Healthy Brand Extentions Targeted at Adolescents:
Can products encourage healthier eating habits and still be fun?

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This study aims to understand if launching healthy extensions of brands that have high acceptance among adolescents could contribute to healthier eating habits. We also analyzed the impact of this launch on brand image. We conducted a survey with 121 Brazilian teenagers and used the market leader brand to study the hypothesis. Results showed that brand preference remained very high with the introduction of the new reduced sugar product, although this caused significant effects regarding brand image. These effects vary regarding age and gender of the child, and also whether the adolescent had already engaged in weight control practices.

**Key words:** Brand extension, Brand image, Health, Adolescents
# INDEX

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>2</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>4</td>
</tr>
<tr>
<td>LITERATURE REVIEW AND HYPOTHESIS FORMULATION</td>
<td>5</td>
</tr>
<tr>
<td>1.1 Adolescents’ Relationship with Brands and Food</td>
<td>5</td>
</tr>
<tr>
<td>1.2 Stages of Cognitive Development</td>
<td>6</td>
</tr>
<tr>
<td>1.3 Adolescents’ Relationship with Healthy Eating and Diets</td>
<td>7</td>
</tr>
<tr>
<td>1.4 Brand Extensions</td>
<td>8</td>
</tr>
<tr>
<td>1.5 Adolescents, Self-Image and Dieting</td>
<td>8</td>
</tr>
<tr>
<td>METODOLOGY</td>
<td>10</td>
</tr>
<tr>
<td>1.6 Legal an Ethical Issues</td>
<td>10</td>
</tr>
<tr>
<td>1.7 Research Method</td>
<td>10</td>
</tr>
<tr>
<td>1.8 Pre test</td>
<td>10</td>
</tr>
<tr>
<td>1.9 Sample</td>
<td>10</td>
</tr>
<tr>
<td>1.10 Measurements</td>
<td>11</td>
</tr>
<tr>
<td>1.10.1 Questionnaire 1: Brand Awareness</td>
<td>11</td>
</tr>
<tr>
<td>1.10.2 Questionnaire 1 Results</td>
<td>11</td>
</tr>
<tr>
<td>1.10.3 Brand Preference</td>
<td>12</td>
</tr>
<tr>
<td>1.10.4 Brand Image</td>
<td>13</td>
</tr>
<tr>
<td>RESULTS</td>
<td>14</td>
</tr>
<tr>
<td>1.11 Sample</td>
<td>14</td>
</tr>
<tr>
<td>1.12 Hypothesis testing</td>
<td>14</td>
</tr>
<tr>
<td>CONCLUSIONS</td>
<td>19</td>
</tr>
<tr>
<td>LIMITATIONS AND FUTURE RESEARCH</td>
<td>20</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>20</td>
</tr>
<tr>
<td>APPENDIXES</td>
<td>23</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

Overweight children and adolescents are a growing concern, with 5% to over 25% of 11 to 13 year old children around the globe being overweight or obese, reaching epidemic proportions in industrialized and in low and middle-income countries, especially in urban areas (WHO, 2009, 2005).

Nielsen’s 2011 global survey showed that 48% of consumers are trying to lose weight and one seventh of them are cutting down on fat. The industry is responding to that reducing sugar from consumer packaged goods (Mintel, 2010).

There is a strong preference in the FMCG market to launch innovations through extensions, as opposed to new brands (Taylor, 2004). However, failure of extensions is significantly high (ACNielsen’s 2005). The trend to launch products via extensions can be explained due to the fact that this transfers to the new product qualities that the brand already has in the eyes of the consumer (Boush et al., 1987). Adolescents have strong brand loyalty (Solomon et al., 2006), which makes it even harder for new brands to be launched towards this specific target. For that reason, when directing healthy products to adolescents, it makes sense to do so under a brand that already has a good acceptance with them. Moreover, brand extensions have the advantage of securing trial due to brand awareness (Swaminathan et al., 2001). On the other hand, acceptance of brand extensions by adolescents depends on the fit between parent and extension category (Xin, Liu et al., 2012), making sure the new product fits within the brand’s promise (Kapferer, 2008), and does not damage its image.

Food targeted to children often has high levels of sugar and fat (Story and French, 2004), and it is necessary to offer products that also appeal to the mother, since they often act as gatekeepers to the purchase decision (Robertson, 1979). Studies have shown
that simply stating the benefits of healthy food is not enough to promote its purchase and consumption (Gary et al, 2007). Mothers struggle with the desire to please their children, but still providing healthy options (Gary et al, 2007). Products that have a high appeal to the adolescents while catering to a desire for healthier choices would please both the child and the parent, and availability of healthier options could influence children’s purchase (Rexha et al, 2010). Therefore, being able to successfully take advantage of a high-levered brand and promote consumption of healthier alternatives could be an encouraging possibility to promote better eating habits among children.

This study aims to understand if reduced sugar brand extensions targeted at adolescents are able to have the necessary fit with the fun parent brand in order to generate positive response when it comes to brand preference and brand image, thus resulting in a successful strategy for product launch.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

1.1 Adolescents’ Relationship with Brands and Food

Brand loyalty is formed and maintained in the adolescent years and has a positive relation with age (Moore, Moschies and Stanley, 1984). Flavell (1970) complements Piaget’s (1972) theory of cognition (which claims that a person’s cognition is formed during adolescence) by saying that changes that happen in this time are not merely biological, this being a point in which an individual’s cognitive structure changes, resulting in the development of brand preference (e.g. Guest, 1944; Fauman, 1966). This strong loyalty creates an entry barrier for other brands (Solomon et al., 2006). Hence, the advantage of brands with high awareness is even greater when it comes to targeting adolescents.
When it comes to taste, adolescents have a very strong and inflexible view of what is considered “good” or “bad”, the former being often related to unhealthy food and the later to healthy options (Clifford et al., 2007). Moreover, there is a strong preference for things that “look good” (Clifford et al., 2007). Having foods that are already have the appeal (color, consistency, packaging, logo, smell, texture) that adolescents appreciate, could overcome this aversion to the looks and taste of food that is seen as healthy. Familiarity also plays an important hole, since preference increases when consumers are familiar and experienced with a certain object (Bettman et al., 1998). According to Clifford et al. (2007), when it comes to health concerns, adolescents see calorie dense foods as “bad for you”, and many define healthy dieting by the exclusion of these foods. Although they often opt for such foods, they have a sense of guilt in doing so, and report healthy eating as an intention that is hard to follow due to their cravings. Moreover, adolescents tend to see themselves as helpless when it comes to eating healthy, thinking they need aid from parents in order to do so. This affects their self-image as they see themselves as unable to take charge of a healthier diet. This leads to our first hypothesis:

**H1: When it comes to familiar brands, adolescents will prefer the reduced sugar version of the breakfast cereal to the regular version.**

### 1.2 Stages of Cognitive Development

Teenagers have already been through the analytical stage of consumer socialization, which takes place between 7 and 11 years old. In this stage, they learn how to analyze products and brands in more than one dimension, being able to take into account multiple features. The decision making process becomes more complex, with the ability to develop cause and effect relationships. From 11 to 16 years old, children
develop those characteristics even further, in the reflexive stage, in which more detailed
consideration of a product’s performance attributes are taken (John, 1999). This leads to
our second hypothesis:

**H2: Low fat/sugar products will be more appealing to older children.**

### 1.3 Adolescents’ Relationship with Healthy Eating and Diets

Adolescents struggle with their body image, having an ideal image of being thin
and even ostracizing the ones who do not fit into this profile. This is a concern common
to both genders; however, it is stronger of teenage girls (Clifford et al., 2007).

Adolescents have, typically, a lack of urgency when it comes to their health
(Neumark-Sztainer et al., 1999), and they point overweight as a reason to start eating
more healthily, since they value more the short-term benefit of being thin than the long
term one of being healthy (Clifford et al., 2007).

Researches indicate that adolescents consume a significant amount of light
products, and many of them are or have been in some sort of diet. A study conducted by
the University of Minnesota showed that, among the adolescents studied, half of the
females and one fourth of the males claimed to be in some sort of diet in the previous
year (Neumark-Sztainer et al., 1999). Moreover, research shows that women consume
more light and low sugar products, and they do so more frequently (Flaczyk et al.,
2006).

According to the Gender Intensification Theory (e.g. Hill and Lynch, 1982;
Archer, 1989), after puberty, the physical differences that are highlighted between boys
and girls trigger a pressure on adolescents to depict higher gender-specific behavior. As
adolescents mature, girls show an increasing concern with personal attractiveness (e.g.
Elliot, 1988; Gavin and Furmin, 1989). This persist until adult life, when women are
more dissatisfied and more concerned about their physical appearance than men (Frederick et al., 2006), showing more anxiety related to feelings of attractiveness and satisfaction with their body (Kamps and Bermam, 2011). This leads to the next hypothesis:

**H3: Girls will be more receptive than boys when it comes to healthier versions of known products.**

**H3.1: The gender gap increases with age.**

1.4 Brand Extensions

An easier and cheaper way of launching new products into the market is through brand extensions, since this saves the need to create awareness from scratch. It is also a safe option since failures in brand extensions are usually forgotten with little or no harm to the parent brand (Kapferer, 2008). Extensions failure is usually due to a lack of understanding of the parent brand, and what it stands for, creating an over-stretch (Haig, 2003).

Taking into account that healthy brand extensions of fun parent brands keep the fun appeal in their marketing and communication campaigns, the next hypothesis is:

**H4: Launching a healthy(er) version of a product from a certain brand will not damage its brand image.**

1.5 Adolescents, Self-Image and Dieting

In modern society, thinness is constantly emphasized, and this results in children being more and more concerned about body image at a young age (Dennison and Shepherd, 1995; Fox et al., 1994). Disordered eating behaviors such as extreme dieting, binge eating and vomiting are reported even for non-overweight adolescents (Neumark-Sztainer et al., 1998). The strongest predictor of disorder eating behavior is body image
(Neumark-Sztainer, Butler and Palti, 1995), which plays an important role in adolescence (WHO, 2005). Many researches have tried to explain this link and the best explanation that can be drawn from available data is based upon sociocultural factors (Heinberg, Wood and Thompson, 1996), since, with increased availability of food, there has been a shift in the beauty ideal from the time in which fatness was a sign of prosperity (Brown and Bentley-Condit, 1998) to nowadays, when being thin is the new ideal body status (Popkin et al., 1993). Adolescents are especially vulnerable to the influence of peers, mass media, and social and cultural norms (Johnston and Haddad, 1996), and it is known that unnecessary or frequent dieting are risk factors for eating disorders (French, Story and Perry, 1995). For that reason, it is important to know if the launch and promotion of reduced sugar or reduced fat products might encourage extreme dieting behavior. This leads to the fifth hypothesis:

**H5: Preference for reduced sugar products will be higher for adolescents who adopt weight control practices**

**H5.1: Preference for reduced sugar products is more strongly associated with adoption of unhealthy weight control practices than with healthy ones**

If there is an association between unhealthy diet practices and the pursuit of reduced sugar products, regulations to protect adolescents and discourage unnecessary dieting would be necessary.
METODOLOGY

1.6 Legal an Ethical Issues

In order to respect ethical requirements, the guidelines from UNICEF (2002) were used. It was required permission from parents and from the schools. Confidentiality was guaranteed and the academic purpose of the study was explained to parents and adolescents. We explained to adolescents that there were no right or wrong answers and that they could decide to participate or not despite of parent’s authorization.

1.7 Research Method

This study aims to find numerical evidence for the proposed hypothesis, measuring brand image and brand preference. For that reason, quantitative research (questionnaires) was used. Qualitative research should be used in further studies, if the goal is to understand the reason for certain behavior (Malhotra et al., 2007). The questionnaires were applied in two private schools in Brazil, one in the city of Contagem and the other in the city of Vespasiano. The study was conducted in two steps so each child answered two questionnaires.

1.8 Pre test

A pre test with 8 children was done, in order to see if there were any problems in understanding the questions. There were no difficulties, so we proceeded to apply the questionnaires to the sample.

1.9 Sample

Our sample was a group of children between 11-14 years old. These children are already in the reflective stage of cognitive development (John, 1999), being apt to understand the advantages and disadvantages of products, making weighed choices based on what they value the most.
A total of 121 parent’s authorizations were received, so 121 questionnaires were applied to the children, 61 to the experimental group and 30 to the control group. Regarding the parent’s questionnaires (see appendix I), 120 were answered.

1.10 Measurements

This first questionnaire to children had the aim to measure brand awareness (recall and recognition). The second questionnaire accessed brand preference and brand image. We also used variables related to the adolescent’s concern with health and healthy eating (see appendixes III and IV). We also included a questionnaire to parents, to understand better the sample (see appendix I). First, they were asked about education level, in order to access social class. Then they were asked which breakfast cereal their children often consumed, to evaluate the frequency of consumption and relate to the awareness levels. The last question evaluated how often they talked to their children about healthy eating (McLeod, 2008) on a 5-point Likert scale, in order to see if the children were coming from households that valued healthy habits.

1.10.1 Questionnaire 1: Brand Awareness

In order to know which brand to be used on questionnaire 2, the first questionnaire aimed at accessing which were the “known” and “unknown” brands. First, adolescents were asked to write all brands of cereal that they could think of, in order to test recall. Further, they were asked to mark which cereals they knew from a list of nine options, to test recognition. Pictures were provided at this stage, since often brand awareness cannot be separated from its symbols and imagery (Aaker, 1996).

1.10.2 Questionnaire 1 Results
A total number of 121 questionnaires were applied, to children between 11 and 14 years of age. The brands Chocapic and Zadimel had the lowest scores in brand awareness (both recall and recognition) Chocapic presented 0% recall and 4.9% recognition, whereas Zadimel had 0% recall and 0% recognition. The brand that had the highest awareness levels was Sucrilhos, with recall of 90.2% and recognition of 100%. Thus being the brand used to test the hypothesis.

In order to test preference and brand image for the reduced sugar version of the known brand, a package for the reduced sugar version of Sucrilhos was created. It was inspired by the packaging of the brand Frosties\(^1\) Reduced Sugar, which is already commercialized in some countries such as the UK and Portugal (see Figure 1) The reduced sugar product used is not real, but a simulation of a packaging created in order to conduct this research (see appendix III; Q1, Q2).

1.10.3 Brand Preference

Brand preference, in this case, was considered the extension to which customers prefer a certain brand to other brands of breakfast cereal. In order to do so, adolescents were asked to rate their preference for four different cereal brands, ordering them from most to least preferred brand, being 1 the most preferred brand and 4 the least preferred one.

The experimental group was presented with four cereal options, one of them was Sucrilhos Reduced Sugar and the other three were regular versions of other cereals (Chocapic, Zadimel and Cornflakes). The control group had the same options, except that they were presented with the regular version of Sucrilhos, instead of the Reduced

\(^1\) Frosties is the name of Sucrilhos in countries such as The United States, United Kingdom, Portugal and France
Sugar option, as can be seen in the questionnaires for both groups (appendix II and III). To see which brands were the most and the least preferred, we computed preference means for the brands presented individually for each child. To compare the preference for the regular or the reduced sugar version we compared the mean for the control versus the experimental group as a whole and per subgroup, according to each hypothesis (age, gender, weight control measures).

1.10.4 Brand Image

Brand image can be defined as a consumer’s perception of a brand and can be measured by the associations made in consumer’s minds (Chandon, 2004). In order to measure the strength of attributes regarding a certain brand, children were asked to answer four questions using a 5-point Likert scale (1 being strongly disagree and 5 being strongly agree), saying how much they agreed with certain statements regarding the brand (McLeod, 2008). The experimental groups were asked to answer those questions about the line composed by Sucrilhos Reduced Sugar and regular Sucrilhos. The control group was presented only with the regular version. The purpose was to access brand image for the regular version of the brand, and then compare with brand image of the line (regular version plus reduced sugar version). By doing so, it was possible to see whether or not the group of students who were exposed to healthier versions of the brand would rate it lower, that is, if the launch of the Reduced Sugar version would damage brand image.
RESULTS

1.11 Sample

The questionnaires of the parents were analyzed in order to understand better the sample. 120 valid questionnaires were received from parents. Most parents had an education level between 9\textsuperscript{th} and 12\textsuperscript{th} year (26\% and 34\%, respectively), although there is a high percentage of parents (22\%) with a degree of some sort. When asked which brand of breakfast cereal their children usually consumed, Sucrilhos was the most mentioned brand (64\%), followed by Nescau (24\%), Cornflakes (6\%) and finally, Nesquick (4\%). This corroborated the results of the brand awareness questionnaire from children. Since Sucrilhos was the most consumed brand, it makes sense that it had high awareness. Finally, when asked how frequently parents talked to their children about health, most of the parents indicated to do it either “Frequently” (70\%) or “Very Frequently” (17\%), which may indicate that this is a common subject on the respondents homes or that parents may have felt compelled to answer positively due to a social desirability bias (Podsakoff et al., 2003).

Our children sample was composed of 121 children, 54\% girls and 46\% boys. In terms of gender distribution in the control and experimental groups, it was homogeneous, as proved by a Chi-Square test (p=.239).

1.12 Hypothesis testing

In order to test the hypothesis presented, the two groups (experimental and control) were divided into 4 subgroups. The experimental group was divided into subgroup 1 (composed of younger children) and subgroup 2 (composed of older children). The control group was divided into subgroup 3 (composed of younger children) and subgroup 4 (composed of older children).
**Hypothesis H1** claimed that adolescents would prefer the reduced sugar version of Sucrilhos to its regular version. To test that, an independent sample T-Test was conducted, comparing the preference means for the experimental group (mean = 1.31) versus the control group (mean = 1.32). A p value of .816 was found, which means that are no statistical differences for mean preference of the reduced sugar versus the regular version, indicating that **H1 should be rejected**.

We also divided the preference ratings into high (when the brand was placed in the first position) versus medium-low (when the brand was placed in positions 2, 3 or 4), and conducted a Chi Square test, (p=.871), which confirmed the results.

**The second hypothesis H2** predicted that older children would be more receptive of the reduced sugar brand. In order to test that, mean preference for all the subgroups was calculated. Subgroup 1 had a mean preference for Sucrilhos of 1.23, Subgroup 2 had a mean of 1.40, Subgroup 3 had a 1.40 mean preference and Subgroup 4 mean was 1.23. In the case of the older group, the means are contrary to our expectations, with children preferring the normal version to the reduced sugar version.

We analyzed these differences in the same way as we did for H1. Our results indicate the means difference to be significant for younger children (T-Test: p=.031, $\chi^2$: p=.334) at a 5% significance level, and for older children (T-Test: p=.091, $\chi^2$: p=.222) at a 10% significance level. Therefore, **H2 is rejected** since it is younger children who prefer the reduced sugar version. It is important to highlight that the T-Test takes into account all the preference options (first, second, third and fourth position), whereas the Chi-Square only compares high preference (first position) versus medium-low (second, third and fourth positions together), and we can see that the Chi-Square did not accuse significant change in preference.
**Hypothesis H3** predicted that girls would be more receptive of the reduced sugar brand than boys. Table 1 presents the means obtained for each gender, as well as the p values obtained for the T-Tests and Chi-Square tests conducted. As we can see, for both genders the mean preference for the reduced sugar version is lower than the normal version, but since these differences are non-significant, we can conclude that there is no effect for both genders, and, therefore, we can reject H3.

<table>
<thead>
<tr>
<th></th>
<th>Mean Experimental</th>
<th>Mean Control</th>
<th>T-Test</th>
<th>how many rated high preference control</th>
<th>how many rated high preference experimental</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>1.36</td>
<td>1.38</td>
<td>p=.764</td>
<td>(21) 72%</td>
<td>26 (72%)</td>
<td>p=.986</td>
</tr>
<tr>
<td>Males</td>
<td>1.24</td>
<td>1.26</td>
<td>p=.748</td>
<td>(25) 81%</td>
<td>20 (80%)</td>
<td>p=.952</td>
</tr>
</tbody>
</table>

Table 1: Comparison between experimental and control preference levels for each gender

For **hypothesis H4**, in order to test the fit between the reduced sugar version with the brand’s image, students were asked to rate four statements about the brand. The means for each variable rating were compared for the experimental group (in which the entire line, reduced sugar and regular versions were presented) and for the control group (in which just the regular version was presented). In order to do so, a series of independent T-Tests was conducted. The results are summarized in Table 2 and indicate that there is a significant difference in the ratings given for the brand in the experimental group and in the control group for all of the attributes tested. That means that a reduced sugar version affects the brand image of Sucrilhos, so **H4 is rejected**.

<table>
<thead>
<tr>
<th>Affirmation</th>
<th>Mean Experimental</th>
<th>Mean Control</th>
<th>p-value</th>
<th>Accept H4?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cereals are fun</td>
<td>4.90</td>
<td>4.98</td>
<td>.000</td>
<td>No</td>
</tr>
<tr>
<td>The cereals are tasty</td>
<td>4.90</td>
<td>4.98</td>
<td>.000</td>
<td>No</td>
</tr>
<tr>
<td>I like it</td>
<td>4.90</td>
<td>4.98</td>
<td>.000</td>
<td>No</td>
</tr>
<tr>
<td>I would buy it</td>
<td>4.90</td>
<td>4.97</td>
<td>.004</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 2: T-Test of brand image between control and experimental groups

The test was then repeated, taking into account the impact the reduced sugar version would have on brand image regarding age and gender differences. Tables 4 and 5 summarize the results. It is possible to see that both girls and boys see the brand
image affected by the launch of a reduced sugar product. Purchase intention, however, was not altered for the girls. Regarding age, the launch has no impact for younger children at all, but has a strong impact on older children in all attributes tested.

<table>
<thead>
<tr>
<th>Affirmation</th>
<th>Females</th>
<th></th>
<th>Males</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Experimental</td>
<td>Mean Control</td>
<td>p-value</td>
<td>Mean Experimental</td>
</tr>
<tr>
<td>The cereals are fun</td>
<td>4.89</td>
<td>4.97</td>
<td>p=.019</td>
<td>4.92</td>
</tr>
<tr>
<td>The cereals are tasty</td>
<td>4.89</td>
<td>4.97</td>
<td>p=.019</td>
<td>4.92</td>
</tr>
<tr>
<td>I like it</td>
<td>4.89</td>
<td>4.97</td>
<td>p=.019</td>
<td>4.92</td>
</tr>
<tr>
<td>I would buy it</td>
<td>4.89</td>
<td>4.93</td>
<td>p=.247</td>
<td>4.92</td>
</tr>
</tbody>
</table>

Table 3- T-Test between experimental and control brand image attributes according to gender

<table>
<thead>
<tr>
<th>Affirmation</th>
<th>Younger</th>
<th></th>
<th>Older</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Experimental</td>
<td>Mean Control</td>
<td>p-value</td>
<td>Mean Experimental</td>
</tr>
<tr>
<td>The cereals are fun</td>
<td>4.94</td>
<td>4.97</td>
<td>p=.226</td>
<td>4.87</td>
</tr>
<tr>
<td>The cereals are tasty</td>
<td>4.94</td>
<td>4.97</td>
<td>p=.226</td>
<td>4.87</td>
</tr>
<tr>
<td>I like it</td>
<td>4.94</td>
<td>4.97</td>
<td>p=.226</td>
<td>4.87</td>
</tr>
<tr>
<td>I would buy it</td>
<td>4.94</td>
<td>4.93</td>
<td>p=.947</td>
<td>4.87</td>
</tr>
</tbody>
</table>

Table 4 T-Test between experimental and control brand image attributes according to age

**Hypothesis H5** predicted that children that already adopt some sort of weight control measure would be more inclined to have a higher preference for the reduced sugar version. Only 24% of our sample confirmed to have adopted some of these practices in the past. Weight control practices considered were: *dieting* (8.3%), *eating less sugar in order to lose weight* (22.3%), *skipping meals in order to lose weight* (0%), and *others* (19%).

In order to test this Hypothesis, the sample was divided into children who had adopted weight control measures and children who had not. Within both groups we conducted T-Tests and Chi-Square tests between the control and the experimental groups. Results suggest that there are no significant differences on all groups (Table 5), and, therefore, **H5 is rejected.**
We also tested if brand image varied according to adoption of weight control practices. In order to do that, an Independent Variable T-Test was conducted, comparing brand attributes rating for experimental versus control groups, for children who adopted weight control measures and for children who did not adopt them (Table 6). Results suggest that, for children who adopt weight control measures, the reduced sugar version diminishes the “fun” aspect of the brand. However, it does not affect other attributes studied. Among the group who did not adopt weight control measures the impact on brand image is stronger, with the reduced sugar version significantly impacting all attributes studied.

### Table 5: Results for preference between children who have and have not adopted weight control measure

<table>
<thead>
<tr>
<th>Adoption of weight control measures</th>
<th>Mean Experimental</th>
<th>Mean Control</th>
<th>T-Test</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have adopted weight control measures</td>
<td>1.36</td>
<td>1.29</td>
<td>p=.830</td>
<td>p=.466</td>
</tr>
<tr>
<td>Did not adopt weight control measures</td>
<td>1.28</td>
<td>1.32</td>
<td>p=.510</td>
<td>p=.872</td>
</tr>
</tbody>
</table>

Table 6: T-Test between Experimental and Control Brand Image Attributes according to adoption of weight control measures

<table>
<thead>
<tr>
<th>Affirmation</th>
<th>Adoption of weight control measures</th>
<th>No adoption of weight control measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Experimental</td>
<td>Mean Control</td>
</tr>
<tr>
<td>The cereals are fun</td>
<td>4.86</td>
<td>5.00</td>
</tr>
<tr>
<td>The cereals are tasty</td>
<td>4.86</td>
<td>4.86</td>
</tr>
<tr>
<td>I like it</td>
<td>4.86</td>
<td>4.86</td>
</tr>
<tr>
<td>I would buy it</td>
<td>4.86</td>
<td>4.86</td>
</tr>
</tbody>
</table>

Hypothesis **H5.1 could not be tested** because none of the adolescents claimed to have taken unhealthy measures in order to lose weight (only healthy measures such as exercise and eating fewer sweets were reported). This could be due to the fact that, even though anonymity was guaranteed, unhealthy eating habits are associated with eating disorders, which are a sensitive issue. Therefore, such questions are subject to omission by interviewees (Brener et al, 2003), due to its sensitive nature.
CONCLUSIONS

The findings of this study revealed that the reduced sugar version had a very high acceptance, as high as the regular version, among adolescents from 11 to 14 years old, with disregard of gender. When it comes to age, older children had high preference for both versions, despite having a higher mean preference for the regular version. Younger children, however, had a higher mean preference for the reduced sugar version, still having high preference for both versions. A reflection of this age differences can be seen when analyzing brand image. For older children, the launch of the reduced sugar version had an impact on brand image, reducing the positive responses the brand elicits. To younger children, however, there was no impact on brand image due to the launch of the reduced sugar version. This suggests that the product could be more successful if targeted to younger adolescents.

It was also possible to see that the reduced sugar version did not have a higher preference among children who usually adopt weight control measures, leading to the conclusion that launching and marketing such products to this target would not take advantage of children who are more concerned with weight control nor particularly encourage such concerns. Due to its universal acceptance (even when preference and image were affected, they still remained very high) to different ages, genders and behaviors (concerned and not concerned with weight and/or health), making these products available would appeal to a broad audience and could benefit a lot of adolescents.

This possibility should, therefore, be considered, since it can encourage healthier eating, by making products like this available while taking advantage of a high acceptance of the brand by this target. However, it is important to see if the parent brand
is strong enough, as it is the case of Sucrilhos, to be able to sustain high preference and positive brand image even with the impacts that the launch of a reduced sugar version can bring.

**LIMITATIONS AND FUTURE RESEARCH**

Since eating disorders are a sensitive issue, it is possible that it was not accurately reported in the questionnaires (Rosen & Poplawski, 1987). For this reason, we suggest further research to conduct a deeper analysis, built with help of doctors and psychologists and using more detailed methods that would be able to perceive more accurately which children are prone to developing eating disorders.

Moreover, this study should be conducted with different brands that do not have such strong image, preference and/or awareness in the market, in order to test if the results would vary.

Lastly, we could see that the sample was mostly composed by children whose parents have high levels of education, so a broader social background would be desired in order to have a better representation of the population.

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Websites:
Assunto: Pedido de autorização para educando participar em estudo sobre lançamento de extensões de linha de produtos "saudáveis" (com teor reduzido de açúcares)

Exmo. Sr. Pai ou Responsável,

Sou aluna do Mestrado em Gestão da Universidade Nova de Lisboa e estou fazendo minha tese na área de comportamento do consumidor infantil. Para tal, estou atuando a relação dos adolescentes com extensões de linha saudáveis, caracterizando no meu trabalho variáveis com açúcar reduzido de produtos já conhecidos. O estudo visa por um lado, perceber de que forma as marcas podem introduzir produtos mais saudáveis na sua linha de produtos e, como isso é valorizado pelos adolescentes ou não, pelo contrário, vai promover maiores obsessões com o acesso a alimentos saudáveis (uma tendência recente e preocupante na adolescência). As conclusões da tese são muito importantes, em termos de entender o que é ético e recomendável, bem como se é necessário introduzir alguma legislação que visu a proteção da saúde pública.

Nutricionista que o(a) seu(a) filho(a) respondeu a um pequeno questionário com questões relacionadas a cereais matinais e alimentação saudável, assim como a sua opinião sobre alguns temas de saúde e controle do peso. Tudo isso demorou cerca de 20 minutos, será feito na escola e coordenado com as aulas. Preciso ainda de algumas informações pessoais, a serem dadas no questionário que envio abaixo. Preciso ainda de algumas informações pessoais, a serem dadas no questionário que envio abaixo.

Os dados recolhidos serão analisados para uma análise mais avançada e suas confidencialidade é total, sendo apenas publicados no caso que a análise do estudo demorar mais do que 20 minutos e será feito na escola e coordenado com as aulas. Preciso ainda de algumas informações pessoais, a serem dadas no questionário que envio abaixo.

Os resultados do estudo serão enviados para a escola, podendo ser consultados por todos os encarregados de educação. Desde já agradeço a sua cooperação.

Com os melhores cumprimentos,
______________________________
Clara Nobre Braga dos Santos, Aluna de Mestrado em Gestão Nova School of Business and Economics
Contactos: 91 286 68 73 – claranbs@gmail.com

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Assinatura do encarregado de educação

___________________________________________________________________________

Questionário Responsável

1. Indique as habilitações literárias

□ Sem estudos
□ 4º Ano (Ensino Primário)
□ Bacharelado/Licenciatura
□ Pós Graduação
□ 9º Ano (Ensino Primário)
□ 1º Ano (Ensino Secundário)
□ 12º Ano (Ensino Secundário)

2. Qual o(s) cereal(s) matinas consome(s) o(a) seu(a) filho(a)?

3. Com a criança, você conversa sobre o consumo de açúcar e o(s) cereal(s) matinais?

                  1  2  3  4  5
Muito frequentemente Frequentemente ocasionalmente Raramente Nunca

Obrigado(a) pela sua colaboração!
II. Children’s Questionnaire 1: Awareness Test

1. List all the names of cereals mentioned above (include any that are not listed): 

2. From the names in the box above, circle those you recognize: 

3. Information Personal 

Name: ___________________________ 

Sexo: ____________________________ 

Questionnaire 1: Cereals 

1. List all the names of cereals mentioned above (include any that are not listed): 

2. From the names in the box above, circle those you recognize: 

3. Information Personal 

Name: ___________________________ 

Sexo: ____________________________ 

Informe suas informações pessoais.

Idade: ____________________________ 

Sexo: ____________________________ 

A sua opinião é importante!
Clara Nobre Braga dos Santos
Aluna do Mestrado na Nova School of Business and Economics

III. Children’s Questionnaire 2: Hypothesis Testing – Experimental Group

Olá!

Estou a fazer um estudo para o meu Mestrado em Gestão e gostava de te fazer algumas perguntas. Algumas relacionadas com cereais matinais e outras com a tua preocupação com saúde e peso. A tua opinião é importante.

Preencha uma página de cada vez e depois de responder a uma pergunta, não volte a ela.

As respostas são confidenciais e o questionário é anônimo.

Preencha uma página de cada vez e depois de responder a uma pergunta, não volte a ela.

A tua opinião é importante.

Clara Nobre

Informações Pessoais

Idade: ___________________________
Sexo: ___________________________

Ao chegar ao supermercado, você vê os cereais abaixo. Alguns você já conhece, outros são produtos novos no mercado.

Dos cereais apresentados abaixo, indique a sua preferência, escrevendo no número 1 (que mais preferiria comprar) ao 4 (que menos preferiria comprar):

1
2
3
4

1 (que eu mais prefiro) ___________________________
2 ___________________________
3 ___________________________
4 ___________________________

1 (que eu menos prefiro) ___________________________
2 ___________________________
3 ___________________________
4 ___________________________

1 (que eu mais gostava) ___________________________
2 ___________________________
3 ___________________________
4 ___________________________

1 (que eu menos gostava) ___________________________
2 ___________________________
3 ___________________________
4 ___________________________

1 (que eu mais gostava) ___________________________
2 ___________________________
3 ___________________________
4 ___________________________

1 (que eu menos gostava) ___________________________
2 ___________________________
3 ___________________________
4 ___________________________
2. Em relação a marca SUÇRILHOS, apresentada abaixo, você a considera:

<table>
<thead>
<tr>
<th>Concordo Muito</th>
<th>Concordo</th>
<th>Não sei</th>
<th>Não Concordo</th>
<th>Nada</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
<td><img src="image5" alt="" /></td>
</tr>
</tbody>
</table>

- São divertidos
- São saborosos
- Gosto
- Comproaria

2. Hábitos Alimentares

1. Você fez algum tipo de dieta no último ano?
   - Sim
   - Não

2. Você pensa em seu peso quando escolhe o que vai comer?
   - Nunca
   - Quase nunca
   - Às vezes
   - Quase sempre
   - Sempre

3. Você pensa na sua saúde quando escolhe o que vai comer?
   - Nunca
   - Quase nunca
   - Às vezes
   - Quase sempre
   - Sempre

4. Já tentou consumir menos doces para perder peso?
   - Sim
   - Não

5. Já saltou refeições com o objetivo de perder peso?
   - Sim
   - Não

6. Já tomou outras medidas para perder peso? Se sim, quais?
   - Sim
   - Não

   Quais: ________________________________________________________________
Clara Nobre Braga dos Santos
Aluna de Mestrado na Nova School of Business and Economics

Olá!

Estou fazendo um estudo para o meu Mestrado em Gestão e gostava de te fazer algumas questões, algumas relacionadas com cereais matinais e outras com sua preocupação com saúde e peso. Apenas preencha o questionário se quiser. As respostas são confidenciais e o questionário é anônimo. Preencha uma página de cada vez, e, depois de responder a uma pergunta, não volte a ela. Não há respostas certas e erradas!

A sua opinião é importante!

Obrigada,

Clara Nobre

Informações Pessoais

Idade: ____________________
Sexo: ____________________

Questionário

1. Ao chegar ao supermercado, você vê os cereais abaixo. Alguns você já conhece, outros são produtos novos no mercado. Dos cereais apresentados abaixo, indique a sua preferência, escrevendo no número 1 (o que mais preferiria comprar) ao 4 (o que menos preferiria comprar):

1 (o que eu mais prefiro) ________________________________
2 ________________________________
3 ________________________________
4 (o que eu menos prefiro) ________________________________
4. Em relação à marca SUCRILHOS, apresentada abaixo, você a considera:

CONCERDO MUITO

CONCERDO

NÃO SEI

NÃO CONCERDO

NÃO CONCERDO

NADA

São divertidos

São Saborosos

Gosto

Comprenda

2. Hábitos Alimentares

1. Você fez algum tipo de dieta no último ano?

Sim

Não

2. Você pensa em seu peso quando escolhe o que vai comer?

Nunca

Quase Nunca

As vezes

Quase sempre

Sempre

3. Você pensa na sua saúde quando escolhe o que vai comer?

Nunca

Quase Nunca

As vezes

Quase sempre

Sempre

4. Já tentou consumir menos doce para perder peso?

Sim

Não

5. Já saltou refeições com o objetivo de perder peso?

Sim

Não

6. Já tomou outras medidas para perda de peso? Se sim, quais?

Sim

Não

Quais: ____________________________________________________________