.524	0.65	0.32	1.49	5.959
Chicken Sandwich									
	Sandwich	840	47	12	57	48	2	1950	
	Fries	430	26	5	43	4	4	250	
	Ketchp	60	0	0	16	0	0	668	
	Total	1330	73	17	116	52	6	2868	
		0.665	1.106	0.773	0.464	0.52	0.24	1.247	4.775
Over the Top Burger									
Regular		965	62	16	54	48	3	1485	
	Fries	430	26	5	43	4	4	250	
	Ketchp	60	0	0	16	0	0	668	
	Total	1455	88	21	113	52	7	2403	
		0.728	1.334	0.955	0.452	0.52	0.28	1.045	5.034
With Cheese		1080	71	22	54	55	3	1660	
	Fries	430	26	5	43	4	4	250	
	Ketchp	60	0	0	16	0	0	668	
	Total	1570	97	27	113	59	7	2578	
		0.785	1.47	1.227	0.452	0.59	0.28	1.121	5.645
Veggie		240	6	1	47	6	16	380	
	Fries	430	26	5	43	4	4	250	
	Ketchp	60	0	0	16	0	0	668	
	Total	730	32	6	106	10	20	1148	
		0.365	0.485	0.273	0.424	0.1	0.8	0.499	2.146
Spicy Chicken Wrap		630	76	9	38	23	2	1200	
	Fries	430	26	5	43	4	4	250	
	Ketchp	60	0	0	16	0	0	668	
	Total	1120	102	14	97	27	6	2118	
		0.56	1.545	0.636	0.388	0.27	0.24	0.921	4.32

APPENDIX H continued

Entrees	2000	66	22	250	100	25	2300	
Jack Chicken	Cal	Fat g	Sat Fat g	CHO g	Pro g	Fiber g	Na mg	HQ
Chicken	1170	71	29	70	72	8	3530	
Mashed potatoes/gravy	450	28	7	44	7	3	1080	
Steamed veggies	90	6	1	7	3	3	90	
Total	1710	105	37	121	82	14	4700	
	0.855	1.591	1.682	0.484	0.82	0.56	2.043	6.915
Crispy Chicken								
Chicken	1870	129	25	132	67	8	3020	
Ketchup	60	0	0	16	0	0	668	
Total	1930	129	25	148	67	8	3688	
	0.965	1.955	1.136	0.592	0.67	0.32	1.603	6.601
Classic Sirloin Steak								
Steak	530	41	14	1	36	0	890	
House salad	140	7	3	12	6	2	190	
Baked potato	190	0	10	43	4	4	15	
Butter	200	22	14	0	0	0	162	
Sour Cream	120	12	8	2	2	0	30	
Total	1180	82	49	58	48	6	1287	
	0.59	1.242	2.227	0.232	0.48	0.24	0.56	5.091
Rockin' Rib-Eye								
Steak	960	87	30	1	40	0	1090	
House salad	140	7	3	12	6	2	190	
Baked potato	190	0	10	43	4	4	15	
Butter	200	22	14	0	0	0	162	
Sour Cream	120	12	8	2	2	0	30	
Total	1610	128	65	58	52	6	1487	
	0.805	1.94	2.955	0.232	0.52	0.24	0.647	6.859
Baby Back Ribs								
Ribs	1370	82	24	112	45	12	4410	
Cole slaw	232	14	2	26	2	3	284	
French fries	430	26	5	43	4	4	250	
Ketchup	60	0	0	16	0	0	668	
Total	2092	122	31	197	51	19	5612	
	1.046	1.848	1.409	0.788	0.51	0.76	2.44	7.281
Shrimp Alfredo	1340	72	37	102	66	5	5120	
	0.67	1.091	1.682	0.408	0.66	0.2	2.226	6.537
Broccoli Alfredo	1100	58	34	105	45	8	4160	
	0.55	0.879	1.545	0.42	0.45	0.32	1.809	5.333
Eggplant Parmigiana								
Eggplant	542	21	8	64	25	4	916	
House Salad	140	7	3	12	6	2	190	
Total	682	28	11	76	31	6	1106	
	0.341	0.424	0.5	0.304	0.31	0.24	0.481	2.12
Grilled Salmon	700	33	8	53	48	5	1420	
	0.35	0.5	0.364	0.212	0.48	0.2	0.617	2.323

APPENDIX H continued

Dressings	2000	66	22	250	100	25	2300	
	Cal	Fat g	Sat Fat g	CHO g	Pro g	Fiber g	Na mg	HQ
Balsamic Vinaigrette (low fat)	50	0	0	9	0	0	530	
	0.025	0	0	0.036	0	0	0.23	0.291
Blue Cheese	330	35	6	1	2	0	420	
	0.165	0.53	0.273	0.004	0.02	0	0.183	1.175
Honey Lime	270	22	3	17	1	0	340	
	0.135	0.334	0.136	0.068	0.01	0	0.148	0.831
Honey Mustard	260	28	4	2	1	0	510	
	0.13	0.424	0.182	0.008	0.01	0	0.222	0.976
Honey Mustard (low fat)	90	1	0	14	0	1	650	
	0.045	0.015	0	0.056	0	0.04	0.283	0.359
Ranch	240	25	4	3	4	0	370	
	0.12	0.379	0.182	0.012	0.04	0	0.161	0.894
Ranch (low fat)	110	6	1	12	1	0	480	
	0.055	0.09	0.045	0.048	0.01	0	0.209	0.457
Thousand Island	270	26	4	9	1	0	600	
	0.135	0.394	0.182	0.036	0.01	0	0.261	1.018

APPENDIX I

Independent Variables—Underlying Factors

Scale/Scale Items	Variable	Factor	Mean Split
Health Consciousness Scale: *Five point scale: strongly disagree (1) to strongly agree (5)*			
I worry that there are harmful chemicals in my food	hc1	extrinsic	Health consciousness total
I am concerned about my drinking water quality	hc2		
I usually read ingredients on food labels	hc3	intrinsic	
I read more health-related literature than I did 3 years ago	hc4		
I am interested in information about my health	hc5		
I am concerned about my health all the time	hc6		
Self Efficacy Scale: *Five point scale: strongly disagree (1) to strongly agree (5)*			
I usually make an attempt to eat a well-balanced diet	se1	personal	Self-efficacy total
I usually make an attempt to exercise regularly	se2		
In the long run, people who take care of themselves stay healthy	se3	general	
People's ill health result from their own carelessness	se4		
In general, I do things that make me healthy	se5	personal	
Consumer Style Characteristics Scale: *Five point scale: strongly disagree (1) to strongly agree (5)* *Perfectionist, High-Quality Conscious Consumer*			
Getting very good quality menu items is very important to me	per1	Seek perfection	Perfectionistic total
When it comes to purchasing menu items, I try to get the very best or perfect choice	per2		
In general, I usually try to buy the best overall quality menu items	per3		
I make special effort to choose the very best quality menu items	per4		
I really don't give my menu item purchases much though or care	per5	Not important	
My standards and expectations for the menu items I buy are very high	per6	Seek perfection	
I shop quickly, buying the first menu item I find that seems good enough	per7	Not important	
A menu item doesn't have to be perfect, or the best, to satisfy me	per8		

APPENDIX I continued

Scale/Scale Items	Variable	Factor	Mean Split
Brand Consciousness, "Price Equals Quality" Consumer			
The well-known chain restaurants are best for me	bc1	Brand consciousness total	
The more expensive menu items are usually my choices	bc2		
The higher the price of a menu item, the better its quality	bc3		
Nice restaurants offer me the best meals	bc4		
I prefer buying the most popular menu items	bc5		
The most advertised menu items are usually very good choices	bc6		
A menu item doesn't have to be perfect, or the best, to satisfy me	bc7		
Novelty-Fashion Conscious Consumer			
I usually have one or more outfits of the very newest style	nfc1	Current	Novelty/ fashion consciousness total
I change my diet based on the latest health information	nfc2		
Ordering something different is very important to me	nfc3	Variety	
To get variety, I select a different menu item each time I eat out	nfc4		
It's fun to order something new and exciting	nfc5		
Recreational, Hedonistic Consumer			
Deciding what to order it not a pleasant activity to me	rec1	Speed	Recreational hedonistic total
Eating out is one of the enjoyable activities of my life	rec2	Enjoy	
Eating out wastes my time	rec3	*	
I select my menu item based on what I want to eat	rec4	Enjoy	
I make my decision on what to order fast	rec5	Speed	
Price Conscious, "Value for Money" Consumer			
I buy as much food as possible at the lowest price	pc1	Price consciousness total	
The lower price menu items are usually my choice	pc2		
I look carefully to find the best value for money when deciding what to order	pc3		

* Variable cross loads on both factors

APPENDIX I continued

Scale/Scale Items	Variable	Factor	Mean Split
Impulsive, Careless Consumer			
I should make my menu selection more carefully than I do	imp1	Careful	Impulsive total
I am impulsive when deciding what to order	imp2		
Often I make careless menu selections I later wish I had not	imp3		
I take the time to select my menu items carefully for the best buys	imp4	Careless	
I carefully watch how much I spend when making my meal selection	imp5		
Confused by Overchoice Consumer			
There are so many menu items to choose from that often I feel confused	cov1	Confused by overchoice total	
Sometimes it's hard to choose which menu items to select	cov2		
The more I learn about nutrition, the harder it seems to choose the best menu item	cov3		
All the information I get on different foods confuses me	cov4		
Habitual, Brand-Loyal Consumer			
I have favorite menu item I buy over and over	hab1	Habitual total	
Once I find a menu item I like, I stick with it	hab2		
I go to the same restaurant each time I eat out	hab3		
I change the menu items I buy regularly	hab4		
Risk Perception Scale: *Five point scale: strongly disagree (1) to strongly agree (5)* Response to: "For each of the following statements, please indicate the likelihood of engaging in each activity"			
Eat "expired" food products that still "look okay"	rp1	Low	Risk perception total
Binge drink frequently	rp2	High	
Ignore some persistent physical pain by not going to the doctor	rp3	Moderate	
Take a medical drug that has a high likelihood of negative side effects	rp4	Low	
Never use sunscreen when you sunbathe	rp5	Moderate	
Never wear a seatbelt	rp6	High	
Not have a smoke alarm outside your bedroom	rp7	*	
Ride a bicycle without a helmet	rp8	Moderate	
Smoke a pack of cigarettes per day	rp9	High	

* Variable cross loads on both factors

APPENDIX I continued

Scale/Scale Items	Variable	Factor	Mean Split
Preventative Health Behaviors Scale: *Three point scale: always (1) to never (3)* Question: How often do you undertake the following activities?			
Eat a well balanced diet	phb1	General	Preventive health behavior total
See your dentist for regular checkups	phb2		
Eat fresh fruits and vegetables	phb3		
Reduce amount of salt in your diet	phb4	Intake	
Watch for salt content in diet	phb5		
Exercise regularly	phb6	General	
Watch the amount of fat you consume	phb7	Intake	
Pay attention to your sugar intake	phb8		
Pay attention to the amount of red meat you eat	phb9		
Cut back on snacks and treats	phb10	*	
Avoid food with additives and preservatives	phb11	Intake	
Get enough rest and sleep	phb12	Calm	
Reduce stress and anxiety	phb13	Calm	
Perceived Nutrition Knowledge Scale: *Five point scale: strongly disagree (1) to strongly agree (5)*			
I know a lot about nutrition	pnk1	Perceived Nutrition Knowledge total	
Compared to most people, I am quite knowledgeable about nutrition	pnk2		

* Variable cross loads on both factors

APPENDIX J

Summary of Preliminary Survey

On average, how many times do you eat dinner in a restaurant during the week?

Number of times:	n:	Percent:
0	7	3.2
1	69	31.2
2	74	33.5
3	37	16.7
4	19	8.6
5	8	3.6
6	1	.5
7	6	2.7

List the top three reasons, in order of importance, you choose to eat out for dinner.

Reason:	**n:**	**Percent:**	**Examples:**
Avoid work	127	25.4	Don't want to cook/clean; want to be served
Convenience	120	24.0	Easier, faster. on the way home, lazy
Financial	33	6.6	Cheaper, business, others pay
Food	114	22.8	No food at home, hungry, more variety
Social	106	21.2	Be with friends/family, socialize

Once you are at the restaurant for dinner, list three reasons, in order of importance, you choose the menu item you will order?

Reason:	**n:**	**Percent:**	**Examples:**
Financial	110	22.2	Cheap, affordable, on special
Food	202	40.7	Taste, favorite, familiar, craving, mood
Influence of others	23	4.6	Someone said to try it
Nutrition	63	12.7	Nutritious, healthy, diet, portion size
Presentation	54	10.9	See others eating, picture in menu, staff description
Variety	44	8.9	Try something new, different

APPENDIX J continued

Does who you are eating with change the answer to the above question in any way?

Behavior:	**n:**	**Percent:**
Yes	36	16.3
How?		
Eat healthier/smaller portions/less messy foods	9	27.3
Eat what others are eating/share meals	9	27.3
Eat what others recommend	4	12.1
Familiar items when eating with others less known	1	3.0
Impress others (date/business)	2	6.1
Others pay; spend more	3	9.1
Others pay; spend less	5	15.1
No	185	83.7

Complete the following sentence: "I eat out because ..."

Reason:	**n:**	**Percent:**	**Examples:**
Avoid work	86	39.5	Don't want to cook/clean; want to be served
Convenience	50	22.9	Easier, faster. on the way home, lazy
Financial	4	1.8	Cheaper, business, others pay
Food	49	22.5	No food at home, hungry, more variety
Social	29	13.3	Be with friends/family, socialize

Complete the following sentence: "To me, eating out means ..."

Reason:	**n:**	**Percent:**	**Examples:**
Avoid work	129	46.1	Don't want to cook/clean; can be served
Convenience	24	8.6	Saves time
Financial	27	9.6	Spending money
Food	55	19.6	Eating good food, something I don't cook
Social	45	16.1	Enjoy being with family/friends

APPENDIX J continued

Do you look for nutritional information about the menu items before you go to the restaurant?

Behavior:		**n:**	**Percent:**
Yes		31	14.0
Where?			
	Online	15	51.7
	Restaurant literature	9	31.0
	Other literature (i.e., nutrition books)	2	6.9
	Staff	3	10.4
No		190	86.0

When you are at the restaurant, do you ask anyone about nutrition information when making a menu selection?

Behavior:		**n:**	**Percent:**
Yes		27	12.2
Who?			
	Restaurant literature/menu	23	92.0
	Staff	2	8.0
No		194	87.8

How do you feel about a menu that provides nutrition information?

Feelings:	**n:**	**Percent:**
Positive	177	80.1
Negative	44	19.9

How do you feel about a menu that does not provide nutrition information about their menu items?

Feelings:	**n:**	**Percent:**
Indifferent	171	77.4
Negative	50	22.6

APPENDIX J continued

What nutrition information would you look for on a menu? (Be specific)

Nutrient:	n:	Percent:
Calories	105	27.3
Carbohydrates	39	10.1
Cholesterol	9	2.3
Fat (total, trans, and saturated)	121	31.4
Fiber	17	4.4
Protein	11	2.9
Sodium (salt)	45	11.7
Sugar	34	8.8
Vitamins	4	1.1

How often do you:

Eat with...	0	1	2	3	4	5	6	7
	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)
No one (Alone)?	157 (71.0)	31 (14.0)	16 (7.2)	10 (4.5)	3 (1.4)	8 (1.8)	0	0
Girl/boy friend?	91 (41.2)	42 (19.0)	36 (16.3)	8 (3.6)	10 (4.5)	7 (3.2)	7 (3.2)	20 (9.0)
People you live with?	40 (18.1)	64 (29.0)	36 (16.3)	19 (8.6)	12 (5.4)	13 (5.9)	14 (6.3)	23 (10.4)
Extended family?	95 (43.0)	67 (30.3)	19 (8.6)	11 (5.1)	13 (5.9)	7 (3.2)	3 (1.4)	6 (2.7)
Friends?	42 (19.0)	78 (35.7)	30 (13.6)	19 (8.6)	18 (8.1)	11 (5.0)	6 (2.7)	16 (7.2)
Co-workers?	121 (54.8)	45 (20.4)	20 (9.0)	8 (3.6)	9 (4.1)	13 (5.9)	0	5 (2.3)
Business acquaintances?	165 (74.7)	34 (15.4)	11 (5.0)	4 (1.8)	2 (.9)	3 (1.4)	0	2 (.9)

Who else do you eat with and how often?

The survey did not provide any additional information.

APPENDIX J continued

Demographic Characteristics

Category:	n:	Percent:	Category:	n:	Percent:
Sex:			Education:		
Male	73	33.0	Did not complete HS	6	2.7
Female	148	67.0	High School or GED	33	14.9
			Attended college	109	49.4
			College Graduate	52	23.5
Age:			Post Graduate Degree	21	9.5
Under 20	15	6.8			
20-29	100	45.2			
30-39	33	14.9			
40-49	39	17.6			
50-59	28	12.7			
60 and over	6	2.7			
			Income:		
			Below $10,000	24	10.9
Ethnicity:			$10,000-$19,999	17	7.7
Black, Not Hispanic	83	37.6	$20,000-$29,999	24	10.9
Hispanic	4	1.8	$30,000-$39,999	19	8.6
Asian, Pacific Islander	8	3.6	$40,000-$49,999	28	12.7
White, Not Hispanic	113	51.1	$50,000-$59,999	33	14.9
Other	13	5.9	Above $60,000	76	34.4

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Courses taught include:
Principles of Marketing, Sales Management, and Ethical and Social Issues in Administration.

Publications:

Kirchner, T. and B. Hochradel (2005). "The Role of BCP Research," *Disaster Recovery Journal*, 18(3).

Proceedings:

Hochradel, R., R. Dondeti, and G. Ross (2007). "The Search for Nutrition Information: The Effect of Knowledge on Consumer Use," *2007 Proceedings of the American Society of Business and Behavioral Sciences 14th Annual Conference*, 14(1): 711- 726.

Hochradel, R. and G. Ross (2006). "Nutrition Labeling: The Effect on Consumer Choice," *Frontiers in Southeast CHRIE Hospitality and Tourism Research*, 10(2): 46-52.

Ross, G. and R. Hochradel (2006). "Predicting Student Success," Frontiers *in Southeast CHRIE Hospitality and Tourism Research,* 10(2): 70-73.

Presentations:

O'Daniel, R. and R. Hochradel (2007). "Beyond the Program Development and Evaluation Dichotomy: Tools for Keeping the Dough," *Philadelphia College Prep Roundtable,* Philadelphia, PA, August 20-21, 2007.

Hochradel, R., R. Dondeti, and G. Ross (2007). "The Search for Nutrition Information: The Effect of Knowledge on Consumer Use," *American Society of Business and Behavioral Sciences 14th Annual Conference*, Las Vegas, NV, February 22-25, 2007.

Hochradel, R. and G. Ross (2006). "Nutrition Labeling: The Effect on Consumer Choice," *SECHRIE Research Conference,* Memphis, TN, October 27-28, 2006.

Ross, G. and R. Hochradel (2006). "Predicting Student Success," *SECHRIE Research Conference,* Memphis, TN, October 27-28, 2006.

Hochradel, R. (2006). "Nutrition Information: Do Consumers Understand and Use the Information Provided?" *Norfolk State University Research Seminar,* Norfolk, VA, November 14, 2006.

Hochradel, R. and B. Panigrahi (2006). "Marketing Ethical Decision Making Models: The Missing Component," *American Society of Business and Behavioral Sciences 13th Annual Conference,* Las Vegas, NV, February 24-26, 2006.

Hochradel, R. (2005). "Ethical Decision Making Models," *University Technology Conference,* Norfolk State University, Higher Education Center, Virginia Beach, VA. October 4, 2005.

Accomplishments:

Speaker, annual meeting, American Dietetic Association, 1987, 1988
Speaker, annual meeting, National Association of WIC Directors (NAWD), 1997
Speaker, regional meeting, Mid-West Region State WIC Directors, 1995
Member, Board of Directors, NAWD, 1997-1998
Chair, Nutrition Coordinators Section, NAWD, 1998
Chair-elect, Nutrition Coordinators Section, NAWD, 1997
Mid-West Regional Representative, Nutrition Section, NAWD, 1996
National Risk Factor Criteria Committee, NAWD, 1997-1998

Previous Experience:

Director, Nutrition and Clinic Services, *Indiana State Department of Health, Division of Nutrition/WIC Program*, Indianapolis, Indiana.

Nutritionist and State Consultant. More than twelve years experience as a consultant for both the Indiana WIC Program and the Georgia WIC Program.

Hospital food service management, restaurant management, and wholesale meat provider management.