

GENDER DIFFERENCES AND FAST FOOD PREFERENCES AMONG U.S.
COLLEGE STUDENTS

by

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ABSTRACT

The intent of this research is to examine the relationship of corporate fast food and health within the context of gender. It tests the hypothesis that Western perceptions of masculinity and femininity inform a differentiated pattern of food preference, which will correlate with health as measured by Body Mass Index (BMI). The targeted sample population for the study is the undergraduate community of the University of Central Florida, and fast food is a chosen dietary medium because it is an increasingly ubiquitous source of caloric energy in the American foodscape, representative of the mass production model applied to cuisine in Western nations. Data regarding fast food consumption habits were collected via survey producing a sample size of n=165 (n=116 females, n=49 males). Statistical analysis applied to this data yields conflicting results. While no gender based food preference is demonstrated, a correlation between BMI and frequency of consumption can be established. This suggests a gender-differentiated preference for fast food in general, if not for specific food items. From this sample, respondents were interviewed (n=14 females, n=8 males). Analysis of these interviews reveals an acute awareness by females of the connection between diet and health that is not reflected by males. Whether this perceived difference is based on an actual disparity of health education or a willingness to express this knowledge, it indicates a discrepancy which is likely attributable to cultural influences. While this study does not reveal gender-based differences in perception of specific foods, it does suggest disproportionate consumption patterns within genders which reflect distinct and contrasting cultural expectations in the U.S.

TABLE OF CONTENTS

LIST OF FIGURES.....	v
LIST OF TABLES.....	vi
CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: LITERATURE REVIEW.....	4
CHAPTER 3: MATERIALS AND METHODS	12
CHAPTER 4: RESULTS FROM QUANTITATIVE ANALYSIS.....	17
CHAPTER 5: RESULTS FROM QUALITATIVE ANALYSIS	25
Food Cognition	25
Commensality	28
Corporate Branding	30
Food Preferences	32
CHAPTER 6: DISCUSSION.....	35
CHAPTER 7: FUTURE DIRECTIONS.....	46
CHAPTER 8: CONCLUSION	49
APPENDIX A: SURVEY	53
APPENDIX B: INTERVIEW QUESTIONNAIRE	58
APPENDIX C: IRB APPROVAL	60
REFERENCES.....	62

LIST OF FIGURES

Figure 1 Differences of fast food consumption between sexes	20
Figure 2 Distribution of BMI categories by sex	22

LIST OF TABLES

Table 1 Mean BMI Score by Sex.....	18
Table 2 PCA Component Matrix of Menu Item Categories.....	19
Table 3 Frequency of Fast Food Consumption by Sex	21
Table 4 BMI Category by Sex	23

CHAPTER 1: INTRODUCTION

Food and foodways are central to everyday life and critical components of individual identity (Sarasua 2001). Accordingly, they have emerged as viable topics of anthropological research as so many aspects of daily life revolve around food acquisition, preparation, and consumption (Counihan 1998b). The rise of civilization over 10,000 years ago was largely predicated on plant and animal domestication. This advancement was accompanied by drawbacks in the form of a less varied diet and an increase in plant food consumption, particularly those rich in carbohydrates (Larsen 2006:14). The Industrial Revolution elevated the efficiency and scale of farming through machines to maximize output from minimal acreage and labor (Alston and Pardey 2006), transforming society. These changes in agricultural production have been complemented by an infrastructure of commercialized, highly mechanized food processing techniques which have transformed food into a new commodity (Eaton et al. 2002:12). How and what consumers eat has changed dramatically in contemporary times. Until recently, locally produced foods were central to human diets, but this is now far less so. Corporate fast food in particular is becoming an increasingly common feature of Western and global foodways (Ritzer 1983; Matejowsky 2008; Matejowsky 2010; Royle 2010). The cost and convenience of fast food underlies its consumer appeal (Knutson 2000:72), despite the large quantities of lipids and carbohydrates found therein, which are nutritionally deleterious to human health (Isganaitis and Lustig 2005:2457-58). The amounts of these macronutrients that are currently consumed are much higher than the human body is able to process (Eaton et al. 2002:12).

Considering the close relationship between diet and health, the increased presence of fast food as a dietary staple of global eating habits presents a challenge to the health profile of most industrialized societies.

My thesis explores the relationship between gender and corporate fast food consumption amongst U.S. college students. By viewing the fast food choices of undergraduates through the lens of gender, I elucidate how pervasive cultural norms about masculinity and femininity gain expression in fast food contexts. Similarly, I shed light on how such associations are linked to human biology and overall health. In this instance, health is specifically defined as a lack of illness and disease within the context of body mass. I argue that the cultural “gendering of food” as described by sociologist Jeffery Sobal (2005:136) also informs the fast food practices and perceptions of young adult Americans. Certain foods are perceived as either masculine or feminine in nature (Sobal 2005: 137). For example, beef is generally perceived in the U.S. as masculine, while yogurt typically has more feminine connotations.

I maintain that similar types of gender-based cultural perceptions will also emerge among the fast food choices and understandings of surveyed college students. Since the link between diet and health is now well established (Allison et al. 1999; Binkley and Jekanowski 2004; Cordain et al. 2005; Eaton et al. 2002; Isganaitis and Lustig 2005), I argue that gendered perceptions about fast food may also impact overall individual health. I predict that gender will not only affect food choice, but that males will disproportionately consume more calories than females, which will be reflected in a higher body mass index (BMI). This figure is not uniquely determined by diet. A sedentary lifestyle characterized by a lack of physical activity, which is common for

college age Americans, further contribute to overall increase in BMI (Racette et al. 2005:245). Simultaneously, societal pressures which are gender specific such as interpretations of beauty and attractiveness (Counihan 1998a, Stevens and MacLaran 2008, Mazur 1986), may also be influential. One study (Harring et al. 2010) indicates that among U.S. college students, male and female perceptions of ideal physique are inverse. For women, a smaller or slimmer figure is desirable, while the opposite holds true for men (Harring et al. 2010:45). When considered altogether, my thesis attempts to elucidate the linkages between gender perceptions and health *vis-à-vis* college students' fast food preferences to better understand the implications of contemporary Western diet and its impact on society.

CHAPTER 2: LITERATURE REVIEW

There exists a growing body of knowledge dedicated to food and its affiliation with health. Contributions have been provided by numerous disciplines, further enhancing the field. Researchers have been able to catalogue recent health epidemics that correlate with changes in both food production and consumption. In some cases, direct causation can be demonstrated between health outcomes and diet. Increasingly, fast food has been the focus of many studies, also with much emphasis on health. While health remains a problematic topic to isolate within a single context such as diet, this literature review explores the connection which has thus been established through scientific study.

In post-industrial Western society, where commerce and capitalism creates new economical niches, corporate fast food restaurants have emerged as a means to fulfill two needs. First, these restaurants provide food on a large scale utilizing a model of efficiency similar to a production line such that it appeals to a large portion of the population because of cost, convenience, and availability (Ritzer 1983). Second, they also serve to create wealth and further economic growth. In this sense, corporate fast food is beneficial to both the individual consumer and the greater society.

The evolution of this category of cuisine within Western society has not occurred without consequence, however. The commercial preparation of this highly processed fare includes abundant quantities of fats and sugars that appeal to consumer tastes yet have proven to be damaging to human health (Isganaitis and Lustig 2005). In

combination with copious amounts of sodium, which has an established link with hypertension, fast food contains measures of macronutrients that are beyond the capacity of human biology to process (Eaton et al. 2002). Additionally, it impacts the overall quality of diet as well. An opportunity cost of the consumption of fast food is a lower intake of healthier dietary choices like fruits and vegetables (Bowman and Vinyard 2004, Paeratakul 2003).

Corporate fast food has become a pervasive feature of global modernity (Royle 2010:250-52). Here, corporate fast food is defined as a commercially prepared and packaged food product purchased in a place of business which is part of a restaurant chain controlled by a greater corporate entity. These establishments tend to standardize their menu offering as well as business practices, and may be differentiated from other types of fast food producers which are privately owned and operated, and not part of a branded chain or franchise. Corporate fast food establishments are typically recognized at the national or international level, and often specialize in providing similar products. The archetypal corporate fast food giant is McDonald's (2012), according to whom there exists over 33,500 company restaurants in 119 countries serving nearly 69 million daily customers. A study by epidemiologists French et al. (2000:1353) reveals a 300% growth in fast food sales accompanied by an increase from 30,000 to 140,000 restaurants between 1970 and 1980. Given the near ubiquity of this style of cuisine, corporate fast food has been increasingly studied by anthropologists and other social scientists. Research on fast food has examined both the biological and sociocultural implications of this type of fare (Rozin et al. 2003;

Paeratakul et al. 2003; Walker et al. 2012; Matejowsky 2010; French et al. 2001; Block et al. 2004).

Several studies demonstrate a co-relationship between fast food and human physiology. Agricultural economists (Binkley et al. 2004) demonstrate a correlation between fast food consumption and increased body mass. Another study (French et al. 2001) supplements these findings with two important points-they positively correlated fat intake and daily fast food servings such as French fries, hamburgers, and soft drinks, and demonstrate a negative association between fast food consumption and daily intake of fruits and vegetables. Such findings are reinforced by the studies of nutritionists and biometric specialists (Bowman and Vinyard 2004) and nutritional epidemiologists (Paeratakul et al. 2003) which link lower overall fruit intake with fast food. These studies demonstrate that fast food consumption can both negatively impact individual health and alter eating habits.

These factors contribute to what may be one of the gravest challenges to contemporary public health policy: obesity. This condition, measured via BMI, is typified by the excess accumulation of adipose tissue. The aforementioned French et al. (2001:1353) study reports that, at the time, over 33.3%, or 58 million people in the U.S. were overweight, alluding to a 9% increase in obesity rates between 1960 and 1991. The results of this growing epidemic are well documented. In a meta-study which combined five independent studies with statistics on BMI, population size, and mortality, medical researchers Allison et al. (1999) determine that an average of 605,000 annual U.S. deaths were obesity-related. While this study does not explore issues such as medical expenses related to obesity, it calculates a price in human lives related to the

unhealthy Western lifestyle. More recent research from the National Center for Health Statistics reveals that between 2009 and 2010, 16.9% of children and adolescents ages 2 through 19 are obese, and 31.8% can be considered either obese or overweight according to BMI (Ogden et al. 2012). Another study by the same group shows obesity prevalence among adult men at 35.5% and women at 35.8%, with overall obesity/overweight prevalence at 73.9% and 63.7% respectively (Flegal et al. 2012). As fast food establishments increase in number, high obesity rates become prevalent (Dunn et al. 2012:2). However, it is imperative to acknowledge that diet is not the singular factor for obesity. Genetics, environment, and other medical issues are all contributing factors to this ongoing epidemic (Centers for Disease Control and Prevention 2013b).

Eating habits are not the only characteristic that diets typified by high fast food consumption can potentially alter. In a recent American Heart Association study, Isganaitis and Lustig (2005: 2459) establish a causal relationship between fast food, adiposity, hyperinsulinemia, and both insulin and leptin resistance. An ability to disrupt the release of leptin, a hormone that suppresses appetite, suggests that eating fast food can create a cycle of more consumption and greater caloric intake. It was later found by endocrinologists Shanik et al. (2008) that hyperinsulinemia, or elevated blood insulin levels, is a cause of several detrimental health conditions, including insulin resistance. As the relationship between obesity, insulin resistance, and Type-2 diabetes become more clearly defined, medical researchers such as Houben et al. (2012) recognize it as a global issue.

Excessive fast food consumption cannot be approached solely from a biomedical perspective. Sociocultural factors also inform this public health issue. While fast food may be linked with obesity, it is important to also recognize that this epidemic strikes disproportionately along socio-demographic lines. Block et al. (2004) demonstrate both a higher frequency of fast food restaurants and a higher prevalence of obesity in black and other minority communities. Findings by public health specialists Walker et al. (2012) support the notion that food deserts, or urban regions lacking access to grocers and fresh foods, are a common phenomenon among areas associated with lower socioeconomic status and are linked with obesity. The less affluent, however, are not alone in confronting the ill effects of fast food.

The amount of fast food consumed in the U.S. has increased significantly since the 1970's (Paeratakul et al. 2003). Between 1991 and 1996, the number of adults who consumed fast food increased by 10% (Bowman and Vinyard 2004:167). This trend is reflected in the amount of money spent on fast food. Between 1953 and 1997, the proportion of "away-from-home" food expenditures directed to the U.S. fast food industry rose from 4% to 34%, or more than one-third of overall expenses (French et al. 2000:1354). This shift to fast food is accompanied by greater availability fostered by the exponential increase in prevalence of fast food restaurants mentioned above (French et al. 2000:1353). According to some health behaviorists, one reason for the growing popularity of fast food is the taste of menu items. Fast food cuisine is often enhanced with copious amounts of fats and sugars (Glanz et al. 1998:1123). In Western societies, taste surpasses health and nutrition in food choice, which is likely a by-product of a mechanized food production system enabling excess calories (Eaton et al. 2002).

These lessons typify the behavior and perceptions of American youth. Behavioral nutritionists Neumark-Sztainer et al. (1999:934) suggest that American school-aged adolescents have a substantial lack of consideration for nutritional quality when presented with food choice. This is understandable in young children but is indicative of a larger problem since many available foods are unhealthy. Evolution does not prepare modern humans to process the calorie-rich cuisine of the post-industrial world (Eaton et al. 2002).

But just as food and foodways remain central features of Western modernity, gender can be equally influential, and has a connection to both food and health. Epidemiologists Cook and Wardle (2005:745) demonstrate that food choice on an individual level is at least partially informed by gendered factors. Nutritionists Wansink et al. (2003) and Caine-Bish and Scheule (2009) provide supporting evidence for this. The former establishes that, with regard to comfort foods, women prefer snack-like foods, while men tend to consume foods that are more meal-like (Wansink et al. 2003:745). Such preferences indicate a strong link between gender perceptions and food choice for males and females (Rozin et al. 2003, Rappoport et al. 1993, and Nayga 2000).

Both males and females are subject to gendered food perceptions of masculinity and femininity. Meat is often perceived as masculine, and in Western society, masculinity is strongly connected to carnivorousness (Sobal 2005:149). Western male identity is also generally equated with physical strength and toughness. This association reinforces perceptions of male invulnerability and diminishes the importance of bodily health. This concept is reflected in studies by Gough and Conner (2006) and Gough

(2007), social scientists who attest to the difficulties of convincing men to adopt healthier diets. Their works demonstrate that males are considered relatively stronger than females, which is reflected in both food choice and portion size. Significantly, the health of males and females are often inversely affected by these gendered views (Buerkle 2009).

While males are often culturally pressured to over-consume, females are pushed in the opposite direction. Such notions are supported by business specialists and sociologists Levi et al. (2006:91), who conclude that food decisions are often of greater importance to women, while men remain ignorant or uncaring with regard to nutrition and health. This dichotomy, arguably, is not coincidental as women are often objectified in media as mere sex objects (Elliot et al. 1995). The effect of societal pressure to live up to these false standards adversely affects women's lives. In a U.K. study by marketing specialists Stevens and Maclaran (2008:173) involving 1,000 women, 84% feel pressure to look attractive, 79% admit that food choice is affected by mood, and 52% are unable to socialize with other people when they felt unattractive. In more extreme cases, negative consequences for women include anorexia and bulimia, according to social scientists Mazur (1986) and Counihan (1998a).

This is further exacerbated by the fast food industry, which utilizes sexuality as a vehicle for promoting their products. While not a novel concept, corporate fast food brands are pushing the limits of this type of marketing, running advertisements which display nearly nude women and equate the consumption of fast food with sexual acts (Berman et al. 2009). Proving that the commodification of sexuality is not a uniquely Western phenomenon, U.S. companies are also applying this form of advertisement in

foreign markets as well (Fairclough and Adamy 2006). While these commercial endeavors have received public criticism, they persist and are presumably successful, particularly with a younger and thus less conservative segment of the population, within which college age populaces preside.

Corporate fast food represents a substantial portion of the average collegiate diet (Knutson 2000:73). As a greater proportion of Americans participate in higher education, fast food will certainly become an increasingly critical topic of study. Food preference is largely malleable during college as it is a time for experimentation and change (Knutson 2000:74). Early adulthood, thus, may represent an ideal time for nutritional education that informs food choices that play out over an individual's lifetime. In this way, it is important to gain a more holistic understanding of the eating patterns of college-age students, which will help contribute to a more nuanced approach to this public health issue.

The argument for a critical association between diet and health has been well established. Not only can diet be linked to obesity, but also specific health outcomes related to both metabolic and cardiovascular disease. In particular, corporate fast food has been targeted for this type of research due to its growing presence which correlates with the increasing incidence of such diseases. While having consequences on a global scale, post-industrial food choices have a severe impact on the individual as well. The following chapter will explore the hypothesis and study design driving this research.

CHAPTER 3: MATERIALS AND METHODS

This study attempts to elucidate the linkages between gender perceptions and health *vis-à-vis* college students' fast food preferences to better understand the implications of contemporary Western diet and its impact on society. A better understanding of differences in food cognition and the impact of diet at this life stage would also better inform the design and implementation of public health initiatives. Predicated on the idea that food retains a gendered identity, I surmise that this perception of food will inform a differentiated food choice which can be correlated with BMI. To examine this relationship, I have disseminated a survey which delineates the fast food consumption habits of undergraduate university students. From this sample I have conducted interviews which explore gender perceptions and contribute to the surveys by assisting in explaining the relationships revealed by analysis of their findings.

The "gendering of food" (Sobal 2005:136-137), which ascribes culturally specific masculine and feminine attributes to food types, is a central concept in my research efforts. An example in the U.S. is the masculinity attributed to a food such as beef, which contrasts with a more "feminine" food product such as yogurt. Within this context, my study tests the hypothesis that gender perceptions in the U.S. inform a gender-differentiated food preference, which correlates with health as measured by BMI. Utilizing corporate fast food as the medium of observation, I predict that males will, in general, consume this type of cuisine more frequently than females. More specifically, males will have a preference for foods which have a masculine attribution, while

females will have a tendency to select more feminine food items. The null hypothesis accordingly assumes no relationship between food preference and BMI.

To explore this relationship, my study is divided into two primary sections. The first part focuses on quantitative findings from a research survey, while the second phase features more qualitative information derived from several interviews I conducted with select survey respondents.

The fast food survey to which I refer in section one is based on a comprehensive 2005 fast food survey conducted by Ty Matejowsky (2010) which focuses on the fast food practices and preferences of college students in the provincial Philippines. The initial section of my survey is divided into three segments. The first portion asks for demographic information such as age, sex, height, and weight. Respondents are also given the option to provide contact information, which is used to arrange for interviews in phase two of the study. The next portion of the survey contains questions about the fast food perceptions and consumption habits of college students. The survey's final segment provides respondents the opportunity to share insights about their choice of corporate fast food restaurants and the reasoning behind these selections.

I created my fast food survey through a for-profit U.K. subscription company known as Free Online Surveys. IBM's Statistical Product and Service Solutions (SPSS) program is utilized for pattern analysis. Principal Component Analysis is used to test for a gender-based difference in food preference. Additionally, Spearman's Correlation is used to examine the relationship between response items, such as BMI, gender, and preferred food items or categories. Finally, the Mann-Whitney U Test is applied to

assess a gender-based difference in food choice on a broader level to determine whether either gender was more likely to choose fast food over a meal prepared at home. This final test is added as a result of the outcomes of the originally planned tests, which calls for a deeper exploration of the relationship of gender to food preference and cognition.

This survey was conducted on the main campus of the University of Central Florida (UCF) in Orlando, Florida during October and November 2012. It was disseminated primarily online via course email through several undergraduate Department of Anthropology courses. Aside from on-line survey distribution, I also applied the survey to students in one face-to-face class. All hard copies were entered into the online survey database manually. I collected 224 surveys in total. Of these, several are duplicates and, thus, were removed from the final pool. Of the completed surveys, I exclude those that are missing necessary data, such as age, gender, or height and weight. A final exclusion criteria for surveys requires responses from students between ages 18 and 25. Ultimately, the survey produces a sample size of $n=165$. When segregated by gender, the sample size of females is $n=116$ and males is $n=49$. The composition of the undergraduate student population at UCF, where females outnumber males (University of Central Florida 2012), partially accounts for this imbalance.

Survey respondents are asked to volunteer contact information in the form of email address or telephone number for further possible research participation. This information is gathered and applied to create a pool of interview candidates. Of a total sample size of $n=22$, 14 interviewees are female and 8 male. Interviews are included to

gain both a more nuanced perspective on their overall perceptions of food and nutrition and a deeper understanding of their respective food choices. The surveys do not focus exclusively on fast food, but also cover questions about general dietary habits in an attempt to ascribe deeper meaning to food perception. Semi-structured interviews were conducted in face-to-face settings on the UCF Orlando campus, with the exception of three which took place over the telephone. All interviews have been coded and analyzed for patterns that can be applied to both health and gender differences, further exploring the ideas presented in the main hypothesis.

There remain several strategic weaknesses that can be addressed to strengthen the efficacy and validity of this study. Three attributes, which are discussed or observed during interviews, should be included in future iterations of this and similar surveys. Place of residence, ethnicity, and portion size are factors which need to be accounted for to enhance this research. Where and with whom the survey respondents reside will greatly impact their dining behaviors, as well as the availability of corporate fast food. Ethnicity can determine metabolic differences and impact attributes related to obesity, affecting mean scores. This discrepancy can be accounted for by differentially weighing responses by ethnic category. Portion size will almost universally affect weight gain, particularly in conjunction with other attributes such as proportion of total daily caloric intake, and possibly proportions of specific macronutrients as well.

This chapter details the methodology applied to this study. Conducted in two phases, the first stage was a survey questioning the fast food eating habits of undergraduate college students. Statistical analysis was employed to discern patterns and relationships which could be further explored during the second stage through

interviews. The following chapter will discuss the quantitative analysis of the survey findings.

CHAPTER 4: RESULTS FROM QUANTITATIVE ANALYSIS

In this chapter, survey results are utilized through statistical analyses to test my hypothesis that gendered perceptions of food will influence BMI via food choice. While a correlation was established between sex and BMI, the hypothesis is not supported by the data, in that no significant pattern could be observed regarding specific food choice. However, another survey category, the frequency of fast food consumption, exhibits a pattern of distribution which coincides neatly with BMI distribution.

For my survey data, I initially anticipated collecting a larger sample of male and female respondents. Although my sample size falls short of a preferred $n=100$ for each gender, the female sample size exceeds expectations. The male sample size, however, only reaches half of what was expected. It should be noted that the final male to female ratio of responses is similar to what was collected before my removal of incomplete or inadequate responses. There is a very simple explanation for this discrepancy; it is an accurate representation of the student body in which females tend to outnumber males, particularly in Anthropology and other social science courses. While the survey was offered to over 1,000 students in total, the high refusal rate over 80% is not unusual for this type of study. Though not ideal, the working sample size of $n=165$ is adequate for the statistical analyses to which the responses are subjected.

Table 1 Mean BMI Score by Sex

	N	Mean BMI	Std. Deviation
Female	116	22.961	4.4599
Male	49	23.837	3.6510

Standard error=.522

To test my hypothesis, the relationship between BMI and sex requires examination. The mean BMI values are represented in Table 1. Spearman's rho test between BMI (a continuous dependent variable) and sex (an independent variable) reveals a significant correlation ($p=.033$, significance at the .05 level). Identical results are obtained from an Independent-Samples Mann-Whitney U Test ($p=.033$, significance at the .05 level). According to these outcomes, we can reject the null hypothesis and claim that within the sample there exists a sex-differentiated correlation with BMI, such that males display a higher mean BMI score. These findings are in line with the first part of my operational hypothesis. Full support, however, requires evidence for differential food preference as well.

Table 2 PCA Component Matrix of Menu Item Categories

Menu Items	Component 1	Component 2
Beef	.720	-.130
Chicken	.578	-.264
French fries	.773	.191
Salad	.110	.960
Soft Drink	.707	-.010

Using IBM's program, Principal Component Analysis (PCA) is used to test for sex-based differences in food preference. Respondents are asked to select the menu items they most frequently order in a fast food setting. The McDonald's menu is applied as a template for this section of the survey given the Golden Arches' bellwether status in the global fast food industry. Specific menu items are listed and then condensed into categories which include hamburgers (beef), chicken, French fries, salads, and soft drinks (which includes all sugary drinks). PCA produces two main components which accounted for 60% of total variance, which are presented in Table 2. Regression factor scores for these components are then applied to a Spearman's Correlation with sex as the grouping variable. This test produced a value of $p=0.105$, where significance level was $p\leq 0.01$. These values result in acceptance of the null hypothesis. In effect, there are no sex-based differences in food preference within this sample population.

Based on the above information, the operational hypothesis is invalidated within this population. However, a final test to examine the relationship between sex and the frequency of consumption of fast food may prove illuminating. Survey respondents are asked to indicate how often they consume fast food. Answers range from “never” to “daily” with seven intervals in between. These responses are then ranked, making them ordinal and suitable for the Independent-Samples Mann-Whitney U Test. In total, there are nine ranks, ranging from zero to eight. Using sex as a grouping variable, this test is implemented under a null hypothesis whereby the ranks are equally distributed across categories of sex, operating at a significance level of $p=0.05$. The test finds that the distribution of frequency ranks is not equal across sexes (see Figure 1), allowing for a rejection of the null hypothesis ($p=0.03$).

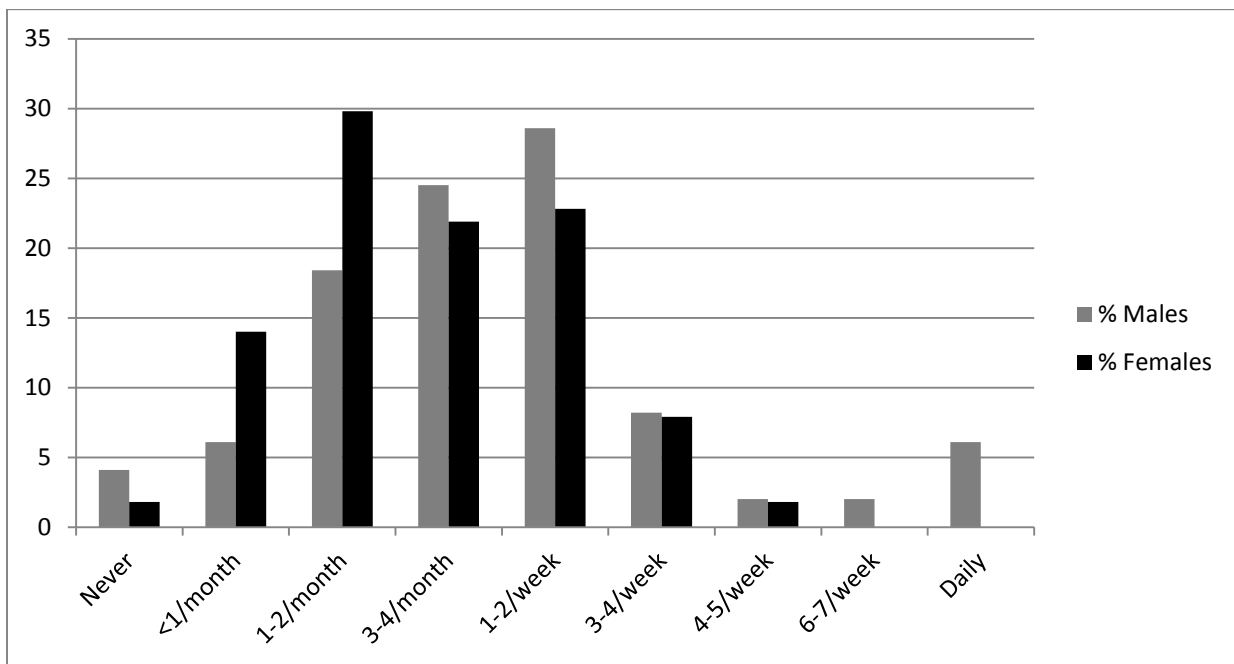


Figure 1 Differences of fast food consumption between sexes

While there may not be sex-based differences in specific food item preferences, there appears to be a difference between sexes in how often fast food is consumed. According to the data, slightly more than half of males (53.1%) report that they ate fast food approximately once a week or less, while over two thirds (67.5%) of females report the same (See Table 3). The subsequent ranks would indicate higher frequencies of consumption (e.g. greater than once per week), making this an ideal midpoint for a comparison. While the data indicate a more normal distribution for males versus a right-skewed distribution for females, they do not explain the reasons for this difference.

Table 3 Frequency of Fast Food Consumption by Sex

Frequency	Male (n=49)	% Male	Cumulative % Males	Female (n=114)	% Female	Cumulative % Females
Never	2	4.1 %	4.1 %	2	1.8 %	1.8 %
< 1/ month	3	6.1 %	10.2 %	16	14.0 %	15.8 %
1-2/month	9	18.4 %	28.6 %	34	29.8 %	45.6 %
3-4/month	12	24.5 %	53.1 %	25	21.9 %	67.5 %
1-2/week	14	28.6 %	81.7 %	26	22.8 %	90.3 %
3-4/week	4	8.2 %	89.9 %	9	7.9 %	98.2 %
4-5/week	1	2.0 %	91.9 %	2	1.8 %	100 %
6-7/week	1	2.0 %	93.9 %	N/A	N/A	N/A
Daily	3	6.1 %	100 %	N/A	N/A	N/A

Incidentally, when comparing BMI's between the sexes, a similar pattern emerges. By separating BMI ratio into the four categories underweight (BMI < 18.5), normal (BMI 18.5-25), overweight (BMI 25.1-30), and obese (BMI > 30) and grouping results by sex, both groups display a right-skewed curve (see Figure 2). However, the female group is disproportionately so.

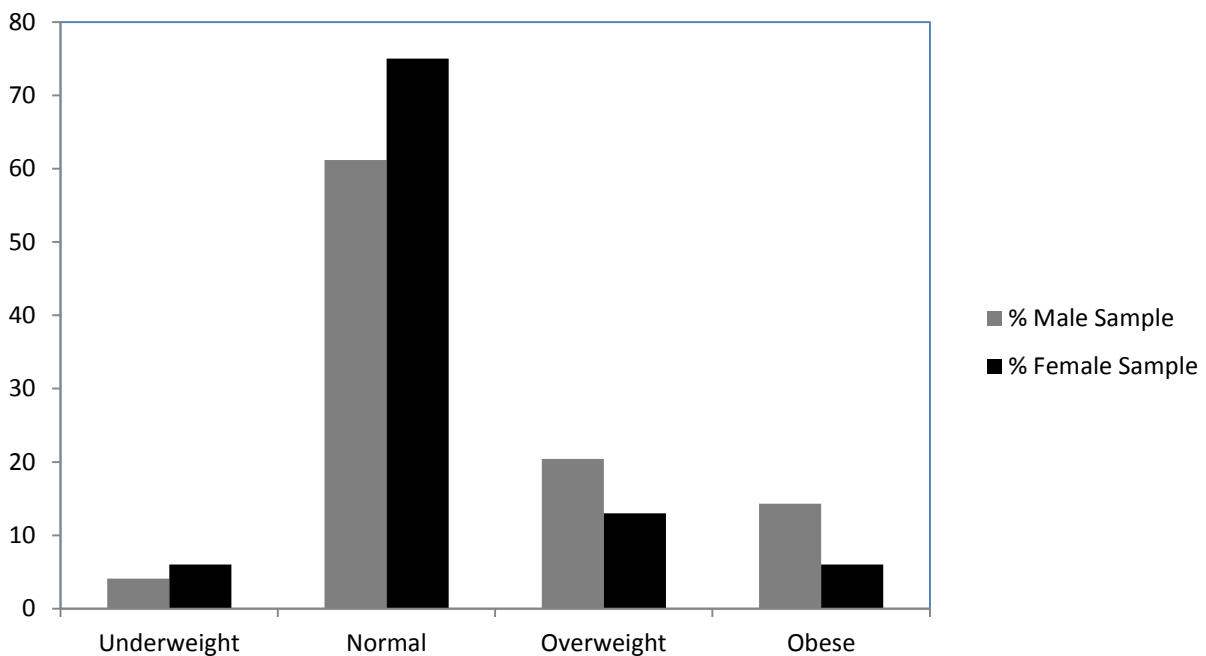


Figure 2 Distribution of BMI categories by sex

Using the normal category as a midpoint, 65.3% of males are considered normal or below, whereas 81% of females fall under the same category (see Table 4). This similarity seems to indicate a relationship between the frequency of fast food consumption and BMI, which supports the results of a recent study by the National Center for Health Statistics (Fryar and Ervin 2013). Greater insight into the dynamic

between sex, BMI, and the frequency by which fast food is consumed is gained through qualitative methods.

Table 4 BMI Category by Sex

BMI category	Male (n=49)	% Male Sample	Cumulative % Males	Female (n=114)	% Female Sample	Cumulative % Females
Underweight	2	4.1 %	4.1 %	7	6.0 %	6.0 %
Normal/Average	30	61.2 %	65.3 %	87	75.0 %	81 %
Overweight	10	20.4 %	85.7 %	15	13.0 %	94 %
Obese	7	14.3 %	100 %	7	6.0 %	100 %

While findings discredit the original hypothesis by failing to display any observable correlation between BMI and food preference or choice, they reveal a much more direct link between fast food and BMI through the frequency by which it is consumed. This is measured on a scale ranging from never to daily with appropriate intervals in between. The category of once per week is applied as a point of reference corresponding with the four BMI categories. While 46.9% of males report consumption rates above this midpoint, only 32.5% of females report the same. Furthermore, zero females report in the two highest categories; 6-7 times per week and daily. Similarly, 34.7% of males are reported as overweight or obese, whereas only 19% of females show the same. While the original hypothesis does not hold true, this analysis does

support correlation, if not causation, between BMI and corporate fast food consumption.

The following chapter will discuss interviews and explore the role of gender in food choice.

CHAPTER 5: RESULTS FROM QUALITATIVE ANALYSIS

The interviews discussed in this chapter were conducted with the intention of focusing on gender differences in relation to food choice. It is divided into four subtopics; food cognition, commensality, corporate branding, and food preferences. These headings revealed themselves through the course of interviews, displaying two distinctly different patterns of thought and values which are based on gender.

Food Cognition

Qualitative data collected via interview are coded and analyzed with an intent to recognize patterns and overarching themes that can be related to sex differences, shifting the focus of this study from health to gender in the second and final phase. Through this approach, distinctions begin to emerge which display clearly recognizable sex differences in food cognition. These differences are made more evident by some quantification.

Of 22 total interviews, 14 were conducted with female respondents and eight with males, which is proportionately similar to the survey sample size. While the “gendering of food” (Sobal 2005) remains at the forefront of consideration when conducting these interviews, respondents are encouraged to speak freely on any topic they wish. No direct references are made during interviews to sex or gender. Rather, interviews focus on food cognition generally. From the interviews, three overarching themes involving

health, convenience, and cost emerge. Other themes such as sustainability, ethics, industry, and even politics are briefly mentioned by some interviewees.

Of particular interest is the disproportionate attention given by either sex to the predominant themes in the one-on-one interviews. While no initial questions are asked directly related to health, the topic is a subject of follow-up questions. Students are asked to speak freely about what comes to mind when thinking of or discussing fast food, and the topic of health as it relates to fast food is discussed in 75% of the male interviews. Female students, by contrast, are more apt to bring up health throughout the interview process, and tend to associate it to multiple topics (i.e. non-fast food related questions). The topic is discussed by each of the 14 female participants at least once (or, in 100% of the conversations).

Of equal interest is the manner in which health is discussed respectively by males and females. Males tend to use the specific term “unhealthy” while describing fast food, or alternately comparing other types of cuisine (i.e. home cooked or traditional restaurant fare) as “healthier.” Females, however, utilize a more varied vocabulary regarding health in the context of food cognition. While the word “unhealthy” is used, other terms are utilized to express the same line of thought, including “obesity,” “weight gain,” and “fattening.” Specific references are made to fat content, nutrition labels, caloric content, serving sizes, and sugar content. One respondent describes fast food as “nutritionally vapid.” Not only do females discuss health more frequently than males, they also utilize a more complex vocabulary. This arguably displays a more nuanced understanding of the subject matter, and is indicative of a sex difference in food cognition among the UCF student population. Such findings may suggest that health is

either of greater importance to females, or that males are more reluctant to discuss it. Either explanation has its own set of implications which are discussed in detail further below.

Another important theme from the interviews relates to the convenience of fast food. While the sex difference is not as distinct as health, the differences expressed about convenience appear significant. Specifically in regard to fast food, convenience is cited or raised in discussion primarily in response to questions about reasons for food choice. If quantified for prevalence, convenience is mentioned by each male at a rate of 125%, or 10 times. For females, convenience is similarly discussed by all respondents, though it was raised throughout the interviews 28 times, prevalent at 200%. In this instance, both sexes utilize similar vocabulary, choosing such terms as “quick,” “easy,” and “convenient.” Respondents also justify their consumption of fast food by being in a “hurry” or “busy.” Differences in the amount of discussion male and female respondents devoted to time or convenience may not necessarily indicate any difference between sexes. Rather, it may reflect individual differences between respondents or the overall fast pace of today’s university lifestyle. What is of greater interest, however, is the significance of convenience in influencing diet or food choice.

A third issue that emerges from the interviews relates to financial cost. In this instance, it is the male sample which emphasizes cost at a disproportionately higher rate. Both groups mention cost in their discussions 11 times each, providing a prevalence rate of 137% for males and only 38% for females. Based on interview findings, cost is clearly of greater importance to males. Yet, any clear reasoning behind this tendency remains elusive because attributes such as real pricing and proportion are rarely

discoursed. The term “cheap” is used by both groups to describe fast food the majority of the time, with the exception of “inexpensive” as an occasional substitute. One female interviewee discusses the business practice of some eateries providing membership cards or other incentives that could result in free meals. However, she remains the sole exception as all other respondents spoke only in generalizations regarding the low cost of fast food as a motivating factor for its consumption. What appears interesting is that cost was cited as a factor regardless of employment or living situation. In combination with the higher prevalence rate among males, it is easy to assume that this group is more frugal. These findings coincide with some research (Pepper et al. 2009), which suggests a negative female association with frugal purchasing decisions. This indicates that when dining out, males are more likely to select the less expensive option, which is often a fast food restaurant. Unfortunately, the topic of fast-food versus non-fast food restaurant preference and cost is not the subject of this study and is not a widely discussed topic during interviews.

Commensality

Commensality helps reinforce social bonds or societal norms, while simultaneously fulfilling basic nutritional requirements (Grignon 2001:24). Corporate fast food, however, fosters a largely different approach to meals. As previously discussed, convenience appears to be one primary factor diners consider when choosing to consume fast food. It is reasonable to expect, then, that fast food fits into

the modern American lifestyle because it fills a niche that, for whatever reason, taking time to prepare a meal does not.

A question regarding with whom and in what settings did respondents eat fast food is posited during the interviews. For the male sample, only three of the eight, or 38%, report that they eat fast food solely with others including friends or family. The number was slightly higher with the female group, seven (57%) of whom report eating with family or friends. While these numbers may initially appear vastly different, both are close to half of each sample. Similarly, four males and six females, also roughly half of each sample set, report that they eat fast food almost exclusively alone, often citing the car and the drive-thru as their main point of interaction with the restaurant.

Upon deeper consideration, only two female participants and one male report that when dining with others, they sit down in the restaurant and take time to interact socially or “catch up” with each other’s lives. For the remaining respondents who dine with family or friends, they still describe the experience as “rushed,” or state that they are typically “in a hurry.” For nearly all interviewees, attitudes toward consumption of fast food echo a view of obligatory nutritional fulfillment and little else. Within this sample, fast food appears to serve the primal purpose of providing calories or satiating hunger, and little else.

Corporate Branding

With a focus on corporate fast food, it is probably relevant to consider company branding as it plays a critical role in consumer attitudes (Berens 2005:44). Certain food items, such as hamburgers, hot dogs, and French fries, are prevalent throughout the American food landscape. This type of cuisine is equally available between corporate fast food restaurants and corporate non-fast food restaurants which are also popular in the U.S. Excluding family-owned businesses or specialty theme restaurants (e.g. vegetarian or Indian restaurants), this category includes commonly found chains such as Chili's, Outback Steakhouse, and Red Lobster. Despite their marketed signature identity, a glance at the menu of each of these chain restaurants reveals the availability of these classic American staples (Chili's 2013, Outback Steakhouse 2013, Red Lobster 2013).

One interviewee describes these sit-down restaurants as dispensers of “upscaled fried food,” and likens them to corporate fast food establishments. I therefore expect that the members of this sample population are familiar with the style of foods available from corporate fast food chains. The degree to which they actually discuss specific restaurant names, however, may be indicative of the degree of penetration that corporate branding has in our lives. Furthermore, there is a definitive gender divide when comparing the prevalence of named corporate brands which arose during our conversations, which suggests that males are far more conscious of this aspect than are females.

Within the female sample, only eight (57%) of the 14 respondents directly mention a corporate fast food brand by name. Of the brands mentioned, the most frequently named brand was McDonald's. Overall, there are 23 specific mentions of corporate brand names during the interviews occurring at a rate of 164%. Males, in comparison, are far more apt with their use of fast food brand names. While McDonald's remains the most common choice in this group, not every male mentions the brand. All eight males, however, did directly name at least one restaurant, such that corporate brand names were mentioned in all interviews among males. Furthermore, each male mentioned, by name, multiple brands in the course of our conversations, totaling 26 overall mentions with a prevalence of 325%. If males have a tendency toward frugality and are more frequent consumers of fast food than females, then these results support a gender-based preference for corporate fast food.

The mentioning of corporate brand names is, in both groups, associated with two questions. The first is a question described above, in which students are asked to speak freely of what came to mind when thinking of fast food. This question involves more of a word association, to act as a focal point from which other questions could branch out. The other question which elicits these responses entails asking interviewees where they eat fast food. This question is certainly open to interpretation as it can refer to either a specific establishment or other location such as "in my car" or "at home," which are both provided as possible answers. Respondents are not prompted to respond in any particular way, but are given reign to speak freely. In this way, male interviewees choose with far greater frequency than females to provide brand names.

This trend reflects a stronger association of corporate fast food with corporate brand names among male students. On a deeper level, the association may possibly serve several purposes. Association with particular brands might simplify choosing; whether that choice is between name brands or between types of cuisine (i.e. fast food or home cooked). Having an option mentally reserved may serve as a way to make the decision to dine at a fast food establishment easier than opting for a self-prepared meal from ingredients found in the home, which requires greater effort, both mentally and physically. Provided that in-home food options are more nutritious, this nuance can potentially affect health albeit in subtle a manner.

Food Preferences

To better understand the relationship between food choice and gender perception, interviewees are questioned about preferred foods. Specifically, they are asked to list their favorite meat and non-meat dishes, excluding fast food. By doing this, I hope to a gain perspective on their food preferences in general. If there is a gender-based difference in the food itself, I maintain that it will be articulated in their answers to this question. I expect that there would be an obvious pattern whereby males would have a strong preference for beef, while females would list poultry, pork, or seafood as their preferred choice. Conversely, I also expect females to be more descriptive within the non-meat category. As my research findings make clear, however, such initial

predictions proved incorrect in my expectations regarding the meat category, but the non-meat category does provide some contrast.

Both sexes display similar preferences to beef, fish, and chicken. Similarly, in the case of non-meat foods, both males and females exhibit similar tastes. However, interviewed females are much more descriptive when they discuss non-meat dishes. The majority of females speak about individual vegetable types, whereas males are only willing to express in general terms that they eat or like vegetables. This dissimilarity again possibly suggests a gendered difference in food cognition, which may reflect the various social pressures each group faces.

Regarding food cognition and health, both males and females acknowledge that fast food is not a healthy choice. However, more females are apt to make this connection, while utilizing a far more informed and nuanced vocabulary. On commensality, or the degree to which eating is a social activity, females were also more likely to eat fast food with friends or family, and males were more willing to eat alone. The convenience and accessibility of corporate fast food also lends to consumption in an automobile, which both sexes described. In this instance, convenience is one factor altering social norms revolving around meals. Considering this, it is no surprise that males are far more knowledgeable in terms of corporate brand names, which may be a result in their increased frequency of consumption. On the subject of food preference, interviews continue to discredit my hypothesis, but reveal that females are more precise when describing vegetable foods, which again can be correlated with health. These findings show that there is some factor which differentiates between males and females in the context of food cognition as a whole. Whether this is a disparity in actual

knowledge or a willingness to discuss such topics, both outcomes suggest a cultural component at work. The proceeding chapter will explore the implications of both quantitative and qualitative analyses.

CHAPTER 6: DISCUSSION

This chapter explores the strengths and weaknesses of the conclusions reached in the course of this study, while placing such findings within the context of existing research. Although the hypothesis is not supported, other findings, such as the gender correlation with frequency of consumption, suggest that the relationship warrants further exploration. The interviews also reveal patterns which also differentiate along gender lines, however the causes remain unclear.

This study is grounded in an operational hypothesis which argues that gendered differences in food preference will have concomitant health outcomes that are reflected in the BMI of male and female survey participants. Under this twofold hypothesis, I predicted that males' gendered food perceptions will produce a less healthy outcome. My study is divided into two distinct phases based around data collected through surveys and intensive interviews. Central to the survey phase is the idea that there exist gender-based differences in food preference in Western society. This outcome is dependent upon differentiating varying food choices and determining specific food perceptions based on gender. This is based on Sobals's (2005:136-37) description of the "gendering of food" which ascribes masculinity and femininity to certain foods. Following this line of thought, denser foods such as beef, potatoes, and gravy have strong masculine attributes, whereas lighter fare, such as vegetables, fruits, and confections, supposedly reflect femininity. Ancillary to this idea, the second necessary outcome would demonstrate a higher mean male BMI predicated on the culturally ascribed gender-based food preference.

Accordingly, the study's first phase surveys food choices of UCF undergraduates. Undergraduates were chosen because they are often in an environment which requires making individual, independent food choices, and are presented with a plethora of fast food restaurants. Since there is no age limit for UCF enrollment, an artificial limit was set at age 25. The survey also records height and weight of respondents, which is necessary to calculate BMI. These figures are self-reported, which may result in some level of bias or error. Not only may respondents overestimate or underestimate these categories, they may not have up-to-date measurements to report. Hopefully, the anonymity provided by the survey will counter this effect. Where respondents provide contact information for follow-up interviews, the voluntary nature of this provision may indicate help mitigate such potential bias.

The first analysis is a Spearman's Correlation with BMI using gender as the grouping factor. This test results in a significant correlation between the factors, though it does not indicate causation. It reveals that within the sample, males have a higher mean BMI. While this result is in line with the hypothesis, it is critical to recognize that a high BMI does not necessarily indicate a negative health condition.

There are certain factors to take into account when applying BMI to determine whether or not individuals are truly overweight or obese such as body fat content. However, BMI is suitable measure as it allows for comparison with the greater population. Because of its broadly applicable nature, BMI serves the purposes of this study. With that said, BMI can be utilized to assess general trends in a sample or population, but fails as the sole diagnostic tool for health assessment. (Centers for Disease Control and Prevention, 2013a)

It is not the purpose of this study to evaluate the health of any participant. Rather, BMI is used as a tool for comparison between genders, which alludes to the importance of the Spearman's Correlation. Because of the results of this analysis, the hypothesis is not dismissed outright. But in order to fully verify it, it is necessary to understand why the males in the sample have a higher BMI, and how this may relate to fast food, which is why Principal Component Analysis is utilized to analyze patterns in food preference. Unfortunately, this step did not reveal a connection between gender and food preference, invalidating the hypothesis. Among these college students, there is not a differential gender perception of food which leads to disproportionate calorie consumption with regard to corporate fast food.

These results do not, however, preclude the possibility that members of this population ascribe gender to foods, since no specific questions were asked to that end. This was a conscious decision since introducing the topic of gender may create bias and skew results, whereas the purpose of the survey is to determine whether such perceptions originally existed or affected behavior. However, the prevalence of corporate fast food in Western society may transcend notions of gender in the U.S.

While this study fails to confirm a gender-based difference in food preference in terms of fast food selection among survey participants, it does reflect diversity in preference of fast food versus non-fast food choices. This is evidenced by a significant correlation between the frequency of fast food consumption and gender. Most respondents report eating this style of cuisine three to four times each month. Slightly more than half (53.1%) of all surveyed males consume fast food at this frequency level or below, whereas slightly more than two thirds (67.5%) of females report this frequency

level or below. Conversely, almost half of males (46.9%), compared to nearly one third of females (32.5%), partake in fast food more than once per week. Additionally, no females report within the two highest ranks (six to seven times per week and daily).

Interview findings suggest possible underlying dynamics that reveal an overall difference in the approach to foods between sexes, which is indicative of why males in this sample tend to consume fast food more frequently than females. My findings for this sample correlate with prior research which indicates that, in general, females are more concerned with both nutrition and health (Buerkle 2009, Gough and Connor 2006, Levi et al. 2006).

Examining gender differences in food cognition is critical to understanding how food is believed to affect health. My interviews with survey respondents help elucidate variations in cognition between male and female college students. They reveal that, in general, females are not only more cognizant of their food choices, but that health is a stronger deciding factor in food choice. This is expressed through the specificity with which females describe food and nutrition. Females tend to consider the latter in determining their dietary choices.

While both groups discuss fast food's adverse health effects, gendered difference relate primarily to how they are discussed. Males use the term "unhealthy" when describing fast food and contrast it to "healthier" options, whereas females are much more descriptive in this regard. Females display a willingness to contextualize health through food by referencing food attributes such as calorie and macronutrient content, as well as fitness aspects such as weight gain and obesity. While most female

respondents identify fast food as “unhealthy” or “bad for you”, several go farther, describing fast food as “nutritionally vapid” and equating it’s consumption to “eating garbage”. Some female respondents also discuss more specific health outcomes of fast food consumption such as cardiovascular disease and diabetes. They consider fast food as “fattening”, ascribing to it “weight gain” and “obesity”. Females also reference reading nutritional labels for caloric and nutrient content, as well as a willingness to pay extra for foods which they consider healthier (i.e. organic foods). This awareness may reflect more considered thought about food choices and may translate to more health-conscious decision-making in both restaurants and grocery markets.

An underlying consideration here is how social pressure from friends and family may influence food choice in the college setting. As Harring et al. (2010:45) describe, a perception exists among college students where the masculine ideal is largeness, while the epitome of femininity is diminutiveness. This reflects a perception of physical strength that reinforces a socially constructed ideal physique upon each gender inversely. Society, therefore, arguably encourages males to be less cognizant of food choices and for females to be the opposite.

This duality is apparent when considering celebrity glorification in American society. More often than not, certain physical qualities are expressed as desirable. The preferred strong masculine physique (Gangestad and Scheyd 2005:538) is achievable, in a vague sense, by greater consumption than is the ideal smaller female physique. In contrast, the imposed feminine ideal is achieved by limiting consumption in a society where calories are in abundance. As a result, considering cultural norms of attractiveness, it is arguably more beneficial for females to be aware of the health

consequences associated with both healthy and unhealthy foods. This may explain not only why college females at UCF appear to be more knowledgeable about nutrition, but also why they show a tendency to consume fast food less frequently.

Another consideration in the observable gender-differentiated expression of food cognition is that males are less comfortable discussing health and nutrition in the context of food. This may reflect conformity to societal norms, where males are not necessarily expected to be concerned with nutrition in the same way as females. If males are expected to have greater mass, then nutritional values connected to obesity could be considered secondary in their food choices. If increased musculature is the desired outcome for males, then this would require a different knowledge set.

Among males, this approach to body mass is also expressed by desired outcomes of exercise. While only one male in the sample discussed exercise, it was in the context of building muscle mass. In contrast, several females of the group profess a desire to decrease body mass through physical activity. In accordance with perceptions of attractiveness, this may explain the disparity in how frequent fast food is consumed by opposite sexes. In terms of food preference, gender may also influence fast food consumption, but not as predicted by my original hypothesis. Instead of affecting the specific category of fast food items that are consumed, it may instead be a determining factor in the sense that gender affects desired health outcomes, which are achievable through varying dietary quality and metabolic responses.

Overall, the college setting provides unique challenges to studying fast food consumption. This becomes increasingly clear when examining attitudes toward

corporate fast food. It is generally regarded as unhealthy, yet a strong majority of sampled students elect to partake in its consumption for various reasons. The most often cited reason for the latter its convenience. Unfortunately, none of the interviewees occupied a frequency rank of greater than 1-2 times per week as recorded by the initial survey, so it is difficult to gauge how these inimical ideals coexist. But the college setting may offer some clues as it fosters an active lifestyle for many students.

Particularly at UCF, and within the interviewed sample, time was a factor in determining convenience, whether this was expressed explicitly or not. All of the interviewees are employed at least part-time, which contributes both to their consumption of fast food and who they socialized with while eating. While dining can be a social affair, in the fast food setting among college students, the opposite may also hold true. For the majority of interviewed students, fast food consumption appears to be a largely solitary activity, often occurring before or after work or school, or on a break during either. Between obtaining an education and paying for it, these young adults appear to lead very busy lives. For them, corporate fast food may be the most feasible choice at times, regardless of attitudes toward health.

This may be indicative of emergent attitudes regarding the overall value of food. For college students, fast food not only arguably represents a convenient option, but also a relatively inexpensive one. The number of corporate fast food restaurants operating today is indicative of the popularity of this fare. My study reinforces the notion that it is due in large part to low cost and high convenience. The irony here is that due to its unhealthy nature, the cost of fast food may end up simply being deferred. But deferment is not a concept that is new to college students or the entire population as a

whole. Students often take out considerable loans to fund their educations. However, the consequences of failing to repay these obligations can be dire. Fast foods or an unhealthy diet in general, are a reflection of overall society in this manner. But rather than finances suffering, it is the body that bears the burden.

This is a price that millions daily are willing to pay, suggesting that there is also a great benefit to a fast food diet. Considering the opportunity cost, in time and energy, of preparing self-cooked meal, corporate fast food represents an appealing substitute with numerous benefits. In the U.S., a culture of capitalist consumerism dominates. For the average citizen, this affords an opportunity for financial success in an environment rife with competition. Where food preparation and consumption can be both time- and labor-intensive, any speedy alternative can serve as a competitive edge to gaining success and financial independence. This is a prevalent theme that interviewees can all relate to. Fast food serves the purpose as a fuel, the energy of which is directed to outcomes perceived as greater than any single meal. For this sample, that outcome is, once again, individual financial success through the completion of a bachelor's degree. In a consumer culture, economic independence is a hallmark of success, and fast food can be a means to that end.

Similar trends can be observed outside of the U.S., where corporate fast food has spread and taken on comparable meanings. East Asia has been a focal point of study on the cultural significance of fast food. In Beijing, for example, McDonald's and other such restaurants represent far more than a vehicle for satisfying nutritional obligations. While the taste and satiating ability of this fare is often dismissed, it is still a preferable option because patrons are not partaking in the consumption of food so

much as they are consuming Western culture (Yan 2006:10). Unlike in the U.S., where fast food is often a less expensive choice, McDonald's is more of a luxury (Yan 2006:14). In this instance, the core ideal of Western corporate fast food is the selling point, which is only supported by the actual menu. This incorporation of the foreign into Chinese culture embodies a desire for modernization enabled by a blurring of cultural divides (Yan 2006:3).

In Japan, similar viewpoints prevail. Challenging to Japanese traditions of commensality, hamburgers in particular are representative of individuality. Their compact, easily accessible nature bucks against the idea of sharing food, altering a critical social dynamic (Ohnuki-Tierney 2006:131). It is no surprise, then, that while some segments of the Japanese population look to fast food for communal experience, a majority of working adults view it in much the same way as the U.S. college students interviewed in this study; an aide to achieving and maintaining economic success (Ohnuki-Tierney 2006:132). In both China and Japan, the actual food is of far less consequence than the ideal it represents. Either nation devises a prevailing viewpoint of fast food as a snack (Ohnuki-Tierney 2006:143-144, Yan 2006:9), yet it has ushered in culturally transformative effects on both societies.

One can look to South Korea for an illustration of open opposition to the cultural incursion that accompanies the inclusion of Western fast food corporations into society. The association of identity with rice is at odds with the emergence of corporate fast food, underlining mutually exclusive goals of cultural preservation and modernization (Bak 2006:98-99). These seemingly oppositional viewpoints are divided along lines of age, with younger Koreans embracing Western-style cuisine along with accompanying

ideals of individuality and consumerism (Bak 2006:119). These examples help to characterize corporate fast food within a global context. Much like the U.S. sample presented in this study, despite the opinions of the actual quality of the food, this fare often fulfills a role that is reflective of an overall Western worldview of consumerism. As this study exemplifies, fast food can be a shortcut enabling economic successes. It is this ideal that is being embraced in Asian nations, who are necessarily consuming Western values along with their hamburgers and fries. The embracing of individual values and the equation of accomplishment with monetary wealth, which is quite useful for the consumption of mass produced goods and the fostering of greater wealth, is the acceptance of Western values. While this does not resonate within entire national populations, as most evidenced by South Korea, it does represent a degree of cultural exchange that is inescapable and may only become a stronger force in the future.

Fast food consumption may best serve as a metaphor for life in Western post-industrial society. While the negative health consequences of this variety of food are recognized, they are owed to the ingredients which provide an appealing taste that caters to the human palate (Eaton et al. 2002). As the survey reveals, there is a continuum that ranges from outright rejection to full embrace in regard to fast food. There are varying degrees to which people consume fast food, but the motivations behind them remain similar; ease of access and low immediate cost. This study demonstrates both that corporate fast food is deeply embedded within contemporary American society, and that it will unlikely disappear anytime soon. Yet, as attitudes toward nutrition shift, fast food corporations will be forced to adapt as well. Already,

calorie information and healthier options find their way onto menus. It will be up to the consumers, who vote with their dollars, to bring about real change in the industry.

It is difficult to study health within a single context, such as diet, since health is as multifaceted and complex an issue as can be studied. It represents the classic debate of nature and nurture, or biology and environment. This study presents a situation where both factors interact to affect health. However, BMI is not a perfect indicator of individual health, and is far more suitable for wider comparisons. Findings coincide with prior research which corroborates the growth of obesity rates (measured through BMI) with increased fast food consumption. But other contributing factors, such as levels of physical activity, are not taken into account. However, the centrally emerging theme arising from this study is the growing presence of corporate fast food in the American and Western foodscape, and the consequences that may result. The next chapter will explore future research directions that may elucidate the findings of this study.

CHAPTER 7: FUTURE DIRECTIONS

This study raises questions which warrant further exploration. This narrowly defined study touches on far greater themes of gender, culture, and Western society. There are implications concerning public education, public health, and gender studies. Examining these issues within the context of food is effective because it is universal.

While this study demonstrates a positive correlation between fast food consumption and BMI, it does not connect gender and food preference in terms of specific food choice. Despite this failure, several unanticipated trends appear throughout the course of research and analysis. Primary among these is the link between gender and food cognition. Members of this sample clearly demonstrate opposing levels of articulation on the topic of nutrition. The interviewees' enrollment as college undergraduates at a major university is indicative of at least a minimal level of education, although that may be highly variable due to the structure of the American education system (i.e. different states may have different standards in regard to health and nutritional education). However, it would be valuable to explore the relationship between sex and food cognition, possibly through a combination of written tests, interviews, and group discussion. This may reveal underlying cultural factors which affect both food cognition and food choice, which could have far-reaching effects for public health issues such as obesity and related diseases.

Another avenue worth exploring may be the gender-differentiated approach to exercise. While this was not a central topic in the study, interviews indicate that

exercise goals may also vary by desired outcomes. At first glance, it may seem apparent that males desire increased musculature while females attempt to decrease body mass. However, considering rising U.S. obesity rates (Flegal et al. 2012), there may be a resulting shift in attitudes of men toward exercise. Furthermore, if gender equality continues to rise (Inglehart and Norris 2003), then a concomitant shift may occur with women regarding exercise. In either case, future research could explore cultural change that is a direct result of changes in a society's overall health profile. Unfortunately, the male interviewees were all within the underweight or normal BMI category, excluding exploration of this topic.

It may also be beneficial to compare my research findings with those collected from a similar age group that is not enrolled in a college or university. Analysis of the environmental effect on food cognition by comparing a sample that is exposed to a college setting with one that is not, and presumably in the work force, might reveal a different pattern. Likewise, investigating differences in fast food cognition at the regional level would be of interest. Examining how food perceptions vary by regions in the U.S. in the context of health and nutrition could yield contrasting results. This approach may also have a deep influence on public health policy as well, and could be achieved by surveying college students from campuses around the nation. Fortunately, recent research has focused on environmental effects on diet and health (Dunn et al. 2012, Kirby et al. 2012, Lee et al. 2010, Drewnowski and Specter 2004). However, a more geographically comprehensive examination of environmental effects and their impact on health may prove to be enlightening.

For a more intensive analysis of health and fast food, it would be beneficial to use a method that directly measures health in terms of body fat. For this study, BMI is utilized as a general indicator of a trend, but one weakness of this approach is that it is a tool for comparison, and does not directly diagnose health conditions. Utilizing a more direct technique, such as skinfold measurement, would provide a more useful dimension for correlation. This method, while more labor intensive, could yield a larger data set and be combined with a short survey to gather data on eating habits. It would be fairly easy to implement with the right training and institutional permission if conducted in a setting such as a university campus. The results found by this study suggest that a gender-based approach to food studies will continue to produce valuable information relevant to a variety of disciplines.

The connection between gender and health becomes more apparent when observed through the lens of diet. Gender and food cognition is a topic that would benefit from a study with a broader scope, incorporating different regions for comparison. It would also be of interest to examine what effects raising obesity rates have on body image. In any study stemming from this research, it would prove beneficial to use a more direct method of measuring health, such as skin-fold tests. The increasing presence of corporate fast food may present a health risk on a societal level, but only through ongoing research will it ever be negated.

CHAPTER 8: CONCLUSION

The production, acquisition, preparation, and consumption of food are universally human attributes around which daily life revolves (Counihan 1998b). Historically, populations have been transformed by the means of food procurement or production. Without the ability to produce food in mass quantities, it would be difficult, if not impossible, to successfully support the extant global population. Technology is responsible for maximizing the efficiency of agricultural practices (Alston and Pardey 2006), forcing societal shifts. Culture has, likewise, adapted although it remains grounded in core human necessities such as survival and reproduction. As society has evolved with the paradigmatic changes afforded by technology, food culture has necessarily adjusted as well.

Because either gender presumably has equal access to food, yet obese and overweight statuses are unequally distributed between men and women in the U.S., then there could presumably exist a sex divide in food perception. This can be explained by Sobal's (2005) "gendering of food" theory which proposes that masculinity and femininity are attributed to foods along lines of cultural discernment. In the U.S., masculinity and femininity are exemplified by greater or lesser mass, respectively (Harring et al. 2010). Accordingly, heavier foods (beef, fried foods, potatoes) are identified as masculine, whereas lighter foods (white meat, fruits and vegetables, pastries) are feminine. This may account for the disparity between sexes in regard to BMI in the U.S., and predicates my hypothesis that American gender perceptions will be expressed through measureable gender-differentiated food preference, which will

manifest through a higher average BMI for males. This would indicate a male preference for masculine (less healthy) foods and a female preference for the opposite.

The focus of this study is to examine the intersection of food, health, and gender. Because corporate fast food is pervasive in the university environment, college students are an exemplary population to study gender perceptions and health within the context of fast food preference, providing a window into the Western diet and the social and health impacts of corporate fast food. To accomplish this research goal, a two-part study is employed. A preliminary survey of UCF undergraduate students gauges fast food preference and measures BMI through self-reported demographics, and semi-structured interviews explore gender perceptions and food cognition.

Through statistical analysis, a correlation between gender and BMI was established and confirm part of the hypothesis. However, there is no correlation between gender and food preference, which nullifies the hypothesis. While males display a higher mean BMI than females, the source is not the effect of gender perception on food preference. Instead, data indicates that males consume fast food more frequently, and interviews reveal a possible motive for the disparity.

During interviews, I made a conscious decision to refrain from discussing gender perceptions directly to avoid influencing responses. Throughout discussions, no apparent gender preference became obvious, as both sexes displayed similar tastes in food. Contrary to predictions, females were as apt to consume beef as males, and some males displayed a disdain for red meat altogether. Since beef is one of the more expensive foods available, and is firmly rooted within American culture, it is possible

that this type of food has a status that transcends gender perception. Most interviewees tended to focus on taste as a determining factor for food choice.

Fast food is recognized by all as an unhealthy option, but analysis reveals that males, while aware of nutritional effects on health, are only willing to discuss the topic briefly. Whether this is a result of unwillingness or lack of knowledge is undetermined. While males only state that fast food is “unhealthy,” females display a much higher level of cognizance. The latter group expresses a much more nuanced vocabulary, greater depth of understanding, and willingness to discuss health in the context of food. Conversations include discussions of calories, fat content, and carbohydrates. Females in this sample are also more actively considerate of health, which is expressed through the reading of food labels, and also speak about obesity and diabetes while discussing food. All of these topics are absent in conversations with male respondents, demonstrating a sex difference in food cognition, although not one expressed in food preference as originally predicted. I argue that this accounts for the difference in the frequency of fast food consumption. Females are more aware of the health consequences of a poor diet, which equates to better overall choices and eating habits.

Gender roles can help to explain this variation. Culturally imposed views of masculinity and femininity determine opposing social pressures for males and females to conform to their desired physiques. Largeness and muscularity are equated with men in the U.S., while a slim, petite stature is expected of women (Harring et al. 2010). The interviewees indirectly express conformity to these cultural ideals when discussing exercise, as expressed via opposing desired outcomes. Males are interested in increasing muscle mass through weight training, whereas females convey a desire to

decrease body mass through aerobic activities like jogging or running. Within this sample, exercise is engaged with these goals explicitly.

These findings indicate that, despite a narrowing gender gap in public spheres, cultural perceptions of masculinity and femininity remain as motivating factors and can influence behaviors. In light of the prevalence of overweight and obese status in the U.S., this stands out as a critical factor when considering public health issues. Because health goals are sex-differentiated, approaches to public health may also benefit from taking a similar approach. It would seem that males could benefit from better nutritional education, which might enable a cultural shift that empowers them to be more expressive about health concerns. Corporate fast food will not disappear from the landscape; it is far too profitable. Like other vices, it should be taken in moderation. Attitudes toward healthy eating can be affected by cultural change through public education as well, and have the potential to positively alter the nature of corporate fast food. Ultimately, it is within the power of the consumer to sanction such changes, which are necessary for the greater public good.

APPENDIX A: SURVEY

Fast Food Survey-2012

Age _____ Sex _____ Number of people in household _____

Father's occupation _____ Mother's occupation _____

This study focuses on health, which will be measured with Body Mass Index. To calculate BMI, your height and weight are required.

Height _____

Weight _____

*Answer the following questions as they relate to you. For most answers, check the box that most applies or fill in the blank. **You do not have to answer any question you do not wish to answer.** By completing this survey I acknowledge that I am at least **18 years of age** and give my informed consent to participate.*

1. How often do you eat fast food?

- | | | |
|--|---|---|
| <input type="checkbox"/> Never | <input type="checkbox"/> More than 4/month | <input type="checkbox"/> 6-7 times per week |
| <input type="checkbox"/> 3 or fewer times/year | <input type="checkbox"/> 1-2 times per week | <input type="checkbox"/> daily |
| <input type="checkbox"/> 1-2 times/month | <input type="checkbox"/> 3-4 times per week | |
| <input type="checkbox"/> 3-4 times/month | <input type="checkbox"/> 4-5 times per week | |

2. Does fast food make you feel full?

- Yes No

3. Is fast food a meal or snack?

- Meal Both
 Snack

4. Fast food is...

- Expensive Inexpensive
 Moderately priced

5. Nutritionally, fast food is...

- Good for you Neither
 Bad for you Not sure

6. Where do you typically eat fast food?

- Restaurant
 Home
 School
- Car
 Other _____

7. What was your age when you first ate fast food?

- Never ate fast food
 1-5 yrs
 6-10 yrs
- 11-15 yrs
 16-18 yrs
 19 or older
- Not sure

8. How often do you eat at McDonald's?

- Never
 3 or fewer times/year
 1-2 times/month
 3-4 times/month
- More than 4/month
 1-2 times per week
 3-4 times per week
 4-5 times per week
- 6-7 times per week
 daily

9. Does McDonald's make you feel full?

- Yes
 No

10. What times of the day do you eat at McDonalds? Select all that apply.

- Breakfast
 Lunch
 Dinner
 Between meals
- Late night
 Early morning (between midnight and breakfast)
 Other _____

11. What do you usually order at McDonald's? Select all that apply.

- Large/specialty burger (Angus, etc...)
 Medium Burger (Big Mac, Quarter Pounder, etc...)
 Small Burger (hamburger, cheeseburger, etc...)
 Chicken Sandwich, Grilled
 Chicken Sandwich, Crispy
 Fish Sandwich
 Chicken Nuggets/Strips
 Side Salad
 Large Salad with grilled chicken
- Large salad with crispy chicken
 French Fries
 Snack wrap
 Breakfast Sandwich with meat
 Breakfast sandwich without meat
 Breakfast Platter
 Hash Brown
 Dessert (ice cream, pie, etc...)
 Fruit
- Soda
 Diet Soda
 Coffee
 Milk
 Orange or Apple Juice
 Milkshake
 Sweet Iced Tea
 Smoothie
 Frozen Coffee Drink (Frappe)
 Other _____

Please rank the following, where 1 is best. If you are unfamiliar with the item, leave it blank. No item can have more than one ranking, and each ranking can only be used once.

12. In terms of service, rank the following (1-7):

<input type="checkbox"/> McDonald's	<input type="checkbox"/> Kentucky Fried Chicken
<input type="checkbox"/> Burger King	<input type="checkbox"/> Subway
<input type="checkbox"/> Wendy's	<input type="checkbox"/> Taco Bell
<input type="checkbox"/> Pizza Hut	

13. In terms of cleanliness, rank the following (1-7):

<input type="checkbox"/> McDonald's	<input type="checkbox"/> Kentucky Fried Chicken
<input type="checkbox"/> Burger King	<input type="checkbox"/> Subway
<input type="checkbox"/> Wendy's	<input type="checkbox"/> Taco Bell
<input type="checkbox"/> Pizza Hut	

14. In terms of nutrition, rank the following (1-7):

<input type="checkbox"/> McDonald's	<input type="checkbox"/> Kentucky Fried Chicken
<input type="checkbox"/> Burger King	<input type="checkbox"/> Subway
<input type="checkbox"/> Wendy's	<input type="checkbox"/> Taco Bell
<input type="checkbox"/> Pizza Hut	

15. Rank the following (1-7) according to where you would most prefer to dine:

<input type="checkbox"/> McDonald's	<input type="checkbox"/> Kentucky Fried Chicken
<input type="checkbox"/> Burger King	<input type="checkbox"/> Subway
<input type="checkbox"/> Wendy's	<input type="checkbox"/> Taco Bell
<input type="checkbox"/> Pizza Hut	

16. Please rank (1-7) which aspects of McDonald's most appeal to you.

- Taste
- Atmosphere
- Service
- Place to meet friends
- Cleanliness
- Location/proximity
- Brand name recognition

As part of this study, follow-up interviews will be conducted in a public setting. If you would like to be considered for a follow-up interview, please provide your Name and Contact Information (phone or email) in the space below. This information will be kept confidential, and only the study investigator will have access.

Name

Contact Information

Thank you for your participation!

APPENDIX B: INTERVIEW QUESTIONNAIRE

Qualifier; this study is about fitness and diet. If you have any health issues that can affect your health, weight, or eating habits, please indicate that you do not wish to be a part of this research. I am not asking for specific details.

1. You win a contest; you have a free dinner, all inclusive, at your favorite restaurant. Describe your restaurant and meal.
 - Why?
 - Is this the type of food you typically eat?
 - This may be followed up by explanations, clarifications, why questions...
2. It's been a long afternoon, you have a few minutes between classes/ on break, and you want a snack. What do you eat?
3. What are your thoughts on fast food? Whole foods (like fruits, vegetables, etc...)? Organic foods?
4. List some of your favorite foods, and why you like them.
5. Let's practice some word association. What comes to mind when you hear the words "fast food"? Feel free to list as many words, phrases, thoughts, etc... as you please.
6. What are some reasons that you eat fast food?
7. Where do you eat fast food? Who do you eat it with? Is it rushed, or do you take your time?
8. What are your favorite types of meats?
9. What are your favorite types of non-meat food/recipes/etc...
10. Describe your typical diet. What is usually on the menu for you?
11. Is the diet you described in the previous question similar to your childhood diet? If not, how is it different?
12. Do you prefer to eat out or to cook at home?

APPENDIX C: IRB APPROVAL



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Donald C. Persaud**

Date: **October 23, 2012**

Dear Researcher:

On 10/23/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination
Project Title: Gender Differences and Fast Food Preferences among US College Students
Investigator: Donald C. Persaud
IRB Number: SBE-12-08739
Funding Agency:
Grant Title:
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 10/23/2012 04:46:11 PM EDT

IRB Coordinator

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