



Contents lists available at ScienceDirect

Food Quality and Preference

journal homepage: www.elsevier.com/locate/foodqual

Influence of rational and intuitive thinking styles on food choice: Preliminary evidence from an eye-tracking study with yogurt labels

Gastón Ares^{a,b,*}, Franco Mawad^b, Ana Giménez^{a,b}, Alejandro Maiche^b^aDepartamento de Ciencia y Tecnología de Alimentos, Facultad de Química, Universidad de la República (Udelar), General Flores 2124, CP 11800 Montevideo, Uruguay^bCentro de Investigación Básica en Psicología (CIBPsi), Facultad de Psicología, Universidad de la República (Udelar), Tristán Narvaja 1674, Montevideo, Uruguay

ARTICLE INFO

Article history:

Received 17 February 2013

Received in revised form 13 July 2013

Accepted 14 July 2013

Available online 20 July 2013

Keywords:

Conjoint analysis

Eye-tracking

Food labels

Nutritional information

Front-of-pack

Traffic light system

ABSTRACT

Consumers have a limited capacity to process all the information they face when deciding their food choices and usually rely on effortless and intuitive thoughts. According to the cognitive-experiential self theory human behavior is determined by the interaction of the two information processing systems: rational and intuitive. Consumers differ in their preference for these two thinking styles, which leads to differences in how they make their decisions. The aim of the present work was to evaluate the influence of rational and intuitive thinking styles on consumer choices and information processing when evaluating yogurt labels. Seventy-one consumers completed a choice-conjoint task with yogurt labels. Three 2-level variables were considered: fat and sugar content (low vs. high), label background (Background A vs. Background B), and traffic light system (present vs. absent). Consumers were presented with 8 choice sets composed of two labels on a computer screen, and were asked to indicate which one they would consume. Their eye movements were recorded during the task using an eye-tracker. After completing the conjoint task, consumers completed the Rational Experiential Inventory (REI). Latent class cluster analysis identified two consumer segments with different preference for analytic-rational or intuitive-experiential thinking styles. Consumers who predominantly relied on analytical-rational thinking engaged on a greater information search and a more thoughtful analysis of nutritional information for making their choices than consumers who preferred intuitive-experiential thinking. Besides, thinking style had a strong influence on the part-worth utilities of the evaluated variables. Results from the present work provide preliminary evidence about the influence of thinking style on consumer food choices, which can have potential implications for the design of communication strategies aimed at changing dietary patterns.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

Food choice is a complex phenomenon which depends on several interrelated factors (Köster, 2009). Consumer choices have been traditionally assumed to be conscious, rational and deliberative processes (Dieckmann, Dippold, & Dietrich, 2009). Many decision models are based on the idea that when making their choices, consumers evaluate a series of attributes and try to maximize their utility or minimize losses (Elrod, Johnson, & White, 2004). However, consumers have a limited capacity to process information and usually rely on effortless and intuitive thoughts (Fiske & Taylor, 1984; Milosavljevic & Cerf, 2008), particularly when dealing with complex choices (Kahneman, 2003). Besides, research has

shown that several consumer decisions occur outside conscious awareness (Fitzsimons et al., 2002).

Consumer decisions have been claimed to be determined by two modes of thinking: System 1 and System 2 (Kahneman, 2011; Stanovich & West, 2000). System 1 is experiential, affective and intuitive, being characterized by fast, effortless, automatic and associative responses (Lieberman, 2000). On the other hand, System 2 is rational, deliberative and analytical, being responsible for slower, serial, effortful, and deliberately controlled operations (Stanovich & West, 2000). The majority of our everyday choices are made without much effort and deliberation and are determined by System 1, or intuitive thinking (Kahneman, 2003). System 2 monitors the decisions of System 1 by processing information in more detail, which requires more mental resources (Kahneman & Frederick, 2002; Slovic, 1996). According to the cognitive-experiential self theory, human behavior is determined by the interaction of the two information processing systems: rational and intuitive (Epstein, 1994).

Epstein (2003) claimed that people differ in the relative share in which they use the two thinking styles; leading to differences in

* Corresponding author at: Departamento de Ciencia y Tecnología de Alimentos, Facultad de Química, Universidad de la República (Udelar), General Flores 2124, CP 11800 Montevideo, Uruguay. Tel.: +598 2 9248003; fax: +598 2 9241906.

E-mail address: gares@fq.edu.uy (G. Ares).

how they make their decisions. Epstein, Pacini, Denes-Raj, and Heiser (1996) developed the Rational-Experiential Inventory (REI) to determine predominant thinking style, analytic-rational or intuitive-experiential, using two independent scales. Rational thinking style is measured using a Need for Cognition scale, which measures the self-reported degree of engagement in and enjoyment of cognitive activities (Cacioppo & Petty, 1982). Meanwhile, Faith in intuition measures participants' confidence in their feelings and initial impressions when making a decision (Epstein et al., 1996).

The difference in the extent in which people rely on the two thinking styles and how they use them can have implications for understanding the receptivity to different kinds of messages (Epstein et al., 1996). According to these authors the use of messages based on emotions and personal experiences can be more effective for people who mainly process information using an intuitive thinking style, whereas messages based on facts and logical arguments can be more appealing for those who attach more importance to analytical-rational thinking style.

Thinking style can also strongly affect eating patterns and motives underlying food choice. In particular, the way in which consumers process information and make their decisions can have a large influence on their decisions when evaluating food labels. Consumers who mostly rely on rational processing are expected to engage in a deeper information processing of food labels than consumers who attribute more importance to intuitive processing choices (Cacioppo, Petty, & Morris, 1983).

According to Dittmar (1992) objects are communicators of social meaning and therefore food labels do not only retrieve information about the qualities of the product itself but also about the people who consume it. Therefore, it could be hypothesized that consumers who mostly rely on intuitive-experiential thinking style are likely to give more importance to design aspects of labels compared to more complex information, such as nutritional information or ingredients. On the contrary, consumers who predominantly rely on rational thinking would be more prone to process complex and objective information when selecting foods than consumers who mostly use intuitive thinking.

Nutritional information has been included on food labels to encourage people to make informed and healthier food choices (Cowburn & Stockley, 2005). However, most people do not use this information when deciding their food purchases because they find it difficult to understand (Grunert & Wills, 2007; Grunert, Wills, & Fernández-Celemín, 2010; Roberto et al., 2012). For this reason, front-of-pack nutritional labels, such as traffic light system and guideline daily amounts-system, have been introduced as a complement to traditional nutritional information to facilitate attentional capture and comprehension (Food Standards Agency, 2007; Grunert et al., 2010; Jones & Richardson, 2007; van Herpen, Seiss, & van Trijp, 2012). Although front-of-pack labels have not been used by Uruguayan food companies yet, previous studies have shown that the traffic light system facilitates attentional capture and understanding of nutritional information (Antúnez et al., 2013; Ares et al., 2012). This type of signpost can be particularly relevant for consumers who predominantly rely on intuitive processing since it can provide a simpler way of evaluating product healthfulness, encouraging them to read nutritional information when making their food choices.

In order to acquire information from a specific part of a food label consumers have to move their eyes so that the light from that part falls into the fovea, the central and most sensitive part of the retina (Wedel & Pieters, 2007). When consumers look straight on a certain area for a certain time period, it is said that they are fixating their eyes and information is being processed. Therefore, visual attention is vital to acquire information (LaBerge, 1995; Pieters & Warlop, 1999). Eye movements are good behavioural indicators of visual attention and information acquisition, being closely

related to higher-order cognitive processes (Rizzolatti, Riggio, & Sheliga, 1994; Russo, 1978). Eye-tracking techniques have a great potential for objectively studying decision making and information processing. These techniques have been increasingly applied in Sensory and Consumer science (Antúnez et al., 2013; Ares et al., 2013; Graham, Orquin, & Visschers, 2012; Piqueras-Fiszman, Velasco, Salgado-Montejo, & Spence, 2013); particularly to study consumer perception of nutritional information on food labels (Antúnez et al., 2013; Ares et al., 2013; Bialkova & van Trijp, 2011; van Herpen & van Trijp, 2011).

The aim of the present work was to evaluate the influence of rational and intuitive thinking styles on consumer choices and information processing when evaluating yogurt labels. It is hypothesized that rational consumers would engage in deeper information search for making their choices than intuitive consumers, giving more relevance to complex information (such as nutritional information) compared to graphic design of the labels. Besides, rational and intuitive consumers are expected to differ in the extent to which they process nutritional information, being this difference smaller for traffic light signpost than for traditional nutritional information formats.

2. Materials and methods

2.1. Participants

Seventy-one people participated in the study, 68% of which were females. Their ages ranged from 18 to 45 years old (average 25.3, standard deviation 8.4). Consumers were recruited among students and workers of the Psychology Faculty (Universidad de la República, Uruguay), according to their interest and availability to participate in the study. The only requirement for recruitment was being consumers of yogurt, at least occasionally. All participants had normal or corrected-to-normal vision and full colour vision. Participants signed an informed consent form and received a gift for participating in the study.

2.2. Stimuli

A choice-based conjoint was used to study consumer choice of yogurt labels. Choice-based conjoint was selected instead of rating-based due to its greater similarity with market behavior and its reported higher external validity (Elrod, Louviere, & Davey, 1992).

Three 2-level variables were considered in the conjoint study: fat and sugar content, label background, and traffic light system (Table 1).

Fat and sugar content were considered because they are usually modified in commercial healthful products. The concentrations of each nutrient were selected according to the technical guidance proposed by the Food Standards Agency (2007). In Uruguay it is mandatory to include total, saturated and trans fat content in nutritional labelling. Thus, in order to avoid unrealistic labels, yogurt labels with high fat level were designed with high saturated fat and medium total fat content. Traffic light system was included

Table 1
Variables and levels considered in the design of the conjoint study with yogurt labels.

| Variable | Levels |
|-----------------------|---|
| Fat and sugar content | High (14.6 g total fat and 21.5 g sugar per portion) Low (0 g total fat and 7.5 g sugar per portion) |
| Label background | Background A (associated with health) Background B (associated with novelty) |
| Traffic light system | Present Absent |

Download English Version:

<https://daneshyari.com/en/article/4317299>

Download Persian Version:

<https://daneshyari.com/article/4317299>

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