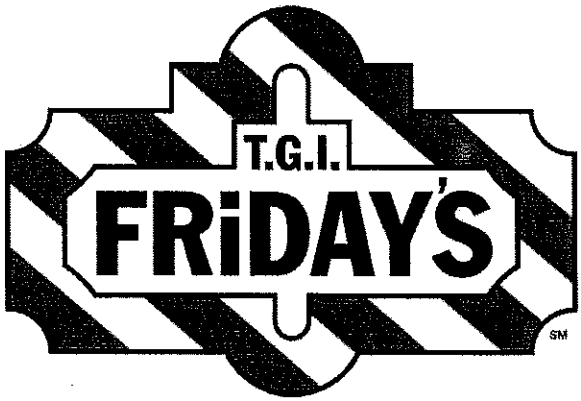
Marketing Research Project:

Nutritional Labeling on Restaurant Menus

A Survey/Quasi-Experiment



Prepared by:

John Bellfield: [redacted]

Chloe Bimont: [redacted]

Kaitlin Gardiner: [redacted]

Jenny Soto: [redacted]

Prepared for:

Professor Dommeyer
MKT 346- 12:30
Fall 2010

SUMMARY

Beginning in January, chain restaurants with at least twenty locations will be required by law to include nutritional information on their menus. Currently, only a few restaurants are abiding by this law and displaying their nutritional information directly on the menu. Therefore, we conducted a survey at T.G.I. Friday's where calories are placed directly on the menu to gain insight on consumer's attitude and behaviors to this law. The main research questions that we want to answer is whether the consumer is noticing the nutritional information and, if so, is it affecting their meal choice. In addition, we want to find out general feelings regarding the nutritional labeling law. More specifically, we want to see if dining frequency and education-level have any effect in use of the nutritional information and attitudes towards menu labeling.

The methodology we used was a self-administered survey. We made 160 attempts and were able to obtain 73 usable surveys. We made all 160 attempts at T.G.I. Friday's in Porter Ranch where we approached every second person who exited the restaurant. We alternated between the treatment using the puppy and the control without the puppy after every tenth attempt.

By running numerous statistical analyses using our survey results, we concluded that our data both supports and does not support our hypotheses. Our first hypothesis that frequent restaurant patrons will notice the menu's nutritional information more than those who dine out less was supported in our results. However, our second hypothesis that higher-educated patrons will notice and utilize the information more readily than lower-educated patrons, was largely unsupported by our data collected.

A. INTRODUCTION AND LITERATURE REVIEW

Restaurants with twenty or more locations will be required by law to display their calorie information directly on their menu by January 2011 (CRA 1). With few restaurants adopting the law early, a major concern is whether displaying the nutritional information has any effect on consumers, as well as the restaurant's sales figures. Americans spend nearly half of their food budget at restaurants (Pomeranz 1578). With the enactment of the law, restaurant owners are wary that Americans may change their eating habits after realizing that restaurant meals are high in calories. In fact, consumers tend to underestimate the calorie content of their meal by an average of six hundred calories (Pomeranz 1579). By disclosing the nutritional information, Public health officials hope that patrons will trade down to a healthier alternative (Shlachter 1). With the divided views regarding the value of disclosing nutritional information, it is best to go directly to the consumer to find out their attitudes and behaviors regarding nutritional labeling and restaurants.

A recent study was published by the American Journal of Public Health regarding the impact of menu-labeling in full-service restaurants. The study was conducted in six full-service restaurants in Pierce County, Washington, where restaurants added nutrition information to their menus, and they provided data on entrée sales for 30 days before and 30 days after the information was added. Restaurants in the study were able to display the nutritional any way, but most chose a slashed format with key numbers (750/21/2300/45) corresponding to calories, fat, sodium, and carbohydrates. The result were that seventy-one percent of patrons reported noticing the nutrition information; 20.4% reported ordering an entrée lower in calories as a result, and 16.5% reported ordering an entrée lower in fat as a result (Pulos 1035). These findings indicate that consumers notice the nutritional information, but largely are unaffected by

it in terms of their meal choice. This study was conducted at six restaurants that may be relatively small with a niche market that loyally patronizes the restaurant. Therefore, they will notice the information because the menu appears different, but they will probably stick to their usual meal choice.

Conversely, another study had a different conclusion when testing the effects of menu-labeling and how it is presented. Specifically, the study randomly assigned consumers with one of three menus: no calorie labels, calorie labels, and calorie labels with daily caloric recommendations. This article concluded that nutritional labeling is valuable and is even more so with the addition of daily caloric recommendations (Roberto 315). When consumers have more knowledge, specifically regarding health, they tend to make more rational decisions.

With disparity in findings, we will investigate the attitudes and behaviors of consumers with regard to restaurants, nutrition, and menu-labeling. Though there may be disparities in the general findings, the differences may be due to the fact that the design of the study and the demographics were relatively different. Therefore, our hypothesis reflects differences within the population with respect to education, as well as dining-frequency. T.G.I. Friday's is one of a few restaurants that voluntarily display calorie information directly on its menu at the restaurant. Specifically, the calories follow the rules of the up-and-coming law where calories are to be disclosed next to the menu item. Hence, results from T.G.I. Friday's will be a good indicator in terms of attitudes towards menu-labeling and restaurants. The previously mentioned findings and studies illustrate the complexities of the menu-labeling and contribute to the importance of investigating our research hypotheses.

Our research hypotheses are: 1) Frequent restaurant patrons will notice the menu's nutritional information more than those who dine out less and 2) Higher-educated patrons will notice and utilize the information more readily than lower-educated patrons. The null hypothesis is therefore that there is no difference when comparing these consumer's attitudes. Nevertheless, as indicated in our research hypotheses, we believe that there is going to be an overall difference in these consumer's attitudes and behaviors.

Our research hypotheses reflect rational generalities about the different types of consumer groups. For example, consumers who regularly dine-out are more exposed to menus and their format than those who rarely dine out. In addition, frequent diners have different views regarding the overall experience for going to a restaurant. Specifically, frequent diners view restaurants as a place to just eat, while less frequent diners are probably going there for a special occasion and want to indulge. Our second research hypothesis is supported by the fact that highly-educated people tend to be knowledgeable and more rational in decision-making. This hypothesis is somewhat related to the first hypothesis in that highly-educated people tend to have higher incomes and have the ability to spend more money on eating out. Though this may seem like a logical conclusion, high-income consumers choose to spend their money differently and thus do not necessarily eat out more often. Therefore, our two hypotheses will remain separate entities. Given our rationality and theories, we will most likely see that our survey results will reflect our research hypotheses.

B. OBJECTIVES AND METHODOLOGY

Our group is attempting to investigate how consumers feel about the idea of nutritional information labeled on their menus. Would customers notice the information or change their mind knowing how many calories are in their meals? Do customers like the nutritional labeling law? We feel that diners who eat-out at full-service restaurants frequently will notice the information more than diners who eat-out less frequently. If consumers are involved with and have constant exposure to something they are more likely to recognize more subtle messages such as nutritional value. Therefore, we feel that with more experience, time, and exposure to the same menus and atmosphere, a more frequent customer will notice the nutritional value on their menus.

Secondly, we believe that patrons with a higher education would take the time and consideration to read and be affected by the nutritional labels. Specifically, we consider patrons with an education beyond high school as being in the high education category. We feel that a person with a higher education would more thoroughly examine the menu and thus notice the calories listed next to the menu item. In addition, higher educated people would understand what the calories signified and would be more apt at choosing a lower calorie item because of it. These specific hypotheses are based on generalities we have about specific groups and we believe that our findings will be supportive.

Our questionnaire was designed to find out if consumers are noticing the nutritional information on their menus, whether the information is affecting their meal choice, and how they feel about the nutritional labeling law. The general questionnaire was designed to compare the above findings to differentiate types of customers who like the law and those who do not like the

law. Our questionnaire started with general questions such as asking the customer how often they ate out at a full service restaurant. This specific question would help to determine our second hypothesis on whether or not frequent diners are noticing the nutritional information on the menu more than non-frequent diners. Next, we asked the respondents about their attitudes towards the features taken into consideration when choosing a restaurant based on a three point scale (not important, somewhat important, or very important). We then inquired a series of questions asking what they ordered, how many calories were in their meal, if they noticed the calories on their menus and if it affected their meal choice. These were key aspects to both hypotheses because these were the questions that would determine whether consumers were reading the calorie information and if they were affected by it. Next, we asked the respondents to state their answers on a five point scale on several statements. Specifically, it indicated how a consumer felt about the calories on a menu, if restaurants have healthier meal choices, and how the nutritional information affects their order and overall experience. Like the previous questions, these are important because it focuses on the main idea we are trying to get from our hypotheses; whether or not nutritional information affects a consumer and their personal opinions on the subject. Finally, the questionnaire concluded with demographic questions including age, gender, weight, level of education, income and ethnicity. Our questionnaire asked broad and detailed questions to the respondents in order to get the best ideas possible to distinguish our groups on dining frequency and educational level.

As far as **pretesting** procedures went, each group member made any and all possible suggestions and corrections to the questions and choices given on the questionnaire. After careful review and consideration, our group handed in our questionnaire survey to Professor Dommeyer for accuracy and advisement. After grading, he gave us specific instructions on what we needed

to fixed and what needed to be addressed on our survey. The initial questionnaire was revised twice before finalized. We then made 200 copies of the final survey before field testing.

The **survey method** our group conducted was a self-administrated survey. Our **target market** was the T.G.I. Friday's patrons of Porter Ranch, California. We felt T.G.I. Friday's is an ideal choice for being a well known sit-down restaurant with several locations throughout the Los Angeles County area and met the criteria of having nutritional information on their menus. And because of their several locations we felt they could appeal to a diverse group in terms of age and ethnicity. Our group's **sampling frame** was the patrons coming out of the T.G.I. Friday's after their meal. The reason why we chose to administer the survey when customers were exiting the restaurant was to get their true experience with regards to the menu's nutritional labeling. Several questions addressed the customer's specific experience while at the restaurant, including, "Did you order a main course at T.G.I. Friday's?" or "Did you notice the calories on the menu?"

We drew our surveys from a nonrandom convenient sample. Our sampling procedures consisted of our group asking every other patron or group coming out of the T.G.I. Friday's in Porter Ranch. Upon the 160 attempts that were made, we obtained 73 **useable questionnaire** responses from our questionnaire. These attempts were made for three consecutive Saturdays on October 16th, 23rd, and 30th between the hours of 12 p.m. to 4p.m. After every tenth attempt, we alternated between our control and our treatment. The control group was approached by one female and one male, while the experimental group would have the same male and female with an addition of a small puppy on a leash held by the female. We felt the puppy would potentially help make our group more friendly and approachable. Each potential respondent was approached by a group consisting of one male and one female on the side walk just outside the parking lot of

the restaurant. When approached, we asked each potential respondent with the following, "Hi, we are students. Can you please help us and fill out a quick survey?" From there, the potential respondents either accepted the questionnaire or rejected. If accepted, we provided a pen and clipboard with the questionnaire to each respondent.

C. PRESENTATION OF SPSS DATA ANALYSIS

1. Overall Survey Results

Criteria for usable surveys

There are different determinants we felt were necessary to make a questionnaire usable. First at least 75% of the questions had to be answered. A second requirement was that the following key questions we selected had to be answered. Since our hypotheses focus on dining out frequency, education levels and effect of calorie information, we determine that the following questions had to be answered for the questionnaire to be usable:

→ Question 2 of our survey coded as "Restaurant 2" which answered the respondents' dining out frequency. This question is essential to our analysis since it is the basis of our first hypothesis that frequent restaurant patrons will notice the menu's nutritional information than those who dine out less.

→ Question 4 of our survey, and more specifically, the answer to the importance of nutritional value when selecting a restaurant coded as "Nutrition". We feel this question helps us determine the respondents' level of concern regarding nutritional choices and health.

→ Question 7 of our survey coded as "Notice7" which answered whether patrons noticed the calorie on the menu at the chosen location; TGI Friday's. This question is crucial in analyzing our first hypothesis that frequent restaurant patrons will notice the menu's nutritional information

more than those who dine out less.

→ Question 8 of our survey coded as "Affect8" which answered whether the calorie information on the menu affected surveyed diners 'meal choice. This question is the basis for our second hypothesis that higher-educated patrons will notice and utilize the information more readily than lower-educated patrons.

→ Question 10 of our survey which indicated to which degree respondents agreed or disagreed with different statements regarding nutritional information placed on menus. Statements addressed patrons 'attitudes towards nutritional information's value for consumers when placed on the menu, attitudes towards nutritional health and concerns and attitudes towards restaurants offering healthier options. We felt these questions were essential to give us a better insight regarding respondents' attitudes towards nutritional information and would help us investigate our second hypothesis regarding a possible positive correlation between higher level of education and higher utilization of nutritional information placed on menus.

→ Finally, the demographic questions had to be answered for a questionnaire to be usable since we wanted to make sure we could compare our sample to the population for representativeness purposes. Moreover the education question coded as "Education4" is crucial for our second hypothesis.

These seven criteria had to be respected for a questionnaire to be considered usable. Overall we collected 76 surveys. Out of these 76, two skipped the last page of our questionnaire, thus did not answer some of the demographic questions and especially their level of education. One other survey was unusable as question 10 was partially and improperly answered. We excluded these latest and ended up with 73 usable surveys that met the above criteria. Out of 160 attempts, 73 respondents provided us with a usable survey. The overall response rate to our

survey was (73/160) x 100= 45.625%.

The response rate for the control group was (30/ 80) x 100= 37.5%.

The response rate for the treatment group was (43/ 80) x 100= 53.75%.

Demographic Characteristics

Out of 73 total surveys, the respondents of our survey were distributed 47% males (34 respondents) and 53% females (39 respondents). By comparing our observed frequencies to census data frequencies, we found that our sample data for sex is representative of the population. That is, we should accept the null hypothesis that our sample with regards to sex is representative of our target population. This can be concluded by calculating the chi-square value and comparing it to the critical z-score values at a significance level of 0.10 (Refer to Table 1). As illustrated in the table, the standardized residuals for both sexes are less than 1.645, which is the appropriate z-value for a significance value of .10.

Table 1: Sex Chi-Square Test

SEX	Observed	Census Proportions	Expected Sample Size (e)	Standardized Residuals	$X^2=O_i-e_i^2/e_i$
Male	34	49.42%	36	-0.3333	0.1111
Female	39	50.58%	37	0.3288	0.1081
Total	73	100%	73	df=1, α=.10	0.2192

χ^2_{table} χ=2.7

(Census data taken from www.losangelesalmanac.com)

Out of our survey respondents, the distributions of the age categories were the following: 5% nineteen and younger, 48% between twenty and thirty-four, 19% between thirty-five and forty-four, 23% between forty-five and sixty-four, and 4% sixty-five years and older. By again comparing chi-square values of our observed sample to that of the population, we conclude that our sample is not representative of the population (Refer to Table 2). Specifically, over-representation for age occurred for the twenty to thirty-four group and the forty-five to sixty-four

group. In addition, as the standardized residual indicates, our sample under-represents the nineteen or younger age bracket.

Table 2: Age Chi-Square Test

AGE	Observed	Census Proportions	Expected Sample Size (e)	Standardized Residuals	$X^2=O_i-e_i^2/e_i$
19 and younger	4	30.96%	23	-3.9126	15.3087
20-34	35	23.99%	18	4.1787	17.4619
35-44	14	28.01%	20	-1.4258	2.0329
45-64	17	7.31%	5	5.0491	25.4937
65 and Over	3	9.74%	7	-1.5414	2.3760
Total	73	100%	73	df=4, α=.10	62.6733

χ^2_{table} = 7.7

(Census data taken from www.losangelesalmanac.com)

An additional demographic characteristic we analyzed was education. This particular demographic that was especially important to us since one of our hypotheses dealt with comparisons based on level of education. The observed sample proportions were: 1% Grade School, 4% Some High School, 12% High School Graduate, 49% Some College, 26% College Graduate, and 7% Graduate School. Unfortunately, our sample does not adequately represent the population (Refer to Table 3). In particular, our sample greatly over-represents the some college category. In addition, our study also under-represents lower-level education categories of grade school and the some high school.

Table 3: Education Chi-Square Test

EDUCATION	Observed	Census Proportions	Expected Sample Size (e)	Standardized Residuals	$X^2=O_i-e_i^2/e_i$
Grade School	1	16.25%	12	-3.1539	9.9468
Some High School	3	13.85%	10	-2.2362	5.0007
High School	9	18.84%	14	-1.2817	1.6427
Some College	36	19.96%	15	5.6139	31.5158
College Graduate	19	22.31%	16	0.6724	0.4522
Graduate School	5	8.78%	6	-0.5567	0.3099
Total	73	100%	73	df=5, α=.10	48.8681

χ^2_{table} = 9.2

(Census data taken from www.losangelesalmanac.com)

In addition to education, our survey included income. Particularly, we asked respondents to specify their household's gross annual income. Our observed household income frequencies were as follows: 8% $0-$19,999, 21% $20,000-$39,999, 29% $40,000-$59,000, 18% $60,000-$74,999, 12% $75,000-$99,999, and 12% $100,000 or more. We found that our sample did not represent the target population with over-representation in the $40,000 to $59,999 and the $60,000 to $74,999 brackets (Refer to Table 4). In addition, the lowest bracket, $0-$19,000 was under-represented.

Table 4: Income Chi-Square Test

INCOME	Observed	Census Proportions	Expected Sample Size (e)	Standardized Residuals	$X^2=O_i-e_i^2/e_i$	
$0-$19,999	6	23.29%	17	-2.6682	7.1191	
$20,000-$39,999	15	23.98%	18	-0.5988	0.3586	
$40,000-$59,999	21	17.75%	13	2.2342	4.9918	
$60,000-$74,999	13	9.72%	7	2.2166	4.9132	
$75,000-$99,999	9	10.16%	7	0.5813	0.3380	
$100,000 or above	9	15.10%	11	-0.6093	0.3713	χ^2 table
Total	73	100%	34.5071	df=5, α=.10	18.0920	=9.2

(Census data taken from www.losangelesalmanac.com)

Lastly, we analyzed the observed frequency data for race/ethnicity and compared it to the target population. In doing so, again, we found that our sample does not adequately represent our target population for this study (Refer to Table 5). The surveys we obtained were as follows: 26% Hispanic, 60% White, 4% Black, 6% Asian, 0% Pacific Islander, 1% American-Indian, and 3% as another race/ethnicity. The standardized residuals indicate that the most over-represented category is White, while the most under-represented category is Hispanics.

Table 5: Race/Ethnicity Chi-Square Test

RACE	Observed	Census Proportions	Expected Sample Size (e)	Standardized Residuals	$X^2=O_i-e_i^2/e_i$	
Hispanic	19	44.56%	33	-2.3721	5.6267	
White	44	31.09%	23	4.4719	19.9982	
Black	3	9.47%	7	-1.4883	2.2150	
Asian	4	11.81%	9	-1.5739	2.4772	
American Indian	1	0.27%	0	1.8085	3.2707	
Other	2	3%	2	-0.1284	0.0165	χ^2 table
Total	73	100%	73	df=5, α=.10	33.6042	=9.2

(Census data taken from www.losangelesalmanac.com)

Overall survey results

Overall, our team is attempting to investigate how diners feel about the idea of nutritional information labeled on their menus. More precisely, our research hypotheses are:

1) Frequent restaurant patrons will notice the menu's nutritional information more than those who dine out less.

For this hypothesis, we treated patrons' dining-out frequency as the independent variable and compared it to our key questions to look for a possible trend. While most of the tests we ran to test this hypothesis did not show up any significant P-value, the most crucial test was able to yield statistically significant results which strongly supported our theory; we compared dining-out frequency to whether patrons noticed the calorie information on the menu or not. Our results support our hypothesis and suggested that there is a significant relationship between high-dining frequency and noticing calorie information. More precisely our survey results showed that every single respondent that fell into the high-dining category noticed the calorie information on the menu and that only 48.4% of the low-dining frequency patrons noticed this same information. This strongly supports our theory that the more patrons eat out and are exposed to the restaurant experience; the more likely they are to notice the calorie information.

2) Higher-educated patrons will notice and utilize the information more readily than lower-educated patrons.

Our second research hypothesis however was not supported by our findings. We recoded the education variable as high and low, treated it as the independent variable and compared it to the most crucial available variables to our hypothesis which were 1, Noticing calorie information on the menu (question 7 of our survey: Did you notice the calorie information on the menu?), and 2, If the calorie information provided affected the patrons' meal choice (question 8 of our survey: Did the calorie information affect your meal choice?). Our findings revealed that there is no statistically significant difference between high and low educated patrons when it comes to noticing the calorie information on the menu and there is no significant difference between high and low educated patrons when it comes to this latest calorie information affecting their meal choice.

In Appendix B, the summary of frequencies for our overall survey results is listed. It is first important to notice that most patrons (61.6%) eat-out at a full-service restaurant 1 to 2 times per week. This is a topic of significance for our hypotheses. It is interesting to notice that only 56% of patrons actually notice the calories on the menu, and that of the 56% that notice calories only 48% have the information affect their meal choice. This goes against our belief that diners would be interested in having nutritional information readily available on the menu for them to be more aware of the value of their nutritional choices and thus based their meal decision more on the calorie information. Moreover we found out that the average meal ordered had approximately 930 calories which shows that most patrons are not aware of nutritional value. A normally active adult should have an average of 2,200 calories per day spread out throughout the day on at least three different meals. The average meal patrons consumed at TGI Friday's

represent almost half of the calorie amount they should consume for the day. This lack of patrons' interests in nutritional value and lack of knowledge also shows in the fact that in terms of selecting a restaurant nutritional value had the lowest average of importance on our Likert's scale when patrons choose a restaurant to go to. However this was somewhat contradicted by the fact that most patrons liked the new law requiring some restaurants in California to provide calorie information on their menus and most patrons preferred the nutritional information directly next to the menu item (instead of not being displayed at all, or on a separate menu). However we also noticed that 43.8% of patrons surveyed perceive themselves as overweight, thus this might explain the large interest we noticed in patrons for the new law.

Aside from our research hypothesis, we found out some interesting trends in our exploratory data. We looked at trends using different demographic variables (sex, age and annual household's gross income) treated as independent variable against our key questions. We believe one of the most significant results for our overall research hypotheses was comparing annual household's gross income to our key question. Our results suggest that there are significant differences between low and high income patrons when it comes to interest in nutritional information. To the statement "I like knowing the nutritional content of my meals", our results suggest that higher income diners are significantly more likely to agree with this statement than lower income diners. On the counter-check statement "I do not worry about the number of calories my meals contain", our results confirmed this tendency that higher income patrons are more likely to care about nutritional information. On this statement lower income patrons were more likely to agree with it compared to higher income patrons. Also another interesting finding was that there is a significant difference between the two groups when it comes to calorie information affecting meal choice. Higher income patrons are significantly

more likely to change their meal choice according to calorie information than lower income diners. These findings could serve our research hypothesis that higher educated patrons are more likely to be interested in nutritional information and use that information to make better decisions because higher income is commonly and generally linked to higher education and lower income to lower education.

When we compared the variable "Sex" to our key question we found out surprising results. There were no significant differences between the two groups (males and females) on statements regarding interests in having information about nutritional value stated on the menus or decision-making when it came to meal selection in regards to nutritional value. Finally there were also no significant relationship between males and females when it came to noticing the calorie information on the menu or this information having an effect on meal selection. The common belief is that women tend to be more concerned about their appearance because of society's pressure to conform to an image that promotes thinness and thus women should be more likely to be interested in having calorie information available and more concerned with nutritional value of their meals. However our findings do not support this trend at all.

2. Results to Quasi-Experiment

The main research questions that we want to answer is whether the consumer is noticing the nutritional information and, if so, is it affecting their meal choice. We think that patrons who dine out often (at least 3 times or more per week) will be more exposed to the restaurant setting and experience and thus will be more likely to notice the calorie information on the menu. Our first quasi-experiment is comparing patrons who have a high dining-out frequency to patrons who have a low-dining out frequency. We believe that it is important to compare these two groups because of the level of exposure they have had to nutritional information on menus and if

it had an influence. Consumers who regularly dine-out are more exposed to menus and their format than those who rarely dine out. Hence they should be more likely to notice the calories on the menus. Also, the logic behind this experiment is that since these patrons dine-out more often and they will be more likely to be interested in the nutritional information in order to watch and control their nutritional intake. In addition, frequent diners view the overall restaurant experience as a more of a convenience in that they see it as getting a meal that they don't have to cook. On the other hand, less frequent diners are probably going to a restaurant for a special occasion and want to indulge. Thus, we think that high-frequency patrons are more likely to notice the calorie information on the menu. They will also be more likely to support the law that will require Californian restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011.

Questionnaire Variable	**Low-Dining Frequency (n=62)**	**High-dining Frequency (n=11)**	**Stat. Test Results**
Q1: What was the occasion for coming to TGI Friday's today? a. Special event b. No occasion	 0% 100%	 9.7% 90.3%	**Chi-Square** Not significant
Q4. Please indicate how important the following features are to you when selecting a restaurant (not important, somewhat important, very important) Nutritional Value	 Mean=2.03	 Mean=1.73	**t-test** Not significant
Q7. Did you notice the calories on the menu?	48.4% -yes	100%- yes	**Chi-Square** Significant P=.002 (See C1)
Q8. Did the calorie information affect your meal choice?	43.6%- yes	63.6%- yes	**Chi-Square** Not significant
Q10. Please use the five point scale below to indicate the degree to which you AGREE or DISAGREE with each of the following statements (interval scale of 1-5) Nutritional information on menus helps consumers make better meal decisions. The nutritional information on menus detracts from the appearance of the menus.	 Mean= 3.87 Mean= 2.44	 Mean= 3.73 Mean= 2.36	**All t-test** (See C2) Not significant Not significant

Restaurants are now offering healthier meal choices.	Mean= 3.55	Mean= 3.45	Not significant
Since nutritional information is on menus, I am more likely to eat out.	Mean= 2.53	Mean= 2.64	Not significant
Restaurants should not be required to describe the nutritional content of their meals.	Mean= 2.11	Mean= 3.36	P= .002
I try to order meals that have low fat content.	Mean= 3.08	Mean= 3.36	Not significant
I do not worry about the number of calories my meals contain.	Mean= 2.81	Mean= 2.45	Not significant
I wish that the restaurants would leave the nutritional information off of the menu.	Mean= 1.98	Mean= 2.82	P= .043
I like knowing the nutritional content of my meals.	Mean= 3.53	Mean= 3.36	Not significant
Q12. A California law will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011. How do you feel about this law?	Mean= 2.58	Mean= 2.09	**t-test** P= .044 (See C3)

Our research hypothesis states that frequent restaurant patrons will notice the menu's nutritional information more than those who dine-out less. This hypothesis is supported in our results. There is a significant relationship (p= .002) between high-dining frequency and noticing calorie information. Our survey results showed that every single respondent that falls into the high-frequency dining category noticed the calorie information on the menu. Only 48.4% of the low-dining frequency patrons noticed this same information. This strongly supports our theory that the more patrons eat out and are exposed to the restaurant experience; the more likely they are to notice the calorie information. However, our findings do not support our belief and reasoning that these same patrons would be more influenced by the calorie information in making their meal decision than the low-dining out frequency customers. There was no significant difference between these two groups when comparing the calorie information on the menu to their meal choice.

Also some of our other results do not support parts of the reasoning behind our hypothesis. We assumed that high-frequency diners would be more interested in having calorie information available to them on the menus so they could watch their nutritional intake, whereas low frequency diners would not care as much as they would be more likely dine out to "indulge" for a special event. First, there was no significant difference between the two groups and the reason for dining out (special occasion vs. no occasion). Overall our results regarding the level of interest in nutritional information between the two groups were not conclusive. There was no significant difference between low-frequency and high-frequency diners for statements such as "I try to order meals that have low fat content", "Nutritional information on menus helps consumers make better meal decisions," "I like knowing the nutritional content of my meals" and "Since nutritional information is on menus, I am more likely to eat out." This information indicates that high-frequency diners are not more likely than low-frequency diners to use the calorie information when they notice it. There was also no statistical significant difference between the two groups when it came to the importance of the nutritional value offered when selecting a restaurant. If our hypothesis proved true for these questions, the high-frequency diners would have had a significantly higher mean than the low-frequency group and a significantly lower mean for the statement "I do not worry about the number of calories my meals contain."

Our hypothesis also suggested that high-frequency diners would be more interested in having access to the calorie information in order to better monitor their nutritional intake and support actions towards this purpose. However, our findings suggest the contrary. There is a significant difference ($p = .002$) on the statement "Restaurants should not be required to describe the nutritional content of their meals" suggesting that high frequency diners are more likely to agree

with it than low-frequency diners. Moreover, results suggest that high-frequency diners are more likely (p=.044) to dislike the California law that will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011 and more likely (p= .043) to agree with the statement "I wish that the restaurants would leave the nutritional information off of the menu" than low-frequency diners. Low-frequency diners had a mean of 2.11, whereas high--frequency patrons had a mean of 3.36 suggesting that they on average they are more likely to agree with this latest statement.

Finally our hypothesis outlined the reasoning that high-frequency diners would be more concerned and aware about the dining setting and the restaurant experience since they are more exposed to them than low frequency patrons. However we did not find any significant difference between the two groups when it came to statements such as "The nutritional information on menus detracts from the appearance of the menus" or questions such as "Where should nutritional content of meals be located in full-service restaurants?" If our reasoning proved true, high-frequency patrons would have a higher mean on the first statement, hence they would have more of an opinion on whether the nutritional information on menu detracts from the appearance of the menus compared to low-frequency diners.

Our second research hypothesis is that higher-educated patrons will notice and utilize the information more readily than lower-educated patrons. This is supported by the fact that highly-educated people tend to be more knowledgeable and more rational when it comes to decision-making, and in this case specifically about their health.

Questionnaire Variable	Low-education (n=13)	High-education (n=60)	Stat. Test Results
Q4. Please indicate how important the following features are to you when selecting a restaurant (not important, somewhat important, very important) Nutritional Value	Mean=2.08	Mean=1.97	**t-test** Not significant
Q7. Did you notice the calories on the menu?	53.8% -yes	56.7 yes	**Chi-Square** Not significant
Q8. Did the calorie information affect your meal choice?	55.6%- yes	46.3%- yes	**Chi-Square** Not significant
Q10. Please use the five point scale below to indicate the degree to which you AGREE or DISAGREE with each of the following statements (interval scale of 1-5)			All t-test (See C4)
Nutritional information on menus helps consumers make better meal decisions.	Mean= 3.87	Mean= 3.73	Not significant
The nutritional information on menus detracts from the appearance of the menus.	Mean= 2.92	Mean= 2.32	Significant P= .086
Since nutritional information is on menus, I am more likely to eat out.	Mean= 2.62	Mean= 2.53	Not Significant
Restaurants should not be required to describe the nutritional content of their meals.	Mean= 2.77	Mean= 2.20	Not significant
I try to order meals that have low fat content.	Mean= 2.92	Mean= 3.17	Not significant
I do not worry about the number of calories my meals contain.	Mean= 2.92	Mean= 2.72	Not significant
I wish that the restaurants would leave the nutritional information off of the menu.	Mean= 2.15	Mean= 2.10	Not significant
I like knowing the nutritional content of my meals.	Mean= 3.08	Mean= 3.60	Not significant
Q12. A California law will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011. How do you feel about this law?	Mean= 2.38	Mean= 2.53	t-test Not significant

Our research hypothesis states that higher-educated patrons will notice and utilize the information more readily than lower-educated patrons. This hypothesis is not supported at all by our results. For the two most important questions "Did you notice the calories on the menu?" and "Did the calorie information affect your meal choice?" our findings are inconclusive. There is no

significant difference between high and low educated patrons when it comes to neither noticing the calorie information on the menu nor affecting their meal choice. If our hypothesis proved true, for these questions, we would get a p-value less than .10, thus the differences across the two groups' percentages for each answer (yes/no) would be larger. Moreover, there is a significant difference between the two groups of patrons when it comes to health concerns. On statements such as "Nutritional information on menus helps consumers make better meal decisions", "Since nutritional information is on menus, I am more likely to eat out", "I try to order meals that have low fat content" and "I like knowing the nutritional content of my meals", our findings showed no significant difference between the two low and high educated patrons. If our hypothesis proved true, for those questions, the high educated customers would have significantly higher means than lower-educated patrons. Regarding California labeling law preferences, the results were not statistically significant for the two education groups. Both high educated and low educated patrons have a similar mean and were both as likely to like this law. Thus, we cannot conclude that highly-educated patrons are more likely to be in favor of this law.

The only significant result (p=.086) our findings revealed regarding these two groups concerns the statement "The nutritional information on menus detracts from the appearance of the menus." The mean for low educated patrons (3.87) is significantly higher than the High educated patrons' mean (2.32), which suggests that lower educated patrons are more likely to dislike having the nutritional information on the menu.

3. Results to Exploratory Data Analysis

Comparison of demographic variable "Sex" to key questions

Questionnaire Variable	**Male (n=34)**	**Female (n=39)**	**Stat. Test Results**
Q2. How many meals do you eat-out at a full-service (sit-down) restaurant per week? Recoded as high (At least 3 times/week) and low (< 3 times per week)	76.6%- Low	92.3% -Low	**Chi-Square** Significant P= .099 (See C5)
Q4. Please indicate how important the following features are to you when selecting a restaurant (not important, somewhat important, very important) Nutritional Value	Mean=1.82	Mean=2.13	**t-test** Not significant
Q7. Did you notice the calories on the menu?	58.8% -yes	53.8%- yes	**Chi-Square** Not significant
Q8. Did the calorie information affect your meal choice?	48%- yes	48%- yes	**Chi-Square** Not significant
Q10. Please use the five point scale below to indicate the degree to which you AGREE or DISAGREE with each of the following statements (interval scale of 1-5)			**All t-test**
Nutritional information on menus helps consumers make better meal decisions.	Mean= 3.79	Mean= 3.90	Not significant
I try to order meals that have low fat content.	Mean= 3.09	Mean= 3.15	Not significant
I do not worry about the number of calories my meals contain.	Mean= 2.82	Mean= 2.69	Not significant
I like knowing the nutritional content of my meals.	Mean= 3.44	Mean= 3.56	Not significant

Q12. A California law will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011. How do you feel about this law?	Mean= 2.58	Mean= 2.09	**t-test** P= .044 (See C3)

When we compared sex to key questions we found that there were two significant results. First, the results revealed that there a significant relationship (p=. 099) between dining frequency and sex. Males are more likely than females to eat-out frequently (3 or more times per week). The second finding is that males are significantly (p=.044) more likely to like the California law that will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011, than females. On a scale from 1 to 3, males had a mean of 2.58 compared to females who had a lower mean of 2.09. There were no significant differences between the two groups on statements regarding interests in having information about nutritional value stated on the menus or decision-making when it came to meal selection in regards to nutritional value. Finally, there were also no significant relationship between males and females when it came to noticing the calorie information on the menu or this information having an effect on meal selection. However, our findings were surprising as the common belief is that women tend to be more concerned about their appearance because of society's pressure to conform to an image that promotes thinness and thus women should be more likely to be interested in having calorie information available and more concerned with nutritional value of their meals.

Comparison of demographic variable "Age" to key questions

(Age recoded as "young"(under 35 year old) and "mature" (35 and older)

Questionnaire Variable	**Young (n=39)**	**Mature (n=34)**	**Stat. Test Results**
Q2. How many meals do you eat-out at a full-service (sit-down) restaurant per week? Recoded as high (At least 3 times/week) and low (< 3 times per week)	87.2%- Low	82.4% -Low	**Chi-Square** Not Significant
Q4. Please indicate how important the following features are to you when selecting a restaurant (not important, somewhat important, very important) Nutritional Value	Mean=1.90	Mean=2.06	**t-test** Not significant
Q7. Did you notice the calories on the menu?	56.4% -yes	55.9%- yes	**Chi-Square** Not significant
Q8. Did the calorie information affect your meal choice?	48.1%- yes	47.8%- yes	**Chi-Square** Not significant
Q10. Please use the five point scale below to indicate the degree to which you AGREE or DISAGREE with each of the following statements (interval scale of 1-5)			**All t-test**
Nutritional information on menus helps consumers make better meal decisions.	Mean= 3.90	Mean= 3.79	Not significant
I try to order meals that have low fat content.			
I do not worry about the number of calories my meals contain.	Mean= 3.13	Mean= 3.12	Not significant
I like knowing the nutritional content of my meals.	Mean= 2.69	Mean= 2.82	Not significant
	Mean= 3.64	Mean= 3.35	Not significant

Q12. A California law will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011. How do you feel about this law?	Mean= 2.59	Mean= 2.41	**t-test** Not significant

Our results do not show any significant differences between the two age groups and dining-out frequency, noticing calorie information, calorie information affecting their meal decisions and interest and concern regarding nutritional value of their meals. These results are surprising as one strong hypothesis could have been that younger diners are more informed and hence should be more concerned about nutritional information than more mature patrons.

Comparison of demographic variable "income" to key questions

(Income recoded as "low"(under $40,000 household gross annual income) and "high" ($40,000 and up household gross annual income)

Questionnaire Variable	**Low (n=42)**	**High (n=31)**	**Stat. Test Results**
Q2. How many meals do you eat-out at a full-service (sit-down) restaurant per week? Recoded as high (At least 3 times/week) and low (< 3 times per week)	88.1%- Low	80.6% -Low	**Chi-Square** Not Significant
Q4. Please indicate how important the following features are to you when selecting a restaurant (not important, somewhat important, very important) Nutritional Value	Mean=1.90	Mean=2.10	**t-test** Not significant
Q7. Did you notice the calories on the menu?	47.6% -yes	67.7%- yes	**Chi-Square** Not significant

Q8. Did the calorie information affect your meal choice?	35.7%- yes	63.6%- yes	**Chi-Square** Significant P=.086 (see C6)
Q10. Please use the five point scale below to indicate the degree to which you AGREE or DISAGREE with each of the following statements (interval scale of 1-5) Nutritional information on menus helps consumers make better meal decisions.			All t-test
I try to order meals that have low fat content.	Mean= 3.76	Mean= 3.97	Not significant
I do not worry about the number of calories my meals contain.	Mean= 3.02	Mean= 3.26	Not significant
I like knowing the nutritional content of my meals.	Mean= 3.00	Mean= 2.42	Significant P= .032 (See C7)
	Mean= 3.19	Mean= 3.94	Significant P= .007 (See C7)
Q12. A California law will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011. How do you feel about this law?	Mean= 2.50	Mean= 2.52	t-test Not significant

This analysis regarding the difference in income yielded interesting findings. There are significant differences between low and high income patrons when it comes to interest in nutritional information. To the statement "I like knowing the nutritional content of my meals," our results suggest that higher income diners are significantly (p=.007) more likely to agree with

this statement with a mean of 3.94, on a scale from 1 to 5, than lower income diners who had a mean of 3.19 on this same Likert scale. On the counter-check statement "I do not worry about the number of calories my meals contain", our results confirmed this tendency that higher income patrons are more likely to care about nutritional information. On this statement lower income patrons were more likely to agree with it with a mean of 3.00 compared to higher income patrons who had a mean of 2.42 on a Likert scale from 1 to 5. Also, another interesting finding was that there is a significant difference (p=.086) between the two groups when it comes to calorie information affecting meal choice. Higher income patrons are significantly more likely to change their meal choice according to calorie information than lower income diners. These findings could serve our research hypothesis that higher-educated patrons are more likely to be interested in nutritional information and use that information to make better decisions because higher income is commonly and generally linked to higher education and lower income to lower education. These results however do not fully support the hypothesis that higher income patrons will be more concerned with nutritional value and information since we did not find any statistical significant differences between the two groups when it came to statements such as "Nutritional information on menus helps consumers make better meal decisions" and "I try to order meals that have low fat content." Moreover, higher income patrons were not more likely to agree with the upcoming law regarding calorie disclosure on menus than lower income diners. There also were no statistically significant differences between the two groups when it came to dining-out frequency and noticing calories on the menu. However, we feel that the two first findings are suggestive enough to explore the hypothesis that higher income patrons are more likely to be concerned with nutritional value and information and use them to make better meal decisions.

DISCUSSION OF RESULTS

According to our results and after much consideration our group came to the conclusion that our results were supportive and not supportive to our research hypotheses. We found that there was a relationship between frequent customers and noticing the calories on the menu. However, we also found that there is no relationship between restaurant frequency and the calories having an effect on their meal choice. One significant factor of this was the results in terms of selecting a restaurant nutritional value scored the lowest average of importance. Perhaps this implies that whether you are a frequent visitor to the restaurant or not, you will not be affected by reading the calories on a menu. We found this interesting since, in general, more patrons seemed to like the nutritional labeling, but it does not weigh heavily in choosing a restaurant or choosing a meal at the restaurant.

We also found no relationship between educational level in terms of noticing or being affected by the calories on the menu. Our general conclusion is no matter what your level of education, respondents were not affected by the calories on the menu if they noticed the information. This goes against our theory of believing that respondents with a higher education would take more consideration in reading the labels and choosing a healthier lifestyle. Instead, we feel that many respondents were just trying to show a sense of responsibility by giving sociably acceptable answers.

Our study has much strength along with a few limitations that need to be addressed. The strengths of our study begin with the questionnaire. It was well detailed and provided many insightful answers and data given to us by the respondents especially in the five- point scale questions. It also covered the basis of our theories, hypotheses, and target market. Furthermore,

we felt that the location we chose was a strength. We felt that we would get the best answers from respondents by asking them about their experience that they just had at the restaurant so it was fresh on their mind. In this fashion, we thought by choosing a location with calories directly on the menu would limit the main testing bias because consumers would not just answer with socially desirable answers. Our limitations mainly came from our sampling bias. We only covered the lunch hours of noon to 4pm on Saturdays. We missed a large demographic by not getting any dinner hour respondents and only covering one day of the week. Our sampling bias is also affected because we were at one location instead of covering all possible T.G.I. Friday's in Los Angeles County. Finally, our last limitations came from the respondents. Some surveys we had to throw out because many questions were not answered correctly. Thankfully, in the end we had more than enough useable respondents.

That being said, our group feels there is room for improvement on a few subjects. For one, to improve on our study, future researchers of this topic can reduce the nonrandom convenience sample by broadening the sampling frame to different days and times of the week and possibly different locations within L.A. County. The Porter Ranch location did not seem to reflect the demographic characteristics of L.A. County and we do not know if it reflects the general population of TGI Friday patrons. Though our specific choice of restaurant gave us feelings that reflected a known experience, it may be better not to choose a specific restaurant to conduct surveys at because it creates a nonprobability sample where there is no way of knowing if the sample is representative of the population.

REFERENCES

"CRA - Overview of California's Menu Labeling Law." *CRA - Home*. Web. 30 Aug. 2010. <http://www.calrest.org/go/CRA/resources/emerging-matters/menu-labeling/overview-of-californias-menu-labeling-law1/>.

Liu, By David. *Los Angeles Almanac - Demographics, History, Statistics*. Web. 30 Nov. 2010. <http://www.laalmanac.com/>.

Pomeranz, Jennifer, and Kelly Brownell. "Legal and Public Health Considerations Affecting the Success, Reach, and Impact of Menu-Labeling Laws." *American Journal of Public Health*, 98.9 (2008): 2008,-21583.

Pulos, Elizabeth, and Kirsten Leng. "Evaluation of a Voluntary Menu-Labeling Program in Full-Service Restaurants." *American Journal of Public Health*, 100.6 (2010): 1035.

Roberto, Christina, Peter Larsen, Henry Agnew, Jenny Baik, and Kelly Brownell. "Evaluating the Impact of Menu Labeling on Food Choices and Intake." *American Journal of Public Health*, 100.2 (2010): 312-318.

Shlachter, Barry. "Posting calorie counts on restaurant menus having little effect on eating habits. " *McClatchy - Tribune Business News* 4 April 2010 ProQuest Newsstand, ProQuest. Web. 1 Sep. 2010.

APPENDICES

Appendix A: Introductory Statement

We approached each respondent in our survey with the same introductory statement:

"Hi, we are students. Can you please help us and fill out a quick survey?"

Appendix B: Questionnaire

MEAL AND MENU MATTERS

1. What was the occasion for coming to TGI Friday's today? (**Chloe** Size,var. name, summary) (Check One)

□**SPECIAL EVENT/ PARTY**
□**DATE**
□**FRIENDLY OUTING**
□**FAMILY MEAL**
□**BUSINESS**
□**NO SPECIAL OCCASION**
□**OTHER**_____

2. How many meals do you eat-out at a full-service (sit-down) restaurant per week?

□**NONE- I DON'T TYPICALLY EAT-OUT**
□**1 TO 2**
□**3 TO 4**
□**5 OR MORE**

3. How often do you eat at TGI Friday's?

□**LESS THAN ONCE A MONTH**
□**ONCE A MONTH**
□**2-3 TIMES A MONTH**
□**4 OR MORE TIMES A MONTH**

4. Please indicate how important the following features are to you when selecting a restaurant by placing an "X" in the appropriate box below.

	NOT IMPORTANT	**SOMEWHAT IMPORTANT**	**VERY IMPORTANT**
LOCATION			
NUTRITIONAL VALUE			
PRICE			
SERVICE			
TASTE OF FOOD			
TYPES OF MEALS OFFERED			

(QUESTIONS CONTINUED ON REVERSE SIDE)

5. Did you order a main course at TGI Friday's?

□**NO** →Please skip to Question 7
□**YES** _____
(What main course did you order?)

6. How many calories do you think your main course had? _____

7. Did you notice the calories on the menu?

□**YES**
□**NO** →Please skip to question 9

8. Did the calorie information affect your meal choice?

□**YES**
□**NO**

9. Most of the food I eat comes from: (Check One)

□**HOME COOKED/ GROCERIES**
□**RESTAURANT/ TAKE OUT**
□**EQUAL AMOUNT GROCERIES & RESTAURANT**
□**OTHER**_____

10. Please use the five point scale below to indicate the degree to which you AGREE or DISAGREE with each of the following statements.

STONGLY DISAGREE	DISAGREE	AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
1	**2**	**3**	**4**	**5**

___1. Nutritional information on menus helps consumers make better meal decisions.
___2. The nutritional information on menus detracts from the appearance of the menus.
___3. Restaurants are now offering healthier meal choices.
___4. Since nutritional information is on menus, I am more likely to eat out.
___5. Restaurants should not be required to describe the nutritional content of their meals.
___6. I try to order meals that have low fat content.
___7. I do not worry about the number of calories my meals contain.
___8. I wish that the restaurants would leave the nutritional information off of the menu.
___9. I like knowing the nutritional content of my meals.

11. Where should nutritional content of meals be located in full-service restaurants? (Check One)

☐NEXT TO THE MENU ITEM
☐IN A SEPARATE MENU AT THE TABLE
☐IN THE BACK OF THE MENU
☐NEITHER ON THE TABLE OR MENU
☐ NO OPINION
☐OTHER_____

12. A California law will require restaurant chains with more than 20 locations to print the calorie count on menus and indoor menu boards by January 1, 2011.
How do you feel about this law?

☐I LIKE THE LAW
☐I DISLIKE THE LAW
☐NO OPINION

PLEASE ANSWER THE FOLLOWING QUESTIONS SO WE CAN COMPARE HOW DIFFERENT TYPES OF PEOPLE HAVE RESPONDED TO THIS SURVEY.

1. What is your sex?

☐MALE
☐FEMALE

2. What is your age?

☐19 or YOUNGER
☐20 to 34
☐35 to 54
☐55 to 64
☐75 or OVER

3. How do you perceive your weight?

☐UNDER WEIGHT
☐AVERAGE WEIGHT
☐OVER WEIGHT

(QUESTIONS CONTINUED ON REVERSE SIDE)

3. What is your highest level of education?

□ **GRADE SCHOOL**
□ **SOME HIGH SCHOOL**
□ **HIGH SCHOOL GRADUATE**
□ **SOME COLLEGE**
□ **COLLEGE GRADUATE**
□ **GRADUATE SCHOOL**

4. What is your household's gross annual income?

□**$0-$19,999**
□**$20,000-$39,999**
□**$40,000-59,999**
□**$60,000-$74,999**
□**$75,000-$99,999**
□ **$100,000 OR ABOVE**

5. Ethnicity/ race

□**HISPANIC**
□**WHITE**
□**AFRICAN AMERICAN/BLACK**
□**ASIAN**
□**PACIFIC ISLANDER**
□**AMERICAN INDIAN**
□**OTHER**_____

THANK YOU FOR YOUR TIME!

Appendix C1:
Chi-Square

Question 7: Did you notice the calories on the menu?
-Comparing Low and high-dining frequency patrons

Notice calories on the menu? * Restaurant recoded high & low Crosstabulation

			Restaurant recoded high & low		
			1	6	Total
Notice calories on the menu?	yes	Count	30	11	41
		% within Restaurant recoded high & low	48.4%	100.0%	56.2%
	no	Count	32	0	32
		% within Restaurant recoded high & low	51.6%	.0%	43.8%
Total		Count	62	11	73
		% within Restaurant recoded high & low	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10.109(b)	1	.001		
Continuity Correction(a)	8.121	1	.004		
Likelihood Ratio	14.201	1	.000		
Fisher's Exact Test				.002	.001
Linear-by-Linear Association	9.970	1	.002		
N of Valid Cases	73				

a Computed only for a 2x2 table
b 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.82.

Appendix C2:
T-test
High dining frequency/Low dining Frequency

Group Statistics

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Nutritional info helps consumers make better meal decisions?	Equal variances assumed	1.192	.279	.459	71	.648	.144	.313	-.481	.769
	Equal variances not assumed			.536	16.115	.599	.144	.268	-.424	.711
Nutritional info detracts from the appearance of the menu?	Equal variances assumed	4.052	.048	.189	71	.851	.072	.380	-.686	.830
	Equal variances not assumed			.226	16.581	.824	.072	.317	-.599	.743
Restaurants are now offering healthier meal choices?	Equal variances assumed	.114	.737	.317	71	.752	.094	.296	-.496	.684
	Equal variances not assumed			.283	12.698	.782	.094	.332	-.625	.812
More likely to eat out since nutritional info is on menus?	Equal variances assumed	1.005	.320	-.308	71	.759	-.104	.338	-.779	.571
	Equal variances not assumed			-.255	12.177	.803	-.104	.408	-.991	.783
Restaurants should not be required to describe nutritional content?	Equal variances assumed	.270	.605	-3.147	71	.002	-1.251	.397	-2.043	-.458
	Equal variances not assumed			-3.362	14.623	.004	-1.251	.372	-2.046	-.456
I try to order meals that have	Equal variances	1.527	.221	-.864	71	.390	-.283	.327	-.936	.370

low fat content	assumed									
	Equal variances not assumed			-1.166	19.751	.258	-.283	.243	-.790	.224
I do not worry about the number of calories my meals contain	Equal variances assumed	1.021	.316	.933	71	.354	.352	.377	-.400	1.104
	Equal variances not assumed			1.102	16.308	.287	.352	.319	-.324	1.028
I wish restaurants would leave the nutritional info off of the menu	Equal variances assumed	1.429	.236	-2.062	71	.043	-.834	.405	-1.641	-.027
	Equal variances not assumed			-2.301	15.289	.036	-.834	.363	-1.606	-.063
I like knowing the nutritional content of my meals	Equal variances assumed	1.558	.216	.407	71	.685	.169	.415	-.658	.995
	Equal variances not assumed			.480	16.302	.637	.169	.351	-.574	.912

Appendix C3:
T-test
High dining frequency/Low dining Frequency

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Law requiring restaurant chains to print calorie count on menus	Equal variances assumed	.257	.614	2.046	71	.044	.490	.239	.012	.967
	Equal variances not assumed			1.838	12.754	.090	.490	.267	-.087	1.067

Appendix C4:
T-test
Low education/ High education

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Nutritional info helps consumers make better meal decisions?	Equal variances assumed	.011	.916	.626	71	.533	.183	.293	-.400	.767
	Equal variances not assumed			.650	18.301	.524	.183	.282	-.409	.776
Nutritional info detracts from the appearance of the menu?	Equal variances assumed	2.340	.131	1.742	71	.086	.606	.348	-.088	1.300
	Equal variances not assumed			1.435	14.968	.172	.606	.423	-.295	1.508
Restaurants are now offering healthier meal choices?	Equal variances assumed	1.223	.273	-.659	71	.512	-.182	.276	-.732	.368
	Equal variances not assumed			-.552	15.137	.589	-.182	.330	-.884	.520
More likely to eat out since nutritional info is on menus?	Equal variances assumed	1.909	.171	.259	71	.796	.082	.317	-.549	.713
	Equal variances not assumed			.211	14.875	.835	.082	.388	-.746	.910
Restaurants should not be required to describe nutritional content?	Equal variances assumed	.696	.407	1.456	71	.150	.569	.391	-.210	1.349
	Equal variances not assumed			1.335	16.225	.200	.569	.426	-.333	1.472
I try to order meals that have	Equal variances	8.703	.004	-.795	71	.429	-.244	.306	-.855	.368

low fat content	assumed									
	Equal variances not assumed			-1.086	28.442	.287	-.244	.224	-.703	.215
I do not worry about the number of calories my meals contain	Equal variances assumed	2.124	.149	.583	71	.562	.206	.354	-.500	.912
	Equal variances not assumed			.634	19.359	.534	.206	.326	-.474	.887
I wish restaurants would leave the nutritional info off of the menu	Equal variances assumed	3.024	.086	.138	71	.890	.054	.390	-.723	.830
	Equal variances not assumed			.178	25.085	.860	.054	.303	-.570	.678
I like knowing the nutritional content of my meals	Equal variances assumed	2.995	.088	-1.365	71	.176	-.523	.383	-1.287	.241
	Equal variances not assumed			-1.113	14.868	.283	-.523	.470	-1.526	.480

Appendix C5:
Chi-Square

Q2. How many meals do you eat-out at a full-service (sit-down) restaurant per week? Recoded as high (At least 3 times/week) and low (< 3 times per week)

-Comparing Males and Females

Restaurant recoded high & low * What is your sex? Crosstabulation

			What is your sex?		
			Male	Female	Total
Restaurant recoded high & low	1	Count	26	36	62
		% within What is your sex?	76.5%	92.3%	84.9%
	6	Count	8	3	11
		% within What is your sex?	23.5%	7.7%	15.1%
Total		Count	34	39	73
		% within What is your sex?	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.560(b)	1	.059		
Continuity Correction(a)	2.430	1	.119		
Likelihood Ratio	3.636	1	.057		
Fisher's Exact Test				.099	.059
Linear-by-Linear Association	3.511	1	.061		
N of Valid Cases	73				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.12.

Appendix C6:
Chi-Square

Q8. Did the calorie information affect your meal choice?

-Comparing low income / high income

Calorie info affect your meal choice? * IncomeHL Crosstabulation

			IncomeHL		
			1	6	Total
Calorie info affect your meal choice?	yes	Count	10	14	24
		% within IncomeHL	35.7%	63.6%	48.0%
	no	Count	18	8	26
		% within IncomeHL	64.3%	36.4%	52.0%
Total		Count	28	22	50
		% within IncomeHL	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.848(b)	1	.050		
Continuity Correction(a)	2.811	1	.094		
Likelihood Ratio	3.895	1	.048		
Fisher's Exact Test				.086	.046
Linear-by-Linear Association	3.771	1	.052		
N of Valid Cases	50				

a Computed only for a 2x2 table
b 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.56.

Appendix C4:
T-test
Low income/ High income

Group Statistics

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Nutritional info helps consumers make better meal decisions?	Equal variances assumed	9.015	.004	-.911	71	.365	-.206	.226	-.656	.244
	Equal variances not assumed			-.961	70.818	.340	-.206	.214	-.633	.221
I try to order meals that have low fat content	Equal variances assumed	.006	.941	-.990	71	.326	-.234	.237	-.706	.238
	Equal variances not assumed			-1.008	68.527	.317	-.234	.232	-.698	.229
I do not worry about the number of calories my meals contain	Equal variances assumed	.073	.788	2.184	71	.032	.581	.266	.050	1.111
	Equal variances not assumed			2.217	68.021	.030	.581	.262	.058	1.103
I like knowing the nutritional content of my meals	Equal variances assumed	8.289	.005	-2.595	71	.011	-.745	.287	-1.317	-.173
	Equal variances not assumed			-2.769	69.679	.007	-.745	.269	-1.282	-.208

Marketing Research Project:
Puppy Appeal
A Survey Method Experiment

Prepared by:

John Bellfield:
[redacted]
Chloe Bimont:
[redacted]
Kaitlin Gardiner:
[redacted]
Jenny Soto:
[redacted]

Prepared for:

Professor Dommeyer
MKT 346- 12:30
Fall 2010

SUMMARY

There are plenty of different treatments that market researchers can use to test consumer behavior and differences in overall response rate. Our objective for the true experiment is to test whether having a puppy present will have an effect on the attitudes and overall response rate, response bias, and item omissions of our self-administered survey. Though we did not find research that uses a puppy as its treatment, we found research supporting the positive responses people have towards dogs.

Our experiment took place at T.G.I. Friday's in Porter Ranch, California. We made 160 attempts, approaching every other patron exiting the restaurant. As we approached each patron, we used the same introductory statement, "Hi, we are students. Can you help us out by filling out this survey?" We alternated between our control group and our treatment after every ten attempts. Overall, we collected 73 usable surveys.

Our results from the collected surveys supported our research hypothesis that a puppy would significantly increase the response rate in comparison to the control group. Specifically, the puppy increased the response rate of female patrons. In terms of item omission rate, there was no significant difference between the control group and the treatment.

INTRODUCTION AND LITERATURE REVIEW

For our true experiment, our research objective was to investigate the effects that a leashed puppy would have on our overall response rate to our self-administered survey. In particular, we used a Yorkie puppy, which is a small and friendly breed of dog. Our goal was to measure and find out whether or not this sort of addition to the administration of the survey would, in fact, entice people towards the puppy and thus towards us and our survey. By analyzing our results, we could see if our strategy to use the puppy increased the overall response by a significant amount. General studies about people's attitudes and responses to dogs gave us insight into what we should have expected in our experiment.

As stated in the *Marketing Bulletin*, non-monetary incentives that appear as high value "gifts" increase the response rate. In the study, a free coke was given as the incentive. Though the response rate increased with the incentive, the omission rate also increased (Dommeyer 9). In another article, *Animal Magnetism*, author Julie Erickson addresses the bond between humans and some animal species (1). Approximately 67 percent of households have one or more pets (Martin 32). The article explained how even non-pet owners experience the joyful and friendly feelings enticed by some animals. Studies have found that the artless presence of an animal next to a patron makes the person appear as a more positive character. The patron was also perceived to be wealthier, bolder, less tense and friendlier than people without an animal nearby (Erickson 1). Another article mentions that humans are specifically drawn to dogs because of their childlike characteristics. Because humans have a natural tendency to care for children, they are drawn to dogs and are not hesitant to care for them and show them affection (Weintraub 46-47). Since certain animals such as cats and dogs appear to create a positive attitude, advertisements are increasingly using them. The results indicate that having an animal in the ad can bring a

sense of good feeling that can be attached to the advertisement or the brand itself. Though consumers may have a positive attitude towards these ads, there were no definitive measures that consumers wouldn't have positive attitudes without an animal (Lancendorfer 1). Through our experiment, we will compare, and thus differentiate, the effects of an animal on consumer's attitudes.

All of these articles and studies helped us develop our reseach hypothesis which states that people are more likely to respond to our survey when a puppy is present than when the puppy is not present. The null hypothesis in this case would be that there is no effect in using a puppy as our treatment in the survey. Based on our literature review and research, we believe that the puppy will have a positive effect on patrons leaving the restaurant, drawing them in to take our survey. People will walk towards the puppy to get a closer look and possibly want to pet it and ask the owner (us) questions. Even an inadvertant look towards the puppy will make the patron feel like they are obliged to fill out our survey (Groves 32).

OBJECTIVES AND METHODOLOGY

In our survey method experiment, we are attempting to investigate whether the addition of a puppy will effect the response rate of our survey data collection. In our control group, one male and one female approached each individual and said,"Hi, we are students. Can you please help us and fill out a quick survey?" In the treatment group, everything was to remain the same, but the female would also have a leashed dog with her. We felt that the addition of a puppy would make our survey team look more friendly and hence increase our response rate (See Appendix A for picture).

In order to decipher between the control group and the treatment group responses, we changed the end note of the survey that says, "THANK YOU FOR YOUR TIME!" The control

group received a " THANK YOU FOR YOUR TIME!" at the end of the survey, while the treatment group received a *" THANK YOU FOR YOUR TIME!"* with stars. We approached every other person coming out of T.G.I. Friday's, alternating between the control group and the treatment after ten attempts. Therefore, the second person we saw exiting the restaurant received no treatment, while the twentieth person received the treatment.

Our experimental design is as follows:

Control Group: (R) O_1

Experimental Group: (R) X O_2

The "R" in the experimental design indicates that the subjects were randomly assigned to the condition. Although our sampling frame was limited to patrons of a particular restaurant and not all of our target population was exposed to the treatment, we alternated the treatment randomly and, thus, our subjects were randomly exposed to the treatment. The "X" represents the exposure of our treatment using the puppy. The "O" represents the observation of the measurement taken on the respective group. In this experiment design, the "X" is before the "O," which indicates that the person was exposed to the treatment before being observed. The vertical arrangement of the Rs, Xs, and Os denotes different groups consisting of the control and the treatment groups we observed. Specifically, this experimental design is known as the after-only with control group design.

PRESENTATION OF SPSS DATA ANALYSIS

Table 1

Comparing Treatment and Control Groups

	Control Group	Treatment (Dog Present)	Stat Test Result
Response Rate	37.50%	53.75%	Chi-Square (See Appendix B)
Item Omission Rate	Mean=0.07	Mean=0.02	T-Test (See Appendix C)

Table 2

Analyzing Response Bias For The Survey Method Experiment

Questionnaire Variable	**Control Group (n=30)**	**Treatment= Dog present (n=43)**	**Stat. Test Results**
Q1: What is your sex? (Male, Female)	40% Female	63% Female	**Chi-Square** **p=.062** (See D1)
Q2: What is your age? (19 or Younger, 22-29, 30-39, 40-49, 50-59, 60 or Over)	>Med: 11	>Med: 23	**Med. Test** Not significant
Q3: How do you perceive your weight? (Under Weight, Average Weight, Over Weight)	>Med: 10	>Med: 22	**Med. Test** Not significant
Q4: What is your highest level of education? (Grade School, Some H.S., H.S. Graduate, Some College, College Grad, Grad School)	>Med: 9	>Med: 15	**Med. Test** Not significant

Q5: What is your household's gross annual income? ($0-$19,999, $20,000-$39,999, $40,000-59,999, $60,000-$79,999, $80,000-$99,999, $100,000 or Above)	>Med: 14	>Med: 17	**Med. Test** Not significant
Q6: Ethnicity/ race (Hispanic, White, African American/Black, Asian, Pacific Islander, American /Indian, Other)	>Med: 3	>Med:7	**Med. Test** Not Significant
Q7: Did you notice the calories on the menu? (Yes, No)	70.0%-Yes	46.5%-Yes	**Chi-Square** **p=.058** (See D2)
Q8: Did the calorie information affect your meal choice? (Yes, No)	56.0%-Yes	40.0%-Yes	**Chi-Square** Not significant
Q10: Agree/Disagree X 10	Mean= 2.83	Mean= 2.35	**T-Test** Not significant Except question "More likely to eat out since nutritional info is on menus?" **p=.063** (See D3)

Our research hypothesis was to investigate the effect that having a puppy present would have on the response rate of our self-administered survey. This would mean that having a puppy present (treatment) would yield a significantly higher response rate when compared to the control group. After completing the Chi-Square test for the response rate, we found that there is a significant difference in response rate between the treatment and the control which meant that our research hypothesis was supported by our data. Analyses of the item omission rate data indicate that there is no significant difference in means between treatment and control group. Our data also revealed that there was a response bias for the survey method experiment when

comparing sex. Females were more likely than Males to participate in our survey when the puppy was present (Table 2). Our data was not able to reveal whether weight, education, income, or race was effected by the treatment. However, we were able to determine that patrons in the control group noticed the calories on the menu more than patrons in the treatment group. Lastly, our data revealed that patrons who were not exposed to our treatment were more likely to eat out since nutritional information is on the menu.

DISCUSSION OF RESULTS

Our results from the collected surveys supported our research hypothesis that a puppy would significantly increase the response rate in comparison to the control group. Specifically, the puppy increased the response rate of female patrons. The small puppy seemed to increase the response rate of females because females often treat their small dogs like their own babies. In general, people seemed more open to a conversation to us after meeting and greeting our puppy, Stone. With this, we feel that a small and friendly dog can increase response rate.

In terms of internal and external validity, our group found that our survey method experiment had high internal validity and a relatively low external validity. No major extraneous factors were susceptible to history, main test, or maturity, etc. due to our "After-Only with control group design." On the subject of external validity, though our experiment was a field experiment, we came to the conclusion that our external validity was relatively low because of our sampling bias. Our group only conducted potential respondents on three consecutive Saturdays. Also, within the Saturday time frames, we only initially questioned the "lunch crowd" between the hours of noon to 4pm. Because of this, we missed a large portion of the customers that day during "dinner hours" between the hours of 5:30pm to 10 pm, or even later.

For future studies, we would recommend using a different treatment by two means. First, use another animal as a treatment to see if there are similar results. Second, you can use two treatment experiments, such as a large dog and alternate with a smaller dog. We understand and recognize that the initial appeal of having an animal with us increased response rate, so we suggest digging deeper into the question of whether only particularly sized dogs are the proper treatment. Finally, we would suggest changing the time frame of the survey. Our group surveyed on Saturdays from noon to 4pm during lunch hours. We would suggest surveying potential respondents on different days of the week and try a different time frame such as "dinner hours" between 5:30 pm to 10 pm.

REFERENCES

Dommeyer, Curt J., Noriaki Hirao, Yoshiyuki Ikeda, Nicole Linkletter, and Keizo Watanabe (2010), "Using a Contingent, Nonmonetary Incentive to Increase the Response Rate to a Personally-Initiated, Self-Administered Survey among College Students," Marketing Bulletin, Vol. 21, 9 pages.

Erickson, Julie. "Animal Magnetism." Crain Communications, Inc. 10Feb. 1986. ProQuest Newsstand, ProQuest. Web. 1 Sep. 2010.

Lancendorfer, Karen M., JoAnn L. Atkin and Bonnie B. Reece. "Animals in advertising: Love dogs? Love the ad!" *Journal of Business Research.* ProQuest Newsstand, ProQuest. Web. 2 Sep. 2010.

Martin, Eric W., and Linda Formichelli. "It's Raining: Cat and Dog Lovers." *Target Marketing;* Feb 2008; 31, 2; ABI/INFORM Global. ProQuest Newsstand, ProQuest. Web. 1 Sep. 2010.

Weintraub, Arlene. "Why We Spoil Spot So. (Cover story)." *BusinessWeek* 4045 (2007): 46-47. *Academic Search Elite*. EBSCO. Web. 3 Sept. 2010.

APPENDICES

Appendix A: Treatment: Stone, the puppy

Appendix B: Response Rate Analysis (Hand Calculation)

Treatment (IV)→ Result (DV)↓	Control Group	Treatment (Dog Present)	Total
Usable Returns	30 (37.50%)	43 (53.75%)	73
Not Returned or Unusable	50 (62.50%)	37 (46.25%)	87
Total	80	80	160

For a 2x2 Crosstabulation the appropriate formula for a Chi-Square test would be:

$\Sigma \{ (| fo - fe | - ½)^2 \div fe \}$

fo	fe	$\lvert fo-fe \rvert$	$\lvert fo-fe \rvert - ½$	$(\lvert fo-fe \rvert - ½)^2$	$(\lvert fo-fe \rvert - ½)^2 \div fe$
30	36.5	6.5	6	36	0.99
43	36.5	6.5	6	36	0.99
50	43.5	6.5	6	36	0.83
37	43.5	6.5	6	36	0.83
					$3.64 = X^2$ CAL

In a 2x2 table, if X^2 CAL ≥ 2.71, the results are statistically significant at a .10 alpha level.

Since $3.64 \geq 2.71$; we reject Ho: There is no relationship between the response rate and treatment.

Conclusion: There is a relationship between the response rate and the treatment.

Appendix C: Item Omission Rate Analysis

Ho: The two groups (control and treatment) have identical means
Ha: The two groups (control and treatment) do not have identical means

Group Statistics

	Treatment	N	Mean	Std. Deviation	Std. Error Mean
Questions Required	Ctrl	30	.07	.365	.067
	Trmt	43	.02	.152	.023

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
									Lower	Upper
Questions Required	Equal variances assumed	2.053	.156	.699	71	.487	.043	.062	-.060	.147
	Equal variances not assumed			.615	36.118	.543	.043	.071	-.076	.163

Conclusion: Means are significantly different.

Appendix D1: Response Bias Analysis for Significant Results

What is your sex? * Treatment Crosstabulation

			Treatment		
			Ctrl	Trmt	Total
What is your sex?	Male	Count	18	16	34
		% within Treatment	60.0%	37.2%	46.6%
	Female	Count	12	27	39
		% within Treatment	40.0%	62.8%	53.4%
Total		Count	30	43	73
		% within Treatment	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.689(b)	1	.055		
Continuity Correction(a)	2.830	1	.093		
Likelihood Ratio	3.711	1	.054		
Fisher's Exact Test				.062	.046
Linear-by-Linear Association	3.638	1	.056		
N of Valid Cases	73				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.97.

P< .10 so we reject Ho; there is no relationship between sex and reaction to treatment.

Conclusion: females are more likely to answer with the dog present.

Appendix D2: Response Bias Analysis for Significant Results

Notice calories on the menu? * Treatment Crosstabulation

			Treatment		Total
			Ctrl	Trmt	
Notice calories on the menu?	yes	Count	21	20	41
		% within Treatment	70.0%	46.5%	56.2%
	no	Count	9	23	32
		% within Treatment	30.0%	53.5%	43.8%
Total		Count	30	43	73
		% within Treatment	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.960(b)	1	.047		
Continuity Correction(a)	3.063	1	.080		
Likelihood Ratio	4.034	1	.045		
Fisher's Exact Test				.058	.039
Linear-by-Linear Association	3.906	1	.048		
N of Valid Cases	73				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.15.

P<.10 so test is significant and we reject Ho: There is no relationship between noticing calories on the menu and a dog being present.

Conclusion: There is a relationship between noticing calories on the menu and a dog being present.

Appendix D3: Response Bias Analysis for Significant Results
Question 10 on survey: (From strongly disagree to strongly agree)

Group Statistics

	Treatment	N	Mean	Std. Deviation	Std. Error Mean
Nutritional info helps consumers make better meal decisions?	Ctrl	30	4.07	.868	.159
	Trmt	43	3.70	.989	.151
Nutritional info detracts from the appearance of the menu?	Ctrl	30	2.17	1.262	.230
	Trmt	43	2.60	1.050	.160
Restaurants are now offering healthier meal choices?	Ctrl	30	3.57	.728	.133
	Trmt	43	3.51	1.009	.154
More likely to eat out since nutritional info is on menus?	Ctrl	30	2.83	1.206	.220
	Trmt	43	2.35	.842	.128
Restaurants should not be required to describe nutritional content?	Ctrl	30	2.40	1.380	.252
	Trmt	43	2.23	1.231	.188
I try to order meals that have low fat content	Ctrl	30	3.03	.850	.155
	Trmt	43	3.19	1.097	.167
I do not worry about the number of calories my meals contain	Ctrl	30	2.73	1.172	.214
	Trmt	43	2.77	1.151	.176
I wish restaurants would leave the nutritional info off of the menu	Ctrl	30	1.90	1.155	.211
	Trmt	43	2.26	1.329	.203
I like knowing the nutritional content of my meals	Ctrl	30	3.50	1.456	.266
	Trmt	43	3.51	1.121	.171

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Nutritional info helps consumers make better meal decisions?	Equal variances assumed	.069	.794	1.648	71	.104	.369	.224	-.078	.816
	Equal variances not assumed			1.686	67.221	.096	.369	.219	-.068	.806
Nutritional info detracts from the appearance of the menu?	Equal variances assumed	.805	.372	-1.614	71	.111	-.438	.271	-.979	.103
	Equal variances not assumed			-1.561	54.927	.124	-.438	.281	-1.000	.124
Restaurants are now offering healthier meal choices?	Equal variances assumed	2.668	.107	.256	71	.799	.055	.215	-.374	.484
	Equal variances not assumed			.271	70.895	.787	.055	.203	-.350	.460
More likely to eat out since nutritional info	Equal variances	2.933	.091	2.023	71	.047	.484	.239	.007	.962

is on menus?	assumed									
	Equal variances not assumed			1.901	48.227	.063	.484	.255	-.028	.997
Restaurants should not be required to describe nutritional content?	Equal variances assumed	.829	.366	.544	71	.588	.167	.308	-.446	.781
	Equal variances not assumed			.533	57.850	.596	.167	.314	-.461	.796
I try to order meals that have low fat content	Equal variances assumed	5.621	.020	-.640	71	.524	-.153	.239	-.629	.323
	Equal variances not assumed			-.669	70.141	.506	-.153	.228	-.608	.302
I do not worry about the number of calories my meals contain	Equal variances assumed	.013	.910	-.124	71	.902	-.034	.276	-.584	.516
	Equal variances not assumed			-.123	61.824	.902	-.034	.277	-.588	.519
I wish restaurants would leave the nutritional info off of the menu	Equal variances assumed	3.053	.085	-1.186	71	.239	-.356	.300	-.954	.242
	Equal variances not			-1.216	67.529	.228	-.356	.293	-.940	.228

	assumed									
I like knowing the nutritional content of my meals	Equal variances assumed	3.195	.078	-.039	71	.969	-.012	.302	-.613	.590
	Equal variances not assumed			-.037	51.807	.971	-.012	.316	-.646	.623

Conclusion: We accept all of the hypothesis: The two have identical mean scores.

With the exception of question "More likely to eat out since nutritional info is on menus?" where we reject the null hypothesis; treatment and control do not have identical means.