False Advertisement in Nutrition and Its Effects on Society

A Study On the Relationship Between Food Labeling, Consumer Purchases, and Effects on Diet

Tag Words: Nutrition; Labels; Advertisements; Diets

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Summary

Food labels may be causing more harm, than good. Customers are blindly falling for manufacture labels such as Walmart's "Great for you" label without considering the nutritional facts. A solution to the "Great for You" dilemma would be to include more nutritional facts on the label. This will not only help the labeling companies but also the general public as they intended. Our solution to this issue is to raise awareness through our study which analyzes consumers perspective based on these labels.

Video Link

False labeling:

http://www.youtube.com/watch?v=vsYK98zvPa8&list=UUts4_1WyqXMmVDfu9ZffstA&index =6&feature=plcp

Background of Nutritional Labels

(AB) Nowadays, nutrition is incorporated into our everyday lifestyles spanning from newspaper articles to diet books. Healthy nutrition reaches all age groups from children to the elderly and it plays a critical role in maintaining the well being of society and health in general. However, with all the information about nutrition and food choices at our fingertips it becomes increasingly difficult to sort through what is good or bad for you. According to the Center for Disease Control, a healthy balanced diet is comprised of food from various food groups such as grain, vegetables, fruit, lean meat, nuts, and low-fat dairy products. While making healthy food choices it is also crucial that society refers to healthy eating plans, examines the quantity of how much food to eat from these food groups, and analyzes food labels on packaged foods (CDC, 2012).

Almost all packaged foods are required to provide nutritional food labels on their wrapping although, many people have a hard time deciphering the true meaning behind food labels. The United States is currently plagued with diet-related disease which often stems from the absence of facts on food labels (Olberding, 2011). Interestingly the failure to eat properly

raises the risk of major health concerns such as heart disease, stroke, and diabetes. Intriguingly, public health departments such as the Food and Drug administration, Centers for Disease Control and Prevention, and the U.S. Department of Agriculture Food and Drug Administration perpetually aim to discover effective ways to encourage communities to promote good nutrition in order to prevent or detain many diseases.

Partly in response to the growing health related disease epidemic, food producers and vendors have created various nutrition ranking systems geared toward "simplifying consumers' food purchasing decisions, with a "better for you" symbol (e.g. a "healthy check")... or graphic rating" (Armstrong, 2010). Nutritional ranking systems definitely present wonderful opportunities for instructing customers about daily healthy choices. However, since various labels differ significantly they can suggest impending tribulations (Armstrong, 2010).

With further investigation of labels, it has become apparent how important food labels are on the food marketing system. Through a simple advertisement, major food companies and food stores are able to have a significant impact on product design, consumer assurance in food excellence, and provide a basis for consumer education on nutrition and wellbeing. Since society tends to have an "increased awareness of nutrition and the advocacy for healthier choices, it is likely that grocery store nutrition labels will become more widespread" whether or not the food is true to their label (Berning et. al, 2009). Although, many food companies use food labels as a shopping aid to encourage consumers to buy their products (Caswell, 1992).

Research has suggested that nutritional labels and information are very effective in altering shopper's behavior leading them to alter their purchases. Incongruously, companies freely choose to label their food as "healthy" even if it may not fit the criteria because a research study has found that there is "an increase in the sales of items marked identifying low sodium, cholesterol, fat, and calories." Moreover, specific products that have labels, which appeal to shoppers and are more preferred, often provide stores with an incentive to raise the prices (Berning et. al, 2009). Consequently, companies continue to focus their efforts on advertising not only for the sake of the well being of the consumers but for increased profit as well (Wansink, 2005).

One major problem with current health claims on packaging is that both too much and too little information can confuse consumers and mislead them. In a recent study conducted by Brian Wansink, he examined the effectiveness of front-sided labels in combination with the back-sided labels on the food packaging. In the results he found that when consumers read both short health claims and the long nutrition labels on the back of the package it lead more consumers to believe the nutritional claim whether or not the claim was erroneous. Additionally, advertisements on the front of packages quickly divert the consumer's attention to the positive characteristics of the product rather than analyzing the food item as a whole. Therefore, companies who utilize the short nutritional claim on the front of the product as well as the back are more likely to have consumers believe their health claims (Wansink, 2005).

Back in 1991, the Nutrition Labeling and Education Act (NLEA) was passed as a means for the government to regulate more truthful and more identical food labeling under the U.S. Department of Agriculture Food and Drug Administration as well as the Food and Drug

Administration (FDA). Before this act was passed food labels have passed through the system unchecked and only about fifty percent of food labels exposed every ingredient (Podolsky, 1991). Without uniform labels, many consumers may not have been able to understand food labeling and packaging, possibly influencing their overall food choices. After a very costly effort, the FDA held national meetings, which involved many experts who helped analyze, combine data, and develop regulations for food labels, as a means to help the public, choose a healthier diet. (Podolsky, 1991).

Nowadays, food labels may be causing more harm, than good. The intention of food labels may be worthy in order to promote healthy eating although they may be very misleading (Johnson, 2012). Bruce Silverglade, from the Center for Science in the Public Interest stated, "The companies try to get around the rules by using vague terminology such as 'helps support your immune system' or 'heart healthy.' These claims are not reviewed by the FDA and are confusing for customers" (Ferran, 2010). Customers are blinding falling for store specific labels without considering the nutritional facts. Companies like the FDA said a solution to this label dilemma would be to include more nutritional facts on the label. This will not only help the labeling companies but also the general public as many companies have intended (Johnson, 2012).

The FDA has taken steps to correct food labels on products that they feel falsifies the actual health benefits. They have stated "misleading 'health' claims continue to appear on foods that do not meet the long- and well-established definition for use of that term" (Ferran 2010). If these companies refrain from correcting their deceiving labels their commodities could very well be removed from store shelves since their products "are in violation of the law and subject to legal proceedings to remove misbranded products from the marketplace." Luckily, all food companies involved in this case are fully cooperating with the FDA to bring this complication to a close as soon as possible (Ferran, 2010).

In 2005, a journal article from *The American Journal of Clinical Nutrition* analyzed the government's perspective on food labeling. According to this journal article, "Surveys report 60-80% of food shoppers had read the labels before buying a new food item, and 30-40% said the label had influenced their choice" (Philipson, 2005). Store focused food labels such as *Walmart's* label "Great for You" encourages shoppers that a particular product is healthy for them because it is stated on the bag. This label is very influential in the purchases customers make, although can many times be misleading as well. Ironically, "this bewilderment has generated distrust of all dietary recommendations and corresponding desire for nutrition information that is clear, authoritative, and easy to understand" (Philipson, 2005).

Current Manufacture Labels:

Food manufactures have generated labels to encourage healthy food choices and there are "more than a dozen different front-of package labeling and grocery shelf rating systems in use in U.S. markets" (Armstrong, 2010). Some examples include, PepsiCo's Smart Choices program, the American Heart Association heart-check label, which signifies it is good for the heart (Berning et. al, 2009), and Walmart's "Great for You" label which has received a lot of criticism from nutritionists who have analyzed products with specific labels.

The American Heart Association proposed the first nutritional rating system in 1995. Their "Heart Check" logo intended to concentrate on diminishing the risk of cardiovascular disease. Although, when this logo emerged there was little scientific evidence backing up the products they endorsed. Many experts believe that this particular health organization paved the way for other companies' logos because this is a very trusted health organization (Armstrong 2010).

Next, PepsiCo's logo emerged featuring a large green check mark that stated "Smart Choices Made Easy" on the front of the food product, symbolizing that it is a healthy food choice. At the start, this logo was placed on more than two hundred fifty products, which included cereal, chips, juice, and snacks (Armstrong, 2010).

Following quickly behind, General Mills developed their version of the front-of-package logo called the "Goodness Corner" which focused mainly on their breakfast cereals. Although their advertisements were more educational by labeling the amount of calories, fat, and vitamins and minerals per serving, many nutritionists stated that it was far too confusing for people to interpret. In 2007, General Mills pledged to remove their logo from products that appealed to children less than twelve years of age and contained more than twelve grams of sugar for each portion (Armstrong, 2010). This pledge was notable because General Mills is the biggest spender on advertising toward children. (Armstrong, 2010).

In 2007, Kellogg's gave into the nutritional label trend and produced the "Nutrition at a Glance" label. Kellogg's took the nutritional facts on the back of the packaging, simplified it, and then placed it on the front of the packages. It also provided percentages, which represented the government's daily suggestion for a wholesome diet (Armstrong, 2010). Once this label emerged nutritionists "pointed to sugary cereals, like Froot Loops, and fat-heavy products like mayonnaise, which they said should not be considered among the healthiest choices in the supermarket. The first ingredient in Froot Loops is sugar" (Neuman, 2009). Ironically, Froot Loops is included in *Kellogg's Fuel for School* program which aims to help children start their day with a well balanced breakfast and healthy snacks, encouraging children to focus on good nutrition. Many nutritionists believe that the criteria for the giant green check mark are far too relaxed fooling consumers and persuading them to purchase these products (Neuman, 2009).

In addition to food manufacturers labels, food retailers are putting their own labels on the shelves of stores as well. These retailers compare nutrition values of different products within the same category. This label system is organized by food group although also includes not just packaged products but fresh produce as well (Armstrong, 2010).

Experts believe that the "healthy" label movement may have the right intentions but have taken it way too far by putting labels on products that do not deserve them. After each of these label emerged, the FDA was concerned that labels can lead consumers to pick highly processed food instead of healthy food such as whole-wheat items, vegetables, and fruits. Professionals believe that some of these labels trick people into thinking that anything with these symbols are healthy choices for their families (Neuman, 2009).

Effects of Labels on Companies:

(JP)

Recently, Wal-Marts in china were forced to close over falsely labeled pork. The government of Chongqing shut down ten Wal-marts for selling regular pork as organic pork. These ten stores plus two more acquired approximately \$114.500.82 of illegal income by selling 63,547kg of falsely labeled pork. The city itself was fined for 2.69 million yuan. Wal- Mart has been punished twenty one times since 2006 for exaggerated advertising and selling expired and substandard food. This example above shows how the organic label on products fools customers. They purchase the product thinking they are eating healthy, but they fail to look at the nutritional details on the back. Wal-Mart is not the only major company facing issues for this matter, many companies have been found following the same footsteps.

A similar company, Frito Lay, was also accused for misleading labels on their Tostitos packaging. On the front of the chips bags they posted the "all-natural" labeling, without really looking at the nutritional details. Chips are a very common snack food and they can be found as organic, with less salt, made from vegetables, artisan, or all natural. This big "all-natural label" fools customers and they forget to look on the back for the actual nutritional details. These snacks include corn and oils from genetically engineered plants, which is why Frito- Lay faced these issues. Although there isn't a formal definition of the term "natural" for food labels according to the Center for Food, the FDA describes natural as "ingredients extracted directly from plants or animal products as opposed to being produced synthetically. According to the company they believe they have complied with all the regulatory requirements, but they have been faced with previous lawsuits for this same label.

Discretionary nutrition labeling is becoming conventional for food companies and retailers, but the practice poses some issues. Discretionary nutrition labels are placed on front-of-package (FOP), but the FDA or USDA does not authorize the claims. Such claims include, "No Trans Fat" or "Made with 100% Whole Wheat," or more general, such as "All Natural" or "Good Source of Fiber." There are several potential risks in making such claims. First, the FDA might accuse a product of being in violation of federal law and FDA regulations if an FOP claim is "false and misleading," such as an "all natural" product that contains a synthetic preservative. (Shapley, 2009)

In addition, even when there is compliance with all applicable FDA regulations and guidelines, companies are at risk from consumer lawsuits claiming that a particular FOP claim was somehow misleading. This is evidenced by a recent flood of class action lawsuits claiming that numerous companies misleadingly labeled certain products as "all natural" when they included allegedly "unnatural" ingredients such as high-fructose corn syrup or genetically-modified organisms. Moreover, front-of-package claims such as "No Trans Fat" can draw unwanted attention.

Impact of Misleading Labels on Consumer Food Purchases:

(JP) Misleading labels such as "No trans fat" can affect the customer's choice to purchase the product without reading the details. Trans fat are found in many foods trans such as vegetable shortenings, some margarines, crackers, cookies, and snack foods, including

microwave "buttered" popcorn. Items made with or fried in partially hydrogenated oil, including some French fries, potato chips, salad dressings, and cakes. The biggest sources of trans fat for Americans are commercial products such as cakes, cookies, crackers, pies, and breads, followed by animal products and margarine. One problem associated with trans fats is Coronary heart disease (CHD), which is the leading cause of death in the United States, with cholesterol being a major factor. Research has shown that high cholesterol can be the result of eating a diet with too much saturated fat and cholesterol. The latest research shows trans fat (also called trans fatty acids), also raises low-density lipoprotein (LDL) or "bad" cholesterol levels. (Nutrition & Health News, 2011)

Consumers can make heart-healthy diet choices if they know how much "bad" fat is in foods, but if the FOP label fools them then they will never know the true details. The Food Labels have listed the total fats, saturated fats, and cholesterol in processed foods since 1993. At that time there was not enough evidence to link trans fat to heart disease. Now, using new research findings, the Food and Drug Administration (FDA) is requiring manufacturers of foods and some dietary supplements to list trans fats on the Food Labels by 2006. Trans fats will be listed under Nutrition Facts on a separate line immediately under "saturated fats." Only foods and supplements that contain 0.5g or more of trans fat per serving will be required to list them on the label. This new label requirement will help consumers make more knowledgeable choices for a heart-healthy diet.

One example of a company that claims "0g trans fat" is Eddy's: Dibs Bite Sized Snacks. They give the impression that the product is heart-healthy. Yet a serving of this ice cream snack has 16 grams of saturated fat, 80 percent of the daily value. CSPI says the FDA should prohibit companies from boasting of "0 grams trans" on foods with more than 1 gram of saturated fat per serving. FDA already has similar limits on "cholesterol free" and "healthy" claims. (Dreyer's Grand Ice Cream, 2010)

There are many examples of products commonly seen at supermarkets with misleading contents. Minute Maid has an "all natural" label on their Minute Maid's Cranberry Apple Cocktail. Yet the product contains added citric acid, meaning that it did not occur naturally in the juice. FDA has long held that adding citric acid prohibits a company from claiming the food is all natural. This product also contains high-fructose corn syrup. This is not the only food company that manufactures labels either to exaggerate the amount of healthy ingredients, or to imply that the food has magical, drug-like qualities that could prevent or treat various health problems. Nestlé's Carnation Instant Breakfast for instance claims that its antioxidants "help support the immune system." While it is true that serious deficiencies in vitamins A, C, and E and other antioxidants can lead to serious health problems, consuming this or other products that make this common claim won't help prevent colds, the flu, or other diseases. Another company that claims to have beneficial support is Kashi: A Kellogg-owned brand. They falsely claim that the green tea in its Heart to Heart Instant Oatmeal will "support healthy arteries." The FDA does have a so-called qualified health claim for green tea that relates to cancer but has not agreed that green tea can protect arteries or fend off heart disease. Recently, General Mills was forced to drop exaggerated heart disease and cancer claims on labels and its web site for its Cheerios cereal by FDA. And in October, FDA expressed concern over the industry-wide smart choices front-of-packaging labeling program. (Shapley, 2009)

Besides food labeling claiming healthy immune system and support many products show false pictures on their packaging but have no proof of containing the product. One such example is the label for Gerber Graduates Juice Treats, a product intended for preschoolers, pictures an abundance of fruit: oranges, grapes, peaches, cherries, pineapple, and raspberries. Yet there is no cherry, orange, or pineapple in the product, and less than 2 percent is raspberry and apple juice concentrate. The main ingredients are corn syrup and sugar, providing 17 grams, or about four teaspoons, of refined sugars per serving. (Shapley, 2009)

Front-of-Package Labels:

There are also so-called FOP labeling programs that are designed to help consumers make healthier food choices using standardized and easy-to-comprehend facts and/or symbols. These include the "Facts Up Front" campaign sponsored by the Grocery Manufacturers Association (GMA) and the Food Marketing Institute (FMI) and the "Great for You" program that was just announced by Wal-Mart. Food companies face minimal risks when participating in these programs. ("GMA, FMI Bring Nutrition Facts Up Front." 2011)

The goal of FOP labeling programs is to help consumers make healthier choices by providing standardized symbols and information that can quickly and easily be understood "at a glance." These programs fall into one of two different categories: interpretive or reductive. Interpretive programs, including Wal-Mart's "Great for You" icon and the Institute of Medicine's proposed rating system of assigning foods zero to three points, seek to interpret the complicated information on the information panel (by clearly telling consumers which products are healthier. In contrast, reductive programs, such as the "Facts up Front" campaign, highlight key information (such as calories, saturated fats, sodium and sugars) and allow consumers to decide whether the product is healthy or not. ("Food" 2011)

Both types of programs have their drawbacks. Interpretive FOP programs are often accused of creating bright lines between food products without recognizing important differences between foods that are relevant to making healthier choices. In fact, this issue is what led to the "Smart Choices" program ceasing operations in late 2009 after it received strong criticism when products such as Froot Loops and Cocoa Krispies qualified for the "Smart Choices" icon. On the other hand, critics assert that reductive FOP programs don't identify specific products as being healthy choices and that they are thus less effective in helping consumers select healthier foods and in getting the food industry to produce a greater amount of healthier foods. ("Food" 2011)

Programs such as Wal-Mart's "Great for You" label pose more risks for manufacturers because they generally create a bright line between healthy food products and all other products. This differentiation is consistent with a key goal of such programs, which is to provide food manufacturers with an encouragement to create new products or reformulate existing products that will qualify as being "healthy." But if a product doesn't qualify and it lacks the seal, there's a risk that shoppers will view the product as inherently "bad for you." This is one reason why the industry has backed the less-interpretive "Facts up Front" campaign, which launched last year and is now being used on approximately 70 percent of packaged foods in the United States. (Johnson, B. 2012)

Center for Science in the Public Interest (CSPI) is moving towards prohibiting qualified health claims for foods. Unlike "health claims," which must meet a "significant scientific agreement" standard, qualified health claims include disclaimers explaining that the scientific evidence is uncertain. CSPI also wants the FDA and the U.S. Department of Agriculture to prohibit misleading claims that a given food will "support" or "maintain" healthy immune systems, joints, vision, and so on. Consumers simply can't distinguish between severely regulated health claims, which require FDA approval, and structure/function claims, which don't, according to CSPI. ("Food Labeling." 2011)

Overall, consumers need honest labeling which they can depend on for making healthy choices in order to avoid diet-related disease. Although many companies want to expand their business by using the labeling tactics mentioned above, they should be required by FDA to provide honest nutritional information. A variety of nutrition rating systems and symbols are now on the front of food packages in order to make it easier for consumers to make healthful choices. However, the number and variety of nutrition rating systems in grocery stores often lead to confusion in the grocery aisle, especially when consumers are constrained for time and may not understand a product rating system. One positive change to the front package labeling could be to include calories on the front for household servings on all products. Besides calories, other information to help consumers pick the right choice would be more helpful.

Introduction of Research Study:

To examine the effects of misleading labeling on consumers we will be holding a small experiment here at Rutgers University. In this experiment we will be focusing on students on campus and their reaction to certain products with false labels. By observing their reactions these mislabeled products, we will be able to determine which products consumers are attracted to. Flashcards with pictures of these products will be posed in front the student in various orders. The results we obtain from this experiment will help us apply these observations to real life situation. For instance, when customers walk down the grocery aisles they are more attracted to foods that have "Great For You" label or "0g trans fats" even without looking at the nutritional label on the back. Customers may have a lack of education or are pressed for time when shopping, leading them to be attracted to false labels. As mentioned earlier in the paper, these misleading labels can cause poor judgment when picking healthy foods, and eventually lead to health issues.

Eating a well-balanced nutritional diet is very important, and nowadays people are trying their best they can. To help support this cause of healthy eating producers should follow the FDA requirements and avoid false labeling. Although many companies start off by having good intentions, the judgment to put labels on food should be coordinated by nutritional experts not companies. In the end companies might put labels on their products to increase sales, without really considering the nutritional facts.

Overall, healthy eating is crucial for the general public and more efforts should be made to help make better choices. First, people should be educated about proper nutrition so they know what choices to make. Second, the producers should make an effort to provide easier

understanding labels for the public, which are not misleading. These efforts are already starting to be enforced as seen earlier in the paper, but there needs to be a greater enforcement on which labels are put on products.

Nutritional Label Study:

(AB/JP) Our study consisted of using flashcards with various food products on them. First the participant was asked to sign a consent form and given a brief overview of the procedure. Second they were given a two piles of flashcards and asked which products they would buy for themselves. One pile consisted of six various cereals such as Cheerios, Kashi Go Lean Crunch, Trix, Corn Pops, Froot Loops, Golden Grams, Rice Krispies Treats, Fiber One, Shredded Wheats, and All-bran. The second pile consisted of six different sorts of Oreos, Ritz Crackers, and Cheese Nips. These products were chosen to study the participants views based on their nutritional backgrounds. After they were asked to rank the products from least healthy to most healthy. Based on their choices they were then further asked to put the "Great for You" label on the products they felt deserved this manufactured label. Overall, these questions were asked to get a better understanding of how they personally view the products without looking at the nutritional labels.

In the next part of the experiment they were given a pile of various manufacture and nutritional labels. From this pile of the flashcards they were asked to separate them based on familiarity and unfamiliarity. The familiar pile was further analyzed and they were asked which products they had seen these labels on. The purpose of this portion of the study was to see if the manufacturer labels were more familiar amongst the general public or the nutritional labels. We were also able to distinguish which labels they felt were more helpful as well as more influential on their purchases.

The participants were finally asked several questions which were recorded and analyzed for our study. One of the questions were if food labels influence what they buy, which gave us a better understanding on what affected their food choices. Second, they were given a scenario as if they were in a grocery store, and asked if they ever took the time to turn the box around and read the nutritional labels. This showed if nutritional labels on the back of boxes where even helpful to people, and if they would rather prefer them being on the front. The last two questions they were asked were more general, in which we asked them how important they found their health and if they believed nutritional labels were helpful in general.

Nutritional Label Study Results:

The results we obtained this study showed that not many participants were motivated enough to turn around the box and read the nutritional label before they purchased it. Most of them responded by saying that they usually just bought the product if they liked it. When they were asked if they prefer the labels on the front, almost all of them responded with a yes. They believed it would catch their eye faster, and would not require any effort. This basically was the answer we expected to get from the beginning of the study (Figure 1). An interesting thing we came across was that many people, seven out of ten subjects, were more familiar with the manufacturing labels, since they had seen them more often, but they did not really know the

actual nutritional facts of the product. (Figure 2) Once the subjects recognized which products were familiar to them and were asked to place the "Great for You" label on the products they felt deserved this label, we found that on average subjects put this label on five out of 6 Cereals, one out of six oreos, two out of six cheese nips, and four out of six Ritz Crackers. This shows that although the manufacturer labels catch the eye of the consumer, they lack the nutritional content. Meaning, that these consumers may be eating unhealthy food but they believe it's healthy because there's a "Great For You" label on it. We can conclude that if a brief nutritional label was posted on front of the box with a catch label, it will catch the consumer's eye as well as provide them with the information they need.

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Appendices:

Table 1: Nutritional Labels Chart:

Logo Image	Nutritional Slogan	Company
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American Heart Association CERTIFIED Mests Criteria For Heart-Healthy Food WWW.heart.org	"Heart Check"	American Heart Association
www.pepsico.com	"Smart Choices Made Easy"	PepsiCo
www.generalmills.com	"Goodness Corner"	General Mills
Total Fall AGLANCE TO Sodium Total Fall AGLANCE TO Sodium Total Fall AGLANCE TO Solid Total Fall AGLANCE TO Solid Total Fall AGLANCE TO Solid Total Fall Fall Fall Fall Fall Fall Fall F	"Nutrition at a Glance"	Kellogg's
GREAT YOU self.com	"Great for You"	Walmart

Figure 1: Subjects Familiarity with Manufacture Labels

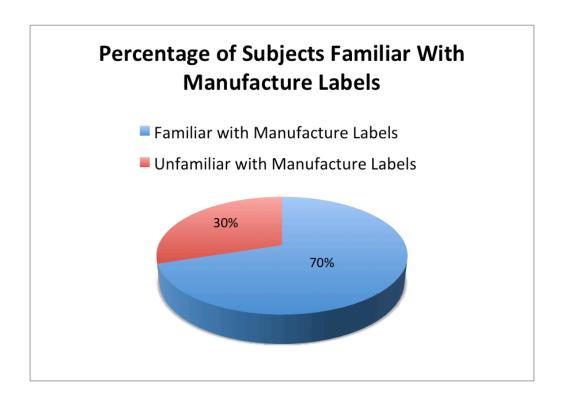
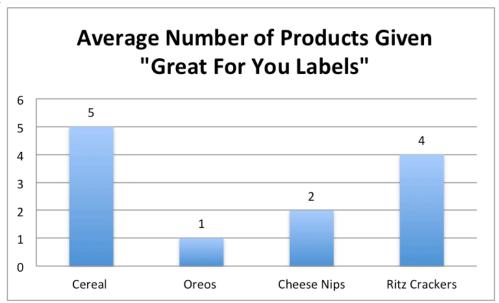


Figure 2:



^{*} Average number of time subjects put the "Great for You" label on the products they felt deserved it. This allowed us to get a feel of how the subjects viewed each product without looking at nutritional labels

Letter to the Editor:

Sent to the editors of Body and Soul Magazine and Eatingwell.com

Dear Editor,

Nowadays, nutrition plays an important role in the everyday lifestyles of many Americans. Healthy nutrition has begun to play a critical role in maintaining the wellbeing of society. Although, with the overload of nutrition labels, food choices, and advertisements available, it has become very difficult for the average consumer to sort through healthy and unhealthy choices. For example, there has been a startling trend of misleading labels on the packaging of many food items in the United States. Since nutritional and advertising labels play a very critical role in consumers behaviour, by altering their purchases, it is imperative that we try to educate consumers on the true meaning behind food labels. It has become apparent that many companies freely label their food with healthy labels, even if they do not fit the criteria. Companies aim to get around the criteria by using vague terminology that is not reviewed by the Food and Drug Administration (FDA). Consumers are blindly falling for misleading labels without considering the nutritional facts.

One of our major concerns is how food labels affect the food purchases of many consumers, and what type of labels affect them the most. With the growing health related disease epidemic in our country, we must put an end to the negative influence that misleading food labels have on society. Although the intention of the "healthy for you" type labels may be to instruct customers about daily healthy choices, there is very minimal criteria the food must meet in order to deserve this type of label. Therefore the lack in consistency of the labels can very well suggest impending tribulations.

We would like to test this phenomenon on a small scale to see the direct effects of labeling on consumers. The study would use a simple sorting technique, in which flash cards containing manufacture labels or nutritional labels would be used. The subject would be asked several questions based on this labels and observations would be recorded. This simple and inexpensive study would support our views on false labeling.

It would be beneficial to educate our community with the true meaning behind food labels. Additionally, it is very important to encourage the Food and Drug Administration to develop more uniform labels so the general public may be able to have a better understanding of food labeling and packaging.

Sincerely, Amanda Borrelli and Jigna Patel

Human Subjects Research Protocol

I. False Advertisement in Nutrition and Its Effects on Society; A study on the relationship between food labeling, consumer purchases, and effects on diet.

Amanda Borrelli and Jigna Patel

II. Objectives

The purpose of this study is to observe the effects that food labeling has on societies nutritional health and food choices.

III. Background and Rationale

Food labels may be causing more harm, than good. Customers are blindly falling for the "Great for you" labels at Walmart without considering the nutritional facts. The "Great for you" labels have been used falsely by companies according to the FDA (2009). A solution to the "Great for you dilemma" would be to include more nutritional facts on the label. This will not only help the labeling companies but also the general public as they intended. Our solution to this issue would be to raise awareness through conducting a study that analyzes peoples perspective based on these labels.

In 2005, a journal article from *The American Journal of Clinical Nutrition* was written and analyzed the government's perspective on food labeling. According to this journal article, "Surveys report 60-80% of food shoppers had read the labels before buying a new food item, and 30-40% said the label had influence their choice" (Philipson, 2005). This correlates with the main idea of our study, that food labels such as Walmart's "Great for You" label, encourages shoppers to purchase products without knowing the correct nutritional facts. Ironically, "this bewilderment has generated distrust of all dietary recommendations and corresponding desire for nutrition information that is clear, authoritative, and easy to understand" (Philipson, 2005).

IV. Procedures

A. Research Design

This study is based on an experimental research design that specifically focuses on the sorting technique. Sorting technique is an easy, inexpensive way to observe the reactions of subjects toward various food products.

B. Sample

The sampling approach used for this experiment will include volunteers at various locations on Rutgers campus. They will be recruited by there own consent, and will not be forced to participate in the study. There will be between 10-15 subjects incorporated into this study. No subjects will be excluded from this study as long as they are over 18 years of age.

C. Measurement / Instrumentation

The variable used in this experiment will include index cards with an image of various types of foods or food labels on them. Each of these food items will have points (1,2, or 3) associated with them, and at the end of the study these points will be added up. The healthier food's will have a higher point compared to a non-healthy version of the same food. The score calculated at the end will indicate if the subjects overall food choices are healthy or not. We will also determine the accuracy of their ability to associate the correct label with the food item. Additionally, we will analyze how labels affect food choices.

D. Study Site(s)/Location of Procedures:

This study will recruit students on Rutgers University, New Brunswick campus. The study will be held at various locations on campus such as the campus centers, gym, and on campus housing.

E. Detailed study procedures

A point system, quantitative, and a qualitative method will be used for data collection. The duration of the experiment will be about 10 minutes, in which they will be asked various questions and sort cards. There are no risks in sorting the cards, they will be asked if they would voluntarily participate in the study and simply answer a few questions. These questions will solely be based on their diet choices and nutrition knowledge. No personal questions will be asked. This experiment will be confidential and the name of the participant will not be recorded. Personal information regarding their diet will be stored electronically for the remainder of the experiment, but will be discarded once the experiment is complete.

F. Consent Procedures:

This study will be explained to the subject by either Amanda Borrelli or Jigna Patel, the consent will be read, and any of the subject's questions will be answered. This study will be anonymous and the subject will be given a copy of the consent form to take home.

G. Internal Validity

In order to avoid study bias the points will not be noted on the cards. Also the subjects will not be informed that the cards they choose are associated with points. This will allow them to choose the cards without having any pressure to pick the one with the most points. At the end of the study all information regarding the study and any questions asked by the subject will be answered.

H. Data Analysis

The sorting technique and point system will be used for data collection and analysis. These procedures are harmless, inexpensive, and easily interpreted. The sorting technique will allow us to observe the diet choices of the subjects, and the points will help determine if there choices are healthy or not.

V. Bibliography

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