

**THE RELATIONSHIP BETWEEN PERCEIVED HEALTH, HEALTH  
ATTITUDES, AND HEALTHY OFFERINGS FOR SENIORS AT A  
FAMILY RESTAURANT**

by

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## **ABSTRACT**

Personal health can influence all aspects of customer behavior and this influence is more manifest within the senior market segment. Health issues also greatly impact the restaurant industry. Therefore, the purpose of this study was to investigate how health status and health attitude influence family restaurant selection criteria. In order to measure self-rated health status and health attitude for seniors, the Health Perceptions Questionnaire (HPQ) and the Perceived Health competence Scale (PHCS) were used.

Most senior participants reported that health-related family restaurant selection criteria and food price were important when they select a family restaurant. Also, while the HPQ and the PHCS were not correlated with food price in the family restaurant industry, the overall results of this study revealed that health status and health attitude for seniors were positively correlated with health-related family restaurant selection criteria. This reflects that offering healthy meals on menus is more important for senior customers with a high level of health condition or health attitude than other senior customers. The results also showed that healthy senior customers who have a positive health attitude are willing to pay more money

for their healthy menu items. Therefore, in order to maximize their profits, managers and operators of family restaurants need to keep creating healthy items for their menus and promote those items to the segment of the senior market which has a high level of health condition or health attitude.

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## TABLE OF CONTENTS

ABSTRACT .....	ii
ACKNOWLEDGMENTS.....	iv
TABLE OF CONTENTS .....	v
LIST OF FIGURES.....	ix
LIST OF TABLES .....	x
CHAPTER 1. INTRODUCTION.....	1
Statement of the Problem .....	3
Objectives of this Study .....	5
Contribution of this Study .....	6
CHAPTER 2. LITERATURE REVIEW .....	7
Senior Market.....	7
Definition of the Senior Market.....	7
Importance of the Senior Market.....	8
Characteristics of Seniors .....	9
Preference and Selection of Senior Customers in Restaurants .....	11
Reasons for Dining out .....	11
Selecting a Restaurant.....	11
Dining Time.....	15
Suggestions for Restaurant .....	16

Customer Satisfaction in the Restaurant Industry.....	17
Health Status and Health Behaviors.....	19
Health for Seniors in the Restaurant Industry.....	20
Perceived Health Status .....	22
Health Behavior.....	24
Measuring health Behavior.....	24
Predictors of Health Behaviors.....	25
Summary .....	27
CHAPTER 3. METHODOLOGY.....	28
Research Questions .....	28
Theoretical Framework.....	28
Dependent Variables .....	29
Independent Variables.....	30
Research Hypotheses.....	30
Research Design.....	33
Pilot Study.....	33
Population and Sample.....	34
Instrumentation.....	34
Data Analysis .....	36
CHAPTER 4. RESULTS .....	37
Data Collected.....	37

Profile of Respondents .....	38
Perceived Health Status.....	41
Health Attitude .....	45
Health-Related Family Restaurant Selection Criteria .....	49
Food Price .....	52
The Relationship between HPQ and Health-Related Family Restaurant Selection Criteria.....	54
The Relationship between HPQ and Food Price.....	56
The Relationship between PHCS and Health-Related Family Restaurant Selection Criteria.....	58
The Relationship between PHCS and Food Price.....	61
Summary .....	64
CHAPTER 5. Summary and Conclusions.....	66
Discussion of the Study.....	67
Family Restaurant Selection Criteria.....	67
Correlations between the HPQ and Family Restaurant Selection Criteria .....	68
Correlations between the PHCS and Family Restaurant Selection Criteria .....	70
Recommendations to Family Restaurants’ Managers.....	73
Limitations of the Study.....	74
Recommendations for Future Research .....	76
Conclusions .....	78
REFERENCES.....	80

Appendix 1 .....	86
Cover Letter.....	87
Survey Questionnaire .....	88
IRB Approval .....	93



## LIST OF FIGURES

Figure 2.1 Influences on a Consumer's Choice of Restaurant .....	12
Figure 3.1 Theoretical Framework.....	28
Figure 4.1 A Summary of the Results of Hypotheses Testing and Key Findings.....	64

## LIST OF TABLES

Table 2.1 Important Attributes in Choosing a Restaurant for Seniors .....	14
Table 2.2 What the Senior Market Orders (Nutrition Driven) .....	21
Table 4.1 Profile of Survey Respondents .....	38
Table 4.2 Financial Profile of Survey Respondents .....	40
Table 4.3 Mean Scores for Health Perceptions Questionnaires items .....	42
Table 4.4 Respondents' Overall Health .....	43
Table 4.5 Correlation between the Mean Score of HPQ and the Single-Item Health Measure	43
Table 4.6 Factor Analysis for HPQ .....	44
Table 4.7 Mean Scores for Perceived Health Competence Scale items .....	46
Table 4.8 Respondents' Overall Health Competence .....	47
Table 4.9 Correlation between the Mean Score for PHCS and the Single-Item Health Competence Measure .....	47
Table 4.10 Factor Analysis for PHCS .....	48
Table 4.11 Correlation between the HPQ and the PHCS .....	49
Table 4.12 Mean Scores for Health-Related Family Restaurant Selection Criteria .....	50
Table 4.13 Factor Analysis for Health-Related Family Restaurant Selection Criteria .....	51
Table 4.14 Mean Score for Food Price .....	52
Table 4.15 Senior's Attitude about Food Price and Healthy Menu Items .....	53

Table 4.16 Correlation between the HPQ and the Health-related Family Restaurant Selection Criterion .....	55
Table 4.17 Correlation between the HPQ and the Food Price .....	57
Table 4.18 Correlation between the HPQ and the Family Restaurant Selection Criteria .....	58
Table 4.19 Correlation between the PHCS and the Health-related Family Restaurant Selection Criterion.....	60
Table 4.20 Correlation between the PHCS and the Food Price .....	61
Table 4.21 Correlation between the PHCS and the Family Restaurant Selection Criteria ....	62

## CHAPTER I

### INTRODUCTION

Americans are getting older. The senior (mature) population in the United States is growing at a remarkable rate. According to the U.S. Census in 2007, there were 60 million people 55 years and older, comprising 20 percent of the population (U. S. Census Bureau, 2007). This proportion will accelerate when the baby boomers, born between 1946 and 1964, join the senior group in 2019 (Wolff, 2007). Moreover, mature consumers enjoy several advantages over young people, such as more leisure time, more discretionary income, and relatively good health. Consequently, they are still considered to be a major force in the economy (Koteff, 2002). They are also more likely than young people to eat out (Lahue, 2000). Accordingly, these characteristics make senior customers an attractive market for restaurants to target. However, marketers and employers in restaurants sometimes neglect to identify what senior customers really want and how these characteristics are changing (Prewitt, 2002). Companies in the restaurant industry are often bogged down by stereotypes about senior customers. As a result, employers and marketers are missing the opportunity to improve their sales (Koteff, 2002). In a *USA Today* study, food service operators received “very poor” customer service grades from older guests. Most mature customers consider that they are occasionally mistreated in restaurants. For example, some of them felt under

pressure to finish eating quickly in restaurants, so that others could have their table (Knutson & Patton, 1993; Prewitt, 2002).

Health is an important issue to consider when identifying the characteristics of the senior market and building a proper positioning strategy. Personal health can impact all aspects of consumer behavior (Hunter-Jones & Blackburn, 2007), and this influence is more obvious within the senior market segment. As people age, they are likely to experience an increase in health-related problems, such as impaired vision and hearing, digestive problems, and a weakened sense of taste and smell (Bone, 1991; Hunter-Jones & Blackburn, 2007; Kim, Lee, & Kim, 2006; Prewitt, 2002). Their tongues become less sensitive and the nerves in the nose need extra stimulation. These symptoms become more extreme by age 70 (Prewitt, 2002). Moreover, food selection from restaurant menus is affected by seniors' health problems such as heart disease, gastrointestinal difficulties and diabetes (Lahue, 2000). Seniors prefer to eat healthier food in restaurants (Knutson & Patton, 1993) because promoting health is a crucial issue for them. Consequently, these health-related concerns can significantly impact the restaurant industry.

However, managers in the restaurant industry have been slow to realize the importance of these issues. For example, most managers believe that health is becoming less important as an issue for the senior market since the media have shown that seniors today are healthier than in the past (Bone, 1991). Nevertheless, there is still a large segment of unhealthy senior

customers. According to Bone (1991), approximately 40 percent of the senior market can be characterized as unhealthy and the restaurant industry does not know the differences between these healthy senior customers and unhealthy senior customers in terms of restaurant selection. Therefore, to attract senior customers, restaurants have to be well informed of the health-related characteristics of this market segment.

### **Statement of the Problem**

Many studies have shown that the senior market is important for most industries. Also, there have been several articles published about customer satisfaction and restaurant selection preferences in restaurants. According to Huang and Tsai (2003), elders will be one of the largest potential market segments in the hospitality and tourism industries.

Thus, understanding senior customers can help restaurant operators to provide better products and services to attract this important market. Many researchers have indicated that senior customers do not belong to a single homogeneous market (Bone, 1991; Moschis, Lee, & Mathur, 1997; Wolff, 2007). This means that they are not only different from younger people, but they also vary widely by their demographic and psychographic characteristics (Moschis, Bellenger, & Bellenger, 2003). For instance, seniors who are just joining this age segment have diversely different needs than those who are much older (Knutson, Elsworth,

& Beck, 2006). Also, health is one of the most important variables to consider for the senior market. Many researchers, especially gerontologists, have studied how health - as a key variable - influences seniors' behavior (Bone, 1991).

However, there has not been a precise study showing whether the senior market can be broken down into distinctive segments, in terms of health status and attitudes regarding health, in the restaurant industry. In other words, no study has looked at the effect of health status and attitude on senior's restaurant selections. Moreover, little research has been conducted to show the differences between healthy seniors and unhealthy seniors in terms of restaurant selections. Therefore, it is necessary to identify the restaurant selection characteristics of healthy or health-conscious senior customers. To address this problem, this study will test how perceived health status influences seniors' restaurant selections. It will also identify the important restaurant selection characteristics for health conscious seniors.

## **Objectives of this Study**

This study has the following objectives:

1. To examine the relationship between perceived health status and family restaurant selection criteria for senior customers.
2. To examine the relationship between attitudes regarding health and family restaurant selection criteria for senior customers.



## **Contribution of this Study**

There are a variety of customer needs, and these diverse needs necessitate that managers in the restaurant industry adjust their product and services to the unique needs and desires of customers. Also, managers are required to identify specific target customers in order to maintain and increase their profits. This study will provide information about what healthy senior customers who have a high level of perceived health status and health-conscious senior customers want so that family restaurants can identify appropriate segments and attract these senior customers. Marketers and operators of restaurants will obtain knowledge in terms of the demographic and psychographic characteristics of healthy senior customers and health-conscious senior customers. Nearly everyone will be seniors someday. Therefore, this knowledge - and the subsequent adjustments - will be a long-term investment in the restaurant industry. This study will also contribute to the literature regarding restaurant selection and the senior market.

## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter reviews the literature that supports the necessity of conducting this study. Thus, this chapter explores the existing theoretical evidence and empirical research findings in the field of the senior market and restaurant selection. It also reviews the literature related to a customer's health behavior and perceived health status.

#### **Senior Market**

##### Definition of the Senior Market

The notion of an older customer may be viewed in relative terms. Senior citizen, senior, older, mature, retired baby boomer, and grey market are all terms that describe the same market known as the senior market. There is no definition regarding the age range for an older customer. Some researchers consider 55 years and older as the senior group (Fu & Parks, 2001; Knutson & Patton, 1993; Moschis et al., 2003; Sheridan, 2004), while others use 50 as an indicator (Abdel-Ghany & Sharpe, 1997; Bone, 1991; Jang, Ham, & Hong, 2007). This study regards 55 years and older as the starting point for the senior years.

## Importance of the Senior Market

There are a number of studies showing that the senior market is important to businesses. According to the U.S. census, the senior population, 55 and over, accounts for 20% of the total population. This group will grow to 75 million by 2010, and to 104 million by 2050; which means that one-third of the population will belong to the senior group (U. S. Census Bureau, 2007). Moreover, the entire baby boomer generation, defined as people who were born between 1946 and 1964 (Chay, 2005), will be over 55 years old in 2019. Increased longevity has also made the senior market more important. In 1994, the average life expectancy of Americans was 75.6 years and it continues to increase (Lahue, 2000). For example, three-fourths of people born in 2000 are expected to live to age 65, and half of those people will live to the age of 80 (Moschis et al., 1997).

Economic power also makes the seniors market more important. Their income has shown the fastest growth rate of any age group for several reasons, including investment income, Social Security, and retirement income. The total income from people aged over 55 in 2001 was two trillion dollars which accounts for 52 percent of all income in the U.S. Moreover, it had increased to 65 percent by 2005 (Burrirt, 2001). This senior group represents 77 percent of all U.S.-held assets. They are also less concerned than in the past

with providing an inheritance for their children because they want to enjoy spending their money on themselves (Bone, 1991).

The National Restaurant Association (2000) found that the average household in the 55-64 age group spends 42.2% of their food expenditure outside the home, and people aged 65 and over spend 35.5% outside the home. Moreover, the senior group aged 55 to 74 spent more money for food away from home than the national average. According to Lahue (2000), 40 percent of people age 55 and over eat out in casual dining or family restaurants more than once a month, and 50 percent of them eat out at a restaurant more than once a week . Moreover, in Knutson, Elsworth, and Beck's study (2006), seniors ate breakfast at a restaurant an average of three times per month, spending about \$6.18 per visit. These same people ate lunch and dinner out about six times a month, spending an average of \$8.67 for lunch and \$17.36 for dinner. The average checks of a meal means that seniors do not only eat cheap food. Accordingly, it is manifest that seniors are an attractive market for the restaurant industry, and that the demand for restaurant meals will increase as the baby boomers advance in age (Kim & Geistfeld, 2003)

### Characteristics of Seniors

Life experiences, personal growth, connecting with others, and helping others, are more

important than tangibles for seniors (Bone, 1991). Huang and Tsai (2003) argued that, unlike the stereotypical image of seniors as elderly, weak, poor, isolated and lacking inspiration; seniors are prepared to spend their income and investments on leisure consumption, rather than saving money for their children. Today they are healthier, more active, and less afraid to spend money than their predecessors. In addition, most of them tend to be loyal to restaurants they like (Lahue, 2000). Because they have a great deal of discretionary time, seniors participate in educational programs such as Elderhostels; engage in self-enrichment programs like gardening, carpentry, and various crafts and skills; and take advantage of leisure products and services (Bone, 1991). They are also a crucial source of labor for volunteer organizations.

One of the trends among seniors is that they prefer to purchase healthier foods and more personal-care products such as anti-aging skin creams (Tenser, 2006). This is because seniors are especially interested in products and services that can help them preserve their youth and vitality. In addition, due to the empty-nest transition, there is a declining demand for family-oriented convenience meals for children. As a result, restaurants are trying to provide more higher-end meals aimed at empty nester seniors (Tenser, 2006).

## **Preference and Selection of Senior Customers in Restaurants**

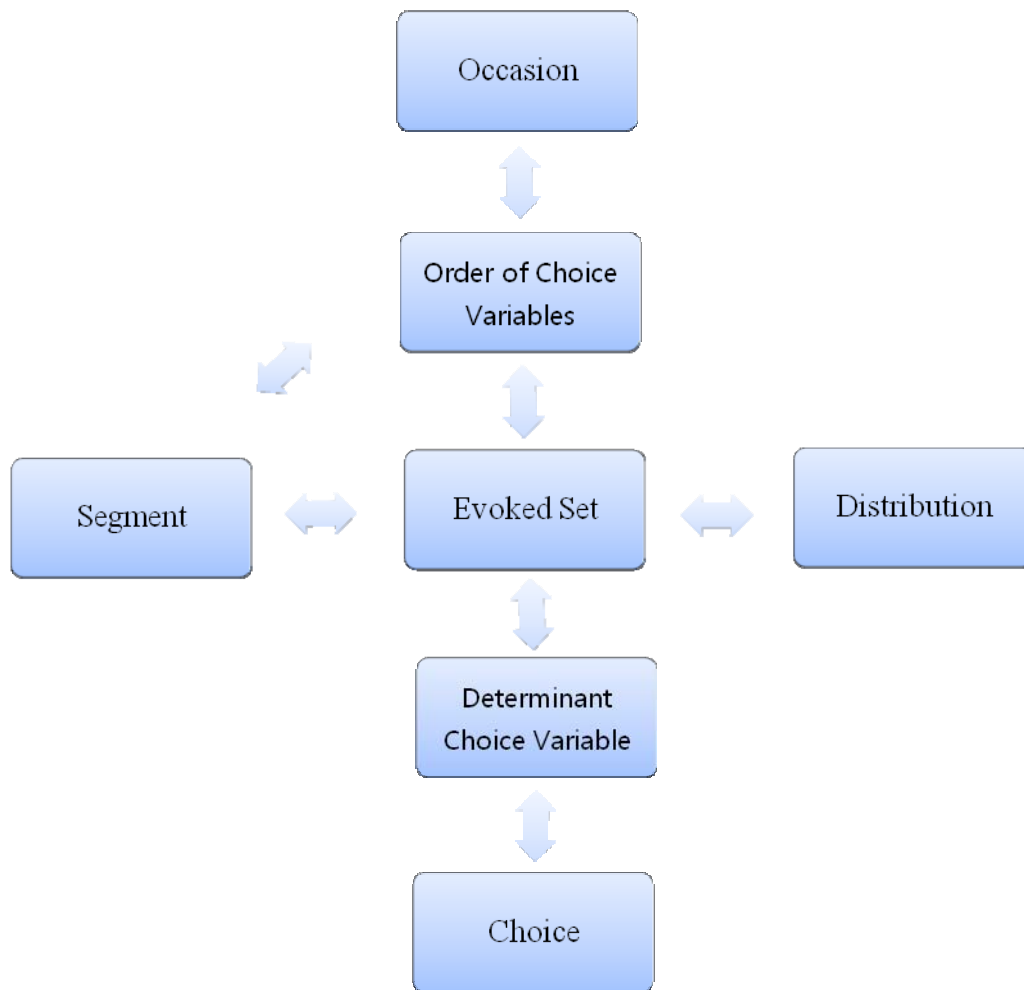
### Reasons for Dining out

There are numerous reasons why people dine out. Most senior customers want to dine out because they are seeking convenience and companionship (Knutson & Patton, 1993). Also, most seniors, especially females, do not want to spend their time in the kitchen cooking and washing dishes. They also responded that they go to a restaurant for the opportunity to meet friends and family. This trend is increasing with the growing number of seniors who live alone, or live with a spouse or a housemate (Knutson & Patton, 1993).

### Selecting a Restaurant

Auty (1992) designed a model which shows the factors that influence a consumer's choice of restaurant (Figure 2.1).

**Figure 2.1 Influences on a Consumer's Choice of Restaurant**



Source: Auty (1992)

According to the author, a customer's choice of restaurant starts with the occasion. This is the most important determinant of restaurant choice, and it influences the initial order of the choice variables. The customer segment has only a secondary impact on this order. The evoked set is established based on the available restaurants which match the relevant variables and the customers' segment. Then, the determinants of choice variables play a role in the decision-making process.

Auty (1992) also mentioned that, in spite of the fact that they are the most frequently cited choice variables; food type, food quality, and price are not usually enough to predict selection for customers. This is because the restaurants in the evoked set of customers are often similar in terms of these variables. Therefore, atmosphere and image are critical determinants for customers in the final selection among restaurants providing a similar menu, food quality, and price.

To select a restaurant, one of the most important factors for senior customers is food quality (Knutson & Patton, 1993). Service quality is also an important characteristic in selecting a restaurant for senior customers. According to Knutson and Patton (1993), great service is not a compelling reason to go to a particular restaurant, while poor service is more likely to be a compelling reason not to go. Senior customers prefer friendly service and communication (Fu & Parks, 2001). According to Fu and Parks (2001), two out of three elderly customers expressed dissatisfaction with service because of mistreatment by restaurant employees. Additionally, familiarity with menu items and staff in restaurants is an important factor for senior customers, especially opulent senior customers (Moschis et al., 2003). Fu and Parks (2001) indicated that many senior customers like restaurants where they are familiar with the appearance, the dining staff, and the menus.

Knutson, Elsworth, and Beck (2006) found important attributes in selecting a restaurant for seniors (Table 2.1).



**Table 2.1 Important Attributes in Choosing a Restaurant for Seniors**

<b>Important Attribute</b>	<b>Total Percentage</b>
<b>Value</b>	91.4
<b>Friendliness</b>	89.8
<b>Variety of menu</b>	88.1
<b>Price</b>	86.5
<b>Location</b>	77.6
<b>Senior discounts</b>	75.9
<b>Convenience</b>	71.2

Source: Knutson, Elsworth, and Beck (2006)

In this study, value, defined as the difference between total experience and total cost, is the most important attribute when seniors select a restaurant. Friendly staff, menu variety and price are also significant characteristics in their decision-making process. One research study found that 54.81 percent of seniors responded that the provision of a comfortable place to socialize is also an important reason for selecting a restaurant. In addition, 50.28 percent of respondents replied that a restaurant's location is a crucial factor for them (Moschis et al., 2003).

Offering coupon discounts and promotions to senior customers is another critical factor (Bone, 1991; Knutson et al., 2006). Many banks and hotels use membership clubs for

attracting the senior market. In the restaurant industry, 55.5 percent of senior respondents aged 55 and over answered that special discounts for senior customers were the crucial reason for patronizing a certain restaurant (Moschis et al., 2003). To attract these senior customers, many restaurants provide benefits to seniors such as special senior menus, time-sensitive discounts (like early bird specials), and two-for-one meal deals (Knutson & Patton, 1993; Moschis et al., 2003). For instance, in their own survey, Ruby's (which is mainly located in California) found that seniors have the highest frequency rate of any age group; visiting Ruby's an average of eight times a year. To strengthen their affinity with the senior demographic and build traffic on traditionally slow days, Ruby's provided a 20% discount on meals for senior customers who have membership cards (Sheridan, 2004). However, while several kinds of discount may initially attract seniors, managers sometimes focus too much on these special price programs and fail to take into account the wants and needs of senior customers (Bone, 1991). Also, these programs can easily be copied by competitors. Therefore, managers should keep in mind that delivering good service and a good product to customers is still a fundamental requirement.

### Dining Time

Senior customers are different from younger customers in terms of their dining times.

Since seniors have more leisure time, compared to others, they prefer to dine out during weekdays (Sheridan, 2004). According to the National Restaurant Association, breakfast and lunch are more popular for senior customers than dinner (Fu & Parks, 2001). Additionally, mature travelers seek earlier dining hours, such as earlier starting hours for dinner service and expanded breakfast hours (Prewitt, 2002).

### Suggestions for Restaurant

Prewitt (2002) suggested 10 steps to attract senior customers in the restaurant industry. These steps are based on a report by Frederick J. Demicco and Ray Kavanaugh' report, titled "The Mature Customer and the Mature Worker in the Hotel and Restaurant Industry". The steps to boost restaurant patronage by mature consumers are below:

- *Improve lighting in dining rooms and parking lots*
- *Print menus with larger type size and non-glare lamination*
- *Consider equipping tables with customer-operated halogen lamps*
- *Consider providing magnifying menu overlays*
- *Offer softer foods*
- *Implement earlier dinner hours*

- *Serve less spicy foods with less fat for guests older than 70*
- *Enhance the flavor of food with more texture, colors, herbs, and spices for guests aged 60 to 70*
- *Add salt substitutes to the table*
- *Restrict noise when possible*

Knutson and Patton (1993) found similar suggestions from senior customers. Due to deteriorated vision ability, seniors responded that good lighting and easy-to-read menus are important improvements for restaurants. Additionally, most seniors want the restaurant staff to speak louder, more distinctly, and directly to them. This is because hearing can become a problem as people age, and the overall noise level in restaurants is often high.

### Customer Satisfaction in the Restaurant Industry

Since customer satisfaction is an important topic both for researchers and for companies (Webster, 1994), a great deal of research has been devoted to this subject. Customer satisfaction is a crucial criterion for evaluating the quality of a product and service that is delivered to customers (Vavra, 1997). It is generally defined as the consumer's response to the evaluations and the actual performance of the product and service after its consumption

(Gundersen, Heide, & Olsson, 1996). Therefore, evaluating customers' satisfaction levels and applying that knowledge, is an important starting point. It is vital to not only to understand a customer's needs; but also to maintain long-term customer retention and brand loyalty, and to establish positive word-of mouth recommendations (Hennig-Thurau & Klee, 1997).

Recently, numerous researchers have applied customer satisfaction theories to the hospitality and tourism industries (Oh, Kim, & Shin, 2004; Pizam & Ellis, 1999). For example, restaurant customers may be more sensitive about obtaining value for money compared to the food and service quality given (Kivela, Inbakaran, & Reece, 1999). For the restaurant industry in popular vacation places, service quality is the most significant factor for determining dining satisfaction for tourists. This is followed by product quality, hygiene, menu diversity, price-value and convenience (Yuksel & Yuksel, 2002). According to Yuksel and Yuksel, the most significant determinant of restaurant satisfaction for 'healthy food seekers' (2002), derived from cluster analysis, is service quality, followed by product quality, facilities and menu diversity. One research study identified distinctive characteristics of senior customers in the restaurant industry. Fu and Parks (2001) attempted to apply the SERVQUAL instrument to senior customers, and found only 3 dimensions out of Parasuranman, Zeithaml, and Berry's five dimensions (reliability, responsiveness, assurance, empathy, and tangibles) (1988). Only tangibles remained in the first dimension of their

model. Reliability and responsiveness were merged into a second dimension, and assurance and empathy were grouped into a third dimension. This could be evidence that senior customers differ from others in terms of their perceptions of service quality.

### **Health Status and Health Behaviors**

The World Health Organization (WHO, 2006) defined health as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’. This means that a variety of conditions, not only physical but also mental, can influence personal health. Since the definition of health is exceedingly broad, researchers in various industries have studied the relationship between health and consumer behaviors (Hunter-Jones & Blackburn, 2007). They found that this relationship becomes more manifest as people get older. In the vehicle industry, one study found that existing health problems influence senior customers’ preferences of vehicle type (Kim et al., 2006). According to this study, unhealthy seniors who self-rated their health as bad preferred to buy SUVs. In the tourism industry, Hallab (2000) found that there is a relationship between healthy living lifestyle and the individual’s travel behaviors. For example, a traveler’s healthy-living behavior explains his/her motives to pursue healthy-living type of travel.

## Health for Seniors in the Restaurant Industry

Health is also an important factor in the restaurant industry, and several researchers have studied the relationship between health and restaurants for senior customers. According to Technomic, the food industry consulting and research firm, seniors rank above average for ordering healthier food and requiring complete nutritional information on restaurant menus. Health and dietary concerns, such as heart disease, gastrointestinal difficulties, and diabetes; can impact menu selections in restaurants (Lahue, 2000). Moreover, younger seniors (the older baby boomers) who have recently joined this segment, are more likely than others to believe that natural food is better for them. This is because naturalness and a 'green' orientation are one of the boomers' consumer characteristics.

In a study regarding perceptions of healthier nutrition for senior customers in restaurants, Knutson and Patton (1993) researched the foods that senior customers like to order (Table 2.2).

**Table 2.2 What the Senior Market Orders (Nutrition Driven)**

<b>Nutrition Driven</b>	<b>Total Percent</b>
Low Fat or Skim Milk	60.5
Senior Citizen Menu	60.3
Low Cholesterol Meals	59.0
Small or Half-Size Portions	50.3
Low Calorie Meals	44.4
Low or No Salt Meals	39.5
Low Fat or Low Calorie Desserts	30.7
Cocktail Before or After Dinner	9.2
Wine or Beer	7.5

Source: Knutson and Patton (1993)

As shown in table 2 above, it is obvious that seniors are concerned about their health. In addition, they like to base their healthy eating behavior on nutrition facts. Most of them tend to order meals that are low in fat and calories; while very few order alcoholic beverages such as cocktails, wine, and beer.

One particular study looked at restaurant selection factors for travelers, using cluster analysis with mixed-aged subjects (Yuksel & Yuksel, 2002). The authors found that travelers in the 'healthy food seeker' cluster search for restaurants which offer healthy food choices. Noticeably, price is not important for this group when they select a restaurant. It may be



interpreted from this that health-conscious customers do not care about the price as long as healthier menus are provided.

### Perceived Health Status

Measuring customers' health condition accurately is a controversial topic because the self-rated health status may be affected by the potential bias of the respondents (Kim et al., 2006). According to Ferraro (1980), self-rated health ranking are sometimes different from physicians' ratings, which means that there may be a difference between 'perceived' or 'subjective' health status, and 'actual' or 'objective' health status. Seniors tend to report a relatively high level of self-rated health status, even though they experience a number of chronic sickness and mobility restrictions (Hunter-Jones & Blackburn, 2007). Self-ratings of health are also significantly affected by several socio-demographics characteristics (Ferraro, 1980). For instance, seniors who have a high level of education are more likely than others to report better health. Moreover, older seniors tend to express a more positive view of their own health than younger seniors. The differences also exist between male seniors and female seniors. According to Fillenbaum (1979), women tend to tolerate more health problems than men within similar categories of self-rated health.

To measure a senior's overall health status, many researchers (Jang et al., 2007; Kim et

al., 2006) asked respondents only the following one question:

*“Would you say your health in general is excellent, very good, good, fair, or poor?”*

The answers to this question are coded on the five point scale. Even though the answers may be affected by the potential bias of respondents, some researchers argue for the validity of the self-rated health measure, which is positively correlated with the evaluation of health care specialists (Ferraro, 1980; Hoeymans, Feskens, Kromhout, & Van Den Bos, 1997) and the incidence of serious illness (Hurd & McGarry, 1995). However, most studies have showed that this single-item health measure has poor reliability (Ware, 1976). Thus, this study will use the Health Perceptions Questionnaire (HPQ) instrument designed by Ware (1976), in order to measure the self-rating health status more precisely. Based on factor analysis, this instrument has eight subcategories (current health, prior health, resistance/susceptibility, health outlook, health worry/concern, sickness orientation, rejection of sick role, and attitude toward going to the doctor) with 32 items. According to the author, the HPQ has both high validity and high reliability and many researchers used the HPQ or the current health status, the subscale of this instrument, to examine perceived health status (Duffy, 1988; Frank-Stromberg, Pender, Walker, & Sechrist, 1990; Killeen, 1989; Smith, Wallston, & Smith, 1995; Zindler-Wernet & Weiss, 1987).

## Health Behavior

A number of researchers have defined health behavior as behavior geared toward health promotion and illness prevention (Grembowski et al., 1993; Padula, 1997). Healthy behavior includes frequent exercise, preventative care, overcoming smoking addiction, reducing alcohol consumption, and maintaining moderate weight levels. These behaviors can help seniors to decrease their risk of illness or death (Grembowski et al., 1993). Researchers have tried to develop instruments to measure health behavior, such as the Health-promoting Lifestyle Profile (HPLP) (Walker, Sechrist, & Pender, 1987) and the Health-Promotion Activities of Older Adults Measure (Padula, 1997).

## Measuring Health Behavior

The Health-Promoting Lifestyle Profile (HPLP) is an instrument to measure participation in health promotion which contains 48 items within six subscales (Walker et al., 1987). However, some researchers have argued that they are concerned about the validity of some items in this instrument because they are not appropriate for use in a senior population study (Padula, 1997). Padula (1997) developed the Health-Promotion Activities of Older

Adults Measure; an instrument to measure participation in health promotion for seniors. This has 44 items grouped into five subscales: Collaborative Health Management/Injury Prevention, Stress Reduction/Rest and Relaxation, Exercise, Substance Abuse Prevention, and Nutrition. Notably, some items from the nutrition subscale in this instrument are closely related with health-related restaurant selection characteristics. For example, this instrument includes questions such as ‘Avoid tobacco smoke’, ‘Avoid foods that I should not eat’, and ‘Eat foods that are good for my health’.

### Predictors of Health Behaviors

In order to predict health behavior several factors have been studied (Marks & Lutgendorf, 1999). Demographic factors such as gender, education, and economic status have been identified as significant predictors of health outcomes for seniors. Higher levels of income and education are also positively correlated with health behaviors for seniors (Grembowski et al., 1993). According to Hallab (2000), individuals with healthier living styles tend to be a female, have a higher level of income, be a married couple and have a higher level of education.

The Perceived Health Competence Scale (PHCS) is also a significant predictor of health behaviors (Marks & Lutgendorf, 1999). The PHCS is an instrument to measure to what

degree an individual feels capable of effectively influencing his or her personal health outcomes (Smith et al., 1995). According to Smith, Wallston, and Smith (1995), the PHCS is negatively correlated with age and positively correlated with health status. Also, individuals at high levels in the PHCS are more likely to approach their life positively and to have a better psychosocial well-being. Moreover, the PHCS predicts individuals' health intentions and health behaviors. This study will use the PHCS as an independent variable to measure senior's attitude regarding health.

Marks (1999) applied PHCS and health behaviors to seniors. In this study to measure health behaviors, the author used the Personal Lifestyle Questionnaire (PLQ). Additionally, to adjust the PLQ for use with senior subjects, the author added several health-related questions such as 'Monitor your salt intake', 'Monitor cholesterol levels', and 'Limit fat intake in diet'. He identified that the PHCS was significantly correlated with health behaviors for seniors. This means that seniors who are at high levels in the PHCS are more likely to have more frequent exercise, pay greater attention to dietary and health promotion, and have more relaxation/social support. In this study, perceived health status was also associated with both PHCS and health behaviors. In other words, healthy seniors tend to care about healthier food and health information, compared to unhealthy seniors.

## **Summary**

The beginning of this chapter focused on the importance of the senior market in the restaurant industry. Several characteristics of senior customers were also presented and factors that influence a senior's choice of restaurant were discussed. At the same time, several studies about senior's perception for health and health behaviors were presented. Among discussed instruments, this study will use the PHC instrument and the PHCS instrument to measure perceived health status and health attitudes of seniors.

## CHAPTER III

### METHODOLOGY

This chapter provides research questions, the theoretical framework and hypotheses for this study. Also, the research design, along with the instruments, and methods of data analysis, are discussed.

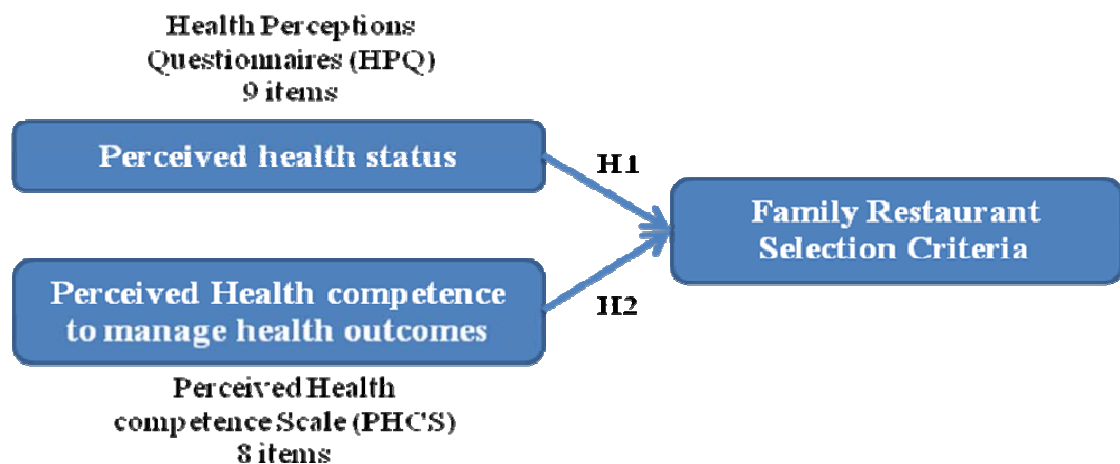
#### Research Questions

1. Does the perceived health status of seniors influence family restaurant selection criteria?
2. Does the perceived competence to manage health-promoting behaviors relate to family restaurant selection criteria?

#### Theoretical Framework

Figure 3.1 illustrates the theoretical framework for this study.

**Figure 3.1 Theoretical Framework**



This study has two main tests. The first test will try to identify a relationship between

perceived health status and restaurant selection. Another test will examine the relationship between customers' attitudes toward health measured by PHCS, and restaurant selection.

The reason why this type of restaurant was selected is that family restaurants provide more opportunity to study the interaction between customers and employees than fast-food restaurants. Also, Shank and Nahhas (1994) found that seniors were more likely than those younger than 55 to eat at family restaurants. Family restaurants are defined as a table service restaurant with lower-priced menus than restaurants more upscale restaurants. They may also provide self-service in the form of salad bars and dessert bars. The concept of a family restaurant is to cater to the family group. Thus, they usually offer a variety of items on the menu to appeal to family members from parent, to child, to grandparent. The atmosphere in family restaurants tends to be informal, with cheerful and bright decorations (Barrows & Powers, 2009, pp. 83-84; Dittmer, 2002, p. 126).

### **Dependent Variables**

The dependent variables of health-related restaurant selection characteristics and food price were derived from previous studies. All health-related items were derived from Yuksel and Yuksel' study (2002) and Knutson and Patton (1993). The items are listed below:

- *Using fresh ingredients,*
- *Availability of healthy food*
- *Availability of low or no salt meals*
- *Availability of low cholesterol meals*
- *Availability of low calorie meals*



- *Availability of organic food*
- *Availability of small or half-size portions*
- *Availability of non-smoking area*
- *Availability of nutrition information*
- *Food price*

## **Independent Variables**

The independent variables are listed below:

- *Health Perceptions Questionnaires (HPQ)*
- *Perceived Health Competence Scale (PHCS)*

## **Research Hypotheses**

The research hypotheses for this study are derived from the literature review. There are two main hypotheses and each main research hypothesis has several sub-hypotheses. The first research hypothesis and 12 sub-hypotheses relating to the relationship between the HPQ and the health-related restaurant selection items are as follow:

Main Hypothesis 1: There is a relationship between the HPQ and the health-related family restaurant selection criteria.

Hypothesis 1-1: HPQ is positively correlated with using fresh ingredients.

Hypothesis 1-2: HPQ is positively correlated with availability of healthy food.

Hypothesis 1-3: HPQ is positively correlated with availability of low or no salt meals.

Hypothesis 1-4: HPQ is positively correlated with availability of low cholesterol meals.

Hypothesis 1-5: HPQ is positively correlated with availability of low calorie meals.

Hypothesis 1-6: HPQ is positively correlated with availability of organic food.

Hypothesis 1-7: HPQ is positively correlated with availability of small or half-size portions.

Hypothesis 1-8: HPQ is positively correlated with availability of nutrition information.

Hypothesis 1-9: HPQ is positively correlated with availability of non-smoking area.

Hypothesis 1-10: There is no relationship between HPQ and food price.

Hypothesis 1-11: There is a relationship between HPQ and price for healthy foods.

Hypothesis 1-12: There is a relationship between HPQ and willingness to pay more money for healthy choices.

The second main hypothesis and 12 sub-hypotheses relating to the relationship between the PHCS and the health-related family restaurant selection items are as follow:

Main Hypothesis 2: There is a relationship between the PHCS and the health-related family restaurant selection criteria.

Hypothesis 2-1: PHCS is positively correlated with using fresh ingredients.

Hypothesis 2-2: PHCS is positively correlated with availability of healthy food.

Hypothesis 2-3: PHCS is positively correlated with availability of low or no salt meals.

Hypothesis 2-4: PHCS is positively correlated with availability of low cholesterol meals.

Hypothesis 2-5: PHCS is positively correlated with availability of low calorie meals.

Hypothesis 2-6: PHCS is positively correlated with availability of organic food.

Hypothesis 2-7: PHCS is positively correlated with availability of small or half-size portions.

Hypothesis 2-8: PHCS is positively correlated with availability of nutrition

information.

Hypothesis 2-9: PHCS is positively correlated with availability of non-smoking area.

Hypothesis 2-10: There is no relationship between PHCS and food price.

Hypothesis 2-11: There is a relationship between PHCS and price for healthy foods.

Hypothesis 2-12: There is a relationship between PHCS and willingness to pay more money for healthy choices.

## **Research Design**

An online survey was conducted for the research. A self-administered questionnaire was distributed and then collected from seniors by a commercial survey company (Zommerang). Convenience sampling will be used in this study, and subjects will be politely asked to participate in the survey. Convenience sampling means using a sampling procedure to obtain units or people who are most conveniently available (Zikmund, 2003, p. 380).

## **Pilot Study**

A pilot study was conducted to test the validity and reliability of the survey instrument. To check the validity of the HPQ and the PHCS, the questionnaire also included two more items, asking overall perceived health status and overall perceived health competence. The first draft of the questionnaire was distributed to five faculty members at the department of

Hospitality and Tourism Management in the Virginia Polytechnic Institute and State University. Then twenty graduate students from the department of Hospitality and Tourism Management in the Virginia Polytechnic Institute and State University completed the instrument. The reviewing process was helpful for input regarding features such as wording, layout, and comprehension of the listed items. The questionnaire was adjusted based on these results.

### **Population and Sample**

The population consists of senior customers at least 55 years old. The subjects of sample are members of survey panels of the Zoomerang.

### **Instrumentation**

The Questionnaire consists of three major areas: HPQ and PHCS, restaurant selection items, and general information about the respondents.

In the first part of questionnaire, respondents were required to answer questions related to the HPQ (the self-rating health status) and the PHCS.

To measure the HPQ, this study only used the current health subcategory, which consists of nine items, out of the eight total subcategories (current health, prior health, resistance/susceptibility, health outlook, health worry/concern, sickness orientation, rejection of sick role, and attitude toward going to the doctor). There are nine items listed below:

Question 1: *According to the doctors I've seen, my health is now excellent*

Question 2: *I feel better now than I ever have before*

Question 3: *I am somewhat ill.*

Question 4: *I'm not as healthy now as I used to be.*

Question 5: *I'm as healthy as anybody I know.*

Question 6: *My health is excellent.*

Question 7: *I have been feeling bad lately.*

Question 8: *Doctors say that I am now in poor health.*

Question 9: *I feel about as good now as I ever have.*

Each question was accompanied by a five point scale: definitely true, mostly true, don't know, mostly false, and definitely false.

To measure seniors' attitudes towards health outcomes, this study used the PHCS. This is because the PHCS has short items, is easily administered, and is an important factor in predicting certain health behaviors for seniors (Marks & Lutgendorf, 1999; Smith et al., 1995). The eight items, arrived at by combining both outcomes and behavioral expectancies, are listed below:

Question 1: *I handle myself well with respect to my health.*

Question 2: *No matter how hard I try, my health just doesn't turn out the way I would like.*

Question 3: *It is difficult for me to find effective solutions to the health problems that come my way.*

Question 4: *I succeed in the projects I undertake to improve my health.*

Question 5: *I'm generally able to accomplish my goals with respect to my health.*

Question 6: *I find my efforts to change things I don't like about my health are ineffective.*

Question 7: *Typically, my plans for my health don't work out well.*

Question 8: *I am able to do things for my health as well as most other people.*

Each item will be asked using the five-point Likert response scale ranging from ‘strongly disagree’ to ‘strongly agree’.

Section two measured the importance of each restaurant selection item with the five-point Likert response scale (1, not at all important; 2, somewhat important; 3, moderately important; 4, very important; 5, extremely important). The literature suggests that the Likert-type scale can be used for measuring people’s attitudes because they are easy to build and analyze (Kozak & Rimmington, 2000).

Section three measured the demographic characteristics of the subjects. This includes age, discretionary income, number of people in household, marital status, education level, and working status (working or retired).

### **Data Analysis**

Data was coded and analyzed using the Statistical Packages for Social Sciences (SPSS) software. First, descriptive analysis of all the variables was used. Factor analysis was conducted for the HPQ, PHCS, and health-related family restaurant selection criteria. Then, Pearson’s correlation coefficient analysis was also conducted to verify each research hypothesis, the relationships between the HPQ, HPQ, and family restaurant selection criteria.

## **CHAPTER IV**

### **RESULTS**

This chapter presents the results of the senior survey, describing the relationship between two presented senior's perceptions, the Health Perceptions Questionnaire (HPQ) and the Perceived Health Competence Scale (PHCS), and family restaurant selection criteria. All analyses were conducted using the SPSS software. This chapter consists of 4 parts: profile of the subjects, validity and reliability tests, interpretation and discussion of the data that were collected, and the results of each research hypothesis testing.

First, demographic characteristics of respondents are presented. Then the two research questions and hypotheses are examined. The first research question addressed the relationship between the HPQ and family restaurant selection criteria among adults aged 55 and over. The second research question assessed the assumption that there would be a relationship between the PHCS and family restaurant selection criteria for senior customers.

#### **Data Collected**

Questionnaires were distributed to the senior survey panels of Zoomerang via online in February 11, 2009. The researcher made sure that Zoomerang distributed the questionnaires only to survey participants, 55 years old and over. A total of 321 completed questionnaires were collected in February 12, 2009. Zoomerang provided the results with Excel file, and it was translated to the Statistical Package for the Social Sciences (SPSS) form.



## Profile of Respondents

The survey participants' demographic information is presented in Table 4.1.

**Table 4.1 Profile of Survey Respondents**

	Variable	Frequency	Percent (%)
<b>Gender</b> (N=321)	Male	201	62.6
	Female	120	37.4
<b>Age</b> (N=321)	55 – 64	130	40.5
	65 – 74	112	34.9
	75 – 84	77	24.0
	85 and Over	2	0.6
<b>Marital Status</b> (N=320)	Married	213	66.4
	Single	107	33.3
<b>Education</b> (N=320)	Less Than High School	2	0.6
	High School Diploma	67	20.9
	Some College	109	34.0
	Bachelors Degree	82	25.5
	Graduate Degree	60	18.7
<b>Occupational Status</b> (N=320)	Working Full-Time	71	22.1
	Working Part-Time	35	10.9
	Retired (Not Working)	214	66.7
<b>Number of people in Household (Include Respondents)</b> (N=321)	1	80	24.9
	2	182	56.7
	3	37	11.5
	4	12	3.7
	5	4	1.2
	6	2	0.6

	7	1	0.3
	9	2	0.6
	11	1	0.3

(Total number of respondents varied due to missing values)

The respondents consisted of 201 senior males (62.6%) and 120 female senior customers (37.4%). Forty-one percent of the respondents (n=130) were between the ages of 55 and 64, 34.9 percent (n=112) were between the ages of 65 and 74; and 24 percent (n=77) were between the ages of 75 to 84. Of the remaining respondents, two (0.6%) were over the age of 85. In terms of marital status, the majority of the respondents (66.4%, n=213) were married while 33.3 percent of respondents (n=107) were single. In regards to education level, the majority of subjects reported they had completed some college (34.0%, n=109), followed by a bachelors degree (25.5%, n=82), high school diploma (20.9%, n=67), graduate degree (18.7%, n=60), and less than high school level (0.6%, n=2). In terms of occupational status, the largest number of respondents was retired (66.7%, n=214), 22.1 percent of respondents (n=71) were currently working full-time, and 10.9 percent (n=35) had a part-time job. Of those responding to the question regarding the number of people in the household, most respondents had two people in their household (56.7%, n=182). While almost 25 percent of respondents lived alone, about 18% lived with two or more people in their household.

Survey respondents reported if they consider themselves to be on a tight budget. Also, discretionary income, and total income per month were asked to respondents. Respondents were allowed to skip those questions due to privacy, so there were several missing values. Table 4.2 describes the results of three financial questions.

**Table 4.2 Financial Profile of Survey Respondents**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
<b><u>I Consider Myself to Be on A Tight Budget (N=321)</u></b>		
<b>Strongly Disagree</b>	19	5.9
<b>Disagree</b>	63	19.6
<b>Neutral</b>	88	27.4
<b>Agree</b>	102	31.8
<b>Strongly Agree</b>	49	15.3
<b><u>Discretionary Income per Month (N=310)</u></b>		
<b>Less than \$ 499</b>	243	75.7
<b>\$ 500 to \$ 999</b>	48	15.0
<b>\$ 1,000 to \$ 1,499</b>	11	3.4
<b>\$ 1,500 to \$ 1,999</b>	3	0.9
<b>More than \$ 2,000</b>	5	1.6
<b><u>Total Income per Month (N=299)</u></b>		
<b>Less than \$ 1,000</b>	19	6.4
<b>\$ 1,000 to \$ 3,999</b>	170	56.9
<b>\$ 4,000 to \$ 6,999</b>	74	24.8
<b>\$ 7,000 to \$ 9,999</b>	20	6.7
<b>More than \$ 10,000</b>	16	5.4

(Total number of respondents varied due to missing values)

Regarding the budget question, almost half of the senior respondents (47.1%, n=151) agreed or strongly agreed that they considered themselves to be on a tight budget. Of the remaining respondents, 88 respondents (27.4%) reported that they were neutral about that statement while 82 respondents (25.5%) disagreed or strongly disagreed with the statement “I consider myself to be on a tight budget.” In terms of discretionary income, most survey participants (75.7%, n=243) had less than \$499 per month. Fifteen percent of respondents (n=48) checked the \$500 to \$999 category, 3.4% (n=11) checked \$1000 to 1,499, 0.9% (n=3)

marked \$1,500 to \$1,999, and 1.6% (n=5) marked the more than \$2,000 category. For total income, the largest number of respondents (56.9%, n=170) made between \$1,000 and \$3,999 per month. 24.8% (n=74) made between \$4,000 and \$6,999, 6.7% (n=20) made between \$7,000 and \$9,999, 6.4% (n=19) made under \$1,000, and 5.4% (n=16) made more than \$10,000.

### **Perceived Health Status**

As described in chapter three, this study used nine items of the Health Perceptions Questionnaire (HPQ) developed by Ware (1976). Four items among nine were phrased negatively (*I am somewhat ill, I'm not as healthy now as I used to be, I have been feeling bad lately, and doctors say that I am now in poor health*). Thus, the scores of those four items were reversed (e.g. 5=Definitely True score was reversed to 1=Definitely False score). An internal reliability analysis for nine items of the HPQ was conducted. The Cronbach's alpha value for nine items was 0.91.

Table 4.3 provides the mean scores for each HPQ item.

**Table 4.3 Mean Scores for Health Perceptions Questionnaires items**

Statement (N=321) $\alpha=0.91$	Mean Score
According to the doctors I've seen, my health is now excellent	3.55
I feel better now than I ever have before	2.92
I am somewhat ill (reversed score)	3.76
I'm not as healthy now as I used to be (reversed score)	2.64
I'm as healthy as anybody I know	3.10
My health is excellent	3.14
I have been feeling bad lately (reversed score)	3.65
Doctors say that I am now in poor health (reversed score)	4.13
I feel about as good now as I ever have	2.81
<u>Average</u>	<b>3.30</b>

(1=Definitely False; 5=Definitely True)

Each statement was accompanied by a five point scale: 1=definitely true, 2=mostly true, 3=don't know, 4=mostly false, and 5=definitely false. The mean scores of four statements phrased negatively were reversed for analysis. The mean scores for statements ranged from 2.64 to 4.13. The highest mean score ( $\bar{x}=4.13$ ) related to the statement *Doctors say that I am now in poor health (reversed score)*, followed by the statement ( $\bar{x}=3.76$ ) *I am somewhat ill (reversed score)*. The lowest mean score ( $\bar{x}=2.64$ ) was the statement *I'm not as healthy now as I used to be (reversed score)*, followed by the statement ( $\bar{x}=2.81$ ) *I feel about as good now as I ever have*. The average score for all nine items was 3.30.

Table 4.4 describes the result for the statement *how would you describe your overall health*.

**Table 4.4 Respondents' Overall Health**

Variable	Frequency	Percent
<b>How Would You Describe Your Overall Health (N=319)</b>		
Very Poor	0	0
Poor	21	6.5
Fair	78	24.3
Good	163	50.8
Very Good	57	17.8
<b>Mean Score: 3.80</b>		

The mean score of respondents' overall health was 3.80. Since the mean score was more than 3.00, senior respondents positively rated their overall health (Ferraro, 1980). To check the ability of the HPQ (see Table 4.3) to correlate with the single-item health measure (see Table 4.4) of the same construct, criterion validity analysis was conducted. To do so, correlation analysis for the two measures was run. As shown in Table 4.5, the correlation between the mean score for the HPQ and the single-item health measure was positive and significant.

**Table 4.5 Correlation between the Mean Score of HPQ and the Single-Item Health**

Measure			
Variables	Pearson Correlation	Sig. (2-tailed)	N
Mean Score for HPQ & Single-item health measure ( <i>How would you describe your overall health</i> )	0.806**	0.000	319

\*\* Correlation is significant at the 0.01 level (2-tailed)

Factor analysis used to explore the interrelationships among variables and to offer an explanation about factors. Also, factor analysis is used to compress the information and

transform those into a smaller set of factors with a minimum loss of information (Hair, Anderson, Tatham, & Black, 1998). In this study, exploratory factor analysis was undertaken for the HPQ data in order to detect the underlying constructs of the HPQ. Table 4.6 shows the result of factor analysis for HPQ.

**Table 4.6 Factor Analysis for HPQ**

Statement (N=321) $\alpha=0.91$	Factor Loading	Eigenvalue	Explained variance by factors (%)
<b><u>Factor one</u></b>			
My health is excellent	.847	5.35	59.383
I feel better now than I ever have before	.812		
I feel about as good now as I ever have	.811		
I'm as healthy as anybody I know	.786		
According to the doctors I've seen, my health is now excellent	.771		
I am somewhat ill	.769		
I have been feeling bad lately	.761		
Doctors say that I am now in poor health	.744		
I'm not as healthy now as I used to be	.612		
<b>KMO</b>	0.906		
<b>Bartlett's test of significance</b>	0.000		

(1=Definitely False; 5=Definitely True)

As shown on table 4.6, only one factor was extracted. Principal component factor analysis with Varimax rotation was used. All items exhibited relatively high factor loadings (> 0.40) and the Cronbach's alpha value for nine items was 0.91. Also, the eigenvalue of the

factor was well above one at 5.35 and the factor accounted for approximately 59% of the total variance. The Kaiser-Meyer-Olkin (KMO) value was 0.906, and Bartlett's test was significant at the 0.00 level. Both results presented the factorability of the matrices being measured (Hair et al., 1998). This factor score for the HPQ was used for the remaining analysis such as measuring the relationship between the HPQ and health-related family restaurant selection criteria.

### **Health Attitude**

To measure seniors' attitude towards health outcomes, this study used the Perceived Health Competence Scale (PHCS) instrument designed by Smith et al., (1995). The PHCS measures people's attitude regarding competence to manage health-promoting behaviors. Like the HPQ items, four items among eight PHCS items were phrased negatively (*No matter how hard I try, my health just doesn't turn out the way I would like, It is difficult for me to find effective solutions to the health problems that come my way, I find my efforts to change things I don't like about my health are ineffective, and Typically, my plans for my health don't work out well*). Accordingly, the scores of those 4 items were reversed (e.g. 5=Strongly Agree score was reversed to 1=Strongly Disagree score). Also, the internal reliability analysis for eight items of the PHCS was conducted. The Cronbach's alpha value for eight items was 0.89.

Table 4.7 presents mean scores for each PHCS item.



**Table 4.7 Mean Scores for Perceived Health Competence Scale items**

Statement (N=321) $\alpha=0.89$	Mean Score
I handle myself well with respect to my health	3.96
No matter how hard I try, my health just doesn't turn out the way I would like (reversed score)	3.42
It is difficult for me to find effective solutions to the health problems that come my way (reversed score)	3.62
I succeed in the projects I undertake to improve my health	3.50
I'm generally able to accomplish my goals with respect to my health	3.60
I find my efforts to change things I don't like about my health are ineffective (reversed score)	3.44
Typically, my plans for my health don't work out well (reversed score)	3.57
I am able to do things for my health as well as most other people	3.76
<u>Average</u>	<b>3.61</b>

(1=Strongly Disagree; 5=Strongly Agree)

Each statement was measured by a 5-point Likert response scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. The mean scores of four statements phrased negatively were reversed for analysis. The mean scores for statements had similar scores ranging from 3.42 to 3.96. The highest mean score ( $\bar{x}=3.96$ ) related to the statement *I handle myself well with respect to my health*, followed by the statement ( $\bar{x}=3.76$ ) *I am able to do things for my health as well as most other people*. The lowest mean score ( $\bar{x}=3.42$ ) was the statement *No matter how hard I try, my health just doesn't turn out the way I would like (reversed score)*, followed closely by the statement ( $\bar{x}=3.44$ ) *I find my efforts to change things I don't like about my health are ineffective (reversed score)*. The mean score for the PHCS was 3.61. Like the mean score for the HPQ, this average score was also applied for the remaining analysis.

Table 4.8 presents the result for the statement *how would you describe your overall competence to manage health-promoting behavior*.

**Table 4.8 Respondents' Overall Health Competence**

Variable	Frequency	Percent
<b>How Would You Describe Your Overall Competence to Manage Health-Promoting Behaviors (N=320)</b>		
Very Poor	0	0
Poor	7	2.2
Fair	92	28.7
Good	167	52.0
Very Good	54	16.8
<b>Mean Score: 3.84</b>		

The mean score of respondents' overall health competence was 3.84. The criterion validity analysis was conducted to check the ability of the PHCS (see Table 4.7) to correlate with the single-item health competence measure (see Table 4.8) of the same construct. The correlation analysis for the two measures was run to verify the criterion validity. As shown in Table 4.9, the correlation between the mean score of PHCS and the single-item health competence measure was significant.

**Table 4.9 Correlation between the Mean Score for PHCS and the Single-Item Health Competence Measure**

Variables	Pearson Correlation	Sig. (2-tailed)	N
<b>Mean Score for PHCS &amp; Single-item health competence measure (<i>How would you describe your overall competence to manage health-promoting behaviors</i>)</b>	0.661**	0.000	320

\*\* Correlation is significant at the 0.01 level (2-tailed)

Table 4.10 shows the result of exploratory factor analysis for PHCS in order to detect

the underlying constructs of the PHCS.

**Table 4.10 Factor Analysis for PHCS**

Statement (N=321) $\alpha=0.87$	Factor Loading	Eigenvalue	Explained variance by factors (%)
<b><u>Factor one</u></b>			
Typically, my plans for my health don't work out well	0.810	3.923	56.037
It is difficult for me to find effective solutions to the health problems that come my way	0.792		
No matter how hard I try, my health just doesn't turn out the way I would like	0.786		
I succeed in the projects I undertake to improve my health	0.747		
I find my efforts to change things I don't like about my health are ineffective	0.742		
I am able to do things for my health as well as most other people	0.727		
I handle myself well with respect to my health	0.619		
<b>KMO</b>	<b>0.848</b>		
<b>Bartlett's test of significance</b>	<b>0.000</b>		

(1=Strongly Disagree; 5=Strongly Agree)

As shown on table 4.10, only one factor was extracted. Principal component factor analysis with Varimax rotation was used. One item, *I'm generally able to accomplish my goals with respect to my health*, was deleted because it was loaded in two components. All items exhibited relatively high factor loadings (> 0.40), and the Cronbach's alpha value for nine items was 0.87. Also, the eigenvalue of the factor was well above one at 3.923 and the factor accounted for approximately 56% of the total variance. The KMO value was 0.848, and Bartlett's test was significant at the 0.00 level. Both results presented the factorability of

the matrices being measured (Hair et al., 1998). This factor score for the PHCS was used for the remaining analysis such as measuring the relationship between the PHCS and health-related family restaurant selection criteria.

A correlation analysis was conducted to check the relationship between the factor score of HPQ and the factor score of PHCS. As shown in Table 4.11, the factor score for HPQ was significantly correlated with the factor score for PHCS.

**Table 4.11 Correlation between the HPQ and the PHCS**

Variables	Pearson Correlation	Sig. (2-tailed)	N
Factor Score for HPQ & Factor Score for PHCS	0.721**	0.000	321

\*\* Correlation is significant at the 0.01 level (2-tailed)

### **Health-Related Family Restaurant Selection Criteria**

As described in chapter three, nine health-related family restaurant selection criteria were measured by a five-point Likert response scale (1=not at all important, 2=somewhat important, 3=moderately important, 4=very important, and 5=extremely important). An internal reliability analysis for the nine restaurant selection criteria was conducted. The Cronbach's alpha value for nine items was 0.89.

Table 4.12 shows the mean scores for health-related family restaurant selection criteria and average score for all selection criteria.

**Table 4.12 Mean Scores for Health-Related Family Restaurant Selection Criteria**

Criterion (N=321) $\alpha=0.89$	Mean Score	Rank
Availability of Non-smoking Area	4.10	1
Using Fresh Ingredients	3.88	2
Availability of Healthy Food	3.57	3
Availability of Low Cholesterol Meals	3.17	4
Availability of Nutrition Information	3.13	5
Availability of Low Calorie Meals	3.11	6
Availability of Low or No Salt Meals	3.08	7
Availability of Small or Half-Size Portions	3.02	8
Availability of Organic Food	2.20	9
<u>Average</u>	<b>3.25</b>	

(1=Not At All Important; 5=Extremely Important)

All selection criteria had scores ranging from 4.10 to 2.20. The highest mean score ( $\bar{X}=4.10$ ) related to the criterion *Availability of non-smoking area*, followed by the criterion ( $\bar{X}=3.88$ ) *Using fresh ingredients* and by the criterion ( $\bar{X}=3.57$ ) *Availability of healthy food*. Three criteria (*Availability of Low Cholesterol Meals*, *Availability of Nutrition Information*, and *Availability of Low Calorie Meals*) had similar mean scores ( $\bar{X}=3.17$ ,  $\bar{X}=3.13$ , and  $\bar{X}=3.11$  respectively). The lowest mean score ( $\bar{X}=2.20$ ) was the criterion *Availability of Organic Food*, followed by the criterion ( $\bar{X}=3.02$ ) *Availability of Small or Half-Size Portions* and by the criterion ( $\bar{X}=3.08$ ) *Availability of Low or No Salt Meals*. The average score for all selection criteria was 3.25.

Exploratory factor analysis was undertaken for health-related family restaurant selection criteria data. Table 4.13 shows the result of factor analysis for health-related family

restaurant selection criteria.

**Table 4.13 Factor Analysis for Health-Related Family Restaurant Selection Criteria**

Statement (N=321) $\alpha=0.89$	Factor Loading	Eigenvalue	Explained variance by factors (%)
<b><u>Factor one</u></b>			
Availability of Low Cholesterol Meals	0.878	4.958	55.088
Availability of Low Calorie Meals	0.870		
Availability of Low or No Salt Meals	0.849		
Availability of Nutrition Information	0.810		
Availability of Healthy Food	0.779		
Availability of Organic Food	0.693		
Availability of Small or Half-Size Portions	0.650		
Using Fresh Ingredients	0.606		
Availability of Non-smoking Area	0.419		
<b>KMO</b>	0.893		
<b>Bartlett's test of significance</b>	0.000		

(1=Not At All Important; 5=Extremely Important)

As shown on table 4.13, only one factor was extracted. Principal component factor analysis with Varimax rotation was used. All items exhibited relatively high factor loadings (> 0.40) and the Cronbach's alpha value for nine items was 0.89. Also, the eigenvalue of the factor was well above one at 4.958 and the factor accounted for approximately 55% of the total variance. The Kaiser-Meyer-Olkin (KMO) value was 0.893, and Bartlett's test was significant at the 0.00 level. Both results presented the factorability of the matrices being

measured (Hair et al., 1998). This factor score for the health-related family restaurant selection criteria was used for the remaining analysis.

## Food Price

The importance of food price as the family restaurant selection criterion was measured with a five-point Likert scale ranging from not at all important to extremely important.

Table 4.14 presents the mean scores for the importance of food price as the family restaurant selection criterion.

**Table 4.14 Mean Score for Food Price**

Statement (N=318)	Mean Score
How important are lower priced items when selecting a family restaurant	4.02

(1=Not At All Important; 5=Extremely Important)

As presented in Table 4.14, the mean score for the food price was 4.02. This score was higher than the scores of any of the health-related family restaurant selection criteria (see Table 4.12).

Table 4.15 describes seniors' attitudes in terms of food price and the healthy menu items. Two statements were accompanied by five point scales: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree.

**Table 4.15 Senior’s Attitude about Food Price and Healthy Menu Items**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
<b><u>Having lower prices than other family restaurants is more important than having healthy menu items (N=321)</u></b>		
<b>Strongly Disagree</b>	54	16.8
<b>Disagree</b>	112	34.9
<b>Neutral</b>	90	28.0
<b>Agree</b>	50	15.6
<b>Strongly Agree</b>	15	4.7
		<b>Average = 2.56</b>
<b><u>I am willing to pay more money at a family restaurant if the menu includes healthy choices (N=321)</u></b>		
<b>Strongly Disagree</b>	16	5.0
<b>Disagree</b>	55	17.1
<b>Neutral</b>	84	26.2
<b>Agree</b>	130	40.5
<b>Strongly Agree</b>	36	11.2
		<b>Average = 3.36</b>

(1=Strongly Disagree; 5=Strongly Disagree)

About 51.7 percent of the senior respondents (n=166) either disagreed or strongly disagreed that having lower prices than other family restaurants is more important than having healthy menu items, while only 20.3% (n=65) agreed or strongly agreed with this statement. The average score for the first statement was 2.56.

In terms of willingness to pay more money for healthy choices, 40.5 percent of the senior participants (n=130) agreed that they are willing to pay more money at a family restaurant if the menu includes healthy choices. About 26.2% (n=84) reported that they were



neutral for the statement, 17.1% (n=55) disagreed, 11.2% (n=36) agreed, and only 5% (n=16) strongly disagreed for the statement. The average score for the second statement was 3.36.

## **The Relationship between HPQ and Health-Related Family Restaurant Selection Criteria**

### Research Question One

*Does the perceived health status of seniors influence family restaurant selection criteria?*

*Research Hypothesis 1: There is a relationship between HPQ and health-related family restaurant selection criteria.*

*Hypothesis 1-1: HPQ is positively correlated with fresh ingredients.*

*Hypothesis 1-2: HPQ is positively correlated with availability of healthy food.*

*Hypothesis 1-3: HPQ is positively correlated with availability of low or no salt meals.*

*Hypothesis 1-4: HPQ is positively correlated with availability of low cholesterol meals.*

*Hypothesis 1-5: HPQ is positively correlated with availability of low calorie meals.*

*Hypothesis 1-6: HPQ is positively correlated with availability of organic food.*

*Hypothesis 1-7: HPQ is positively correlated with availability of small or half-size portions.*

*Hypothesis 1-8: HPQ is positively correlated with availability of nutrition information.*

*Hypothesis 1-9: HPQ is positively correlated with availability of non-smoking area.*

To test the first research hypothesis, a series of twelve sub-hypotheses were generated. Pearson's correlation coefficient analysis was conducted on the sub-hypotheses.

Table 4.16 shows the results of correlation coefficient analyses for the HPQ and each selection criterion.

**Table 4.16 Correlation between the HPQ and the Health-related Family Restaurant Selection Criteria**

Variables	Pearson Correlation	Sig. (2-tailed)	N
HPQ & Using Fresh Ingredients	0.241**	0.000	321
HPQ & Availability of Healthy Food	0.249**	0.000	321
HPQ & Availability of Low or No Salt Meals	0.079	0.157	321
HPQ & Availability of Low Cholesterol Meals	0.075	0.181	321
HPQ & Availability of Low Calorie Meals	0.116*	0.037	321
HPQ & Availability of Organic Food	0.120*	0.032	321
HPQ & Availability of Small or Half-Size Portions	0.244**	0.000	321
HPQ & Availability of Nutrition Information	0.133*	0.017	321
HPQ & Availability of Non-smoking Area	0.054	0.334	321

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

While three of the sub-hypotheses could not be supported, most results supported the stated sub-hypotheses. For example, *using fresh ingredients*, *availability of healthy food*,

*availability of low calorie meals, availability of organic food, availability of small or half-size portions, and availability of nutrition information* variables were positively correlated with the HPQ, but no correlation was detected between *availability of low or no salt meals* and the HPQ, between *availability of low cholesterol meals* and the HPQ, and between *availability of Non-smoking Area* and the HPQ. This means that the hypothesis 3, 4, and 9 could not be supported. In sum, it can be interpreted that those seniors who have a high perceived health status tend to consider *using fresh ingredients, availability of healthy food, availability of low calorie meals, availability of organic food, availability of small or half-size portions, and availability of nutrition information* as important criteria when they select a family restaurant.

### **The Relationship between HPQ and Food Price**

*Hypothesis 1-10: There is no relationship between HPQ and food price*

*Hypothesis 1-11: There is a relationship between HPQ and price for healthy foods.*

*Hypothesis 1-12: There is a relationship between HPQ and willingness to pay more money for healthy choices.*

The results of the correlation analysis for the HPQ and the price-related statements are portrayed in Table 4.17

**Table 4.17 Correlation between the HPQ and Food Price**

Variables	Pearson Correlation	Sig. (2-tailed)	N
HPQ & How important are lower priced items when selecting a family restaurant	-0.043	0.448	321
HPQ & Having lower prices than other family restaurants is more important than having healthy menu items	-0.120*	0.032	321
HPQ & I am willing to pay more money at a family restaurant if the menu includes healthy choices	0.154**	0.006	321

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

The HPQ was statistically not correlated with the food price statement (*how important are lower priced items when selecting a family restaurant*). Thus, the stated hypothesis was supported. However, the HPQ was negatively correlated with the statement *having lower prices than other family restaurants is more important than having healthy menu items*, and positively correlated with the statement *I am willing to pay more money at a family restaurant if the menu includes healthy choices*. This means that sub-hypotheses 11 and 12 were supported, and seniors with a high level of perceived health status are willing to pay more money for healthy menu items.

In sum, based on the results of 12 sub-hypotheses, the first research hypothesis was supported.

To check the validity, Pearson’s correlation coefficient analysis for the HPQ (see Table 4.3) and the factor score of the health-related selection criteria (see Table 4.13) were conducted. Table 4.18 describes the results.

**Table 4.18 Correlation between the HPQ and the Family Restaurant Selection Criterion**

<b>Variables</b>	<b>Pearson Correlation</b>	<b>Sig. (2-tailed)</b>	<b>N</b>
<b>HPQ &amp; Health-related Family Restaurant Selection Criterion</b>	0.191**	0.001	321

\*\* Correlation is significant at the 0.01 level (2-tailed)

The HPQ was significantly correlated with the health-related family restaurant selection criterion. Pearson correlation value was 0.191.

### **The Relationship between PHCS and Health-Related Family Restaurant Selection Criteria**

#### Research Question Two

*Does the perceived competence to manage health-promoting behaviors relate to family restaurant selection criteria?*

*Hypothesis 2: There is a relationship between PHCS and health-related family restaurant selection criteria.*

*Hypothesis 2-1: PHCS is positively correlated with fresh ingredients.*

*Hypothesis 2-2: PHCS is positively correlated with availability of healthy food.*

*Hypothesis 2-3: PHCS is positively correlated with availability of low or no salt meals.*

*Hypothesis 2-4: PHCS is positively correlated with availability of low cholesterol meals.*

*Hypothesis 2-5: PHCS is positively correlated with availability of low calorie meals.*

*Hypothesis 2-6: PHCS is positively correlated with availability of organic food.*

*Hypothesis 2-7: PHCS is positively correlated with availability of small or half-size portions.*

*Hypothesis 2-8: PHCS is positively correlated with availability of nutrition information.*

*Hypothesis 2-9: PHCS is positively correlated with availability of a non-smoking area.*

To test the second research hypothesis, a series of Pearson's correlation coefficient analyses for the second 12 sub-hypotheses was conducted. Table 4.19 illustrates the results of correlation coefficient analyses for the PHCS and each selection criterion.

**Table 4.19 Correlation between the PHCS and the Health-related Family Restaurant Selection Criteria**

Variables	Pearson Correlation	Sig. (2-tailed)	N
PHCS & Using Fresh Ingredients	0.307**	0.000	321
PHCS & Availability of Healthy Food	0.370**	0.000	321
PHCS & Availability of Low or No Salt Meals	0.137*	0.014	321
PHCS & Availability of Low Cholesterol Meals	0.134*	0.016	321
PHCS & Availability of Low Calorie Meals	0.163**	0.003	321
PHCS & Availability of Organic Food	0.177**	0.001	321
PHCS & Availability of Small or Half-Size Portions	0.257**	0.000	321
PHCS & Availability of Nutrition Information	0.203**	0.000	321
PHCS & Availability of Non-smoking Area	0.119*	0.033	321

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Table 4.19 shows that all correlations were statistically significant. This means that all results supported the stated hypotheses. The correlation coefficients ranged from 0.114 to 0.368. Such positive correlations represent that seniors who reported the high PHCS tend to consider *fresh ingredients, availability of healthy food, availability of low or no salt meals, availability of low cholesterol meals, availability of low calorie meals, availability of organic*

food, availability of small or half-size portions, availability of nutrition information, and availability of a non-smoking area as important criteria when they select a family restaurant.

### The Relationship between PHCS and Food Price

*Hypothesis 2-10: There is no relationship between PHCS and food price.*

*Hypothesis 2-11: There is a relationship between PHCS and price for healthy foods.*

*Hypothesis 2-12: There is a relationship between PHCS and willingness to pay more money for healthy choices.*

The results of the correlation analysis for the PHCS and the three price-related statements are portrayed in Table 4.20.

**Table 4.20 Correlation between the PHCS and the Food Price**

Variables	Pearson Correlation	Sig. (2-tailed)	N
PHCS & How important are lower priced items when selecting a family restaurant	-0.074	0.185	321
PHCS & Having lower prices than other family restaurants is more important than having healthy menu items	-0.232**	0.000	321
PHCS & I am willing to pay more money at a family restaurant if the menu includes healthy choices	0.230**	0.000	321

\*\* Correlation is significant at the 0.01 level (2-tailed)

In terms of the correlation between the PHCS and the food price statement *how*



*important are lower priced items when selecting a family restaurant*, no correlation was detected. It seems that regardless of the level of PHCS, seniors seek lower food prices when they select a family restaurant. However, the PHCS was significantly correlated with the two statements, *having lower prices than other family restaurants is more important than having healthy menu items* and *I am willing to pay more money at a family restaurant if the menu includes healthy choices*. This means that those who have a high level of PHCS are willing to pay more money for healthy menu choices when they go to a family restaurant. Therefore, these 3 hypotheses were supported.

In sum, based on the results of 12 sub-hypotheses, the second research hypothesis was supported.

To check the validity of this analysis, Pearson’s correlation coefficient analysis for the PHCS (see Table 4.10) and the factor score of the health-related selection criteria (see Table 4.13) were conducted. Table 4.21 shows the results.

**Table 4.21 Correlation between the PHCS and the Family Restaurant Selection**

		<b>Criterion</b>		
<b>Variables</b>	<b>Pearson Correlation</b>	<b>Sig. (2-tailed)</b>	<b>N</b>	
<b>PHCS &amp; Health-related Family Restaurant Selection Criterion</b>	0.273**	0.000	321	

\*\* Correlation is significant at the 0.01 level (2-tailed)

The PHCS was significantly correlated with the health-related family restaurant selection criterion. Person correlation value was 0.273 which is bigger than the value between

the HPQ and the health-related family restaurant selection criterion. This means that the PHCS has a closer relationship with the health-related family restaurant selection criterion than the HPQ.

## Summary

This chapter presented the study results. First, descriptive analysis of all the variables was used. Then, factor analysis and Pearson's correlation coefficient analysis were conducted to test statistical relationships between the HPQ, PHCS, and health-related family restaurant selection criteria. A summary of the findings is presented in Figure 4.1

**Figure 4.1 A Summary of the Results of Hypotheses Testing and Key Findings**

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### Research Hypothesis 1

There was a significant relationship between the HPQ and aggregate health-related family restaurant selection criterion (supported).

### Hypothesis 1-1

There was a significant relationship between the HPQ and using fresh ingredients (supported).

### Hypothesis 1-2

There was a significant relationship between the HPQ and availability of healthy food (supported).

### Hypothesis 1-3

There was no significant relationship between the HPQ and availability of low or no salt meals (not supported)

### Hypothesis 1-4

There was no significant relationship between the HPQ and availability of low cholesterol meals (not supported)

### Hypothesis 1-5

There was a positive relationship between the HPQ and availability of low calorie meals (supported).

### Hypothesis 1-6

There was a positive relationship between the HPQ and availability of organic food (supported).

### Hypothesis 1-7

There was a significant relationship between the HPQ and availability of half-size portions (supported).

### Hypothesis 1-8

There was a positive relationship between the HPQ and availability of nutrition information (supported).

### Hypothesis 1-9

There was no significant relationship between the HPQ and availability of a non-smoking area (not supported).

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**Hypothesis 1-10**

There was no significant relationship between the HPQ and food price (supported).

**Hypothesis 1-11**

There is a significant relationship between HPQ and price for healthy foods (supported).

**Hypothesis 1-12**

There is a significant relationship between HPQ and willingness to pay more money for healthy choices (supported).

**Research Hypothesis 2**

There was a significant relationship between the PHCS and aggregate health-related family restaurant selection criterion (supported).

**Hypothesis 2-1**

There was a significant relationship between the PHCS and using fresh ingredients (supported).

**Hypothesis 2-2**

There was a significant relationship between the PHCS and availability of healthy food (supported).

**Hypothesis 2-3**

There was a positive relationship between the PHCS and availability of low or no salt meals (supported).

**Hypothesis 2-4**

There was a positive relationship between the PHCS and availability of low cholesterol meals (supported).

**Hypothesis 2-5**

There was a significant relationship between the PHCS and availability of low calorie meals (supported).

**Hypothesis 2-6**

There was a significant relationship between the PHCS and availability of organic food (supported).

**Hypothesis 2-7**

There was a significant relationship between the PHCS and availability of small or half-size portions (supported).

**Hypothesis 2-8**

There was a significant relationship between the PHCS and availability of nutrition information (supported).

**Hypothesis 2-9**

There was a positive relationship between the PHCS and availability of a non-smoking area (supported).

**Hypothesis 2-10**

There was no significant relationship between the PHCS and food price (supported).

**Hypothesis 2-11**

There is a significant relationship between PHCS and price for healthy foods (supported).

**Hypothesis 2-12**

There is a significant relationship between PHCS and willingness to pay more money for healthy choices (supported).

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## **CHAPTER V**

### **Summary and Conclusions**

The previous chapters provided information including a literature review which was related to this study, the proposed theoretical framework, the research questions and hypotheses, the methods used to conduct this study, and an analysis of the statistical results based on the collected data. This chapter contains the following elements: (1) discussion and analysis of the study, (2) recommendations for family restaurant managers, (3) limitations of the study, (4) recommendations for future research, and (5) the conclusions.

The purpose of this study was to investigate the impact of the Health Perceptions Questionnaire (HPQ) and the Perceived Health Competence Scale (PHCS) on health-related family restaurant selection criteria and food price for senior customers. For such a purpose, Pearson's correlation coefficient analysis was utilized to test the relationship between these two perceptions (the HPQ and the PHCS) and family restaurant selection criteria. Furthermore, this study examined how the HPQ and PHCS influence senior's willingness to pay more money for their healthy menu items.

## **Discussion of the Study**

### Family Restaurant Selection Criteria

This study revealed that health-related criteria have a significant impact on family restaurant selection for senior customers, and this is consistent with a previous study by Dipietro and Roseman (2004). Out of several health-related criteria, the availability of non-smoking areas is the most crucial criterion for senior customers. This clearly shows that current governments' policies are following this trend by increasing smoking bans in public places. For example, two states, Virginia and North Carolina, recently decided to impose smoking ban laws in restaurants and bars, even though they are historically both major growers and manufacturers of tobacco (Elan, 2009).

When available on the menu, senior customers like to order meals that are low in cholesterol, low in calories, and contain little or no salt. Mills and Thomas (2008) found that the nutrition information on menus is important for restaurant customers because of increasing concern regarding healthy eating behaviors (Lahue, 2000), and the results of this study supported their findings. Meals using fresh ingredients and healthy food are popular choices for the senior market. In addition, many seniors prefer small or half-size portions since, according to Knutson and Patton (1993), seniors cannot eat as much as younger

restaurant customers or because they are not allowed to eat as much as they used to eat due to their health problems. Even though many senior customers do not order them frequently, meals with organic food still have some appeal for them.

Many studies have shown that food price is one of the critical selection determinants for restaurant customers (Knutson et al., 2006), and the results of the present study appear to match these previous studies. The seniors in the present study regard food price as an important criterion when they select a family restaurant. This may be more common in the current economic freeze. However, in regards to the comparative importance of food price and healthy menu items, most seniors reported that having healthy menu items is more important than having low prices. They also stated that they are willing to pay more money at a family restaurant if the menu includes healthy choices. Thus, this result showed that, even though food price as a selection criterion plays an important role when selecting a family restaurant, senior customers may be willing to go a family restaurant with more expensive healthy menu choices.

#### Correlations between HPQ and Family Restaurant Selection Criteria

Previous studies have shown that seniors tend to consider themselves as having a relatively high level of health status, even though they may suffer from several health

problems (Hunter-Jones & Blackburn, 2007). The current study also revealed that most senior participants report being in a relatively healthy condition. A series of Pearson's correlation coefficient analysis for the first 12 sub-hypothesis was conducted to determine the relationship between the HPQ and family restaurant selection criteria. Based on the result of first 12 sub-hypothesis, this study suggested that there is a significant relationship between the HPQ and health-related family restaurant selection criteria, which means that seniors who rated themselves as having a high level of health status tend to select a family restaurant with healthy meal choices. It may also be interpreted that seniors with good health are more likely to seek healthy food to maintain their good health. On the other side, those who are in poor health may tend not to care about healthy eating behaviors, even though these behaviors may significantly influence their personal health.

In detail, the results of this study partially supported the first 12 sub-hypothesis. There were strong relationships between the level of the HPQ and using fresh ingredients, the availability of healthy food, and the availability of small or half-size portions criteria. Also, the availability of low calorie meals, availability of organic food, and availability of nutrition information criteria were correlated with the HPQ. This reveals that senior customers with good health may consider these variables as important criteria when they select a family restaurant. However, some criteria, such as the availability of meals with little or no salt, the availability of low cholesterol meals, and the availability of non-smoking



areas; showed no relationship with the HPQ. This may be interpreted that most seniors were fully aware of the dangers of salt, cholesterol, and second-hand smoke to their health. As a result, regardless of the level of their health status, they try to avoid meals containing a high level of salt and cholesterol and places which allow smoking. This finding also aligns with the reasons why many restaurants prepare substitute salts on each table and most states have prohibited smoking in public places.

As hypothesized, the HPQ was not correlated with food price, which reflects that, regardless of the level of the HPQ, food price plays a crucial role when senior customers choose a family restaurant. However, the results of this study also revealed that the more healthy seniors are, the more money they are willing to pay for healthy menu items. In other words, this means that senior customers with a high level of health status consider having healthy menu choices to be more important than having lower menu prices when they select a family restaurant.

#### Correlations between PHCS and Family Restaurant Selection Criteria

To measure seniors' health attitudes, this study used the PHCS definition of attitudes regarding the competence to manage health-promotion behaviors. The findings of this study were consistent with the study by Marks and Lutgendorf (1999), revealing that the PHCS

was associated with the HPQ. The results of this study also showed that the PHCS is strongly correlated with the HPQ. This may be explained by the fact that seniors who want to promote their health are likely to maintain good health. Even though there is no hypothesis in the present study related to this correlation, it will be helpful to understand the relationship between health status and health attitudes.

All of the second 12 sub-hypotheses were supported by the analysis of each health-related criterion. Pearson's correlation coefficient analysis showed that the PHCS is significantly correlated with using fresh ingredients, the availability of healthy food, the availability of reduced or zero salt meals, the availability of low cholesterol meals, the availability of low calorie meals, the availability of organic food, the availability of small or half-size portions, the availability of nutrition information, and the availability of non-smoking areas. It makes sense that these health-related criteria are important for seniors who want to improve their health outcome when they select a family restaurant.

As for food price, the PHCS was not found to be correlated with the importance of lower priced items when seniors select a family restaurant. As with the HPQ case, it could be interpreted that no matter what their level of health attitude is, senior customers consider food price as an important criterion when they select a family restaurant. In contrast, the results suggested that there is a positive correlation between the PHCS and the willingness to pay more money for healthy meals. Also, senior customers who have positive health

attitudes place more importance on the availability of healthy meals than on low price when they choose menu items.

Based on the results above, this study concluded that there is a significant relationship between the PHCS and family restaurant selection criteria for seniors. This means that seniors who want to be healthy are more likely to choose healthy meals on menus in family restaurants.

## **Recommendations to Family Restaurants' Managers**

The results of this exploratory study provide useful insights for restaurant managers, especially family restaurant managers, regarding their decisions to promote healthy menus and to target their customers. It is obvious that increasing the number of healthy meals on menus is becoming increasingly important for senior customers. The National Restaurant Association reported, based on a survey of chefs, that offering healthier options is one of the top trends in the restaurant industry for 2009 (National Restaurant Association, 2008). According to Nestle (2009), there are a few health-related suggestions for restaurants. For example, larger portions not only contain more calories, but also encourage people to eat more. Thus, restaurants should reduce the size of their meals. This suggestion is in line with the results of this study that health-related family restaurant criteria are important when senior customers select a family restaurant. Therefore, family restaurants should design new healthy menus to attract senior customers.

After creating healthy menus, the next question would be which senior segments restaurants should focus on when promoting their healthy meals. When targeting senior customers, the results of this study clearly showed that a restaurant with a variety of healthy meal choices should focus on seniors with a high level of health status. In addition, they should take note of health attitudes, in that seniors with good health or a positive attitude

towards health are more likely to choose healthier meals on menus. As for food price, those healthy seniors who want to keep or improve their health status are willing to pay more money for healthy menus. This means that if family restaurants target this specific senior segment, they could sell their healthy meals at higher prices than their regular meals.

### **Limitations of the Study**

There are a few limitations with the present study. First, this study targeted adults aged 55 years old and over and the questionnaire was distributed to them online. This might have caused sample bias because all of the respondents included in this study were familiar enough with Internet use enough to complete an online survey. Due to this ability, it was assumed that they had a relatively high educational level and income level compared with the norm for a senior group. For example, according to U.S. Census Bureau (2008), average income for seniors age 55 and over was about \$3,000 per month in 2007, while average income for the seniors in the present study is around \$4,000 per month. Also, a previous study (Grembowski et al., 1993) found that higher levels of income and education are positively correlated with health outcomes for seniors. Thus, the results of the HPQ and PHCS may have been influenced by these characteristics of the participants.

The second limitation is related to the current economic conditions. Since, during times of economic downturn, customers cut back on spending, price sensitivity may be higher. Consequently, the result involving food price would be biased because of the different price sensitivity of senior customers. This means that the results could change from year to year based on economic status. Therefore, it would be necessary to conduct a similar study when economic conditions improve.

The last limitation is the results of the present study cannot be generalized to other age groups and to other dining segments in that this study only focused on senior groups and the family restaurant segment. Other age groups may have different attitudes toward health-related menus in each dining segment because each age group and each dining segment has their own characteristics. Therefore, it is hard to say that the results of this study can be applied to entire age groups or dining segments.

## **Recommendations for Future Research**

This study focused exclusively on senior customers, since health-oriented consumer behaviors are manifest in the senior segment. However, health issues impact consumer behavior in all age groups (Hunter-Jones & Blackburn, 2007). Accordingly, a study for all age segments may be required to analyze how each age group is affected by health status and health attitudes when selecting restaurants.

The present study only included the family restaurant category and is not representative of all restaurant categories. Thus, the findings of this study cannot be applied to other restaurant categories, such as the fast food industry or the fine dining restaurant industry. As a result, future research is needed to compare whether the results found for family restaurants are different from the results of other restaurant categories. For example, fast food restaurants have been known to serve unhealthy food. Therefore, an examination of the relationship between customers' health status, customer health attitudes, and health-related selection criteria in fast food restaurants would be interesting.

Another suggestion for future research is to measure the gap between intended behaviors and actual behaviors related to health issues. This study did not measure seniors' health-related actual behaviors. In addition, no research has been conducted to discover whether health attitudes are consistent with actual consumer behaviors in the restaurant

industry. For example, while considering themselves as having a relatively positive level of health attitude, some people may perform unhealthy behaviors such as eating junk foods. Therefore, it would be interesting to test whether health attitudes affect actual health behaviors.



## **Conclusions**

Personal health can impact all aspects of consumer behavior (Hunter-Jones & Blackburn, 2007), and this influence is more manifest within the senior market segment. Health issues also greatly influence the restaurant industry (Lahue, 2000). Therefore, the purpose of this study was to investigate how health status and health attitude influence family restaurant selection criteria. In order to measure self-rated health status and health attitude, the HPQ and the PHCS were used. A total of 321 completed questionnaires were collected in February 12, 2009, targeting seniors age 55 and over. Factor analysis, Pearson's correlation coefficient analysis were conducted to analyze the collected data.

Most senior participants reported that health-related family restaurant selection criteria and food price were important when they select a family restaurant. Also, while the HPQ and the PHCS were not correlated with food price in the family restaurant industry, the overall results of this study revealed that health status and health attitude for seniors were positively correlated with health-related family restaurant selection criteria. This reflects that offering healthy meals on menus is more important for senior customers with a high level of health condition or health attitude than other senior customers. The results also showed that healthy senior customers who have a positive health attitude are willing to pay more money for their healthy menu items. Therefore, in order to maximize their profits, managers and

operators of family restaurants need to keep creating healthy items for their menus and promote those items to the segment of the senior market which has a high level of health condition or health attitude.

## REFERENCES

- Abdel-Ghany, M., & Sharpe, D. L. (1997). Consumption patterns among the young-old and old-old. *The Journal of Consumer Affairs*, 31(1), 90.
- Auty, S. (1992). Consumer Choice and Segmentation in the Restaurant Industry. *The Service Industries Journal*, 12(3), 324.
- Barrows, C. W., & Powers, T. (2009). *Introduction to Management in the Hospitality Industry*. Hoboken, New Jersey: John Wiley & Sons.
- Bone, P. F. (1991). Identifying Mature Segments. *The Journal of Consumer Marketing*, 8(4), 19.
- Burritt, C. (2001). Aging boomers reshape resort segment. *Lodging Hospitality*, 57(3), 31.
- Chay, D. (2005). New segments of boomers reveal new mktg. implications. *Marketing News*, 39(5), 24.
- Dipietro, R. B., Roseman, M., & Ashley, R. (2004). A Study of Consumers' Response to Quick Service Restaurants' Healthy Menu Items: Attitudes versus Behaviors. *Journal of Foodservice Business Research*, 7(4), 59.
- Dittmer, P. R. (2002). *Dimensions of the Hospitality Industry*. New York, NY: John Wiley & Sons.
- Duffy, M. (1988). Determinants of health promotion in midlife women. *Nursing Research*, 37(6), 358-362.
- Elan, E. (2009). Smoke bans hot in Va., N.C., but operators stay cool (Publication. Retrieved April 10, 2009, from Nation's Restaurant News: [http://www.nrn.com/landingPage.aspx?coll\\_id=702&keyword=smoking%20ban&id=364524](http://www.nrn.com/landingPage.aspx?coll_id=702&keyword=smoking%20ban&id=364524)

- Ferraro, K. F. (1980). Self-Ratings of Health among the Old and the Old-Old. *Journal of Health and Social Behavior*, 21(4), 377-383.
- Fillenbaum, G. G. (1979). Social Context and Self-Assessments of Health among the Elderly. *Journal of Health and Social Behavior*, 20(1), 45-51.
- Frank-Stromberg, M., Pender, N., Walker, S., & Sechrist, K. (1990). Determinants of health promoting lifestyle in ambulatory cancer patients. *Social Science in Medicine*, 31(10), 1159-1168.
- Fu, Y., & Parks, S. C. (2001). The relationship between restaurant service quality and consumer loyalty among the elderly. *Journal of Hospitality & Tourism Research*, 25(3), 320-336.
- Grembowski, D., Patrick, D., Diehr, P., Durham, M., Beresford, S., Kay, E., et al. (1993). Self-Efficacy and Health Behavior Among Older Adults. *Journal of Health and Social Behavior*, 34(2), 89-104.
- Gundersen, M. G., Heide, M., & Olsson, U. H. (1996). Hotel guest satisfaction among business travelers. *Cornell Hotel and Restaurant Administration Quarterly*, 37(2), 72.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate Data Analysis*. Upper Saddle River, New Jersey: Prentice-Hall, Inc.
- Hallab, Z. A. A. (2000). *An exploratory study of the relationship between healthy-living and travel behavior*. Unpublished Ph.D., Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- Hennig-Thurau, T., & Klee, A. (1997). The Impact of Customer Satisfaction and Relationship Quality on Customer Retention: A Critical Reassessment and Model Development. *Psychology & Marketing (1986-1998)*, 14(18), 737.
- Hoeymans, N., Feskens, E. J. M., Kromhout, D., & Van Den Bos, G. A. M. (1997). Ageing and the relationship between functional status and self-rated health in elderly men. *Social Science & Medicine*, 45(10), 1527-1536.

- Huang, L., & Tsai, H.-T. (2003). The study of senior traveler behavior in Taiwan. *Tourism Management, 24*(5), 561-574.
- Hunter-Jones, P., & Blackburn, A. (2007). Understanding the relationship between holiday taking and self-assessed health: an exploratory study of senior tourism. *International Journal of Consumer Studies, 31*(5), 509-516.
- Hurd, M. D., & McGarry, K. (1995). Evaluation of the subjective probabilities of survival in the Health and Retirement Study. *The Journal of Human Resources, 30*, S268.
- Jang, S., Ham, S., & Hong, G.-S. (2007). Food-Away-From-Home Expenditure of Senior Households in the United States: A Double-Hurdle Approach. *Journal of Hospitality & Tourism Research, 31*(2), 147-167.
- Killeen, M. (1989). Health promotion practices of family care givers. *Health Values, 13*(4), 3-10.
- Kim, E., & Geistfeld, L. (2003). Consumers' Restaurant Choice Behavior and the Impact of Socio-Economic and Demographic Factors. *Journal of Foodservice Business Research, 6*(1), 3-24.
- Kim, H., Lee, J., & Kim, D. (2006). The impact of age and health on vehicle choices among elders. *Journal of Family and Economic Issues, 27*(3), 437.
- Kivela, J., Inbakaran, R., & Reece, J. (1999). Consumer research in the restaurant environment, Part 1: A conceptual model of dining satisfaction and return patronage. *International Journal of Contemporary Hospitality Management, 11*(5), 205.
- Knutson, B., Elsworth, J., & Beck, J. (2006). Restaurant Discounts for Seniors: Perceptions of the Mature Market. *Cornell Hotel and Restaurant Administration Quarterly, 47*(1), 61.
- Knutson, B., & Patton, M. E. (1993). Restaurant can find gold among silver hair: Opportunities in the 55+ market. *Journal of Hospitality and Leisure Marketing, 1*(3), 79-80.

- Koteff, E. (2002). Paying more attention to older customers could turn silver to gold for savvy operators. *Nation's Restaurant News*, 36(29), 29.
- Kozak, M., & Rimmington, M. (2000). Tourist satisfaction with Mallorca, Spain, as an off-season holiday destination. *Journal of Travel Research*, 38(3), 260.
- Lahue, P. (2000). The new mature market. *Restaurant Hospitality*, 84(1), 51.
- Marks, G. R., & Lutgendorf, S. K. (1999). Perceived Health Competence and Personality Factors Differentially Predict Health Behaviors in Older Adults. *Journal of Aging Health*, 11(2), 221-239.
- Mills, J. E., & Thomas, L. (2008). Assessing Customer Expectations of Information Provided On Restaurant Menus: A Confirmatory Factor Analysis Approach. *Journal of Hospitality & Tourism Research*, 32(1), 62-88.
- Moschis, G., Bellenger, C. F., & Bellenger, D. (2003). Restaurant-selection Preferences of Mature Consumers. *Cornell Hotel and Restaurant Administration Quarterly*, 44(4), 51.
- Moschis, G., Lee, E., & Mathur, A. (1997). Targeting the mature market: opportunities and challenges. *The Journal of Consumer Marketing*, 14(4), 282.
- National Restaurant Association. (2000). Restaurant spending (Publication. Retrieved Dec 10, 2008, from National Restaurant Association: <http://www.restaurant.org/research/consumer/spending.cfm>)
- National Restaurant Association. (2008). Industry Forecast Predicts Trends in Healthier Options and "Greener" Restaurants in 2009 (Publication. Retrieved April 5, 2009, from National Restaurant Association: <http://www.restaurant.org/pressroom/pressrelease.cfm?ID=1726>)
- Nestle, M. (2009). On the menu: healthful ideas for restaurants (Publication. Retrieved April 10, 2009, from SFGate.com: <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/04/05/CMKM16EU03.DTL>)

- Oh, H., Kim, B.-Y., & Shin, J.-H. (2004). Hospitality and Tourism Marketing: Recent Developments in Research and Future Directions. *Hospitality Management, 23*, 22.
- Padula, C. (1997). Development of the Health-Promotion Activities of Older Adults Measure. *Public Health Nursing, 14*(2), 123-128.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual: A Multiple-Item Scale For Measuring Consumer Perceptions. *Journal of Retailing, 64*(1), 12.
- Pizam, A., & Ellis, T. (1999). Customer satisfaction and its measurement in hospitality enterprises. *International Journal of Contemporary Hospitality Management, 11*(7), 326.
- Prewitt, M. (2002). Senior moment: Chains forget older customers. *Nation's Restaurant News, 36*(27), 1.
- Shank, M. D., & Nahhas, F. (1994). Understanding The Service Requirements Of The Mature Market. *Journal of Restaurant & Foodservice Marketing, 1*(2), 23.
- Sheridan, M. (2004). Senior Circuit. *Restaurants & Institutions, 114*(13), 70.
- Smith, M. S., Wallston, K. A., & Smith, C. A. (1995). The development and validation of the Perceived Health Competence Scale. *Health Education Research, 10*(1), 51-64.
- Tenser, J. (2006). NEW OLD WON'T GO QUIETLY. *Advertising Age, 77*(1), 20.
- U. S. Census Bureau. (2007). U.S. interim projections by age, sex, race, and hispanic origin. [Electronic Version]. Retrieved September 5, 2008 from <http://www.census.gov/ipc/www/usinterimproj>.
- U. S. Census Bureau. (2008). Historical Income Tables - People [Electronic Version]. Retrieved April 20, 2009 from <http://www.census.gov/hhes/www/income/histinc/p09AR.html>.

- Vavra, T. G. (1997). Improving Your Measurement of Customer Satisfaction: A Guide to Creating, Conducting, Analyzing, and Reporting Customer Satisfaction Measurement Programs. *Academy of Marketing Science. Journal*.
- Walker, S. N. E. R., Sechrist, K. R. P. R., & Pender, N. J. P. F. (1987). The Health-Promoting Lifestyle Profile: Development and Psychometric Characteristics. *Nursing Research, 36*(2), 76.
- Ware, J. E. (1976). Scales for measuring general health perceptions. *Health Services Research 11*(4), 396.
- Webster, F. E., Jr. (1994). Executing the new marketing concept. *Marketing Management, 3*(1), 8.
- WHO. (2006). *Constitution of the world health organization*. Retrieved November 1, 2008, from [http://www.who.int/governance/eb/who\\_constitution\\_en.pdf](http://www.who.int/governance/eb/who_constitution_en.pdf).
- Wolff, C. (2007). Getting Older, Thinking Younger. *Lodging Hospitality, 63*(5), 29.
- Yuksel, A., & Yuksel, F. (2002). Measurement of tourist satisfaction with restaurant services: A segment-based approach. *Journal of Vacation Marketing, 9*(1), 52.
- Zikmund, W. G. (2003). *Business Research Method*. Mason, Ohio: Thomson South-Western.
- Zindler-Wernet, P., & Weiss, S. (1987). Health locus of control and preventive health behavior. *Western Journal of Nursing Research, 9*(2), 160-175.



## **Appendix 1**

### **Cover Letter and Survey**

## Cover Letter

January 30, 2009

Dear Survey Participant,

I am a graduate student in the Department of Hospitality and Tourism Management at Virginia Tech. I am working on my Master's thesis that examines senior's perceptions of health status, health competence, and how these perceptions would influence senior's family restaurant selection criteria. This study will help the restaurant industry better serve seniors.

The enclosed questionnaire will only take about five minutes to complete. Your participation in this study is greatly appreciated. Your response will be completely confidential and only used for research purposes. If you have any questions, please feel free to contact me [(540)808-7714 or send email [plustak@vt.edu](mailto:plustak@vt.edu) ]

Thank you very much for your assistance and cooperation.

Sincerely,

Sangtak Lee (Tak)

Master student

Hospitality and Tourism Management

Virginia Tech

1. The following statements are about your perceived health status. Please circle the number that best indicates your health status.

	<b>Definitely False</b>	<b>Mostly False</b>	<b>Don't Know</b>	<b>Mostly True</b>	<b>Definitely True</b>
According to the doctors I've seen, my health is now excellent	1	2	3	4	5
I feel better now than I ever have before	1	2	3	4	5
I am somewhat ill	1	2	3	4	5
I'm not as healthy now as I used to be	1	2	3	4	5
I'm as healthy as anybody I know	1	2	3	4	5
My health is excellent	1	2	3	4	5
I have been feeling bad lately	1	2	3	4	5
Doctors say that I am now in poor health	1	2	3	4	5
I feel about as good now as I ever have	1	2	3	4	5

2. How would you describe your overall health?

Very poor     Poor     Fair     Good     Very good

3. The following statements are about your perceived health competence. Please circle the number that best indicates how much you agree or disagree with each statement.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I handle myself well with respect to my health	1	2	3	4	5
No matter how hard I try, my health just doesn't turn out the way I would like	1	2	3	4	5
It is difficult for me to find effective solutions to the health problems that come my way	1	2	3	4	5
I succeed in the projects I undertake to improve my health	1	2	3	4	5
I'm generally able to accomplish my goals with respect to my health	1	2	3	4	5
I find my efforts to change things I don't like about my health are ineffective	1	2	3	4	5
Typically, my plans for my health don't work out well	1	2	3	4	5
I am able to do things for my health as well as most other people	1	2	3	4	5

4. How would you describe your overall competence to manage health-promoting behaviors?

\_\_ Very poor      \_\_ Poor      \_\_ Fair      \_\_ Good      \_\_ Very good

5. The following statements are about family restaurant selection criteria. Please circle the number that best indicates how important each item is when you select a family restaurant (e.g. Bob Evans, Big Boy, or Denny's).

	<b>Not At All Important</b>	<b>Somewhat Important</b>	<b>Moderately Important</b>	<b>Very Important</b>	<b>Extremely Important</b>
Using Fresh Ingredients	1	2	3	4	5
Availability of Healthy Food	1	2	3	4	5
Availability of Low or No Salt Meals	1	2	3	4	5
Availability of Low Cholesterol Meals	1	2	3	4	5
Availability of Low Calorie Meals	1	2	3	4	5
Availability of Organic Food	1	2	3	4	5
Availability of Small or Half-Size Portions	1	2	3	4	5
Availability of Nutrition Information	1	2	3	4	5
Availability of Non-smoking Area	1	2	3	4	5

6. How important are lower priced items when selecting a family restaurant?

Not At All Important     
  Somewhat Important     
  Moderately Important,  
 Very Important     
  Extremely Important

7. The following statements are about food price when you select a family restaurant. Please circle the number that best indicates how much you agree or disagree with each statement.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
Having lower prices than other family restaurants is more important than having healthy menu items	1	2	3	4	5
I am willing to pay more money at a family restaurant if the menu includes healthy choices	1	2	3	4	5

8. Please answer following questions about yourself.

**How many times do you go to family restaurants per month?** \_\_\_\_\_

**Gender:**  Male     Female

**What in the year were you born (year):** \_\_\_\_\_

**Number of people in household (include yourself):** \_\_\_\_\_






DATE: January 6, 2009

MEMORANDUM

TO: Ken W. McCleary  
Sang Tak Lee

FROM: Carmen Green 

SUBJECT: **IRB Exempt Approval:** "The Impact of Perceived Health and Health Attitudes of Seniors on Family Restaurant Selection Criteria", IRB # 08-782

I have reviewed your request to the IRB for exemption for the above referenced project. The research falls within the exempt status. Approval is granted effective as of January 6, 2009.

As an investigator of human subjects, your responsibilities include the following:

1. Report promptly proposed changes in the research protocol. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.
2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

cc: File