

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

SCHOOL OF HOSPITALITY MANAGEMENT

CAREGIVER CONSUMER BEHAVIOR TOWARDS HEALTHY AND UNHEALTHY
MEALS AT A MAJOR ENTERTAINMENT RESORT

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SPRING 2014

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
in Hotel, Restaurant, and Institutional Management
with honors in Hotel, Restaurant, and Institutional Management

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ABSTRACT

In the years following the childhood obesity epidemic, there have been numerous interventions aimed at combating childhood obesity and its detrimental effects. Currently, 33% of children and adolescents in the United States are either overweight or obese. This pilot test studies the effects of providing a healthy breakfast option for children ages 3-9, compared to a less healthy breakfast option, to caregivers. Caregivers were surveyed to determine their selection behavior when presented with a choice of two meals in order to investigate the feasibility of offering a healthier breakfast meal, compared to a less healthy meal, at a major entertainment resort in Orlando, Florida. Caregivers were also surveyed to determine whether their level of concern regarding their child's weight and diet quality played a role in choosing a meal for their child. The effects of providing nutritional information and factors outside of healthfulness such as price, packaging and appearance, and convenience, were studied as well to evaluate whether these had an effect on meal selection. The results indicate that caregivers' high levels of concern regarding their children's diets and the healthfulness of a meal increases the likelihood of selecting a more healthy meal. Additionally, while a caregiver may be aware of provided nutrition information, they must also consider that nutrition information in order for it to have an influence on meal selection.

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ACKNOWLEDGEMENTS

I would like to acknowledge my greatest thanks to my family; my mother, father, and sister, for being my greatest source of encouragement not only throughout the process of this research, but throughout my college career as well. Many thanks go to Dr. Peter Bordi for his constant help and guidance during the last two years as we worked on this study. He encouraged and taught me to always keep the bigger picture in mind whenever I got stuck focusing on the smaller pieces of the puzzle. From working with him, I take away much more than the product of this thesis. I would also like to thank Gary Jones and Kara Cressey for being open to consider my meals and to approve my survey for this study and their purposes. It has been a wonderful opportunity that I never imagined I would have, to work with and present my findings to them. My sincerest appreciation and thanks go to Dr. Breffni Noone for guiding me through the Schreyer Honors College to help me where I am at my academic career today, as well as for her intensive efforts and review of my study. With the ready help of Kim Snyder and Kiwon Lee, I was able to design my survey correctly and recruit the participants that I needed. I would like to thank Dr. Andy Mowen for introducing me to the basics of writing a thesis, and making something that seemed at first intimidating, possible.

Chapter 1

Introduction

Childhood obesity continues to be at the forefront of major public health initiatives in the United States. Beginning in the 1970's, overweight and obesity rates in the United States for both adults and children increased rapidly during a time when energy-dense food became more prevalent, portion sizes increased, and less healthy food became less expensive (Wang, McPerson, Marsh, Gotfmaker & Brown, 2011). Childhood obesity has become a national and worldwide issue because of its association with a number of adverse health conditions, including hypertension, high cholesterol, and type 2 diabetes. However, the United States continues to be one of the most obese countries in the world with obesity rates higher than those in Canada, Australia, and Europe (Veugelers & Fitzgerald, 2005). In 2009-2010, it was determined that approximately 30% of children and adolescents aged 2-19 in the United States were obese or overweight (American Heart Association, 2013). Known as the obesity epidemic, these surging rates of overweight and obesity have spurred the public health community in the United States to expand upon focused interventions to improve health, including improving diet quality for children through public policy, systems, and environmental approaches (Kim et al., 2011; Nestle & Jacobson, 2000). Although it appears that the rates of overweight obesity in both U.S. adults and children have been slowing since 2008, obesity should remain as a major focus in order to fight the residual effects of the obesity epidemic and to promote long lasting, healthy lifestyles. While certain nutrition interventions have been found to be beneficial in improving the diet quality for children in a home and school setting, (Sallis & Glanz, 2006) it is important to look at how we may transition these interventions to other environmental contexts, such as hospitality and leisure settings, especially entertainment resorts, given

their popularity and attractiveness to young children, as well as their predominant association with, and widespread availability of, fast food and other indulgences.

Statement of purpose

This pilot study examined caregivers' behaviors towards selecting a healthy or unhealthy meal for their children, and their attitudes regarding their child's weight, diet quality, and other factors external to nutrition, such as price, appearance, and convenience. For the purposes of the current study, "caregiver" is defined as a parent, grandparent or adult who is responsible for the safety, well-being, and diet of at least one child ages 3-9. This study observed whether the provision of a new, healthy meal would be a competitive product to sell in terms of consumer choice, when compared against its popular, less healthy counterpart for a major entertainment resort in Orlando, Florida. This study was developed because currently, less healthy options continue to make up more than half of food sales at the entertainment resort in question. Furthermore, while a nutritious breakfast has been correlated with better diet quality and learning ability in children (Crockett & Simms, 1995), breakfast in particular takes up a majority of the less healthy food sales at this entertainment resort, making it an appropriate target meal.

Research objectives

As stated above, the objective of this study was to examine the effects of providing a healthy children's breakfast option, and a less healthy breakfast options along with nutritional information for both meals, to caregivers in an entertainment resort environment. Specifically, the study focused on:

1. The likelihood that the parent or caregiver would choose the healthy breakfast option, over the less healthy breakfast option, for their child

2. The impact of parental and caregiver concern regarding overweight and obesity, diet and nutrition, and the level of responsibility parents and caregivers had in determining their children's diets, on their choice of breakfast option..

Significance of the study

Entertainment resorts are used for recreational purposes and as a vacation, and subsequently, are often associated not only with leisure purposes, but with the opportunity to enjoy unhealthy foods and other indulgences as well. These locations offer the typical fast food items for quick, on the go eating, while other recreational settings such as cruises are famed for 24 hour all you can eat buffets. It is exactly this type of setting where encouraging healthy food behavior is important because it is one that frequently has limited availability of healthy food options, and also one in which consumers typically indulge.

Few studies have specifically looked at changing or influencing consumer food behavior and choice in recreational and leisure settings. Though this study was specifically designed for one particular entertainment resort, the information would be beneficial for other hospitality and leisure companies that may also seek to improve the nutritional value and healthy availability of their products. It may also be beneficial to encourage healthier eating in children through healthy living programs such as the one this resort has launched. This information will also be especially relevant to this particular resort in regards to its goal to remain competitive, as well as to distinguish itself as an opinion leader, given the growing concern and push towards the marketing of healthier foods.

In accordance with the growing public health campaign, companies are increasingly looking to market their products as healthier. Marketing and having more healthy products may be advantageous to the company as a way to remain competitive while simultaneously benefitting the consumer by increasing the availability of healthy products. In 2006, the entertainment resort in this study became the first major multi-media company to introduce new standards for food marketing towards children and families in an

attempt to address concerns about entertainment's role in childhood obesity. Since then, the company has also announced plans to remove all advertising geared towards children for junk food on its website and all television and radio channels by 2015. This push led to the conception of the resort's "Magic of Healthy Living Program" by introducing more balanced meals served to children as well as to establish a set of nutritional guidelines based off of federal standards (The Walt Disney Company, 2012). These nutritional guidelines are the ones by which all breakfast meals developed for this study follow. Surveying consumers to determine their responses to a meal following these nutritional guidelines and a meal that is already served at the entertainment resort, is thus in line with the resort's health initiative.

Chapter 2

Literature Review

This chapter includes research on childhood obesity and the obesity epidemic, which coincided with a period during which high energy-dense and low nutrient foods such as fast food and convenience foods soared in popularity in the United States. It also includes research on the numerous adverse health, social, and psychological effects associated with overweight and obesity, and the influence parents and physical environments may have on children's eating habits.

Background

The obesity epidemic in the United States has led to great concern over the health of American children and the population overall. This may be attributed to an increase in consumption and portion size of energy dense foods, an increase in a sedentary lifestyle, and a decrease in prices of less healthy foods, as well as rising incomes and two-income households (Kant & Graubard, 2004; Wang et al., 2011). Technological surges in the past decades have resulted in the streamlined production of processed foods, making prepackaged foods more widespread and less expensive, and technology (e.g., Internet and gaming) has also contributed to sedentary lifestyles (Finkelstein & Strombotne, 2010).

Body mass index (BMI) is used to classify individuals in the different weight categories and is determined by measuring weight in kilograms divided by height in meters squared. For children and teens, BMI is age and sex specific. Weight classifications and cut off points are as follows:

Table 1

Weight Classifications by BMI	
Underweight	BMI < 5 th percentile
Healthy weight	5 th percentile < BMI < 85 th percentile
Overweight	85 th percentile < BMI < 95 th percentile
Obesity	95 th percentile \leq BMI

As a result, overweight is defined as having a body mass index greater than the 85th percentile and less than the 95th percentile for peers, whereas obesity can be defined as having a body mass index greater than the 95th percentile for people of the same age and gender (Center for Disease Control and Prevention [CDC], 2013). Childhood obesity and overweight rates have tripled since 1980, leading to the health crisis known as the “obesity epidemic” and an increase in public health awareness to combat childhood obesity. Although it appears that rates of childhood obesity are now decreasing for the first time, the prevalence of overweight and obesity is still much greater than it was decades ago, and subsequently, efforts should be sustained to address these rates (C.S. Mott Children’s Hospital, 2013).

Deteriorating nutrition and its implications

As obesity rates have increased in recent decades, dietary trends in the United States have changed as well. Today, very few children and adolescents consume the recommended amounts of fruits and vegetables set by the United States Department of Agriculture. Although consumption of fruits and vegetables often has a positive correlation with increasing socioeconomic status, overall consumption is still low in all socio-demographic groups (Cullen & Zakeri, 2004; Kim et al., 2011; Arcan et al., 2007). Additionally, over time, calories consumed per day have increased in adolescents. Adolescent boys have

increased their calorie intake by 250 kcal since 1975 to a total of approximately 2800 kcal/day today. Likewise, adolescent girls average around 1900 kcal/day, with an increase of 120 calories (Finklestein & Strombotne, 2010). More specifically, between 1989 and 2010, nationally-representative surveys consisting of the Continuing Survey of Food Intakes by Individuals, and the National Health and Nutrition Examination Survey were conducted on children and adolescents from 2-18 years old to examine their dietary intake. Information was collected from interviewer-directed one day dietary recalls as well as self-administered two day dietary recalls. Results indicated that from 1989 to 2004, total energy intake in surveyed individuals notably increased, with the highest increases found in children ages 2-5, Mexican Americans, and children in lower-income families. However, from 2004 to 2008, total energy intake appeared to decrease, and from 2008 to 2010 remained constant. Although this decrease in calories consumed should not be ignored, and may be indicative of successful obesity prevention efforts, it was also found that for surveyed individuals, pizza, whole milk, hot dogs, desserts, breads, pasta dishes, savory snacks, and sugar-sweetened beverages were still consistently found in the top 10 food sources in diets (Slining, Mathias & Popkin, 2013). All of these foods are frequently high energy, low nutrient-rich foods that have been associated with obesity. These findings are consistent with other studies that have found that increasing trends in less nutrient-rich diets. Pizza, the most popular convenience food item, accounts for 2.2% of total energy and calories in children's diets (Drewnowski & Rehm, 2013). As a result, it is clear that the nutritional quality in U.S children's and adolescents' diets has deteriorated and that variety has shifted to low nutrient, high energy-dense foods.

Deteriorating nutrition is exacerbated when children have higher access to unhealthy foods in their physical environments, such as when children advance to middle school. The transition often includes a much higher access to snack bars or school stores not available in elementary schools (Cullen & Zakeri, 2004; American Dietetic Association [ADA], 2004). School meals and junk food availability have often been a source of contention due to the nutritional content of school meal and junk food options. The most popular snack bar foods are often those highest in fat and calories, such as pizza, chips,

soda, and candy. In middle schools, these foods comprise 88.5% of the foods sold in school stores. Further cross-sectional studies have identified that fifth grade students consume a significantly lower amount of fruits and vegetables when exposed to snack bar foods, compared to fourth grade students receiving only national school lunch program meals. These meals, in comparison, offered 2 servings of fruits and vegetables, and 8 ounces of milk per meal (Cullen & Zakeri, 2004). These findings suggest that increasing the availability of healthy food options in an environment could lead to an increase in healthy food consumption.

Health effects of childhood obesity

Implications associated with childhood obesity have both immediate and long-term consequences. Short-term health effects include higher risk for hypertension and high cholesterol, which are risk factors for cardiovascular disease, and in the development of diabetes (CDC, 2013; Wang et al., 2011). Obese children are also at greater risk for impaired glucose tolerance and insulin resistance, as well as asthma, sleep apnea and joint problems than normal weight children (CDC, 2013). Long-term health effects of obesity include a propensity to be obese as an adult. Children who are obese even at as young of an age as two are more likely to be obese as adults. As a result, from a young age, these children are also more likely to have not only increased, but lifetime risks for cardiovascular problems such as stroke, heart attack, high cholesterol, hypertension and adult morbidity (Ogden, Carroll, Kit & Flegal, 2012). These risks can be explicitly seen in a model of men and women in healthy (22.5), overweight (27.5), obese (32.5), and severely obese (37.5) BMI groups showing substantial increases in risks for hypertension, hypercholesterolemia, type 2 diabetes, coronary heart disease (CHD), and stroke with increases in BMI. The lifetime risk for CHD is 41.8% in obese men; almost 7% higher than in non-obese men, while for women, the risk increases from 25% risk for CHD in normal weight to 32.4% for an obese individual (Hammond & Levine, 2010).

Besides physical health effects, overweight and obesity have been shown to be associated with adverse social and psychological effects. Obese children with lower self-esteem rates are more likely to exhibit higher rates of sadness, anxiety, and depression and as a result may be more at risk to engage in more destructive behaviors due to low self-esteem and/or social stigmatization (Reeves, Postolache & Snitker). A research experiment studying African American adolescents found that obese youths had considerably worse scores on a psychosocial and self-esteem domain than youths of the same age with a normal weight BMI (Witherspoon, Latta, Wang, & Black, 2013). Additionally, by the age of 5, girls who are simply at risk for overweight or obesity have been found to have high levels of restrained eating, weight concern, and body dissatisfaction by age 9 (Shunk & Birch, 2004). While these experiments indicate internal psychological consequences of being overweight or obese, there are also external, social consequences. Studies have associated an overall reduced quality of life as well as employment prospects later down the road for obese adults (Slater et al., 2010). This can be seen in multiple studies documenting strong evidence of stigmatization of obese and overweight people, as well as the perception that obese people are more prone to negative flaws such as laziness, unattractiveness, and incompetence. This may not only affect employment status down the road, but interpersonal relationships and access to healthcare and education as well. This weight bias is severely pervasive and transcends different weight groups, from underweight to obese (Schwartz, Vartanian, Nosek & Brownell, 2006). As a result, besides physical health consequences, the effects of obesity span both internal and external social relationships.

Economic effects of childhood obesity

Due to the increased health risks associated with obesity, it has been established that obesity imposes not only a health burden but also an economic burden due to medical costs stemming from treating obesity-related diseases. The increase in obesity rates and subsequent health-care spending on obese people has been estimated to account for up to 27% of the increase in US health-care expenditure

from 1987 to 2001 (Wang et al., 2011). A study aggregating 33 U.S studies determining the economic effects of overweight and obesity found that, in 2008, the per person direct medical cost of being overweight was \$266, while the direct medical cost of being obese was \$1, 723. These costs are significant and on average, 42.7% greater than the costs of normal weight. Nationally, the combined costs of overweight and obesity totaled \$113.9 billion. These costs are found to account for anywhere from 5-10% of total U.S healthcare spending--compared to the 1-2.5% found in Canada and the European Union (Tsai, Williamson, & Glick, 2010). These costs come from diagnoses and treatment of the numerous health conditions linked with obesity, such as hypertension, type 2 diabetes, heart disease, and asthma.

Medical costs specifically related to obesity in children are also substantial. It is estimated that the direct medical costs of childhood obesity in the United States are approximately \$14.3 billion (Hammond & Levine, 2010). Given the propensity for overweight and obese children to become overweight and obese adults as discussed previously, one can foresee future adult direct medical costs as well. Research suggests that current rates of overweight and obesity in adolescents may result in costs upwards of \$45 billion from 2020-2050 (Hammond & Levine, 2010).

Using breakfast as a target meal

This study focuses on increasing the availability of healthy breakfasts for multiple reasons. First, the majority of less healthy food sales come from the less healthy breakfast sales at this entertainment resort. Secondly, fewer restaurants and food carts at the entertainment resort serve breakfast as opposed to snacks, lunch, and dinner, making it an easier platform to make initial menu changes. Finally, studies have established a positive relationship between eating breakfast and overall nutrient intake. Children who eat breakfast have much higher Healthy Eating Index scores for grains, fruits, dairy, and variety, and overall diet quality than children who do not eat breakfast (ADA, 2004). Eating breakfast has been shown to positively influence nutritional status, as well as overall health and learning ability (Crockett & Sims,

1995). It is important to encourage children to develop the habit of eating breakfast given the multitude of benefits it is associated with, especially having a higher diet quality. A Survey of School Breakfast Programs conducted by the Got Breakfast? Foundation, released earlier this year found that schools that participated in a pre-packaged breakfast meal, consisting of items such as fruit cups, cereal in a bowl, juice or milk boxes, and muffin, or a low fat dairy or whole grain component, found that more elementary, middle, and secondary school students ate breakfast, enabling more children to start the day off on a more nutritious note (E.S. Foods, 2012). Providing a variety of convenient yet healthy to-go breakfast meals could encourage parents and caregivers to purchase them for their children.

Influence of nutrition information provided at meals

Consumers often grossly underestimate the amount of calories, fat, and saturated fat in the meals that they eat, especially those eaten away from home. Food prepared outside of the home is typically higher in total calories as well as total fat, saturated fat, dietary fiber, calcium, and iron on a per calorie when compared to food prepared at home. Food away from home (FAFH) is defined as any food that is prepared, purchased, or consumed away from the home, including all school and workplace cafeterias (Kant & Graubard, 2004; Drewnowski & Rehm, 2013). Without proper nutritional information or labeling, consumers are often unaware of, or misestimate, the higher levels of calories, fat, and sodium in menu items (Burton 2006). This is significant because Americans are increasingly eating FAFH. In 2012, Americans spent an estimated 6.8 billion dollars on FAFH from food outlets such as restaurants, bars, hotels and motels, recreational facilities, vending machines, and educational institutions, versus the approximately 6.95 billion dollars spent on expenditures relating to preparing food at home (United States Department of Agriculture, 2013). It is clear that FAFH is taking up an increasing portion of American diet and food expenditures.

Having nutrition information available with meals could potentially influence consumers to make more health conscious choices. This could lead consumers to make more informed decisions about their diet and lifestyle. Among consumers who already believe they live a healthy lifestyle, the nutritional label was named as one of the top 3 best sources of information for those who were trying to make changes to their diet over a period of six months (Wills, Schmidt, Pillo-Blocka & Cairns, 2009). After New York City became the first city to pass legislation requiring restaurant chains to post calorie information on menus and menu boards in 2008, a study conducted by Dumanovksy, Huang, Bassett, & Silver (2010) found that 27% of customers who saw caloric information took it into consideration upon making their food choices. The study found that prominent placement of nutrition information could have a beneficial effect on consumer behavior, guiding them to choose healthier options if they want to be more health conscious. Additionally, Tandon, Wright, Zhou, et al (2010) found that when parents were presented with nutrition information along with a menu, parents, on average, ordered 102 fewer calories in meals for their children than parents without nutritional information did. However, these studies contradict the results of other studies that found that providing nutrition information does little to change consumer behavior in choosing what to eat. For example, Tandon et al. (2011) found that, although menu labeling on fast-food purchases increased parents' awareness of nutrition information, it did not decrease the overall calories of the meal chosen for their children. An important note to keep in mind is that nutrition labeling may not influence consumer choices because consumers may be aware of, but not consider, the provided nutrition information. Because of the contradiction of the literature presented, this study will examine the effects nutritional labeling may have on meal selection in caregivers through the following hypotheses:

Hypotheses 1: Participants' nutrition information awareness will not have an impact on selecting the healthier meal

Hypothesis 2: Participants' consideration of nutrition information will influence their selection of the healthier meal.

Parental and caregiver attitudes towards children's healthy eating

Parents and caregivers obviously play a large role in determining their children's diets. They are most likely to be the most important influence in determining their children's nutrition and physical environments (Slater et al., 2010). As a result, it is critical to involve parents in nutrition and healthy living interventions, especially because they are the primary purchasers of meals for their children. Although rates of overweight and obesity span all socioeconomic groups, the 2013 National Poll on Children's Health conducted by the C.S. Mott Children's Hospital determined that the majority of adults rated childhood obesity as the largest health concern for children in the country, jumping ahead of drug abuse and smoking. This high level of concern from adults may indicate an increased willingness to seek healthier foods for their children. The International Food Information Council Foundation found that two-thirds of parents surveyed on their attitudes toward food safety, nutrition, and health, worried more about the healthfulness of their children's diets than their own. However, it also found that factors outside of nutrition drove food and beverage choices, such as price, more than healthfulness did (2012). Furthermore, parents stated an awareness of the importance of providing a healthy diet and encouraging exercise in children, as well as their responsibility for preventing overweight and obesity in their children, many also cited barriers such as tiredness, lack of time and being busy outside of work and school. Additionally, some mothers indicated a lack of control over what their children ate, citing that it was dependent on what was available. (Pocock, Trivedi, Wills et al, 2010). The research presented above support the development of the following hypotheses:

Hypothesis 3: Caregivers' levels of concern regarding their children's weight will influence their selection of the healthy meal.

Hypothesis 4: Caregivers will place more importance on factors such as the convenience, price, and appearance over the healthfulness of a meal.

Hypothesis 5: Caregivers' higher levels of concern regarding their children's diets will influence their selection of the healthy meal.

Parental and caregiver concerns also vary by demographic characteristics such as socioeconomic status, age, gender, and education level. For example, socioeconomic status, parental and caregiver support, family meal frequency, and availability of healthy foods at home are positively correlated with fruit and vegetable intake and negatively correlated with fast food intake, as well as availability of unhealthy foods at home (Cutler et al, 2010). Higher socioeconomic status and education level is a predictor for higher fruit and vegetable intake in adults, adolescents, and their children. Specifically, parents' own eating behaviors are the strongest predictors of their children's fruit and/or vegetable intake. Mothers in particular are most likely to be a more influential aspect in food related behavior, which may begin as early as pregnancy, and increases in the mother's education and the child's age are associated with greater vegetable intake. This may be attributed to an increase in nutrition education and knowledge of the importance of healthy eating practices, as well as a decrease in food neophobia, the fear of eating new or unfamiliar foods, as a child becomes older (Cooke et al., 2003). Thus, it is clear that parents, and their own behavior and role modeling, may have a strong impact on their children's eating practices. Increasing the availability of healthy, yet quick, breakfast menus may encourage parents to choose healthier meals for their children by cutting out the time investment involved in preparing healthy meals for their children, while including nutrition information may encourage, and provide the ability to, make healthy decisions for their children, assuming that parents have the nutritional knowledge and education to do so.

Physical environments and their effects on obesity

Due to technological advances, economic and lifestyle changes, and U.S food policies, the United States food system has changed dramatically in the past few decades. Portion sizes have increased and

more processed and convenience food items are readily accessible throughout the day. Suburbanization has led to a more sedentary lifestyle, and more meals are eaten away from home (Story, 2008). Physical settings such as restaurants schools and resorts have a major influence on consumer behavior because these settings limit the availability of foods. As noted above, many parents feel a decreased self-efficacy in determining their children's diets due to a low availability of healthy foods when eating outside of the home. This could be improved by increasing the availability of health foods in different physical environments so that parents may feel adequately empowered to have different choices to choose for their children. While genetic predisposition and physical activity are still relevant factors in the development of obesity, there is a great deal of evidence showing that physical environments play a major role as well. Environmental factors such as suburbanization and increasing energy rich foods have contributed to decreasing energy expenditure and increasing energy intake (Hill, Wyatt, Reed & Peters, 2003).

Studies have shown links between increasing the availability of fruits and vegetables in school lunch programs, and increasing intake of fruits and vegetables in children. This supports previous research on correlations between providing healthy, low fat and high fiber food items at grocery and convenience stores, and consumer consumption of these items (Sallis & Glanz, 2006). Because of these findings, this study will examine the following:

Hypotheses 6: The level of importance caregivers place on seeking out healthy foods for their children will influence their selection of the healthier meal.

Conclusions

Although American childhood obesity rates have decreased to some extent in the past few years, it is still necessary to maintain to control and decrease them. The overall rising obesity rates in the past four decades have been accompanied by a general increase in energy intake, and decline in diet quality. Improving diet quality may be gained through increasing the availability of healthy food options along

with providing its nutritional information. Currently entertainment resorts have typical fast food menu items, with limited healthy menu options. An entertainment location such as a resort would be an extremely relevant setting to pilot healthy menu options for children, because of its brand image as a family friendly company. Furthermore, its position as a leader in the industry may also influence other competitors to do the same.

Chapter 3

Methodology

This chapter reports the methodology with which this study was conducted in order to examine the perceived effects of providing nutrition information and a healthier meal option on caregiver consumer behavior. This purpose of this chapter is to describe the procedures used to screen participants, survey participants, and gather and analyze data.

The study's target population consisted of parents with children ages 3-9, or grandparents with grandchildren ages 3-9. Participants were screened to ensure eligibility, and then sent the Kid's Meal Breakfast Survey (Appendix). The survey consisted of 16 questions, the majority of which were Likert-like scale questions. Data was collected through Qualtrics Survey Software. Parents or caregivers were presented with the meal options and were asked to fill out an online survey regarding their thoughts on the meal options in question. Participants were asked to choose between a less healthy meal (Waffle breakfast) and a more healthy meal (Under the Sea breakfast), or neither, for their child while at an entertainment resort, and answered questions on variables that would most influence their purchasing decisions for their children (convenience, appearance, healthfulness, and price). Additionally, participants were asked the extent to which they considered nutrition information when choosing a meal for their child, as well as their concerns on the likelihood of their child becoming overweight or obese. As a way to increase voluntary participation, study participants received a \$5 gift certificate to Sheetz.

The breakfast options in question were one themed breakfast meal, titled "Under the Sea Treasure Chest Breakfast Special," which adhered to nutritional guidelines, and one regular "Waffle Breakfast Special," which did not adhere to nutritional guidelines. The waffle breakfast meal is currently being offered at the entertainment resort in question. Participants were shown pictures of both meals, nutritional

information for both meals, and specific nutritional recommendations for children between ages 2-3, 4-8, and 9-13 as determined by the USDA. Both can be seen below as follows:

Table 2

Nutritional Guidelines for Breakfast Meals
-Between 400 and 600 calories
-0 g trans fat
-Less than 600 mg of sodium
-No more than 1.1 g saturated fat per 100 calories
-Includes at least 2 elements from fruits and vegetables, low-fat dairy, whole grains, and lean proteins

Table 3

Daily Nutritional Recommendations for Children			
	Ages 2-3	Ages 4-8	Ages 9-13
Calories	Girls: 1,000-1,200 Boys: 1,000-1,400	1,400-1,600	Girls: 1,600-2,000 Boys: 1,800-2,200
Total Fat (g)	Girls: 33-53 Boys: 33-62	39-62	Girls: 44-78 Boys: 55-78
Saturated Fat (g)	Girls: <11-13 Boys: <11-16	<15-18	Girls: <17-22 Boys: <30-24
Cholesterol (mg)	<300	<300	<300
Sodium (mg)	<1,500	<1,900	<2,200
Carbohydrate (g)	130	130	130
Dietary Fiber (g)	14	Girls: 17 Boys: 20	Girls: 22 Boys: 25
Protein (g)	13	19	34
<i>Source: U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2010. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010</i>			

The results of this study placed particular emphasis on the ultimate decision of the caregiver between these two meals, in order to gauge the success of offering the Under the Sea meal along with the waffle meal at the resort. While availability of healthy foods may play a role in increasing healthy food intake, the price scheme of the food must also be taken into account. High prices can be a major deterrent against choosing healthy food items. When asked to rate the most important factors in deciding what to

eat, Americans rated taste as the most important factor, closely followed by cost (Sallis & Glanz, 2006). As a result, this study priced both the healthy and less healthy meal the same (\$4.99 each).

Variables

The survey captured participants' choice between the Under the Sea breakfast meal and the Waffle meal for their children. It also measured a total of four variables including the participant's level of concern regarding their child's weight, the level of concern regarding the nutritional quality of their child's diet, and whether the provision of nutrition information was noted and considered. The survey also measured external factors in parental consumer behavior outside of health and nutrition such as the appearance, price, and convenience of meal options. Finally, participants were also asked to provide information demographic information including age, gender, education level, marital status, and family role.

Meal selection for children

Participants were asked to select the Under the Sea meal, the Waffle meal, or neither, as a breakfast option for their child. This was to determine whether the introduction of the proposed Under the Sea meal would be a compelling competitor against the resort's current waffle meal breakfast option, before launching the Under the Sea meal for sale at the entertainment resort. Following their choice, participants were also asked to list why they had chosen their particular meal, in order to determine the primary motivating force that drove them to their choice. In order to better predict variables that impacted meal selection, outcomes that had the Waffle meal selected and outcomes that had neither meal selected were merged, so that the current study could compare the responses that selected the Under the Sea meal

and the responses that did not. For the purposes of this study, meal selection (selection of the Under the Sea meal or not) was the dependent variable. Independent variables are discussed as follows.

Level of concern regarding child's weight

The survey measured the level of concern participants had regarding their child and obesity. This was measured through two items: "How concerned are you about your child maintaining a desirable weight?", and "How concerned are you about your child becoming overweight? These questions were answered on a five point Likert scale, with 1 being "not concerned," and five being "very concerned" (Lee, 2013). Following data collection, a Pearson bivariate correlation was performed to find a significant, very strong, positive correlation between the two items, $r(76) = .59, p < .01$. As a result, a composite measure was derived between these two items in order to study participants' overall level of concern regarding their child's weight during data analysis. These questions were asked to determine the existence of a link between parents' level of concern regarding overweight and obesity and their meal choice for their children.

Level of concern regarding child's diet

The survey asked participants to rate their level of concern regarding their child's diet. The item asked was "How concerned are you about your child's diet?" (Lee, 2013). The question was asked on a five point Likert scale, with 1 being "not at all often," to 5 being "very often." This question was asked to study whether the participants' level of concern regarding their child's diet had a relationship with their meal selection for their child.

Level of concern regarding healthy food availability

Participants' level of concern regarding the healthy food availability when seeking out food or eating out was measured through two items. The questions were "How concerned are you about the level of healthy food availability when eating out?" and "How often do you seek out foods for your child with healthfulness of the food in mind?" (Lee, 2013). Both questions were asked on a five point Likert scale, with 1 being "not at all often," to 5 being "very often." Following data collection, a Pearson bivariate correlation was performed to find a significant, strong positive relationship between the two items, $r(96) = .40, p < .01$. These items were derived into one composite measure in order to measure the participants' level of concern regarding healthy food availability.

Provision of nutrition information

Participants were also asked to rate two statements, "I am aware of the presence of nutrition information on the menus." and "I considered the provided nutrition information when I selected the menu." The items were rated on a Likert scale with one being "strongly disagree" and five being "strongly agree." These questions were used to determine the effectiveness of providing nutrition information with both meals, and whether the provision of said information made a difference in consumer choices by looking at participant awareness and participant consideration. Following data collection, a composite measure was not derived for the two items under this variable. As stated in Chapter 2, the goal of the two items was not to measure the provision of nutrition information as one item. Rather, it was to compare the level of awareness of the nutrition information to the level of consideration of the nutrition information and the resultant impacts on meal selection.

Influence of factors outside of health and nutrition

In order to gain a better understanding of what could influence caregiver consumer behavior outside of nutrition and health, participants were asked to rate the following factors on the importance on making a decision: packaging/appearance, price, convenience, and healthfulness. Factors were rated on a five point Likert scale, with one being “not important,” and five being “very important.” This was done in order to compare how much influence healthfulness played a role in the participant’s choice versus these other external factors.

Data Collection

Participants

A total of 76 participants were used in this study. All potential participants were recruited from the Listserv of the Center for Food Innovation at a major, public Northeastern university in the United States. In total, 405 potential participants completed the survey screener. Out of the 405 people, 94 were eligible as determined by the screener, and were sent the survey through a link in an email. Reminder emails were sent out containing the survey link and information two weeks after the previous email. 76 of these people went on to complete the survey, with a 75% response rate and a 0% dropout rate.

Participants had to fulfill one criterion in order to be eligible for the study. Either they had to be a parent or caregiver of at least one child aged 3-9, or they had to be a grandparent of at least one grandchild aged 3-9. This criterion was set because the entertainment resort’s target market for the two kids meals are children ages 3-9. All participants who completed the screener and did not meet this criterion were not sent the survey.

Procedures

The questionnaire was sent to the entertainment resort and to the Center for Food Innovation at a large, public university in the northeast. The screener was sent out on February 27th, and eligible participants were sent an email with the survey link on March 6th. They were also sent a follow up email reminder on March 12th and 19th. As more people completed the screener on a rolling basis, further eligible participants received the survey link on March 19th and March 24th. Once participants received the survey link, they were asked to visualize a scenario in which they are at a theme park with their child on a typical day. They see a breakfast establishment offering two different breakfast options, and nutritional information for both. They were asked to choose one of the two options, or neither if applicable. Participants were then asked to answer questions and rate statements to gauge their concern for diet and nutrition, concern for obesity, level of influence on their child's diet, influence of external factors regarding their choice, and their ultimate meal choice for their child. All survey responses were recorded and analyzed through the Qualtrics Survey Software. Responses were also analyzed through SPSS.

Rationale for the study

Given the incidence of the obesity epidemic and the deleterious implications involved, it is vital to continue to combat current rates of childhood obesity. Research has shown the feasibility of improving diet quality and obesity rates in school settings. Schools and other hospitality settings are ideal settings for nutrition interventions due to the time children spend in these environments and the ability to structure behavioral models in these contexts. Encouraging children to continue to choose healthy options outside of the school environment will further enforce healthy behaviors that may continue, as they grow older. As a result, it is important to look at ways children can be encouraged to improve their diets in other settings.

Interventions in hospitality settings that target children and families should be an area of focus in the ongoing obesity epidemic, because people often associate resorts and vacation with indulgences through food or activity. These locations' menus are often composed of fast food items such as burgers, hot dogs, French fries, or corn dogs, while the availability of healthy options is quite low and hard to access for consumers. As a result, encouraging and increasing the availability of healthy options is even more important, given the pre-existing rationalization to choose the fast food that available while on vacation. Finally, in 2011, the resort in question drew in 17.1 million visitors—a 1% increase from the previous year, securing it as the most popular entertainment resort in North America, and thus making it an extremely relevant setting for a nutrition intervention-based study (WDC, 2012).

Chapter 4

Results

Demographic information on participants and their children

The majority of the population was female, had a baccalaureate degree, was aged 35-44 and married, and had a parent role. The extended demographic information of participants can be seen in Table 4 below. The total number of survey participants was 76. The average age of participant's children was 6.00 ($SD = 2.16$). Of the children participants listed as the recipient of their meal selection, 42% ($n=32$) of children were male, and 52% ($n=40$) of the children were female. Four participants did not list the gender of their selected child.

Table 4 Demographics

Demographics	Frequency	Percentage
Gender		
Male	21	28.9%
Female	54	71.1%
Education		
High school	13	17.1%
Associate degree	19	25.0%
Baccalaureate degree	25	34.2%
Graduate degree or higher	18	23.7%
Age		
25-34	19	25.0%
35-44	27	35.5%
45-54	13	17.1%
55-64	17	22.4%
Marital status		
Single	4	5.3%
Married	62	82.4%
Divorced	8	10.8%
Widowed	1	1.4%
Family role		
Parent	49	65.3%
Grandparent	24	32%
Caregiver	2	2.7%

Comparison of meals

Of the participants, 61.8% selected the Under the Sea Treasure Chest Breakfast Special for their child, while 32% of participants did not select this meal. Instead, they selected either the Waffle Breakfast Special or neither meal for their child (identified as “Other” in Figure 1).

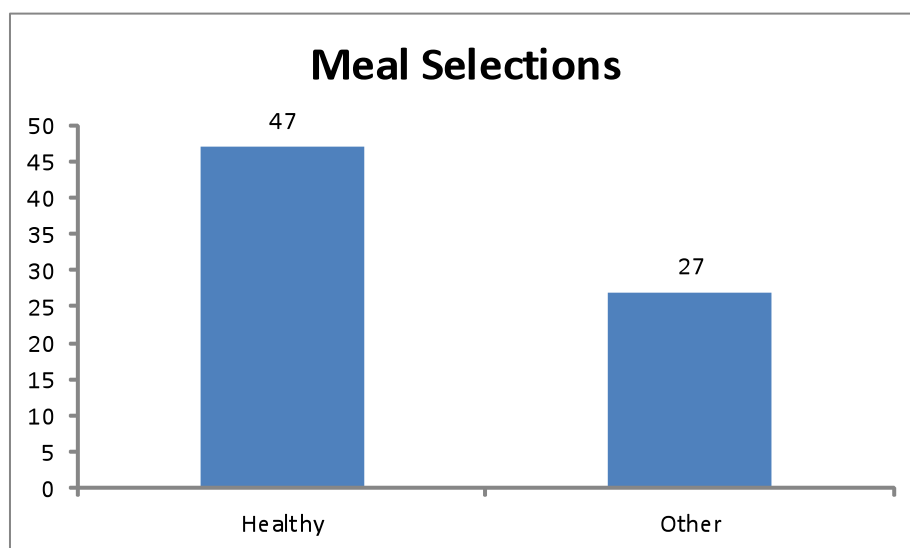


Figure 1 Total Meal Selections

Following their choice, participants were asked to explain their choice. Explanations were broken up into four major categories: those listing specific foods in meals as a concern, the variety of the meal, the healthfulness of the meal, and knowledge of what their children would like. Some participants (6%) specifically listed knowledge that their child would not like hummus. All comments regarding variety (17%) referred to either positive associations towards the Under the Sea meal or negative associations towards the Waffle meal. The majority of participants (47%) listed healthfulness as the reason for their choice. Finally, 30% of participants cited their choice to be attributed to what they knew their children would like. Of these participants, more chose the Waffle meal (62%) because they knew their child would like it more, while the other 32% of participants stated that their children would enjoy the foods in the Under the Sea meal more.

Statistical Analysis

Two binary logistic regressions were conducted to predict whether participants would select the Under the Sea meal or not, by using various predictors such as their level of concern regarding their child's weight, their awareness and/or consideration of the provided nutrition information, their level of importance on convenience, price, and appearance, and their level of concern regarding having healthy foods available for their children. Meal selection was the dependent variable, with participants choosing the Under the Sea meal as "yes," which was regarded as 1. Selection of the Waffle meal, or neither, was considered "no," and given a value of 0.

Analyses of Hypotheses

The results of the logistic regression are provided in Tables 5 and 6. Model 1 measured whether levels of concern about children's weight and diet accurately predicted meal selection. It also measured concern over the availability of healthy food, as well as awareness and consideration of the provided nutrition information with meals. The logistic regression for Model 1 was statistically significant, $\chi^2(5) = 13.94, p < .05$. Nagelkerke R^2 was .228, with Model 1 classifying 67.1% of meal selections correctly. Of the five factors, consideration of nutrition information and concern over diet were significant at the 0.1 level. Specifically, consideration of nutrition information had a significant effect on meal choice ($p < .05$). In other words, the odds of selecting the Under the Sea meal increase as caregivers increase their level of consideration of the nutrition information. Concern over diet had a marginally significant effect on meal choice ($p < .1$). Interestingly, the coefficient for this variable (-.07) indicates that the odds that caregivers will select the Under the Sea meal decrease as their concern over their children's diets increases, holding other variables constant. None of the other variables tested had a significant effect on meal selection.

Model 2 measured the level of influence that factors such as price, packaging/appearance, convenience, and healthfulness had on the likelihood that participants would select the Under the Sea meal. The logistic regression model was not statistically significant, $\chi^2(4) = 5.46, p = .243$. Nagelkerke R^2 was 0.094, with 65.8% of meal selections correctly. Of the variables tested, healthfulness was marginally significant ($p < .1$). Further research should be conducted with a larger sample size in order to further evaluate the significance of healthfulness and its impact on meal selection. None of the other factors tested were significant and thus did not have an impact on meal selection. An examination of the means for each of the variables tested, demonstrates that, while only marginally significant, healthfulness is more likely to impact choice than the other factors. Mean responses taken from participants show that participants placed the highest importance on healthfulness when considering meal selection ($M \pm SD = 4.46 \pm .76$). Price, convenience, and packaging/appearance, had responses of ($M \pm SD = 3.67 \pm .1.09$), ($M \pm SD = 3.39 \pm 1.07$), and ($M \pm SD = 3.21 \pm .1.11$), respectively.

The results support hypotheses 1 and 2. Simply having an awareness of nutrition information did not influence participants' behavior in selecting the Under the Sea meal. However, participants who scored highly on their level of consideration of the nutrition information were more likely to select the Under the Sea meal. Results do not support hypothesis 3 because concern over the child's weight was not significant. Healthfulness of the meal was marginally significant, and all other factors external to nutrition such as packaging, price, and appearance were not significant, indicating that hypothesis 4 was not supported. Participants who scored higher on their concern for their child's diet were actually less likely to select the Under the Sea meal, rejecting hypothesis 5. Hypothesis 6 was also rejected because the results indicate that caregivers' level of concern regarding their child's weight and the availability of healthy foods for their children are not adequate predictors of meal selection.

Table 5 Data Results from Model 1

Variable	B	S.E.	Wald	Df.	Sig.	Exp(B)
Packaging	.085	.233	.133	1	.715	1.089
Price	-.215	.289	.555	1	.456	.806
Convenience	.283	.286	.977	1	.323	1.327
Health	.679	.364	3.476	1	.062	1.972
Constant	-2.960	1.761	2.826	1	.093	.052

Table 6 Data Results from Model 2

Variable	B	S.E.	Wald	Df.	Sig.	Exp(B)
Concern over child's diet	-.703	.368	3.661	1	.056	.495
Awareness of nutrition information	-.299	.366	.666	1	.414	.742
Consideration of nutrition information	.857	.330	6.739	1	.009	2.355
Concern over child's weight	.317	.256	1.531	1	.216	1.373
Concern over healthy food availability	.434	.452	.922	1	.337	1.543
Constant	-1.599	2.391	.447	1	.504	.202

Chapter 5

Findings

Comparison of meals

Overall, this study found that the majority of participants selected the Under the Sea Treasure Chest Breakfast Special, rather than the Waffle Breakfast special, or neither meal. Furthermore, when participants were asked to state the reason for their meal selection, the majority indicated that the primary driving force motivating their meal choice was the healthfulness of the Under the Sea meal. The binary logistic regression (Model 1) indicated that consideration of nutrition information was a significant predictor of meal choice. With over 60% of participants selecting the Under the Sea meal, this meal would be a viable product to sell alongside the Waffle Breakfast meal at the entertainment resort. With some participants specifically listing aversion to the hummus found in the Under the Sea meal, a possible improvement to the meal may be to replace the hummus with a more suitable and age appropriate alternative.

Provision of nutrition information

The results of this study indicated that, while participant awareness of provided nutrition information did not have a significant effect on meal choice, participant consideration of the nutrition information did. These findings support hypothesis 1 and 2 and have multiple implications. An overwhelming majority of participants who picked either of the two meal options rated their awareness, and consideration of, nutrition information as relatively high (either “somewhat agree” or “strongly

agree”) when they selected their meal for their children. This is significant because the results indicate that almost all participants at least reviewed and considered the nutrition information, regardless of their ultimate choice. See Table 7. These results suggest that although the majority of caregivers that chose the Waffle meal looked at and considered the nutrition information, there was a different factor that drove them to their selection. As noted in the Comparison of meals section of Chapter 4, the second most common reason stated for participants’ meal choice was knowledge that the participant’s child would like the chosen meal more (30%). While caregivers considered the nutrition information, they may also have considered other factors such as their child’s likes and dislikes. In order to target these caregivers, it may be important to provide a variety of other meal options to choose from. Furthermore, these results contribute to evidence listed in chapter 2 that simple provision of nutrition information may not be adequate in influencing consumer behavior. As a result, it may not be an appropriate nutrition intervention to simply provide nutrition information and assume that consumers may consider it, but provide it and actively encourage consumers to consider it

Table 7

Nutrition label awareness and consideration by meal choice		
Factor	Under the Sea	Waffle meal and Neither
I am aware of the presence of nutrition information on the menus	89.3%	89.6%
I considered the provided nutrition information when I selected the menu	85.1%	65.5%

Level of concern regarding child’s weight

Hypothesis 3, which stated that higher levels of caregivers’ concern regarding their children’s weight would influence their selection of the healthy meal, was not supported by the results of this study.

One possible reason for this could be that although caregivers may state an overarching concern for their child's weight in general, when making real-time decisions in terms of meal selection for their children, they may find it more important to consider other factors such as the actual healthfulness of the meal.

Influence of external factors

When rating the importance of external factors on meal choice, participants rated the importance of three of the factors similarly: packaging/appearance, price and convenience. There was no significant relationship between these variables and meal selection. The insignificant effect of price on meal choice makes sense given that both meals were offered at equal price points. However, further research is merited to further explore the potential effects of convenience and packaging on meal selection. The importance of healthfulness was rated somewhat higher than the other external factors. However, its effect on meal choice was only marginally significant. In order to fully discover the extent to which healthfulness impacts meal selection compared to the other external factors, further research should be conducted. This finding is still noteworthy because it implies that when asked to consider factors that are unrelated to health or nutrition such as packaging, price, and convenience alongside healthfulness, caregivers in this study still considered the healthfulness of a meal to be the most important. This contradicts some of the literature presented in Chapter 2.

Level of concern regarding child's diet

Although caregivers' concerns over their children's diets was a marginally significant predictor of meal selection, the results indicate that as caregivers increased their concern over their child's diet, they were less likely to select the Under the Sea meal. This finding did not support hypothesis 5, which proposed that caregivers who rated their concerns over their child's diet more highly were more likely to

select the Under the Sea meal. The ambiguity inherent in the item measuring this variable may have contributed to this result. Participants were asked to rate their concerns about their child's diet. Further research could measure whether asking participants to rate their concerns regarding the healthfulness of their child's diet, or the quality of their diet, could have a different result.

Level of concern regarding healthy food availability

The level of importance participants placed on having healthy food availability for their children was not a significant predictor of meal choice. As a result, hypothesis 6 was rejected. The lack of significance could result from the fact that caregivers were presented with one healthy, and one less healthy, meal each; as a result, caregivers may have considered a 1:1 ratio of healthy to less healthy adequate in terms of healthy food availability. It would be interesting to measure whether levels of concern regarding healthy food availability change when participants are presented with a lower ratio of healthy, to less healthy, meals.

Conclusions

The results of this study show more caregivers selecting the Under the Sea Breakfast Meal for their children, making it a viable meal to sell at the entertainment resort. Providing nutrition information with both meals, as well as daily nutrition recommendations for children, allowed caregivers to consider the information in their ultimate meal choice. The study found that meal selection positively correlated with the importance that participants placed on the healthfulness of meals. The study found that caregivers rated healthfulness as being more important than other external factors such as price, packaging/appearance, and convenience. Furthermore, while awareness did not have an impact on meal selection, consideration of nutrition information did, indicating that more needs to be done than simply

providing nutrition information to consumers in order to influence purchasing behavior. Caregivers who rated highly on the level of concern they had about their child's diet, and the importance they placed on the healthfulness of meals were more likely to select the Under the Sea meal. Additionally, caregivers who considered the nutrition information of the provided meals were also more likely to select the Under the Sea meal.

Limitations and recommendations for future study

There are a number of limitations of this pilot study. First of all, participants were recruited from the Listserv of one university. As a result, all participants most likely came from a similar geographic area. Consumer attitudes and behavior towards different meals may change across different geographic areas. Secondly, 76 caregivers participated in this study. This relatively small sample size could have skewed the data. Also, the study only provided two meal choices for the participants to select from. In real life, caregivers will be provided a number of options for their children. A final limitation of this study is that it provided nutrition labels for both meals along with daily dietary recommendations for children, specifically for the ages 2 to 3, 4 to 8, and 9 to 13. Although the nutrition labels included comparison to a daily recommendation, all percentage of daily values on the nutrition label were based on a 2,000 calorie diet, which is too high for almost all children ages 3-9. Caregivers will not often encounter the specific nutrition recommendations for their child's specific age group when considering meal choices for their children. As a result, this could have skewed the results.

Because of these limitations, there are a number of recommendations that can be provided for future study. First of all, eligible participants could be found through a random sampling of the population across the country, ensuring that the resulting participants are more representative of caregivers across the country. More eligible participants could also be surveyed in order to increase sample size. Participants could be given more than two breakfast meals to choose from for their child. Providing more options may

reduce the likelihood that a participant would choose neither meal. In order to determine actual purchasing behavior, this study could observe participants in a real life situation as well.

As indicated earlier in this chapter, further research could be conducted to study the influence of healthfulness and other external factors on meal selection, because the current study found the impact of healthfulness to have only a marginally significant effect on meal choice. Additionally, contrary to what hypothesis 5 proposed, caregivers who rated higher concerns for their child's diet were less likely to select the healthy meal. Further research could be conducted to determine if caregiver concerns over their child's diet would lead to a healthy meal selection in a different context.

Appendix

Kid's Meal Breakfast Survey

Thank you for participating in this survey. For this survey, we would like to know your opinions on different breakfast options. Before starting the survey, please answer the following questions:

Q1 How many children under your care in your household are 3-9 years old?

Q2 How many grandchildren between 3-9 years old do you care for at times?

Q3 Please rate the following:

	no influence (1)	slightly no influence (2)	neutral (3)	slight influence (4)	strong influence (5)
How much influence do you have on food selection for your child when eating out? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 Please assume that you are at a theme park with your child and have decided to eat out for breakfast. No special events are involved (e.g., birthday or pay day). You are out looking around for a convenient meal to eat quickly and come across an establishment offering the following breakfast menus for your child. Nutritional recommendations are provided for your convenience as well. Please take a look at the menus and nutritional information and answer the following questions regarding the menus.

Under the Sea Treasure Chest Breakfast

Special

\$4.99

- Odwalla Smoothies for Kids Mango Pineapple Orange
- Ham and Egg Goldfish Sandwich
- Dippin' Stix Baby Carrots and Hummus



Nutrition Facts

Amount Per Serving		% Daily Values*	
Serving Size 1 meal			
Calories 482			
Total Fat 11.5g			18%
Saturated Fat 3.5g			18%
Trans Fat 0g			
Cholesterol 120mg			40%
Sodium 550mg			23%
Total Carbohydrate 72.5g			24%
Dietary Fiber 9.5g			38%
Sugars 46.5g			
Protein 17g			34%

*Percent Daily Values are based on a 2,000 calorie diet.

Nutritional Recommendations for Children			
	Ages 2-3	Ages 4-8	Ages 9-13
Calories	Girls: 1000-1200 Boys: 1000-1400	1400-1600	Girls: 1600-2000 Boys: 1800-2200
Total Fat (g)	Girls: 33-53 Boys: 33-62	39-62	Girls: 44-78 Boys: 55-86
Saturated Fat (g)	Girls: <11-13 Boys: <11-16	<15-18	Girls: <17-22 Boys: <20-24
Cholesterol (mg)	<300	<300	<300
Sodium (mg)	<1500	<1900	<2200
Carbohydrate (g)	130	130	130
Dietary Fiber (g)	14	Girls: 17 Boys: 20	Girls: 22 Boys: 25
Protein (g)	13	19	34

Source: U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2010. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010.

Waffle Breakfast Special

\$4.99

- Waffles served with syrup and butter
- Side of bacon
- Milk



Nutrition Facts

Amount Per Serving		% Daily Values*	
Serving Size 1 meal			
Calories 818			
Total Fat 29g			45%
Saturated Fat 13g			65%
Trans Fat 0g			
Cholesterol 120mg			40%
Sodium 942mg			39%
Total Carbohydrate 112g			37%
Dietary Fiber 2g			8%
Sugars 61g			
Protein 18g			36%

*Percent Daily Values are based on a 2,000 calorie diet.

Nutritional Recommendations for Children			
	Ages 2-3	Ages 4-8	Ages 9-13
Calories	Girls: 1000-1200 Boys: 1000-1400	1400-1600	Girls: 1600-2000 Boys: 1800-2200
Total Fat (g)	Girls: 33-53 Boys: 33-62	39-62	Girls: 44-78 Boys: 55-86
Saturated Fat (g)	Girls: <11-13 Boys: <11-16	<15-18	Girls: <17-22 Boys: <20-24
Cholesterol (mg)	<300	<300	<300
Sodium (mg)	<1500	<1900	<2200
Carbohydrate (g)	130	130	130
Dietary Fiber (g)	14	Girls: 17 Boys: 20	Girls: 22 Boys: 25
Protein (g)	13	19	34

Source: U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2010. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010.

Q5 Please select one of the breakfast menus from above for your child.

- Under the Sea Treasure Chest Breakfast Special (1)
- Waffle Breakfast Special (2)
- Neither (3)

Q6 Please write down the reason why you selected your breakfast menu or why you did not select one.

Q7 Please select 1 child or grandchild between the ages 3-9 to answer the following questions about breakfast menus. List the age and gender of the child you selected.

Q8 Please rate whether the following have any influence on you when you select a meal or food item for your child when eating out.

	Scale				
	not important (1)	slightly not important (2)	neutral (3)	slightly important (4)	very important (5)
Packaging/Appearance (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Convenience (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Healthfulness (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 Please rate the following:

	Scale				
	not at all often (1)	not very often (2)	neutral (3)	somewhat often (4)	very often (5)
How often do you feel responsible for deciding what your child eats? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you seek out foods for your child with healthfulness of the food in mind? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Please rate the following:

	Scale				
	not at all often (1)	not very often (2)	neutral (3)	somewhat often (4)	very often (5)
How concerned are you about your child's diet? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How concerned are you about your child maintaining a desirable weight? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How concerned are you about your child becoming overweight? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How concerned are you about the level of healthy food availability when eating out? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 Please rate the following:

	Scale				
	Strongly disagree (1)	somewhat disagree (2)	neither agree nor disagree (3)	somewhat agree (4)	strongly agree (5)
I am aware of the presence of nutrition information on the menus (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I considered the provided nutrition information when I selected the menu (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 My gender is:

- Male (1)
- Female (2)

Q13 My highest level of education is:

- Less than high school (1)
- High school (2)
- Associate degree (3)
- Baccalaureate degree (4)
- Graduate degree or higher (5)

Q14 My age is:

- 18-24 (1)
- 25-34 (2)
- 35-44 (3)
- 45-54 (4)
- 55-64 (5)

Q15 My marital status is:

- Single (1)
- Married (2)
- Divorced (3)
- Widowed (4)

Q16 My family role is:

- Parent (1)
- Grandparent (2)
- Caregiver (3)
- Other (4)

Q17 Please give us your name and email address for our records. This information is needed in order for you to receive the gift card for completing the survey. Thank you!

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- Education** The Pennsylvania State University May 10, 2014, University Park, PA
The Schreyer Honors College
Hotel, Restaurant and Institutional Management, Management Dietetics, B.S
- Experience** Operations Intern ARAMARK Corporation; Columbus, OH 5/13 - 8/13
-Managed recruiting processes for 6 locations within Nationwide Insurance World Headquarters -Developed and implemented a new speed interviewing system for hiring, conducted interviewing and hiring process from start to finish, and trained 6 managers on the newly conceived process -Analyzed qualitative data from a national customer survey for all 11 Nationwide Insurance accounts across the country, compiled and drafted summary materials for presentation
- Server Kimchi Korean Restaurant; State College, PA 8/12 - Present
-Manage guest relations and provide dining service for patrons in a casual dining, high guest turnover environment -Solely developed training manual for new employees in order to better streamline training process
- Higher Education intern ARAMARK Corporation; Dallas, TX 5/12 - 8/12
-Evaluated and analyzed labor costs and savings for on-site dining facilities at Southern Methodist University, and formally presented findings to a team of 12 managers and 1 district manager -Experience working in marketing, accounting/payroll, human resources, nutrition and front/back of house operations
- Environmental Advocacy Intern PennEnvironment; Philadelphia, PA 5/10 - 6/10
-Researched relevant environmental issues such as the Marcellus Shale, helped coordinate meetings with state legislatures to petition and lobby specific policies
- Activities** Penn State University Nutrition Department Teacher Assistant 8/13 - Present
-Collaborate with professor to instruct and grade students on weekly lab and course material, and assist professor in administrative course work
- The Schreyer Honors College Literary Committee 8/10 - Present
-Advocate potential novels to the Schreyer Honors College Dean to be considered for incoming class' required reading, organized discussion sessions on behalf of the SHC Scholars
- Penn State THON Dance Marathon Rules and Regulations Committee 8/10 - 3/11
-Ensured safety and security of bystanders and THON members throughout Penn State's pan-hellenic dance marathon that raised \$9.5 million for the fight against pediatric cancer
- Awards** John K. Tsui Honors Scholarship (2010-2013), The Schreyer Honors College Scholar Award (2010-2013), Edith M, Marion E and Ralph E Johnson Memorial Award (2012-2013), Penn State Licensing Program Academic Excellence Scholarship (2013)