How Health Claims on Product Packaging Influence Consumer Perceptions and Purchase Decisions

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ABSTRACT

The goal of this investigation was to expand upon research from the field of consumer behavior, with a specific focus on food product packaging and health claims. It specifically focused on how these health claims impact consumer perceptions and purchase decisions related to everyday food items. Students at Bryant University were asked to take part in a study which measured their overall health knowledge and nutritional interest. They were then presented with different variations of a product packaging label to assess its impact on their attitude towards a product. Findings indicated that both females and those who score highest on a health knowledge scale are more likely to be influenced by packaging claims. Implications for marketers are further discussed in the body of the paper.

INTRODUCTION

Data collected in recent years has shown an enormous growth in overall consumer health consciousness. Not even 20 years ago, soda sales were skyrocketing and Americans began opting for packaged foods as opposed to the homemade meals they used to so often make. This led to the development of serious health problems across the United States including obesity, diabetes and heart disease. Now the food industry is facing a new era of consumers, and these consumers are demanding healthier options. This demand has led to an explosion of new products and offerings to attract the attention of these health conscious individuals. Modern day grocery shelves are becoming flooded with foods marketed as "low fat", "gluten free" and "non GMO". This is putting pressure on food marketers to appeal to this new health conscious market to gain an edge over their competitors.

In 2015, the Nielson Global Health and Wellness Foundation released study findings that reflected this movement towards healthier eating (as cited in Watson, 2015, p. 1). The study specifically found that, "Younger consumers are far more concerned about everything from food ingredients, genetically modified food and organic food than previous generations," (2015). 41% of the young millennials surveyed claimed that they would spend more money if a product was healthier. However, of all participants aged 35 and older, only 26% would consider spending more money on health food products. This increased interest in healthy eating demonstrates just how relevant the focus of this study is, and how valuable the information can be to food marketers. Since consumers are beginning to care more about healthy food options, companies should respond accordingly. Research has demonstrated that the use of health claims on product packaging can be helpful in attracting the attention of these health-conscious shoppers.

My personal interest in nutrition and healthy eating, coupled with the potential I see for today's food marketers, is what led me to pursue this research experiment. This study seeks to build upon previous research and uncover changes in consumer perceptions related to health claims made on food packaging. It is crucial to take a look at these claims as they relate to a consumer's purchase decisions, and assess how the market is changing. A review of the literature on this topic and an overview of the study design will be outlined in the following sections of the paper.

LITERATURE REVIEW

History

It wasn't until certain health issues became increasingly widespread that researchers began to look into the effects of a poor diet. First administered in 1978 (as cited in Ippolito and Mathios, 1991, p. 2), *Health and Diet* surveys were distributed to thousands of Americans to learn more about their food choices and eating habits. These surveys measured consumer knowledge of food as a factor of their health. In 1985, another survey was released by the FDA to examine 24-hour food intake data from thousands of women across the country (1991). This survey was performed before health claims became popular, and again in later years after food packaging became saturated with nutritional claims. The results showed a significant increase in consumer purchases of certain food items, such as those marketed as "high in fiber". This is because food marketers began to educate the public about the health benefits that their product could offer (i.e. fiber lowering your risk of cancer) which in turn

led to increased awareness and spending. The American population (women in particular) was responding more to food advertisements that linked a product to a health benefit, than they were to similar articles released in print media by the government. Once food marketers caught wind of this, the use of health claims became widespread.

However, the use of nutritional claims was met with a great deal of backlash. Some people were concerned that larger corporations could use these claims to mislead consumers into eating food that wasn't actually healthy for them (Parker, 2003, p. 4). Smaller produce companies, for example, could not afford to brand their products and promote all of the health benefits that they had to offer. Instead, larger food companies such as Kellogg's and General Mills were better at attracting the attention of consumers, even though their products were not necessarily healthier. Critics were worried that these companies were using deceptive claims that were not necessarily backed by scientific evidence (2003). This is when it became necessary for the FDA and NLEA to step in and regulate the health claims being used.

The Nutritional Labeling and Education Act (NLEA) was created in 1990 to help consumers make more educated food choices (Kozup, Creyer and Burton, 2003, p. 5). This act was becoming increasingly necessary as the American population was becoming more obese. The NLEA tried to combat this issue by making nutrition information more readily available to consumers. They did this by creating the Nutrition Facts label that is now found on all consumer packaged goods. The Nutrition Facts label includes items such as calorie content, fat content, and serving sizes. The NLEA also set rules and regulations for food companies regarding the health claims that they could put on their packaging. Large companies had begun using deceptive and misleading claims that were contributing to the

country's health issues. The NLEA was not able to fully resolve this issue, but it did set boundaries for food marketers. The most noteworthy outcome of these regulations was a sharp decline in health claims made by cookie, oil and entrée companies (Caswell, Ning and Mojduszka, 2003, p. 12). On the other hand, the amount of claims made by produce and vegetable companies increased the most. In this sense the NLEA did play an important role in making sure the right claims were being released to consumers.

The FDA also played an important role in the regulation of marketing health claims (2003). Although not as impactful as the NLEA, the FDA monitored the use of claims being made by restaurant chains and food vendors. Restaurants would have to meet certain requirements in order to list foods as "heart healthy" or "low fat" on their menus. These regulations were incredibly important as the American population began spending more money on take-out meals and prepared foods. The FDA continues to play an important role in the regulation of health claims to this day. In 2009, they released a document entitled, "Evidence-Based Review System for the Scientific Evaluation of Health Claims" (Ellwood, Trumbo & Kavanaugh, 2010, p. 2). This served as a guidance document for companies that were in the process of developing their health claims. This prevented many companies from facing future retribution from the FDA.

The rules and regulations that have been put into place affect every product claim we see on our food packaging today. However, the new and emerging health claims require more research. The consumer market is changing, as millennials are becoming more health conscious than they were in previous generations (as cited in Watson, 2015, p. 1). Millennials are also becoming increasingly more educated about proper nutrition and how to interpret

nutrition labels. This will mean new challenges and opportunities for the NLEA and FDA, as companies are beginning to utilize new health claims on their packaging.

Review

After reviewing much of the literature on this topic, I began noticing trends and commonalities between previous studies. It seemed as though many of the common themes revolve around health claim regulations, consumer health knowledge, and how consumer health concerns change over time. Each of these topics will be discussed in further detail throughout the following sections.

Deceptive Health Claims

When the use of health claims became increasingly widespread, many people worried about the deceptive messages being used to promote food products for children. This was a valid concern as the number of sugary cereals and snacks on the market began to increase. A more modern day example of this deceptive advertising is Kellogg's Mini Wheats commercials that state, "Clinically shown to improve kids' attentiveness by nearly 20%" (Gallagher, 2010, p. 1). The FTC began to monitor these advertising messages more closely in the early 2000s as childhood obesity was becoming a larger issue. The Better Business Bureau's Children's Food and Beverage Advertising Initiative was also created to help combat this problem. This ties into the research experiment at hand because it shows how much consumers can be persuaded by health claims made on packaging labels. Not even just children are affected, but the parents that are grocery shopping for their children as well. One

study examined hundreds of product packaging boxes and found that 55% of food products are for kids, but make a specific appeal to the parents on the package (Elliott, 2012, p. 6). These parents were just as likely to be influenced by these claims, even those that were misleading. Deceptive advertising has played a huge role in how packaging claims have changed throughout the years. In 2005, the amount of lawsuits placed on food and beverage companies that were marketing to consumers ages 18 and under hit a record high (Rutkow, et. al., 2015, p. 3). This means that companies today must be much more conscious of what they are putting on their packaging. In order to build upon past research on the given topic, a portion of the study will focus on whether or not today's consumers trust the claims made on food packages. Building off of this, it will seek to examine whether or not increased levels of health consciousness will impact their tendency to trust and be influenced by these claims.

Consumer Awareness

Consumer health awareness plays a large role in the effectiveness of health claims made on packaging. It is expected that shoppers who have more health knowledge are less likely to be influenced by product packaging, and more likely to be influenced by the nutrition labels themselves. But is this actually the case? Many studies have been conducted in the past that examined how one's health awareness impacted their reactions to health claims.

Research done by the European Heart Network in 2003 found that while many consumers claim to read and understand food labels, their actual understanding is limited (Mackison, Wreiden, and Anderson, 2010, p. 1). They tend to struggle most when asked to make mathematical calculations to compare different serving sizes and nutrient information.

At the time of the study, consumers tended to focus most on the fat and calorie content while disregarding other important nutrition information. In order to obtain this information, researchers administered a survey that included scales to measure one's overall understanding and perception of food labels. Participants were shown multiple nutritional claims, but there was no between subject design that allowed participants to view different packaging designs. In this particular experiment, the results showed that consumers had a very limited understanding of nutritional information found on product packaging. The outcome could potentially be different for today's consumers, who appear to care more about their overall health and wellness.

A more recent study was conducted in Japan that also examined health awareness as a factor in consumer purchase decisions (Hirogaki, 2013, p. 1). This study targeted consumers ages 18-25 and examined how health awareness and health claims impact a consumer's willingness to pay money for a product. This study was performed on a small sample of participants in Japan and examined different kinds of health claims. They looked at a particular brand of tea and found that consumers who scored higher on a health awareness test were less likely to be influenced by health claims. They were, however, just as likely as lower scoring participants to increase their purchase likelihood if the product stated that it was made in Japan. This research was the foundation for one of the hypotheses for the research study at hand. However, in order to build upon their research findings, the current study will include a different product type and will strictly focus on American millennial consumers.

Changes in Consumer Concerns

The use of certain claims made by food marketers has much to do with what health concerns are most prevalent at a certain point in time. Throughout the past 30 years, Americans have faced different health problems, and have sought out particular health benefits offered by different food products. When heart disease began to become more widespread, many consumers began opting for food labeled as “heart healthy”. When the media released studies that linked certain types of cancer to fiber intake, fibrous cereals and granola bars began to fly off of the shelves. Popular health claims are very much a factor of what is trendy and what Americans are currently concerned about.

It was in the late 1970s when research was released that linked ones fiber-intake to a lower risk of certain types of cancers. Since this was at the forefront of the minds of many Americans, food marketers took action accordingly. In 1984, Kellogg’s cereal company started an advertising campaign that discussed the benefits of fiber, and promoted their cereals that contained this ingredient (Ippolito and Mathios, 1991, p. 3). When President Reagan was diagnosed with colon cancer in 1985, fears were heightened even more, and cereal consumption began to increase at a rapid rate. Another study was conducted to see how fiber health claims specifically impacted consumer perceptions of different food products (Zank and Kemp, 2012, p. 1). College-aged students were shown either a cereal box with the claim, “Now with extra fiber” or the same cereal box without the claim. Subjects responded more favorably to the box with the added fiber claim, demonstrating the effectiveness of this marketing strategy.

In 2000, a similar study was conducted that yielded very interesting results. Study participants were shown different packaging labels that contained different health and

nutritional claims (Garretson and Burton, 2000, p. 2). One package claimed to have added fiber, one package was marketed as "low fat", another promoted nutrient benefits, and the final condition was a package that contained no claim. Surprisingly, consumers responded most favorably to the package labeled as "low fat". The fiber and nutrient claims did not impact consumer perceptions in a significant way. This emphasizes the point made earlier about how consumer health concerns shift over time. By the early 2000s, fiber was becoming less trendy and important in the eyes of consumers. Instead, Americans began opting for low-fat and low-calorie food options. This is most likely linked to an increase in American weight gain. Obesity rates were steadily increasing and were the highest they had ever been in the late 1990s. The media contributed to this nationwide panic, and many Americans began dieting and trying to lose weight. As always, food marketers responded accordingly and numerous foods were developed that claimed to be "low-calorie" and "low fat".

However, it is interesting to note that very little research has been done that examined health claims that are becoming prevalent in today's day and age. Today it is becoming trendy for food products to be labeled as "gluten free" or "all natural/non GMO". I found this to be the case by browsing through a local grocery store at the health claims being made on many of the packages. It seems as though these claims are beginning to be utilized by many food marketers, which made me wonder why more studies had not included these claims. This was a major gap in the literature that I noticed, and I therefore decided to incorporate the "gluten-free" and "all-natural" claims into my experiment.

My study will add to the existing body of knowledge because it will examine a modern day nutrition bar, KIND, and its health claims. This brand specifically promotes the

fact that it is gluten free, non-GMO, low glycemic, and low trans-fat. I could not find any other recent research study that examined the effectiveness of these claims. Therefore, my study will help to gain more insight about whether or not these new claims are effective at targeting young millennials. It will take a look at these specific consumers and the trendy snack bars that they are purchasing.

Hypotheses

A review of the literature on this topic has led to the formation of three main hypotheses. The first hypothesis **(H1)** predicts that there will be major differences in the way that male participants and female participants respond to health claims. The aforementioned FDA diet surveys from the early 1900s were only distributed to women, and the results led me to believe that this gender is quite receptive to health claims. Therefore, it is believed that female participants will be more likely to be influenced by these claims. On the contrary, male participants will be less likely to see these claims as important. The next hypothesis **(H2)** predicts that consumers who score higher on the Health Consciousness Scale will be less likely to be influenced by health claims on product packaging. This hypothesis is based off of Hirogaki's study in 2013 which found that those who were more knowledgeable about health were less likely to trust the health claims made by food marketers. The final hypothesis **(H3)** is that people who score high on the Nutrition Information Interest Scale will be more likely to be influenced by health claims on product packaging. This scale differs from the previous scale in that it measures one's interest in nutrition, as opposed to their health consciousness

and knowledge. The logic behind this hypothesis stems from the research that was noted in the "Changes in Consumer Concerns" portion of the literature review.

METHODS

A total of two hundred and one students took part in this study which was conducted in the on-campus behavioral lab in March of 2016. Before running the survey, the questionnaire was reviewed and approved by the Bryant University IRB. The subjects were encouraged to participate in this study in order to receive credit for one of their marketing courses. 62% of participants were male and 38% were female. A total of 83% of respondents listed their ethnicity as white, 6% as Hispanic, 5% as African American, 5% as Asian/Pacific Islander, 1% as Native American, and 1% as other. Before completing the survey, all participants were asked to complete a consent form which outlined the nature of the study and assured them that their participation was voluntary.

Survey Design

The survey consisted of thirty-two different questions that were grouped into six sections (Appendix A). The first six questions were intended to measure the participant's overall health consciousness. These questions were part of the Health Consciousness Scale, which was developed for use in another study (Burns and Jayanti, 1998).This six question scale was composed of five-point Likert items that sought to measure the degree to which an individual was concerned and knowledgeable about health issues. The next three survey items were a part of a second scale, called Nutrition Information Interest. This scale, which also

included five-point Likert items, differed from the first in that it measured the degree to which someone was concerned about nutrition information. It was developed in 1990 and further altered for use in a 1999 study which measured food product evaluations (Burton, Garretson and Velliquette, 1999).

The next two sections of the questionnaire asked participants to indicate how important various attributes and health claims were to them. The first section focused specifically on elements related to a food product (i.e. brand name, nutritional claim, ingredient label, etc.). Participants could rate the attribute using a five-point number scale (1 being not important, 5 being extremely important). The next section utilized the same number scale, except it asked participants to rate the importance of different health claims (i.e. low-fat, low-calorie, all natural/non GMO, etc.).

The next section of the questionnaire included a two by two experimental design. Each participant was randomly presented with one of four different variations of a nutrition bar packaging label (Appendix B). The labels were created using Photoshop and differed based on brand name and presence of health claims. In one condition the survey taker was presented with a KIND granola bar box that had claims such as “gluten free” and “non-GMO”. In another condition, the survey taker could have been shown a package of generic Walmart granola bars with the exact same claims. In the next condition, the box of KIND bars had no nutritional claims. This was also the case in the fourth condition which displayed the generic granola brand with no claims. After viewing the package for thirty seconds, participants were then asked a series of questions about the product they were shown. These questions measured their familiarity with the brand, attitudes toward the product, purchase likelihood

and whether or not they trusted health claims. The wording in a few of the questions was modified based on what package the respondent had seen. For example, someone who was shown a package with claims was asked to indicate whether or not they believed the nutritional claims made on the package. Someone who was shown a product without claims was asked if they believed the nutritional claims on food packages in general.The final section of the questionnaire inquired about demographic information, including gender and ethnicity.

RESULTS

The data from the questionnaire was analyzed to both test the original hypotheses and to gather additional data. It was found that the first hypothesis regarding gender differences was supported. First, a t-test was performed to compare the mean scores of both females and males on the Health Consciousness and Nutrition Information Interest scales. On the Health Consciousness scale, males had a mean composite score of 21.3305 while females had a mean composite score of 22.8667 (Figure 1.1). Although females technically scored higher, there was no significant difference between their average score and that of the male participants. On the Nutrition Information Interest scale the male mean score was 9.5083 and the female mean score was 10.64 (Figure 1.2). Here there was a significant difference ($p < .05$) between the scores of each gender. Next a one-way analysis of variance (ANOVA) was performed to compare how each gender rated the importance of different product attributes. There was a significant difference between how males and females rated brand name, nutritional claim and ingredient label. Females rated the importance of brand name higher than males, at a $p < .05$ significance level (Figure 1.3). Females also rated the importance of nutritional claim as

higher than males, at a $p < .001$ significance level (Figure 1.4). They also felt as though an ingredient label was more important than males did ($p < .05$) (Figure 1.5). An ANOVA was next performed to analyze how each gender rated the importance of health claims themselves. Once again, females rated each health claim a significantly more important than their male counterparts. For the "low calorie" claim the difference was at a significance level of $p < .001$, and for both the "high in fiber" and "low sugar" claims the difference was at a significance level of $p < .001$. Every claim, with the exception of the "gluten free" was at this same significance level.

The next hypothesis, which predicted that those who score high on the Health Consciousness scale would be less likely to be influenced by health claims, was not supported. It was found that those who scored highest on this scale were most likely to place a higher importance level on product attributes and various health claims. Before running an ANOVA, participants were categorized into one of three groups based on their composite score. Those who scored between 10 and 19 were considered the low scoring group (Group 1, 30.2% of participants). Those who scored between 20 and 23 were considered the middle group (Group 2, 30.7% of participants). Finally, those who scored between 24 and 30 were considered the high scoring group (Group 3, 39.1% of participants). There were significant differences in the importance that Group 3 placed on brand name, nutritional claim, ingredient label and taste as compared to the two other groups. In order to compare the means of each group against each other individually, a post hoc test was performed. The most significant findings were that Group 3 rated the importance of nutritional claims as higher than Group 1 at a significance level of $p < .001$ (Figure 2.1). This group also rated ingredient label as more

important than Group 1 at a significance level of $p < .001$ (Figure 2.2). Group 2 also felt that this attribute was more important than Group 1 did ($p < .01$). However, Group 1 rated one attribute as significantly higher than both other groups. This attribute was taste and the difference was at a significance level of $p < .01$ compared to both Groups 3 and 2 (Figure 2.3). An ANOVA and a post hoc test were also performed to examine differences between how each group rated the importance of different health claims. For every single claim there were significant differences in how each group answered. The claims with the most significant differences included all natural non-GMO ($p < .001$ significance level between Group 3 and 1) and gluten free ($p< .001$ significance level between Group 3 and 1).

A similar analysis was performed in order to test the third hypothesis. This hypothesis, which predicted that those who score higher on the Nutrition Information Interest Scale would be more likely to be influenced by health claims, was supported. Participants were again categorized into three groups based on how they scored on the scale. Those who scored between a 3 and 8 were considered low scorers (Group 1, 29.2% of participants). Those who scored between 9 and 11 were considered medium scorers (Group 2, 31.2% of participants). Finally, those who scored between 12 and 15 were classified as high scorers (Group 3, 37.4% of participants). Once again significant differences were found between how each group rated the importance of different product attributes. The largest difference occurred between how Group 3 rated the importance of nutritional claim compared to Group 1 ($p < .001$) (Figure 3.1). This was also the case for the ingredient label attribute, as there was a significant difference ($p < .001$) between Group 3 and 1, and between Group 2 and 3 (Figure 3.2). In every case Group 3 rated these attributes as more important. There were also significant

differences in the ways that each group rated the importance of every single health claim on the scale. The most significant differences ($p < .001$) occurred between how Group 3 rated the importance of the "low fat" "low calorie" and "high in fiber" compared to Group 1. In every case, Group 3 felt that these claims were more important to them when selecting a food product, including the "gluten free" and "all-natural/non GMO" claims.

Additional research was completed in order to examine how people responded to the various product package designs. A two-way ANOVA was used to analyze the differences in responses to questions 23-26. Question 23 asked participants how familiar they were with the brand. As expected, there was a significant difference ($p < .001$) between how many people were familiar with the KIND brand compared to the generic brand. However, there was no significant difference in familiarity between the package labels that had claims and those that lacked health claims. Question 24 asked participants whether or not they believed that the product they were shown was healthy. There was a significant difference ($p < .001$) between how healthy people perceived the KIND bars to be compared to the generic brand (Figure 4.1). In general, most participants believed that the KIND bars were healthier, regardless of whether or not health claims were present. Question 25 asked participants to indicate their likelihood of purchasing the given product in the future. Once again, purchase likelihood was significantly higher for KIND bars compared to the generic brand bars, at a significance level of $p < .001$ (Figure 4.2). However, there was no significant difference between the purchase likelihood of those bars with claims compared to bars without. Finally, the last question to be analyzed was question 26 which asked participants how likely they would be to recommend this product to their friends. Respondents were more likely to recommend the KIND bars

compared to generic bars at a significance level of $p < .001$ (Figure 4.3). The presence or lack of claims, however, did not make a significant impact on one's likelihood of recommendation.

DISCUSSION

The purpose of this study was to get a more in-depth understanding of how different people respond to health claims on product packaging. The goal was to learn more about consumer perceptions as they relate to gender, health awareness, and nutritional information interest. The data demonstrated that there were significant differences in how people within these groups rated the importance of various health attributes and nutritional claims.

The first hypothesis, which was supported, stated that females would be more likely to be influenced by health claims than males. On both the Health Consciousness and Nutrition Information Interest scales, females had a higher mean score. This indicates that females tend to be more health conscious when choosing which food products to purchase. It also indicates that they tend to have more general knowledge related to nutrition. When shown different product attributes, females also rated brand name, nutritional claim, and ingredient level as more important than males. They also tended to favor health claims that promoted a product as being "low calorie", "high in fiber" and "low sugar". These findings can be helpful for food marketers when deciding how to appeal to their target market. If their target customer is moms or women in general, they should focus more on promoting the health benefits that their product can offer. If they are trying to target males, on the other hand, this type of packaging may not be as relevant.

The second hypothesis, which was not supported, stated that participants who scored higher on the Health Consciousness Scale would be less likely to be influenced by health claims. The reasoning behind this hypothesis was that it was believed that these individuals would get their health information elsewhere, as opposed to referring to a product package. Instead, the data demonstrated that people who have high levels of health consciousness are more likely to care about the health claims on food products. In particular, they pay the most attention to brand name, nutritional claim, and ingredient label. Those that scored lowest on the Health Consciousness scale, on the other hand, felt that taste was most important. These findings suggest that food marketers that are trying to appeal to a health conscious consumer should focus on the ingredients and claims listed on their packaging. Since data has demonstrated that millennial customers are becoming increasingly health conscious, this may become important for many food companies in years to come. On the other hand, if a food product contains little to no health benefits, a marketer should focus on promoting the taste of the product. This is because the results demonstrate that this is more important to people who are not as educated about their health.

The final hypothesis, which stated that those who scored higher on the Nutritional Information Interest scale would be more likely to be influenced by health claims, was supported by the data. To reiterate, this scale differed from the previous in that it measured one's interest in nutrition information, as opposed to how knowledgeable they were about health. Similar to the second hypothesis, the people who scored highest on this scale were more likely to rate the importance of nutritional claim and ingredient label as higher than others. The high scorers also tended to value claims such as "low fat", "low calorie" and

"high in fiber". The implications for food marketers are therefore similar to what was stated in the previous paragraph. These marketers have a higher likelihood of selling their products to health conscious individuals if they promote a higher fiber content and a lower calorie and fat content.

The exploratory research findings have very different implications for food marketers. Based on the data that was examined, it appears as though the brand of a nutrition bar is more important to consumers than the actual health claims themselves. It is interesting to note that even when the generic granola bar box featured the exact same claims as the KIND bar box, people still perceived the KIND bars as being healthier. The health claims did also not make a significant difference in terms of purchase likelihood and likelihood of product recommendation. This demonstrates the importance of branding when trying to sell a food product. It appears as though the consumers that took part in this study would prefer to purchase a more recognized brand and cared less about the claims listed. That being said, the findings that are related to which health claims are most effective would be most relevant for companies that have already established a reputable brand name for themselves.

While discussing the implications of the study findings it is also important to point out any relevant limitations. It is possible that the package design experiment findings were impacted by the generic brand that was chosen. The "Great Value" bars are a part of Walmart's line of generic products, and it is possible that some survey takers recognized this fact. Knowing that these bars came from Walmart could have affected the way in which these participants evaluated the product. Those who have a negative predisposition towards Walmart would be more likely to score the product poorly, without even considering the

nutritional claims on the packaging. Additionally, the findings in this study only reflect the opinions of a small sample of college-aged students. This may not be reflective of the population as a whole, especially considering the fact that the Bryant student population tends to primarily come from the same economic and ethnic background. Perhaps the findings would have been different if the survey had been distributed in a different location.

The findings in this study are fairly consistent with previous research, in terms of how one's health knowledge impacts their attitudes towards health claims. However, this study also contributes to the literature that has already been published on this topic. This study specifically targeted college-aged students in the hopes of learning more about how the millennial consumer perceives health claims on product packaging. Beforehand, little research had been done on this particular age demographic. Additionally, newer claims such as "organic", "all-natural/non GMO", and "gluten free" were assessed and found to be significantly more important to health conscious consumers. Building off of this, these consumers also seem to be more interested in ingredient labels than consumers have been in the past. These shifts in interests related to health claims and product attributes are all very important for today's food marketers to consider.

CONCLUSION

The results of this study demonstrated that health claims on food packaging do indeed impact some consumers' perceptions and purchase decisions. These same consumers are also paying a great deal of attention to brand name in determining whether or not a product is perceived as healthy. These results are fairly consistent with existing research but also

contribute to what has been discovered in the past. Future research studies can build upon these findings by placing a larger emphasis on the importance of brand name in the health food sector. This research should specifically focus on newer and trendier food product categories such as gluten free and all-natural non-GMO because of the lack of research done in this area. Additionally, researchers should further analyze how millennial females choose health food products. It appears as though this demographic is most attentive to these health claims, and therefore there could be a large profit potential for companies that are able to effectively understand and target this type of consumer. This topic in general is of increasing importance as food marketers must prepare to face a new era of health conscious shoppers. Learning how to optimize food products in the minds of these consumers will therefore become even more critical for success in years to come.

APPENDICES

Appendix A – Survey Design

Please indicate your level of agreement with the following statements. (5-point Likert scale, strongly agree → strongly disagree)
1. I worry that there are harmful chemicals in my food.
2. I am concerned about the quality of the food I consume.
3. I usually read the ingredients on food labels.
4. I read more health related articles than I did 3 years ago.
5. I am interested in information about my health.
6. I am concerned about my health all the time.

7. How often do you read nutrition labels? (never → all of the time)
8. How interested are you in reading nutrition and health-related information at the grocery store? (not interested → very interested)
9. How often do you read nutrition labels on packaged foods? (not frequently at all → very frequently)

How important are each of the following attributes to you when deciding whether or not to purchase a food product? (Number scale: 1= not important, 5= extremely important)
10. Brand name
11. Nutritional claim
12. Ingredient label
13. Package design
14. Taste
15. Other (please specify)

When purchasing a food product, how important are the following claims? (Number scale: 1 = not important, 5 = extremely important)
16. Low fat
17. Low calorie
18. High in fiber
19. Gluten free
20. Low sugar
21. All natural/non GMO

22. Please take a full 30 seconds to view the product package you are about to be shown.

23. How familiar are you with the brand you were shown? (5 point scale: not familiar → extremely familiar)

24. I believe this product is healthy. (5 point scale: strongly disagree → strongly agree)

25. I would purchase this product in the future. (5 point scale: strongly disagree → strongly agree)

26. I would recommend this product to my friends. (5 point scale: strongly disagree → strongly agree)

27. *(Condition 1: Survey taker saw a product with health claims)*
I would be more likely to buy this product because of its nutritional health claims.
(Condition 2: Survey taker saw a product without health claims)
I would be more likely to purchase this product if it had nutritional health claims.

28. *(Condition 1: Survey taker saw a product with health claims)*
I believe the nutritional health claims made on this package.
(Condition 2: Survey taker saw a product without health claims)
I believe the nutritional health claims on food packages.

29. *(Condition 1: Survey taker saw a product with health claims)*
I **trust** the nutritional health claims made on this package.
(Condition 2: Survey taker saw a product with health claims)
I **trust** the nutritional health claims on food packages.

30. *(Condition 1: Survey taker saw a product with health claims)*
I believe that the nutritional health claims on this package are credible.
(Condition 2: Survey taker saw a product with health claims)
I believe that the nutritional health claims on food packages are credible.

31. *(Condition 1: Survey taker saw a product with health claims)*
I believe that the nutritional health claims on this package are accurate.
(Condition 2: Survey taker saw a product with health claims)
I believe that nutritional health claims on food packages are accurate.

29. *(Condition 1: Survey taker saw a product with health claims)*
I like the nutritional claims made on this package.
(Condition 2: Survey taker saw a product without health claims)
I would like this product more if it had nutritional health claims.

30. *(Condition 1: Survey taker saw a product with health claims)*
The nutritional health claims made on this product are important to me.
(Condition 2: Survey taker saw a product without health claims)
It would be important to me for this product to have nutritional health claims.

31. Please specify your gender.

32. Please specify your ethnicity.

Appendix B – Package Experiment

Figure 1: Condition 1- KIND bar box with health claims

Figure 2: Condition 2- KIND bar box without health claims

Figure 3: Condition 3- Generic bar box with claims

Figure 4: Condition 4- Generic bar box without claims

Appendix C - Results for Hypothesis #1

Figure 1.1

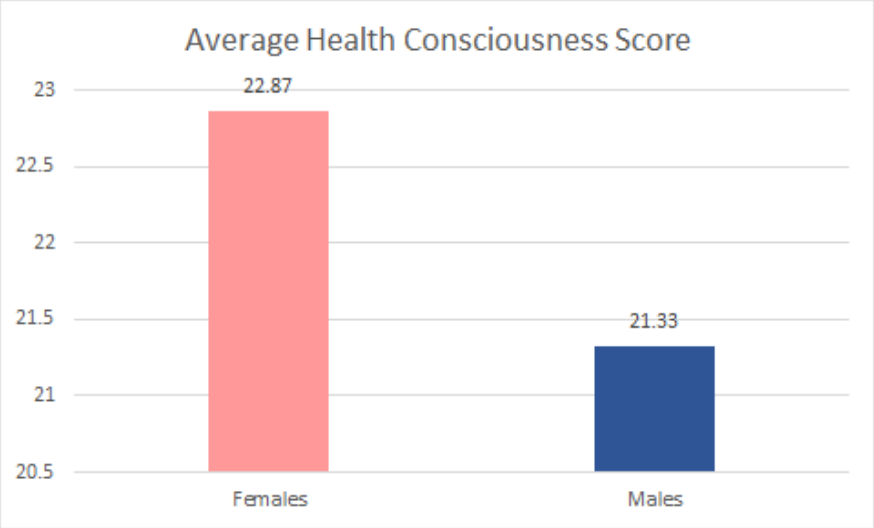


Figure 1.2

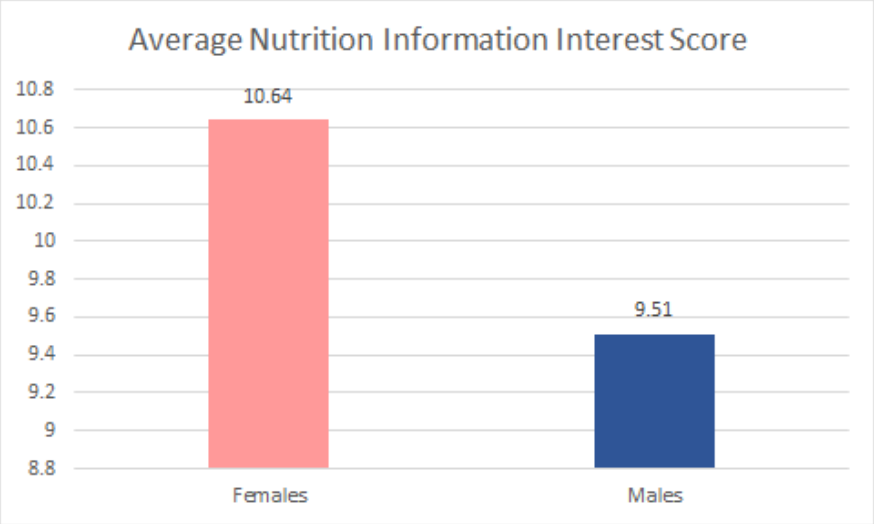


Figure 1.3

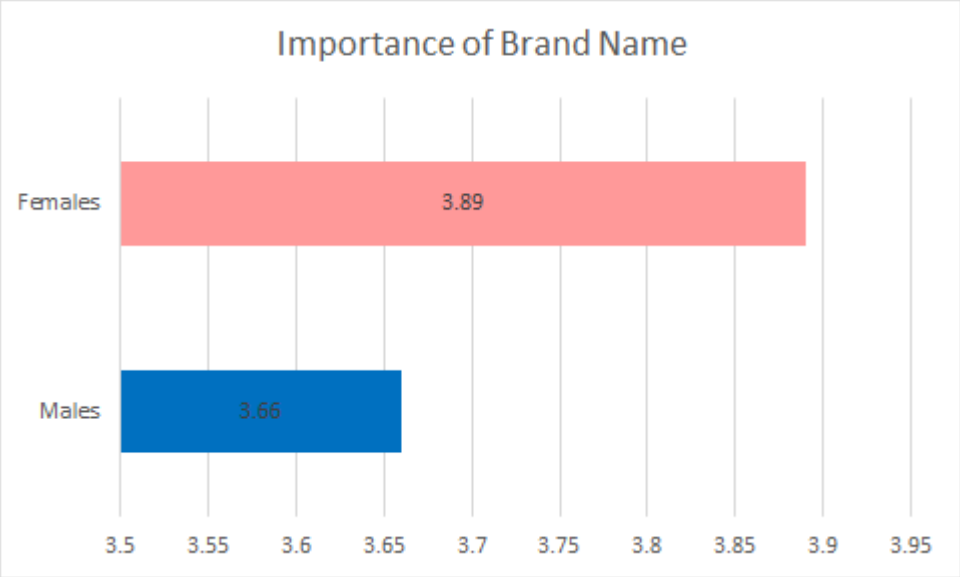


Figure 1.4

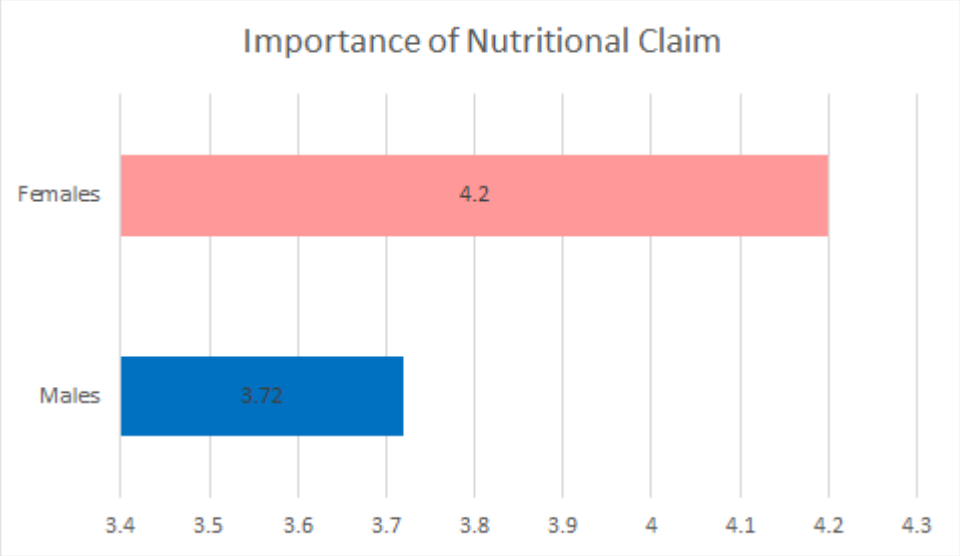
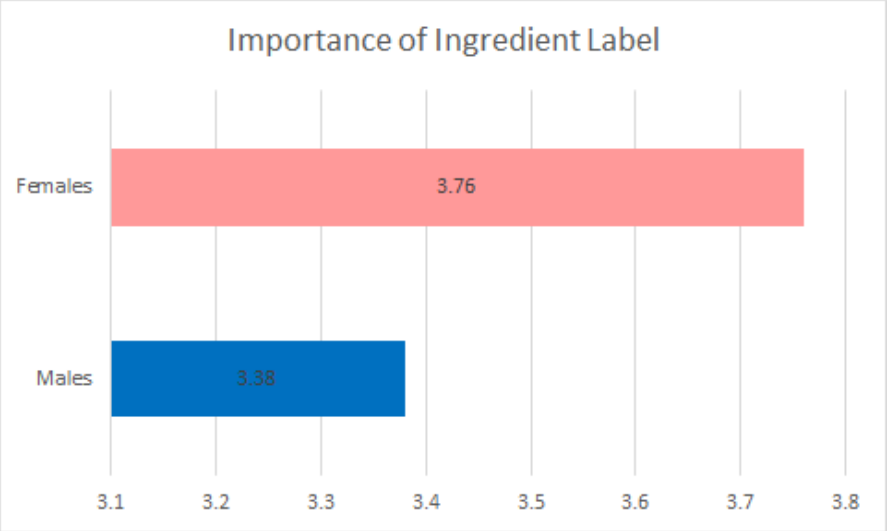


Figure 1.5



Appendix D - Results for Hypothesis #2

Figure 2.1

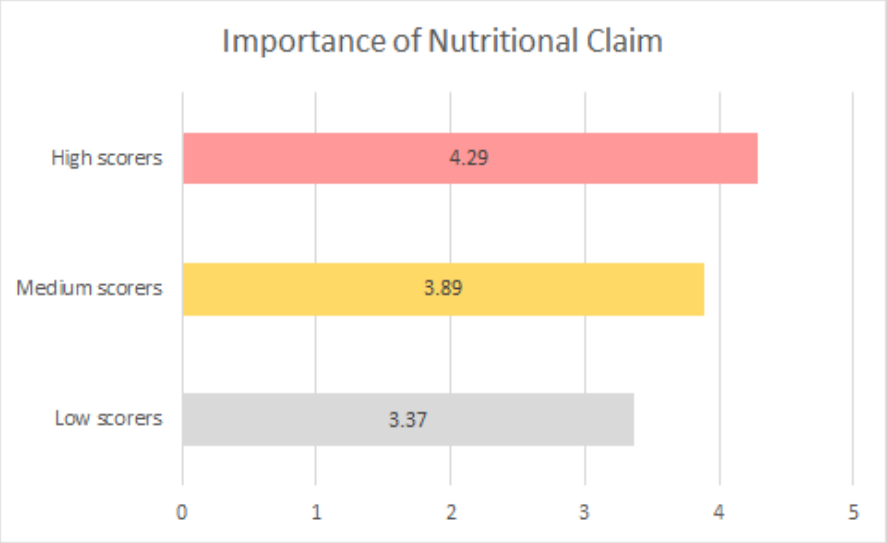


Figure 2.2

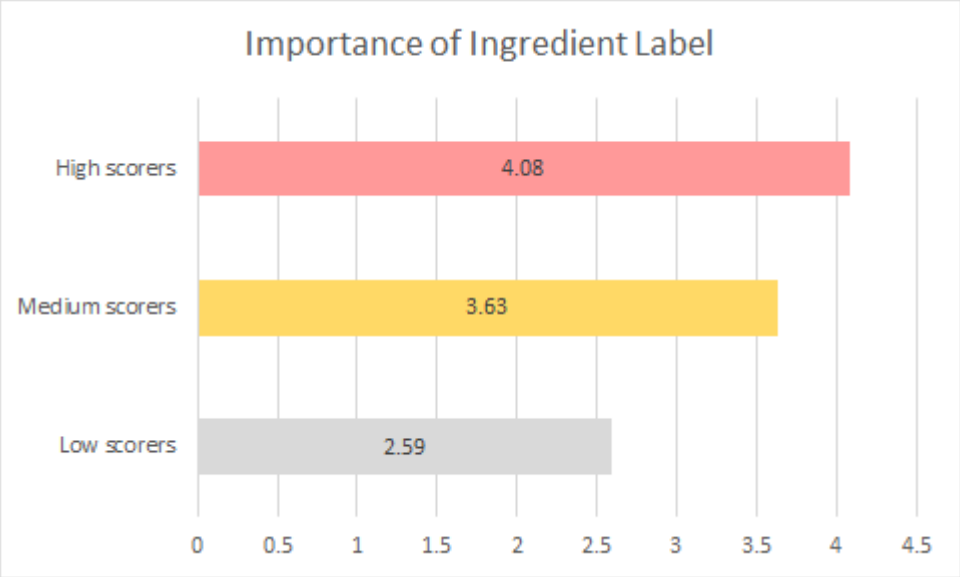
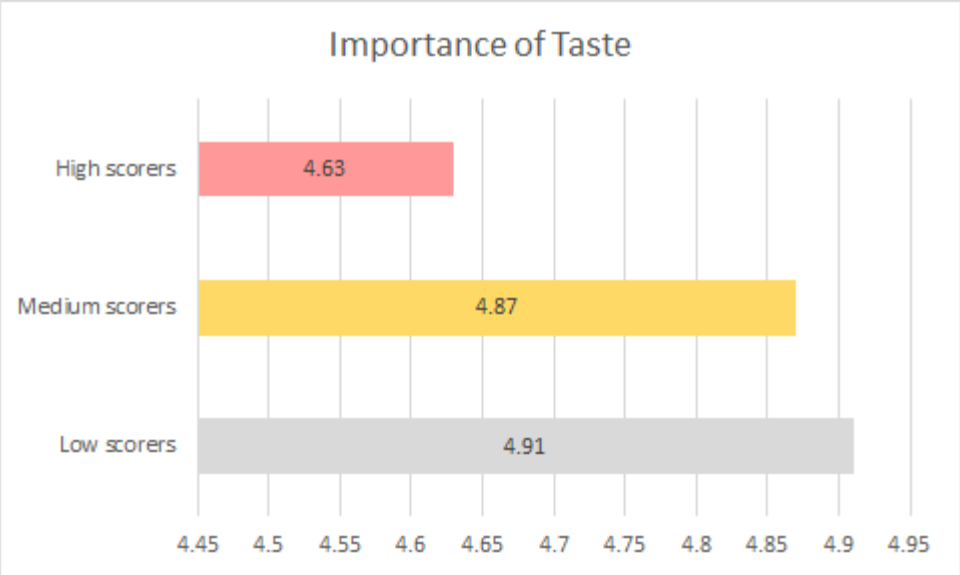


Figure 2.3



Appendix E - Results for Hypothesis #3

Figure 3.1

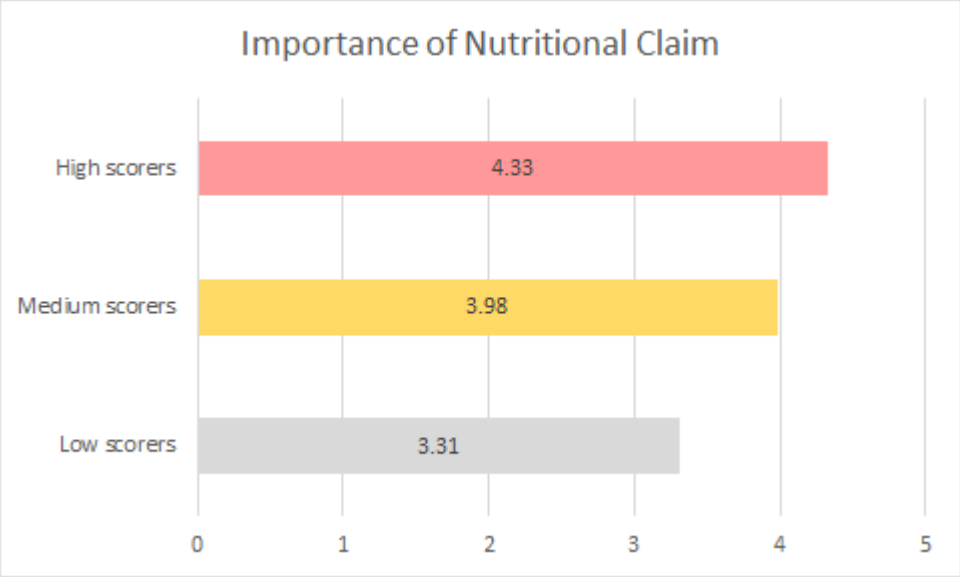
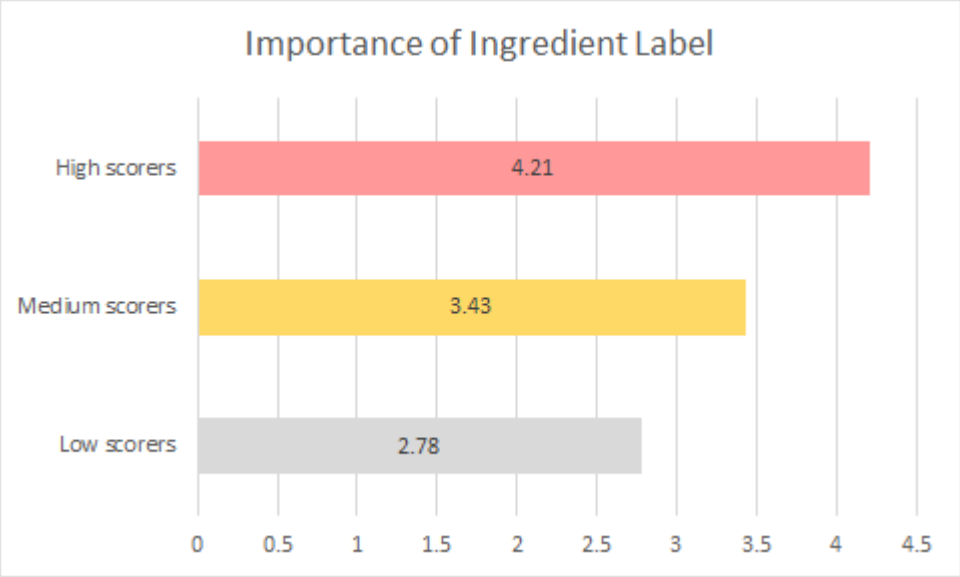


Figure 3.2



Appendix F - Results for Exploratory Research

Figure 4.1

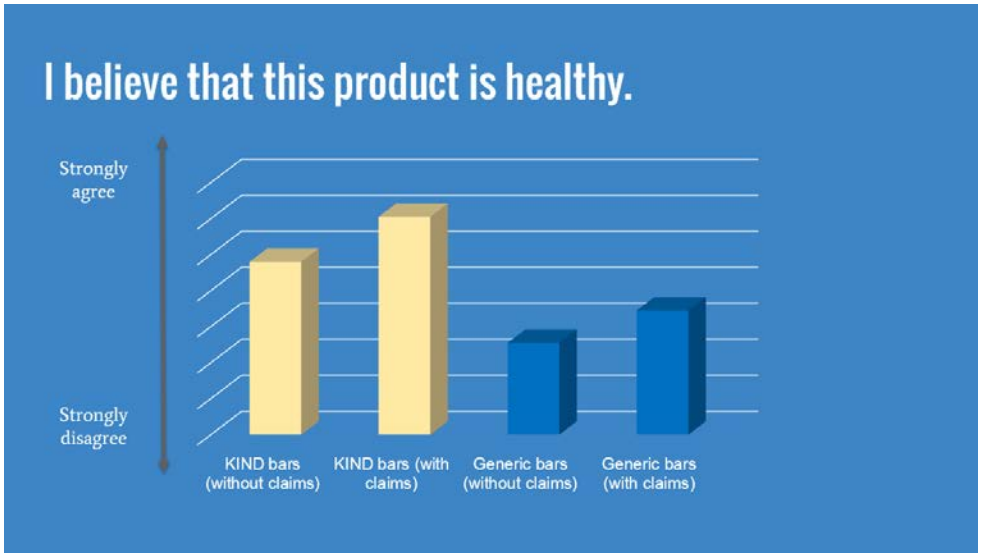


Figure 4.2

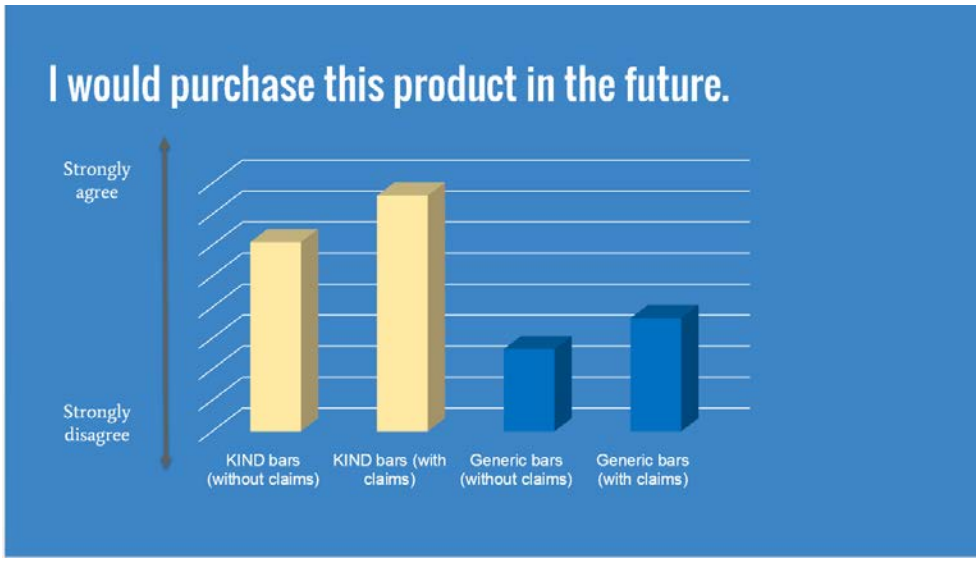


Figure 4.3


I would recommend this product to my friends.
Strongly agree
Strongly disagree
KIND bars (without claims)
KIND bars (with claims)
Generic bars (without claims)
Generic bars (with claims)

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