DOI: 10.5902/19834659 13729

INVOLVEMENT AND CONSUMER PERCEPTION TOWARD REPOSITIONED BRANDS

Received on: 06/05/2014
Approved on: 21/06/2016

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ABSTRACT

This study was designed to identify the relationship between consumers' involvement with a brand, their perception of its repositioning, and their consumption of the brand after repositioning. The object of study, the McDonald's fast food chain, included healthy items on its menu as part of a bid to reposition its brand. Data were collected via online questionnaires, which were answered by 214 individuals. Data were analyzed using econometrics, resulting in the preparation of a simultaneous equation model with two regressions, whose dependent variables were perception and consumption. The results indicated that perception of brand repositioning depended positively on the consumers' attitudes towards a balanced diet and how often they frequent McDonald's, while there was a negative relationship with the consumers' age, sex, education, and how important they felt the nutritional value of foods was. The results suggest that perception is influenced by personal stimuli and emotional involvement with the brand. However, adherence to the brand after repositioning was not found to be influenced by any kind of involvement, but by the consumers' personal stimuli.

Keywords: Involvement, Brand Repositioning, Brand Perception, Food, Econometrics

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1 INTRODUCTION

The analysis of consumer involvement in purchasing decisions or their relationships with products and brands is a recurring theme in the literature (BRODERIK; MUELLER, 1999; CELSI; OLSON, 1998; FUCHS; DIAMANTOPOULOS, 2010) because of how important it is to the study of marketing.

One of the constructs of this involvement addressed in the literature is the stimuli consumers receive not only from the purchasing environment, but also from prior experiences and personal characteristics, which end up influencing their purchasing behavior (SANDHUSEN, 2000; SCHIFFMAN; KANUK, 2000). Other studies have focused on the cognitive relationship, which has to do with consumers' personal preferences, such as their lifestyle (Broderik; Mueller, 1999; Celsi; Olson, 1998; Souza, 2003), and their emotional relationship with the brands on the market (Bennett; Hartel; Mccoll-kennedy, 2005). When it comes to consumer behavior, perceptions of brand positioning have often been found to result from stimuli and involvement (Aaker; Shansby, 1982; FUCHS; DIAMANTOPOULOS, 2010).

As brands are often repositioned to obtain better commercial outcomes or adapt to new market conditions (Porter, 1996; Trout; Rivkin, 1996), it follows that consumer behavior towards brands will also change in response to such repositioning, if they perceive the change in the brand's image.

With this in mind, the main goal of this study is to analyze whether consumers' involvement and personal stimuli influence their perceptions of brand repositioning and to find out whether these factors, together with perception, prompt them to adopt such a change. More specifically, six suppositions are proposed that relate consumers' lifestyle, degree of brand involvement, and personal characteristics with their perception of an altered brand position. The suppositions are described and detailed in the theoretical section.

This research focuses on a chain of fast food restaurants that has responded to consumer perceptions of it being unhealthy by including more nutritious options on their menu (Boje; Carl, 2006). These new items were first included in the last decade and have remained ever since. However, it is not actually clear whether the inclusion of these items has actually changed buying behaviors or consumer perceptions. Academic articles and media stories often report on the harmful health effects of the food on offer at these chains. As such, this article also investigates whether the changes made by McDonald's in a bid to alter consumer perceptions and purchasing habits were actually effective.

Galão, Crescitelli, and Baccaro (2014) have suggested there is a need for more research into the relationship between brand repositioning efforts and consumer perceptions, while Ellickson, Misra, and Nair (2012) have identified a lack of empirical studies about repositioning. This research follows these suggestions, contributing to the literature by relating brand repositioning to changes in consumer perceptions and purchasing habits. It also investigates how consumers' personal characteristics affect their perceptions of brand repositioning and purchasing habits. Finally, it relates perceptions of brand repositioning to purchasing habits.

This is an important subject for marketing, since several food/restaurant businesses seek to modify client perceptions by changing their menus; i.e., they try to reposition their brand by including different services and products. This study will provide managers of these businesses with further information about what leads individuals to perceive (or not perceive) and adhere (or not adhere) to these changes, helping them to define the focus of future marketing campaigns.

The article is divided into an introduction to the research goals, a theoretical section, a section explaining the methodology, a section showing the econometric analysis, a discussion of the results, and some conclusions.

2 LITERATURE REVIEW

In the literature review, we present some of the topics covered in this study as well as the suppositions investigated in this research.

2.1Brand Positioning

The choice of a brand strategy that optimizes results and customer value is a key issue for marketing managers (REGO; OLIVEIRA; LUCE, 2008). Brand building implies making the right brand positioning choices (MILLER, 2014), which includes defining the selling proposition and the brand image (Aaker; Shansby, 1982).

Brand positioning has to do with how a brand's image is presented to customers (Yakimova; Beverland, 2005), often in relation to its competitors (PAHARIA; AVERY; KEINAN, 2014). It indicates to consumers what the brand represents, what it is, and how it should be perceived and evaluated (MONGA; GÜRHAN-CANLI, 2012), directly affecting customer preferences, sales, and revenues (Giraldi; Spinelli; Merlo, 2003). However, the choice of a single brand position is not enough of itself to assure a sustainable competitive edge (Porter, 1996): whenever the competitive environment changes, brands have to be repositioned accordingly (Schiffman; Kanuk, 2000; CHIABI; GONÇALVES, 2010; WANG; SHAVER, 2013).

One repositioning strategy used by many companies is "me too," which essentially involves adopting the same position as the market leader (CARPENT; NAKAMOTO, 1989; Trout; Rivkin, 1996). In contrast, "radical repositioning" means making significant changes to the brand, the product portfolio, store formats, etc. Another strategy is to adopt an indecisive attitude, combining the benefits of a successful position while maintaining the same position. This strategy implies introducing new features, services, or technologies to a business's existing activities (Porter, 1996). Another approach is incrementalism, where a company makes incremental changes in its brand position rather than step changes (Martens, Matthyssens, Vandenbempt, 2012). Table 1 sums up these repositioning strategies.

Table 1 – Brand Repositioning Strategies

Strategy	Concept	References
Me Too	Mimic the positioning of a leading brand	CARPENT; NAKAMOTO, 1989; TROUT; RIVKIN, 1996
Radical Repositioning	Make significant changes	CORSTJENS; DOYLE, 1989
Indecisive Attitude	Introduce new features, services, or technologies to the business's existing activities	PORTER, 1996
Incrementalism	Make incremental changes to the brand's positioning rather than a step change	MARTENS, MATTHYSSENS, VANDENBEMPT, 2012

Another issue is that the positioning a company intends to impart to a brand does not necessarily correspond to the way the brand positioning is perceived by consumers (FRELING; CROSNO; HENARD, 2010). That is why it is important to understand how consumer perceptions are shaped, taking into account the limitations of the human mind, which is averse to confusion, insecure, change-averse, and susceptible to loss of focus (Trout; Rivkin, 1996).

2.2 Involvement

One of the factors that influence consumer responses to brands is their degree of involvement, which results in different levels of loyalty (Bennett; Hartel; Mccoll-Kennedy, 2005; Bowden; Dagger; Elliott, 2009), customer evaluations (PALMER, 2010), and customer satisfaction (Oliver; Rust; Varki, 1997).

Involvement may be related to the product, the message, or the individual that perceives them. In this study, the aim is to analyze product involvement, especially food products, "whose routine acquisition and consumption is normally the object of behaviors consistent with low involvement, while acquisitions of foodstuffs for special occasions like parties or celebrations are marked by high involvement" (Souza, 2003, p. 18). A low-involvement product is one that is acquired without much consideration and does not involve the ego or much money, so that a poor purchasing decision will not have any particularly negative consequences.

Involvement may be cognitive or emotional. Cognitive involvement has to do with the personal relevance of the brand content based on its utilitarian value. Meanwhile, emotional involvement is the personal importance of the brand content based on emotional appeal – i.e., more linked to the brand per se (ANDREWS; DURVASULA; AKHTER, 1990).

According to Broderick and Mueller (1999), cognitive involvement is a primary determinant of consumer behavior, as it is related to different aspects of the consumption process. For Yi, Gong, and Lee (2013), involvement has to do with the environment the consumer is in, as well as their own motivations. According to these authors, this motivation, combined with a specific objective (e.g., satisfying a particular need or desire) may influence the consumer to look for new products or services to meet this need. People's needs and goals are related to their motivations as well as their involvement (Souza, 2003).

Involvement is related to products, perceptions of importance, branding, and advertising (Celsi; Olson, 1998), "where sounds, colors, and aromas are routine parts of their different environments, represented by advertisements, product packaging, radio and television advertisements, billboards, pamphlets, and so forth" (Souza, 2003, p. 16).

As such, as the theory suggests that cognitive involvement leads to differentiated perceptions, it is logical to imagine that:

S1a: An individual's involvement with healthy habits will affect their perception of new items on a fast food chain menu.

S1b: An individual's involvement with healthy habits will affect their consumption of new items on a fast food chain menu.

These suppositions will be tested for each of the items related to an individual's involvement with healthy habits.

2.3 Brand Involvement

When businesses, organizations, products, services, and even people interact with consumers, they do so through brands. A brand may be seen as the use of a term, symbol, sign, or design with words or names that identify a business, organization, product, or service (Aaker; Shansby, 1982; Kotler, 1998). Brands reproduce elements of a business and can therefore be

linked to objective (rational) and subjective (emotional) factors. According to Aaker (1998), an established brand may influence purchasing decisions.

As Kotler (1998) explains, consumers observe clear distinctions between brands when they are looking to buy a different product, even if their brand involvement is low. For instance, even though a chocolate bar is regarded as a low-involvement product, there are countless differences between the brands on the market and one can be easily distinguished from all the others.

The perception of a brand's image may therefore also be linked to emotional involvement with it. As such, it is also proposed that:

S2a: An individual's involvement with a fast food chain will alter their perception of changes to its menu.

S2b: An individual's involvement with a fast food chain will alter their consumption of new items on its menu.

2.4 Personal Stimuli

Alongside cognitive and emotional involvement, physical and personal stimuli will also influence a consumer's perceptions and consumption behavior.

It is logical to assume that individual differences may change the way they perceive a particular brand. This is because perception is the outcome of a process by which stimuli are selected, organized, and interpreted. These stimuli are physical – picked up from the environment – and personal – predispositions due to prior experiences, which cause each person to have a unique world view (Schiffman; Kanuk, 2000). As such, different individuals may have different brand perceptions.

Personal stimuli are ones that are influenced by each individual's personal characteristics, like their age, sex, income, education, and marital status (Sandhusen, 2000).

This study analyzes whether consumers' personal stimuli impact their perceptions of brand positioning. More specifically, it tests whether an individual with a specific set of features will tend to perceive differences in brand positioning more accurately. Further, it ascertains whether such perceptions, like involvement, lead the consumer to adhere to this new brand position.

As such, the following suppositions were formulated for each of the personal characteristics under study:

S3a: An individual's personal characteristics will alter their perception of changes to a fast food chain menu.

S3b: An individual's personal characteristics will alter their consumption of new items on a fast food chain menu.

The next section presents the database and the econometric method used to test the suppositions. The results are then discussed and some conclusions are presented. As a result, the role of involvement in consumers' perceptions of attempts to reposition brands will be examined.

3 METHODOLOGY

The data were gathered online using a non-probability sampling approach called snowball sampling. A questionnaire was created on Google Docs and sent to the authors' contacts, who then passed it on to others (snowball effect). To calculate the minimum sample size necessary, the power of the test (Power = 1 – βprob. error II = 0.95) was defined and weak effect size (f^2 = 0.10) was set above the level recommended by Cohen (1988) and Hair et al. (2009), and 50 predictors were used. With a critical value of t of 1.99, the recommended number of completed questionnaires was 134. In fact, 219 questionnaires were collected, which, after eliminating five that were incomplete, resulted in a sample size of 214.

The target of the study was the McDonald's fast food chain. There were three reasons for this choice. Firstly, it is a strong brand, so it could be assumed that the respondents would be familiar with the brand, its product portfolio, and its previous brand positioning. This is fundamental, since it is impossible to perceive brand repositioning without being familiar with its previous position. Secondly, the chain had made a big brand repositioning effort, moving from an offer of exclusively high-calorie products to a much larger range of healthy options. This is also an important factor, because perceptions can only change if there is a real change in the brand's marketing mix. Finally, McDonald's is not a niche brand, which reduces the likelihood of only some of the respondents being familiar with its previous and new brand positions.

The consumption and altered perception of consumers who were (or were not) involved with health issues were measured.

The questionnaire was modeled on the one used by Alfassi, Pedrinola, Szylit, and L'Abbate (2005). To measure brand involvement, the respondents were asked to indicate how often they ate McDonald's foods (selecting one of five options). To measure consumption and perception, each respondent was given two lists of 30 items (not all of which are on the McDonald's menu), 13 of which had higher nutritional value and had been featured in McDonald's advertising campaigns. Both lists were the same, but for one, the respondents had to mark the items they knew were on the menu, while on the other they had to mark only the items they had consumed. This was used to prepare a perception index and a consumption index, both ranging from 1 to 13, representing the number of healthy alternatives indicated by the respondents.

In order to gather data on the respondents' personal characteristics, they were asked their age, sex, income bracket, marital status, and education level, and were also asked about their lifestyle, such as how long they watched TV, did physical activity, and took to have a meal. They were also asked about how important they felt a balanced diet, the nutritional value of foods, and physical exercise were, using a seven-point Likert scale.

4 RESULTS AND ANALYSES

4.1 Descriptive Analysis

The respondents' average age was 31.36, with a standard deviation of 10.89; 64.49% were female, 65.89% were single, and 30.84% were married. Their household income varied greatly: 12.62% earned between 1 and 3 times the minimum wage (MW), 16.82% earned 4 to 7 times the MW, 30.37% earned 8 to 15 times the MW, 21.96% earned 16 to 30 times the MW, and 18.69% earned more than 31 times the MW. In other words, 40% of the respondents reported household incomes of more than 16 times the minimum wage. As for their education level, 37.85% had university degrees and 38.32% had graduate diplomas or advanced degrees.

The questions designed to build up a picture of the respondents' lifestyle yielded the following data: μ = 1.77 and σ =1.70 for the number of hours per day spent watching TV; μ=3.13 and σ =2.65 for the number of hours per week spent doing physical exercise; and μ=41.64 and σ =19.25 for the number of minutes (on average) spent per meal.

The respondents' brand involvement was ascertained by asking how often they ate McDonald's products. It was found that 2.34% frequented McDonald's once to three times a week, 17.29% once to five times a month, 25.70% six to twelve times a year, 3.38% once to five times a year, and 17.29 less than once a year.

To measure the respondents' consumption and perceptions of the products (familiarity with the menu), they just had to mark the products. Figures 1 and 2 show the histograms of the perception and consumption indices against the number of respondents, respectively.

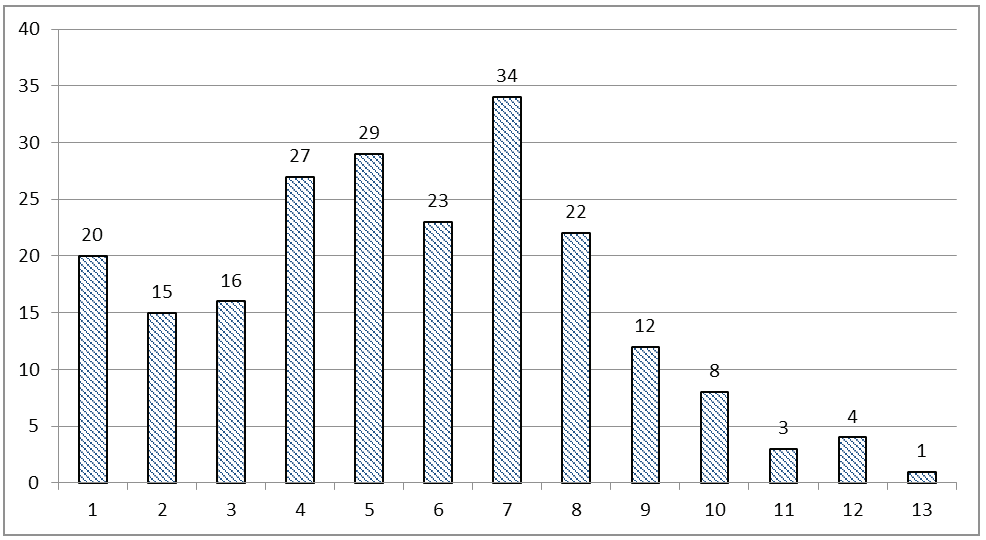

Figure 1. Histogram: perception index vs. number of respondents
Note: μ = 5.50; σ =2.80

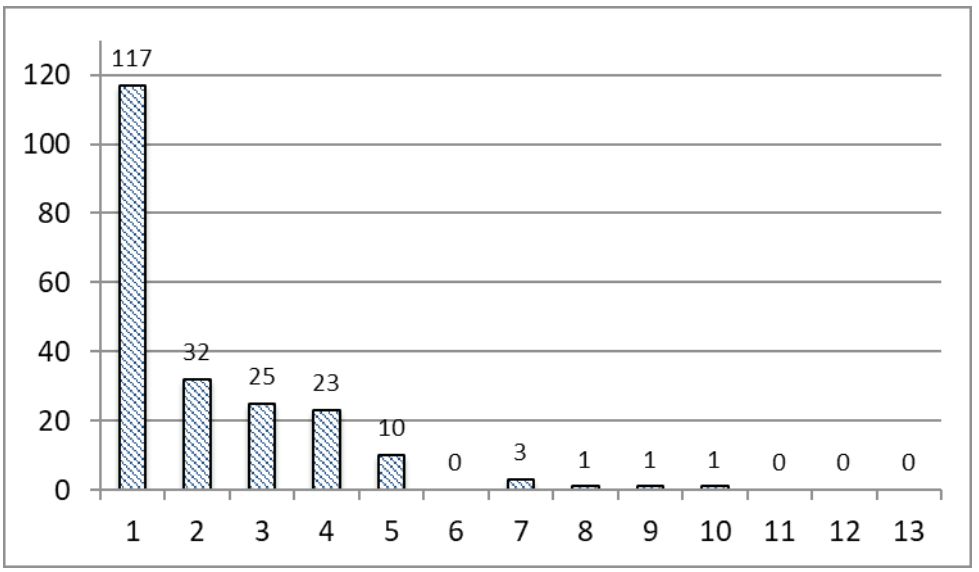

Figure 2. Histogram: consumption index vs. number of respondents
Note: μ = 1.82; σ =1.84

4.2 Econometric Analysis

The data were analyzed using simultaneous equations, since it was necessary to estimate one regression for perception and one for consumption. Both equations had the same independent variables, but consumption depended on perception. The estimates were done using ordinary least squares regression, which is best suited when the dependent variable is metric, as is the case of perception and consumption (ANGRIST; PISCHKE, 2008; HAIR, et al., 2009).

As some of the features (sex, marital status, income, knowledge of McDonald's, and frequency of visits to McDonald's) were categorical or bracketed into ranges, they had to be transformed into dummies. All of them, except for sex, had more than two alternatives. For these items, n-1 dummy variables were created, "n" being the number of alternatives. These variables are described in Table 1.

Table 1- Description of dummy variables

Characteristic	Variable	Description
Sex	Male	Male = 1 Female = 0
Estado civil	Single	Single = 1 Married, Separated/Divorced, Widowed = 0
	Married	Married = 1 Single, Separated/Divorced, Widowed = 0
	Separated/Divorced	Separated/Divorced = 1 Single, Married, Widowed =0
Monthly household income	1 to 3 times the minimum wage	1 to 3 times the minimum wage = 1 4 to 7 times the minimum wage, 8 to 15 times the minimum wage, 16 to 30 times the minimum wage, over 31 times the minimum wage = 0
	4 to 7 times the minimum wage	4 to 7 times the minimum wage = 1 1 to 3 times the minimum wage, 8 to 15 times the minimum wage, 16 to 30 times the minimum wage, over 31 times the minimum wage = 0
	8 to 15 times the minimum wage	8 to 15 times the minimum wage = 1 1 to 3 times the minimum wage, 4 to 7 times the minimum wage, 16 to 30 times the minimum wage, over 31 times the minimum wage = 0
	16 to 30 times the minimum wage	16 to 30 times the minimum wage = 1 1 to 3 times the minimum wage, 4 to 7 times the minimum wage, 8 to 15 times the minimum wage, over 31 times the minimum wage = 0

Education [1]	Less than 9 years at school	Less than 9 years at school = 1 9 to <12 years at school, 12 years at school, university degree (incomplete), university degree, graduate diploma, advanced university degree= 0
	9 to <12 years at school	9 to <12 years at school = 1 Less than 9 years at school, 12 years at school, university degree (incomplete), university degree, graduate diploma, advanced university degree= 0
	12 years at school	12 years at school = 1 Less than 9 years at school, 9 to <12 years at school, university degree (incomplete), university degree, graduate diploma, advanced university degree= 0
	university degree (incomplete)	University degree (incomplete) = 1 Less than 9 years at school, 9 to <12 years at school, 12 years at school, university degree, graduate diploma, advanced university degree= 0
	university degree	University degree = 1 Less than 9 years at school, 9 to <12 years at school, 12 years at school, university degree (incomplete), graduate diploma, advanced university degree= 0
Frequency of consumption of McDonald's	1 to 3 times a week	1 to 3 times a week = 1 1 to 5 times a month, 6 to 12 times a year, 1 to 5 times a year, and less than once a year = 0
	1 to 5 times a month	1 to 5 times a month = 1 1 to 3 times a week, 6 to 12 times a year, 1 to 5 times a year, and less than once a year = 0
	6 to 12 times a year	6 to 12 times a year = 1 1 to 3 times a week, 1 to 5 times a month, 1 to 5 times a year, and less than once a year = 0
	1 to 5 times a year	1 to 5 times a year = 1 1 to 3 times a week, 1 to 5 times a month, 6 to 12 times a year, and less than once a year = 0
[1] Note: No respondent marked the option “9 years at school”.		

In order to be sure that the regressions did not suffer from multicollinearity, the correlations between the other variables were calculated, as shown in Table 2. There was a -0.38 correlation between age and perception, a 0.41 correlation between importance of balanced diet and importance of nutritional value, and a 0.52 correlation between perception and consumption. No significant correlation was found between any of the other variables. As these values were above 0.3, the variance inflation factor was calculated for them after the regression estimation, with any significant values indicating problems of multicollinearity.

Table 2 – Correlation between variables

	a	b	c	d	e	f	g	h	i
a. No. of hours of physical exercise per week	1.00								
b. No. of hours of TV per day	-0.04	1.00							
c. Age	0.06	0.12	1.00						
d. Importance of balanced diet	0.03	0.00	0.04	1.00					
e. Importance of exercise	0.14	0.14	0.04	0.25	1.00				

f. Importance of nutritional value	0.02	0.06	0.10	0.41	0.12	1.00			
g. Minutes per meal	0.13	-0.03	0.08	0.02	-0.02	-0.04	1.00		
h. Perception	-0.02	-0.09	-0.38	0.03	-0.07	-0.23	0.02	1.00	
i. Consumption	-0.04	-0.03	-0.06	0.10	-0.08	-0.08	0.12	0.52	1.00

The following system of simultaneous equations was estimated.

$$\begin{aligned}\text{Perception} = {} & \beta_0 + \beta_1 \text{age} + \beta_2 \text{male} + \beta_3 \text{single} + \beta_4 \text{married} + \frac{\beta_5 \text{Separated}}{\text{Divorced}} \\ & + \beta_6 \text{1to3xMW} + \beta_7 \text{3to7xMW} + \beta_8 \text{7to15xMW} + \beta_9 \text{15to30xMW} \\ & + \beta_{10} \text{less than 9 years} + \beta_{11} \text{9 to 12 years} + \beta_{12} \text{12 years} \\ & + \beta_{13} \text{university degree (incomplete)} + \beta_{14} \text{university degree} \\ & + \beta_{15} \text{minutes per meal} + \beta_{16} \text{hours of exercise per week} \\ & + \beta_{17} \text{hours of TV per day} + \beta_{18} \text{importance of nutritional value} \\ & + \beta_{19} \text{importance of balanced diet} + \beta_{20} \text{importance of exercise} \\ & + \beta_{21} \text{1to3x a week} + \beta_{22} \text{1to5x a month} + \beta_{23} \text{6to12x a year} \\ & + \beta_{24} \text{1to5x a year}\end{aligned}$$

$$\begin{aligned}\text{Consumption} = {} & \beta_{25} + \beta_{26} \text{perception} + \beta_{27} \text{age} + \beta_{28} \text{male} + \beta_{29} \text{single} + \beta_{30} \text{mmmarried} \\ & + \beta_{31} \text{separated or divorced} + \beta_{32} \text{1to3xMW} + \beta_{33} \text{3to7xMW} \\ & + \beta_{34} \text{7to15xMW} + \beta_{35} \text{15to30xMW} + \beta_{36} \text{less than 9 years} \\ & + \beta_{37} \text{9 to 12 years} + \beta_{38} \text{12 years} + \beta_{39} \text{university degree (incomplete)} \\ & + \beta_{40} \text{university degree} + \beta_{41} \text{minutes per meal} \\ & + \beta_{42} \text{hours of exercise (per week)} + \beta_{43} \text{hours of TV (per day} \\ & + \beta_{44} \text{importance of nutritional value} + \beta_{45} \text{importance of balanced diet} \\ & + \beta_{46} \text{importance of exercise} + \beta_{47} \text{1to3x a week} + \beta_{48} \text{1to5x a month} \\ & + \beta_{49} \text{6to12x a year} + \beta_{50} \text{1to5x a year}\end{aligned}$$

Tables 3 and 4 show the results of the regressions for perception and consumption, respectively. Most of the variables were not significant for either equation, so adjustments were made to both regressions to remove the non-significant variables, which resulted in the following system:

$$\begin{aligned}\text{Perception} = {} & \beta_0 + \beta_1 \text{age} + \beta_2 \text{male} + \beta_3 \text{less than 9 years} \\ & + \beta_4 \text{importance of nutritional value} + \beta_5 \text{importance of balanced diet} \\ & + \beta_6 \text{1to3x a week} + \beta_7 \text{1to5x a month} + \beta_8 \text{6to12x a year} + \beta_9 \text{1to5x a year}\end{aligned}$$

$$\begin{aligned}\text{Consumption} = {} & \beta_{10} + \beta_{11} \text{perception} + \beta_{12} \text{age} + \beta_{13} \text{university degree (incomplete)} \\ & + \beta_{14} \text{university degree}\end{aligned}$$

The variables under consideration are the ones whose significance was found to be at least 10%. Curiously, “separated/divorced” was found to be significant in the first estimated system, but in the final model it was no longer significant (t= -1.39, p=0.17).

Table 3 – Result of preliminary regression – Dependent variable: perception

Variable	Coefficient	St. Error	t	Prob.
β_0	10.03	2.96	3.39	0.00***
Age	-0.06	0.02	-2.77	0.01**
Male	-1.64	0.37	-4.49	0.00***
Single	-3.33	2.44	-1.36	0.18
Married	-3.57	2.38	-1.50	0.14
Separated/Divorced	-4.83	2.55	-1.90	0.06*
1x to 3x minimum wage	-0.82	0.73	-1.12	0.27
4x to 7x minimum wage	-0.35	0.59	-0.58	0.56
8x to 15x minimum wage	0.02	0.51	0.04	0.97
16x to 30x minimum wage	-0.50	0.52	-0.95	0.34
Less than 9 years at school	-4.43	2.43	-1.82	0.07*
9 to <12 years at school	-0.09	1.75	-0.05	0.96
12 years at school	0.27	0.88	0.31	0.76
University degree (incomplete)	0.25	0.51	0.49	0.62
University degree	0.22	0.38	0.59	0.56
Minutes per meal	0.01	0.01	0.68	0.50
Hours of exercise per week	0.07	0.07	0.98	0.33
Hours of TV per day	0.01	0.10	0.05	0.96
Importance of nutritional value	-0.29	0.11	-2.63	0.01**
Importance of balanced diet	0.24	0.12	2.01	0.05**
Importance of exercise	-0.15	0.14	-1.05	0.29
1x to 3x per week	3.92	1.17	3.36	0.00***
1x to 5x per month	3.08	0.60	5.16	0.00***
6x to 12x per year	2.63	0.52	5.06	0.00***
1x to 5x per year	1.72	0.49	3.50	0.00***

Note: R^2 = 0.41; R^2 adjusted = 0.34; F = 5.53 with prob. (F) = 0.00
***Highly significant values < 0.00, **very significant values < 0.05, significant values < 0.10.

Table 4 - Result of preliminary regression – Dependent variable: consumption

Variable	Coefficient	St. Error	t	Prob.
β_{25}	-3.09	2.12	-1.46	0.15
Perception	0.37	0.05	7.41	0.00***
Age	0.03	0.02	2.06	0.04**
Male	0.04	0.27	0.14	0.89
Single	1.90	1.71	1.12	0.27
Married	1.57	1.66	0.94	0.35
Separated/Divorced	1.49	1.79	0.83	0.41
1x to 3x minimum wage	-0.19	0.51	-0.36	0.72
4x to 7x minimum wage	-0.02	0.41	-0.04	0.97
8x to 15x minimum wage	-0.05	0.35	-0.15	0.88
16x to 30x minimum wage	0.24	0.36	0.65	0.52
Less than 9 years at school	-1.19	1.70	-0.70	0.48
9 to <12 years at school	-1.14	1.22	-0.94	0.35
12 years at school	0.12	0.61	0.20	0.84
University degree (incomplete)	-0.67	0.36	-1.88	0.06*
University degree	-0.39	0.26	-1.50	0.13
Minutes per meal	0.01	0.01	1.16	0.25

Hours of exercise per week	-0.05	0.05	-1.03	0.30
Hours of TV per day	0.02	0.07	0.22	0.83
Importance of nutritional value	0.02	0.08	0.31	0.75
Importance of balanced diet	0.10	0.08	1.16	0.25
Importance of exercise	-0.11	0.10	-1.14	0.26
1x to 3x per week	-0.74	0.84	-0.89	0.38
1x to 5x per month	0.28	0.44	0.62	0.53
6x to 12x per year	0.30	0.38	0.79	0.43
1x to 5x per year	0.29	0.35	0.82	0.41

Note: R^2 = 0.35; R^2 adjusted = 0.26; F = 3.99 with prob. (F) = 0.00
***Highly significant values < 0.00, **very significant values < 0.05, significant values < 0.10.

In order to avoid multicollinearity, the variance inflation factors for both regressions were analyzed. None of the variables had a value of over 2.15, so it was concluded that there was no multicollinearity.

The White test was also conducted for heteroskedasticity, since this is one of the basic assumptions of the linear regression model. For the regression with "perception" as a dependent variable (Regression 1), the hypothesis of homoskedasticity was not rejected (F=0.75, p=0.66), but for the regression with "consumption" as a dependent variable (Regression 2), this hypothesis was rejected (F=9.24, p < 0.00). As such, it was necessary to correct the regression for heteroskedasticity.

Another basic hypothesis is error normality. It was therefore important to test the null hypothesis of normality of the errors for both regressions. Again, Regression 1 showed no problems (p =0.37), but the hypothesis was rejected for Regression 2 (p < 0.00).

The results after making the necessary corrections are presented in Tables 5 and 6.

Table 5 – Result of regression – Dependent variable: Perception

Variable	Coefficient	St. Error	t	Prob.
β_0	6.61	0.95	6.93	0.00
Age	-0.07	0.02	-4.31	0.00
Male	-1.54	0.33	-4.64	0.00
Less than 9 years at school	-4.54	2.33	-1.95	0.05
Importance of nutritional value	-0.31	0.10	-2.98	0.00
Importance of balanced diet	0.19	0.11	1.69	0.09
1x to 3x a week	3.68	1.10	3.35	0.00
1x to 5x a month	2.96	0.58	5.14	0.00
6x to 12x a year	2.49	0.50	4.97	0.00
1x to 5x a year	1.64	0.47	3.51	0.00

Note: R^2 = 0.38; R^2 adjusted = 0.35; F = 13.68 with prob. (F) = 0.00

For Regression 1, R^2 was found to be 0.38, which means that the independent variables of the model explain 38% of the sample variance for perception. The test statistic F=13.68 gave a p-value of 0.00, so we rejected the null hypothesis of the test of equality for the estimated parameters and concluded that there were no redundant variables in this model.

Table 6 – Result of regression – Dependent variable: Consumption

Variable	Coefficient	St. Error	t	Prob.
β_{10}	-0.79	0.39	-2.04	0.04
Perception	0.39	0.05	7.78	0.00
Age	0.02	0.01	2.73	0.01
University degree (incomplete)	-0.61	0.34	-1.80	0.07
University degree	-0.38	0.23	-1.62	0.11

Note: $R^2 = 0.30$; R^2 adjusted = 0.29; F = 22.90 with prob. (F) = 0.00

The R2 value in Regression 2 was 0.30, which means the independent variables in the model explain 30% of the sample variance for perception. The test statistic F (22.90) also gave a p-value of 0.00, so we rejected the null hypothesis of the test of equality for the estimated parameters and concluded that none of the variables were redundant.

Making a more in-depth analysis, the confidence intervals were also estimated for the parameters of each variable for both regressions, with a significance level of 10%, as shown in Tables 7 and 8. The regressions were also estimated for the standardized variables described in Tables 9 and 10.

Table 7 – Confidence interval (90%) – Dependent variable: Perception

Variable	Coefficient	Below	Above
β_0	6.61	5.04	8.19
Age	-0.07	-0.09	-0.04
Male	-1.54	-2.09	-0.99
Less than 9 years	-4.54	-8.39	-0.69
Importance of nutritional value	-0.31	-0.48	-0.14
Importance of balanced diet	0.19	0.00	0.37
1x to 3x per week	3.68	1.87	5.50
1x to 5x per month	2.96	2.01	3.92
6x to 12x per year	2.49	1.66	3.31
1x to 5x per year	1.64	0.87	2.42

Table 8 – Confidence interval (90%) - Consumption

Variable	Coefficient	Below	Above
β_{10}	-0.79	-1.44	-0.15
Perception	0.39	0.30	0.47
Age	0.02	0.01	0.04
University degree (incomplete)	-0.61	-1.17	-0.05
University degree	-0.38	-0.76	0.01

Table 9 - Standardized variables – Dependent variable: perception

Variable	Coefficient	Standardized coefficient	Elasticity in the means
β_0	6.61	0.00	1.20
Age	-0.07	-0.26	-0.38
Male	-1.54	-0.26	-0.10
Less than 9 years	-4.54	-0.11	0.00
Importance of nutritional value	-0.31	-0.19	-0.24
Importance of balanced diet	0.19	0.11	0.18
1x to 3x per week	3.68	0.20	0.02
1x to 5x per month	2.96	0.40	0.09
6x to 12x per year	2.49	0.39	0.12
1x to 5x per year	1.64	0.28	0.11

Table 10 – Standardized variables - Dependent variable: consumption

Variable	Coefficient	Standardized coefficient	Elasticity in the means
β_{10}	-0.79	0.00	-0.44
Perception	0.39	0.59	1.17
Age	0.02	0.14	0.40
University degree (incomplete)	-0.61	-0.12	-0.05
University degree	-0.38	-0.10	-0.08

5 DISCUSSION OF RESULTS

The final estimated regression values (Tables 5 and 6) can be used to interpret the results. In Regression 1, the characteristics that influenced perception were: importance of nutritional value, importance of balanced diet, age, sex, education, and frequency of visits to McDonald's.

These results are consistent with those of Freling, Crosno, and Henard (2010), namely, that not all the consumers perceived any difference in the McDonald's brand position. The values for importance of nutritional value and importance of balanced diet were 0.31 and 0.19, respectively, which means that individuals who cared about the nutritional value of foods were less likely to perceive changes in the menu than individuals who did not care about nutritional value. Meanwhile, those who cared about a balanced diet were more prone to notice changes in the menu than those who did not. Therefore, when it comes to Supposition S1a, the effects are divergent, as one of the variables of involvement had a positive effect but the other had a negative effect, minimizing the overall effect of involvement with healthy habits. This means that no satisfactory conclusion could be drawn about this supposition.

Supposition S2a – that an individual's involvement with a fast food chain will alter their perception of changes to its menu – was supported. The variables indicating involvement with the study subject were significant to the model. The parameters for the dummy variables for frequency were: 1 to 5 times a year: 1.64; 6 to 12 times a year: 2.49; 1 to 5 times a month: 2.96; and 1 to 3 times a week: 3.68. This suggests that the less often an individual frequents McDonald's, the less likely they are to perceive any change. This finding is consistent with Broderick and Mueller (1999), and demonstrates how cognitive involvement influences behavioral variables.

Turning to the parameters used to describe individual characteristics, the value of "age" was -0.07, indicating that younger individuals tended to perceive changes on the menu more. The parameter "male" came in at -1.54, indicating that women tended to notice changes more than men, while less than 9 years at school yielded -4.54, indicating that individuals who had not completed their primary education tended to notice changes less than those who had progressed to high school or higher education. Individual characteristics – and therefore personal stimuli – can therefore be seen to have an impact on perception. As such, supposition S3a is supported by the results.

Regression 2 shows that the variables that influence consumption are: perception, age, university degree (incomplete), and university degree. The result for perception (0.39) was consistent with our expectations, showing that increased perception leads to increased consumption. As none of the other variables had to do with lifestyle or involvement with McDonald's, suppositions S1b and S2b were both rejected.

Supposition S3b was supported, insofar as personal stimuli were found to influence consumption, as observed by Sandhusen (2000). The value for "age" was -0.02, although its significance was low, showing that younger people tend to consume new items on the menu more than older people. The parameters for the dummies linked to education were university degree (incomplete) (-0.61) and university degree (-0.38), indicating that undergraduates and graduates without a graduate diploma or advanced degree tend to consumer these food items less than the others.

The results of this study suggest that involvement and personal stimuli both impact perceptions of brand repositioning, which corroborates Schiffaman and Kanuk (2000), who found that environmental and personal stimuli and predisposition based on prior experiences gave consumers individualized views. In other words, different consumers will perceive the same brand differently, irrespective of the effort to convey the same image, constituting an extra challenge for brand managers. The relationship found between involvement and perception is consistent with Bloch (1982), who found that when consumers are more interested in a product they try to keep informed about it and pay more attention to marketing messages, which could lead to their increased perception of changes in brand positioning.

Finally, the results suggest that perception of brand repositioning has a positive influence on the brand's consumption, which reinforces the importance of getting repositioning efforts right, whenever they are needed, to ensure increased brand consumption.

6 CONCLUDING REMARKS

The six suppositions tested in this article were: S1a: An individual's involvement with healthy habits will affect their perception of new items on a fast food chain menu; S1b: An individual's involvement with healthy habits will affect their consumption of new items on a fast food chain menu; S2a: An individual's involvement with a fast food chain will alter their perception of changes to its menu; S2b: An individual's involvement with a fast food chain will alter their consumption of new items on its menu; S3a: An individual's personal characteristics will alter their perception of changes to a fast food chain menu; S3b: An individual's personal characteristics will alter their consumption of new items on a fast food chain menu.

Suppositions S1a, S1b, and S2b were not supported in this study, based on the results of the econometric analyses; conversely, S2a, S3a, and S3b were supported. Chart 2 sums up these findings.

Chart 2 – Summary of results

Suppositions	Results
S1a: An individual's involvement with healthy habits will affect their perception of new items on a fast food restaurant's menu.	Rejected by the results
S1b: An individual's involvement with healthy habits will affect their consumption of new items on a fast food restaurant's menu.	Rejected by the results
S2a: An individual's involvement with a fast food chain will alter their perception of changes to its menu.	Supported by the results
S2b: An individual's involvement with a fast food chain will alter their consumption of new items on its menu.	Rejected by the results
S3a: An individual's personal characteristics will alter their perception of changes to a fast food chain menu.	Supported by the results
S3b: An individual's personal characteristics will alter their consumption of new items on a fast food chain menu.	Supported by the results

The results suggest that not all consumers perceive when a brand is repositioned, which corroborates the findings of Freling; Crosno, and Henard (2010). More specifically, they show that an individual's involvement with acquiring healthy products does not mean they will be better at noticing the variety of products offered by companies, even fast food restaurants, which are generally regarded as unhealthy.

The findings also show that people's personal characteristics are related to their perceptions of changes to restaurant menus. Also, their involvement with the brand is related to their perception of changes to the menu, but not their consumption of the new items. Essentially, these findings are very much in line with the theory, showing that personal stimuli and emotional involvement influence consumer perceptions towards particular brands. However, only personal stimuli actually lead them to adhere to a new image (in this case, actually consuming the new items on the menu).

These conclusions could help marketing managers, as they demonstrate the importance of considering consumers' emotional involvement when they plan marketing campaigns with a view to repositioning a brand. The knowledge that involvement is strongly related to perceptions of change means that brands should seek to stay as close as possible to their consumers in order to facilitate communication.

When a company wants to include an image of healthy eating, it must consider that even people involved with the idea of eating more healthily will not necessarily perceive these changes any more than others. Indeed, as different levels of involvement generate different perceptions, they call for different repositioning and communication strategies (Assael, 1998).

The limitations of this study are that the sample had no controlled variables, and the data were collected by convenience sampling. As such, demographic variables like sex, income, age, and education were not distributed homogeneously, which could have influenced the results of the analysis. Furthermore, this study investigated just one brand with a strong market presence. These issues could be addressed in future studies.

Another limitation was that this research was time-specific, since the data were collected only once, after brand repositioning. One way of addressing this would be to do a longitudinal study. For instance, perceptions and purchasing of a brand could be measured before and after a brand repositioning effort, enabling them to be compared. Another option would be to measure changes in perceptions and purchasing habits over time.

Other variables related to involvement with healthy habits could be tested. Identifying differences in the relationship between high- and low-involvement brands could shed light on the subject. Other types of companies from the food industry and other areas of consumption could also be investigated.

Another suggestion is to analyze whether different personality types could affect brand involvement, perceptions, and attitudes. Also, studies could be done of how people's brand involvement and behavior towards brands are affected by others, including social media (ABBADE; FLORA; NORO, 2014). High-involvement products could also be tested, thereby comparing companies offering services, rather than products.

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