



Contents lists available at ScienceDirect

# Appetite

journal homepage: [www.elsevier.com/locate/appet](http://www.elsevier.com/locate/appet)

## Naturally good: Front-of-package claims as message cues



Christine Skubisz

Emerson College, 120 Boylston Street, Boston, MA 02116, United States

### ARTICLE INFO

#### Article history:

Received 8 January 2016

Received in revised form

19 October 2016

Accepted 22 October 2016

Available online 24 October 2016

#### Keywords:

Message cues

Public policy

Communication

Information processing

Food labels

Elaboration Likelihood Model

### ABSTRACT

Excess bodyweight is a significant public health problem in the United States, increasing the risk of adverse health conditions including hypertension, diabetes, heart disease, stroke, and cancer. Americans are consuming more calories than their bodies need each day and making purchasing decisions using heuristic cues, rather than caloric information. A recent trend in food and beverage labeling is the placement of a natural claim on a product's package. Unfortunately, the United States has not established clear requirements for natural claims and manufacturers are using this term liberally. Using models of information processing as a framework, the goal of this study was to predict the effects of natural claims on message processing and evaluations. It was predicted that natural claims would be perceived as heuristics for healthfulness. A 6 (product) × 2 (claim) experimental design was carried out. Support for the prediction that natural labeled products are evaluated as more healthful was found. Despite the fact that natural products contained the same number of calories as their regular counterparts, participants estimated that natural products contained 18% fewer calories. Implications of these findings for food labeling and public health are discussed.

© 2016 Elsevier Ltd. All rights reserved.

### 1. Introduction

Overweight and obesity rates have been steadily rising in the United States since 1980 (Finucane et al., 2011). A startling 70.7% of adults over age 20 are overweight (Ogden, Carroll, Fryar, & Flegal, 2015). Excess bodyweight increases the risk of disease including hypertension, diabetes, heart disease, stroke, and cancer (CDC, 2015a). Changes in consumers' food choices, the quantity of food consumed, and dietary intake patterns are necessary to reverse the obesity trend (Nicklas, Baranowski, Cullen, & Berenson, 2001). Existing patterns will lead to approximately 500,000 additional cases of cancer by 2030 (National Cancer Institute, 2012). In the face of this problem, there is evidence that a small reduction in body fat can offer health benefits. If every overweight adult reduced his or her body mass index (BMI) by just 1%, a weight loss of approximately two pounds, 100,000 new cases of cancer could be prevented (National Cancer Institute, 2012). It is promising evidence that reducing consumption by a few hundred calories each day can have measurable outcomes.

Given this evidence, it is noteworthy to examine how extra calories creep into a daily diet. Multiple factors lead to weight gain including genetics, inactivity, medication use, and age.

Nevertheless, body weight is tied to energy balance. Energy in (calories consumed) must equal energy out (calories used), or a person will gain weight in the form of body fat (Bray et al., 2012; CDC, 2015b). Most people do not monitor their caloric intake, it is common for people to consume more calories than their bodies are using, and many underestimate the number of calories in the products they are consuming (Block et al., 2013; Livingstone & Black, 2003; Young & Nestle, 2002).

Nutrition and calorie consumption are guided by messaging on product packaging. At no point in history have packages displayed such a wide variety of statements asserting health benefits (Nestle & Ludwig, 2010). To help people make informed choices, the Nutrition Labeling and Education Act empowered the Food and Drug Administration (FDA) to require nutrition information to be included on products in the form of a nutrition facts label (Curtis & Dunlap, 2005). In addition to the regulated label, manufacturers and health organizations have also placed claims on packages to guide consumers.

There is empirical evidence that people attend to front-of-package claims and these claims influence purchasing decisions. Front-of-package claims are used as arguments for a product's healthfulness in addition to the regulated nutrition facts label (Turner, Skubisz, Patel Pandya, Silverman, & Austin, 2014). These claims vary in their format from presenting a small symbol, like a check mark, to displaying detailed information about selected

E-mail address: [c.skubisz@gmail.com](mailto:c.skubisz@gmail.com).

ingredients. There is also variance in the federal regulation of claims. For example, the term organic is regulated and products must contain 95% organic content to make this claim. In contrast, the FDA has not established clear requirements for the claim that a product is natural. This ambiguity has provided flexibility in the use of the term. In recent years, manufacturers have used the term natural on packages with some frequency. A natural claim can be found on a wide range of products including potato chips, peanut butter, and soda. Finally, there is evidence that claims promote sales (Wartella, Lichtenstein, Yaktine, & Nathan, 2012). In 2013, products with natural claims brought in 40 billion dollars in sales in the United States (Estere, 2013).

### 1.1. Defining natural

The ambiguity in labeling laws stems from the fact that there is no standard definition of the term natural. From a food science position, it is difficult to define the term natural because most products have been processed in some way (FDA, 2012a, 2012b). Currently, the FDA follows a 1993 policy that states:

“[FDA] has not objected to the use of the term [natural] on food labels provided it is used in a manner that is truthful and not misleading and the product does not contain added color, artificial flavors or synthetic substances. Use of the term “natural” is not permitted in a product’s ingredient list, with the exception of the phrase “natural flavorings.”

Given this ambiguity, and the fact that the FDA provides little regulation in this domain, practically any food or beverage product can legally display the term natural. Products that contain natural flavors, sweeteners, or other plant based substances can be labeled natural. In addition, products containing highly processed high fructose corn syrup and those containing genetically engineered ingredients can also display this claim (Hansen, 2013).

Given the fact that many people do not monitor their daily caloric intake or attend to nutrition information, if a product bears a natural claim people may use this information as a mental shortcut to judge the healthfulness of a product. This type of reasoning requires little cognitive effort and few cognitive resources (Eagly & Chaiken, 1993). The Heuristic-Systematic Model (Chaiken, 1980, 1987, pp. 3–39) and the Elaboration Likelihood Model (Petty & Cacioppo, 1981) are models of information processing that aid in making predictions regarding the kinds of information consumers are likely to pay visual attention to and cognitively process.

### 1.2. Models of information processing

According to models of information processing, for someone to make a health promoting decision, several stages of interaction between a receiver and a message must occur (DeJoy, 1991; McGuire, 1981, pp. 291–307): A receiver must: 1.) Be exposed to message content; 2.) Attend to the content; 3.) Devote adequate cognitive resources to encode the message into memory; 4.) Comprehend the content, and 5.) Respond in some way (attitudinally or behaviorally). Here we focus on exposure and attention to messages. Several factors influence whether or not a receiver will effectively navigate the information processing model: Receiver characteristics, message content, the environment, and the nature of the task (de la Fuente & Bix, 2010). This study attempts to characterize message content and audience characteristics that drive attention, as well as elucidate the associated attitudinal outcomes.

Age, biological sex, and level of education are three receiver characteristics that have been identified in previous research to

influence outcomes in this context. There is some evidence that women have a stronger preference for natural items, although the difference between men and women was not statistically significant in previous work (Rozin et al., 2004). Women have higher levels of nutrition knowledge, compared to men. This difference has been attributed to their more dominant role in food purchasing and preparation as well as a lower interest in nutrition by men (Hendrie, Coveney, & Cox, 2008; Parmenter, Waller, & Wardle, 2000; Wardle, Parmenter, & Waller, 2000). Rozin et al. (2004) concluded that age and level of education may affect preference. In this study, older people were more likely to show a natural preference. Here, preference ratings were summed across multiple products including raw foods, processed foods, and medicines. The interactions between receiver characteristics and natural preferences are not clearly understood and this study will explore these relationships further. Identifying differences in the population, if any exist, can assist health communicators to match a public health message to an appropriate target audience group.

### 1.3. A natural claim as a message cue

The goal of the present study is to investigate attention to and effects of natural claims. Specifically, this project aims to determine if natural front-of-package claims are a message cue for healthfulness. Previous research has established that people indicate a preference for natural when asked if they prefer substances in their natural form, processed form, or were indifferent (Rozin et al., 2004). In another context, cigarette packages with natural descriptors were rated by participants as statistically significantly more appealing and less harmful, compared to packages without such labels (Czoli & Hammond, 2014). In previous work, a distinction was made between natural products and processed products. Yet, in the current food and beverage environment, processed products display natural claims, conflating the two domains. What is unknown, is if natural claims on processed products lead to more positive attitudes or influence objective measures of healthfulness. If the term natural is a message cue, there are implications that should be considered. It is posited that people may inaccurately assume that products labeled natural are lower in calories and more healthful, compared to products without this claim. A similar cognitive inference has been observed in the processing of organic food labels. Schuldt and Schwarz (2010) found that the term organic was defined by participants as low calorie. Also, researchers know little about how audience characteristics interact with this type of claim to affect outcomes. To advance understanding in this area, this study seeks answers to the following research questions and puts forth the following hypotheses:

RQ1: Do participants hold positive or negative attitudes about natural products?

RQ2: Are age and level of education related to attitudes about natural products?

H1: Products with a natural front-of-package claim will be evaluated more positively than products without a natural claim.

H2: Biological sex and type of claim will interact to affect product evaluations (calories, grams of fat, and teaspoons of sugar).

## 2. Method

### 2.1. Participants

Six hundred and five participants were recruited using Amazon’s Mechanical Turk (MTurk). Multiple quality safeguards were

Download English Version:

<https://daneshyari.com/en/article/5044441>

Download Persian Version:

<https://daneshyari.com/article/5044441>

[Daneshyari.com](https://daneshyari.com)