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Food Quality and Preference

Influence of evoked contexts on rating-based conjoint analysis: Case study with lamb meat

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ABSTRACT

The aim of the present work was to evaluate the influence of two evoked consumption contexts on consumers' intention to purchase lamb meat cuts using rating-based conjoint analysis. Participants were randomly assigned to one of the evoked consumption contexts: a celebratory lunch with family over the weekend (n = 157), and a dinner at home after a day's work (n = 171). Rating-based conjoint analysis was used to evaluate the influence of four independent variables on consumers' intention to purchase lamb meat in each of the two evoked consumption contexts: type of cut, presentation, seasoning and price. Intention to purchase scores were significantly affected by the evoked context. Consumers were more willing to purchase lamb meat when the celebratory weekend lunch context was considered, compared to the weekday dinner. In the two contexts, price was the most important variable affecting willingness to purchase lamb meat, followed by type of cut. However, at the aggregate level the utility values were similar for the two contexts: consumers expressed higher intention to purchase for leg cuts without seasoning at the highest price. In the two contexts different consumer segments were identified, which gave different relative importance to the variables included in the conjoint task. However, conclusions regarding consumers' segmentation were affected by evoked consumption context. The findings suggest that evoked consumption contexts influence results from conjoint analysis, which suggests that they may be an interesting methodological alternative to increase the validity of conjoint tasks.

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1. Introduction

Food choice is a complex process that depends on several inter-related variables, which can be grouped into characteristics of the person who makes the choice, characteristics of the product itself, and characteristics of the specific context in which the choice is made (Köster, 2009). Context, defined as the specific situational and temporal conditions in which a specific food choice is made, has been shown to have a large influence on consumer perception (Meiselman, 2006). However, the majority of consumer studies are carried out without considering context, which can decrease consumers' involvement with the task and lead to inaccurate

responses (Köster, 2003). Therefore, the consideration of context seems necessary to increase the validity and predictive ability of consumer studies (Korzen & Lassen, 2010).

Awareness of the need to consider consumption context when measuring consumer responses to food has prompted the need to seek methodological developments that provide a better balance between research carried out under controlled laboratory conditions and natural settings (Meiselman, 2013). One of the simplest ways to consider context during the evaluation of food products under laboratory settings is the use of written scenarios to evoke consumption contexts (Hein, Hamid, Jaeger, & Delahunty, 2010). These scenarios instruct participants to image a situation and to think of that specific situation when evaluating products.

The use evoked context has been reported to influence consumers' overall liking scores and increase sample discrimination (Hein, Hamid, Jaeger, & Delahunty, 2012; Hein et al., 2010;

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Hersleth, Monteleone, Segtnan, & Næs, 2015). Besides, recent research has shown that emotional associations to products greatly differ when the products are imagined to be consumed in one context or another (e.g., breakfast, lunch, or dinner). Consumers also tend to select positive emotional associations more often when consumption context is appropriate for the product compared to when it is not (Piqueras-Fiszman & Jaeger, 2014a, 2014b, 2014c).

The influence of evoked contexts on consumers' perception is expected to depend on the specific product and the specific context being considered, as well as the match between product and context (Lusk, Hamid, Delahunty, & Jaeger, 2015). In this sense, studies on the influence of evoked contexts have been mainly focused on consumers' perception of food concepts or the sensory characteristics of products (Hein et al., 2010, 2012; Hersleth et al., 2015; Piqueras-Fiszman & Jaeger, 2014a, 2014b, 2014c). However, evoked contexts are expected to influence consumers' perception of the non-sensory characteristics of products, such as brand, price and convenience. Hersleth et al. (2015) reported that evoked consumption contexts (traditional vs. novel meal) affected consumers' perception of the intrinsic and extrinsic characteristics of dry-cured ham. According to these authors the influence of evoked context was larger for extrinsic product characteristics, as consumers modified the relative importance they attached to some of the extrinsic characteristics of the products. In particular, consumers gave more importance to country of origin when the evoked context was related to a traditional meal compared to the novel meal, preferring Norwegian dry-cured hams.

Conjoint analysis is one of the most widely used methodology for studying the relative importance of a set of product attributes on consumers' perception (Annunziata & Vecchio, 2013). It is based on the evaluation of a set of stimuli created as a combination of levels of product attributes according to an experimental design (Green & Srinivasan, 1990). In rating-based conjoint analysis consumers are asked to rate their willingness to buy of a set of individual stimulus, which enables the estimation of the relative importance of a set of product characteristics on consumers' perception at both aggregate and individual level (Moskowitz, Reisner, Lawlor, & Deliza, 2009).

The present study focuses on consumers' perception of lamb meat. Although this type of meat represents only a small share of the total global meat production, sheep farming has economic and social relevance in sheep-meat producing countries (Ponnampalam, Holman, & Scollan, 2016). In particular, lamb meat has great growth potential in Brazil (Ricardo et al., 2015), which makes it necessary to study the influence of extrinsic variables, such as packaging, convenience and price, on consumers' willingness to purchase lamb meat in order to develop strategies to promote its consumption.

Lamb meat has several characteristics that clearly differentiates it from other types of meat, including its characteristic flavor, higher price and limited possibilities for processing and transformation (Bernués, Ripoll, & Panea, 2012). Context has been reported to play an important role in consumers' perception of lamb meat. Consumers perceived this type of meat as appropriate for special occasions and not as a product for everyday meals (MARM, 2008). Therefore, eating occasions can influence how consumers perceive lamb meat, as well as the relative importance they attach to extrinsic and intrinsic variables.

The aim of the present work was to evaluate the influence of two evoked consumption contexts on consumers' intention to purchase lamb meat cuts using a rating-based conjoint analysis. The influence of evoked contexts on the relative importance attached to different product characteristics (type of cut, presentation, seasoning and price) and consumers' segmentation was evaluated.

2. Materials and methods

2.1. Participants

A total of 378 middle/high income Brazilian participants took part in the study. The socio-demographic characteristics of the participants are included in Table 1. Participants were recruited via e-mail, using the consumer database of the Sensory and Instrumental Evaluation Laboratory of Embrapa Food Technology and Federal University of Rio de Janeiro. Participants who reported have never consumed lamb meat were removed from the analysis, resulting in 328 consumers. At recruitment stage, no information about the specific aim of the study was provided.

The study was approved by the Ethics Committee of the University Hospital Clementino Fraga Filho at Federal University of Rio de Janeiro, Brazil (Number 36803614.8.0000.5257). Participants completed an informed consent form at the beginning of the study.

2.2. Stimuli

Rating-based conjoint analysis was used to evaluate the influence of four independent variables on consumers' intention to purchase lamb meat: type of cut, presentation, seasoning and price. The four variables aimed at covering the main barriers for consuming lamb meat, price, lack of convenience in terms of time and lack of versatility for preparation, as reported by several authors and confirmed in previous studies on Brazilian consumers (Bernués et al., 2012; MARM, 2008).

Two levels were selected for variables type of cut (loin and leg), price (low and high) and seasoning (with and without), whereas three levels were selected for cut presentation. The two cuts considered in the study corresponded to the most popular in Brazil

Table 1
Demographics of the consumers recruited for each of the two evoked contexts.

	Context		Total
	Weekend lunch	Weekday dinner	
n	157	171	328
Gender (%)			
Female	40.1	46.2	43.3
Male	59.9	53.8	56.7
Age (years)			
Range	18–72	18–77	18–77
Mean	38.7	39.6	39.2
Standard deviation	13.4	13.8	13.6
Consumption frequency of lamb meat (%)			
Frequent consumer	33.1	36.3	21.3
Occasional consumer	66.9	63.7	59.1
Purchase frequency of lamb meat (%)			
Frequent purchase	22.3	20.5	21.3
Occasional purchase	61.8	56.7	59.1
Never purchased	15.9	22.8	19.5
Region of birth in Brazil (%)			
North	0.0	0.0	0.0
Northeast	8.3	2.9	5.5
Midwest	5.1	5.3	5.2
Southeast	42.0	41.5	41.8
South	44.6	50.3	47.6
Educational level (%)			
Primary school	1.3	3.5	2.4
Secondary school	17.8	16.4	17.1
University	33.1	42.7	38.1
Post-graduate	47.8	37.4	42.4
Occupation (%)			
Student	13.4	11.7	12.5
Worker	85.4	84.8	85.1
Retired	1.3	3.5	2.4