



Consumer perception of balsamic vinegar: A cross-cultural study between Korea and Italy



Luisa Torri^a, Seon-Young Jeon^b, Maria Piochi^a, Gabriella Morini^a, Kwang-Ok Kim^{b,*}

^a University of Gastronomic Sciences, Piazza Vittorio Emanuele 9, 12042 Bra (CN), Italy

^b Department of Food Science and Engineering, Ewha Womans University, Seoul 120-750, Republic of Korea

ARTICLE INFO

Article history:

Received 28 September 2016

Received in revised form 7 December 2016

Accepted 9 December 2016

Available online 11 December 2016

Keywords:

Cross-cultural study
Consumer perception
Sorted napping
Familiarity
Food pairing
Descriptive analysis
Balsamic vinegar

ABSTRACT

Understanding cross-cultural differences in food perception is a key issue of food research in order to understand consumer behaviour in different countries. The objective of this study was to explore potential cultural differences of balsamic vinegar perception between Korean and Italian consumers using the sorted napping method. Nine balsamic vinegars different in terms of ingredients, aging time, and origin were evaluated by Korean (n = 50) and Italian (n = 49) consumers using sorted napping. Familiarity and food matching were also examined. Descriptive analysis was performed to verify the attitude of the consumers in product description. The results obtained from two groups of consumers in Korea and Italy revealed a higher description attitude of the Italians (higher number of total elicited attributes, of attributes in common with the trained panel, of attributes shared with the vocabulary reported in literature, of significant specific positive product-attribute associations). Italian subjects generated various descriptors associated with the European gastronomic culture (aromatic herbs, fortified wine, dried figs, Indian fig, Parmigiano-Reggiano cheese), whereas Korean consumers used more terms related to the Asian food culture (red ginseng, Chinese medicine, Japanese apricot, teriyaki sauce, persimmon vinegar, balloon flower roots). Moreover, cultural differences of food matching were also observed: the Italians would pair the balsamic vinegars mainly with vegetables, fruits and cheese, while Koreans would combine the balsamic vinegars preferably with bread, vegetables and meat. In conclusion, familiarity resulted the main factors for cross-cultural differentiation.

© 2016 Published by Elsevier Ltd.

1. Introduction

Since there is an evidence that traditions, beliefs and values are among the main factors affecting preference, mode of food preparation, serving and nutritional status, it seems that culture is a major determinant of food choice (Cox, 2007, Chap. 16). Therefore, investigating cross-cultural dimensions of food choice is a key issue of food research in order to understand consumer behaviour in different countries (Prescott, Young, O'Neill, Yau, & Stevens, 2002; Tu, Valentin, Husson, & Dacremont, 2010). Cross-cultural factors affecting food choice are several, some related to language and the way language drives focus of attention, while others have social origin, whereas others referred to focus on attention and perception (Risvik, Rødbotten, & Olsen, 2007, Chap. 13).

Various studies have been conducted to explore the perceptual differences between consumers of different culture. Kim, Jombart, Valentin, and Kim (2013) observed that the sensory properties of the green tea samples were the main factor in Napping® for consumers who were familiar with the products. They indicated that the Korean consumers who were more familiar with green tea, discriminated the

green tea samples more clearly depending on the processing methods and elicited more terms to describe the products than the French consumers. Importance of familiarity on food perception also has been emphasized in the study comparing perception of perilla between Korean and Italian consumers. It was indicated that familiarity played an important role in the perception of perilla (Laureati, Pagliarini, Bassoli, & Borgonovo, 2014). However, in a cross-cultural study (Blancher et al., 2007) between French and Vietnamese consumers examining the difference in description of texture characteristics of jellies, it was found that French consumers described more terms than Vietnamese consumers even though Vietnamese consumers were more familiar with the products

In order to increase the knowledge on the cultural difference of food perception, in this study we have investigated the cross-cultural differences of food perception between Italian and Korean consumers using balsamic vinegar which is a traditional Italian product. The term “balsamic vinegar” is generally adopted to identify sauces, condiments and dressings with particular sweet taste. Since the vinegar is used as a condiment for foods or as an ingredient in dishes by the consumers, the quality of the product is primarily determined by its sensory properties as it may modify the overall liking of a given food or meal (Teskaye, Morales, Garc, & Troncoso, 2002). The possible variability in ingredients

* Corresponding author.

E-mail address: kokim@ewha.ac.kr (K.-O. Kim).

and aging time gives rise to a high number of balsamic vinegars differently produced in several countries around the world. In Italy, two types of balsamic vinegar products are available: the “traditional balsamic vinegar”, made using an artisanal production process; the “balsamic vinegar of Modena”, produced on industrial scale with a modern production process. Several samples belonging to these two categories and other balsamic vinegar from other countries (Korea, Germany and Spain) were used in this work to include a variety of samples.

The consumers' perception of the balsamic vinegar samples were investigated by means of the sorted napping method (Pagès, Cadoret, & Lê, 2010), a rapid and cost-effective technique which is a natural extension of the Napping® method. In comparison to Napping®, sorted napping has the advantage to collect information on how consumers group the products and describe the product groups created. Our aim was to verify if the sorted napping was effective in showing cultural differences in grouping the samples and describing the product groups between Italian and Koreans. To evaluate the ability of the consumers in describing balsamic vinegar, sorted napping data were compared with descriptive data obtained in this study from a Korean panel of trained assessors and with descriptive data from a panel of Italian trained assessors reported in literature. Moreover, data on consumers' familiarity with balsamic vinegars and food matching data were collected. Even if a clear theoretical background for familiarity is not available in literature, our hypothesis was that a different level of familiarity with the product could differently impact on product description ability and food pairing choices. In summary, the specific aims of the present work were: 1) to compare the consumer perception of various balsamic vinegar products in Italy and in Korea using the sorted napping method; 2) to explore a potential relationship between product sensory attributes and familiarity expressed by Italian and Korean consumers; 3) to explore a potential influence of familiarity with balsamic vinegar on product description ability; 4) to investigate the effect of the Italian and Korean gastronomic culture on the selection of food paired with balsamic vinegar.

2. Materials and methods

2.1. Balsamic vinegar samples

In order to explore the sensory perception of Korean and Italian consumers, nine commercially available balsamic vinegars were selected. They were differed in aging time, production method, country of origin, and ingredients. The information of the 9 balsamic vinegar products used in this study is given in Table 1. The products were purchased from a local market in Seoul (Republic of Korea) and transported to the University of Gastronomic Sciences by airplane, except for the two traditional balsamic vinegar of Modena samples. Those products were supplied to the University of Gastronomic Sciences directly by the Consortium for protection of balsamic vinegar of Modena (Consorzio Tutela Aceto Balsamico di Modena) that supervised the complete process of

the production to ensure the authenticity. Those samples were transported to Seoul by airplane. Balsamic vinegars were transferred from their original bottles to 20 ml amber vials equipped with a dropper. Black color sheet was used to cover the container of the samples to avoid bias caused by color differences of samples. Samples were stored at room temperature (20 ± 1 °C) until the test.

2.2. Consumer test

2.2.1. Subjects

Two consumer panels having similar characteristics in terms of gender (female), occupation (student) and age (18–25 years) performed the sensory tests in Korea and Italy. Original numbers of participants in Korea and Italy were 54 and 51 respectively but there were missing data for four Korean and two Italian participants. Thus, data from 50 Korean and 49 Italian consumers were considered for statistical analysis. Participants were recruited at the Ewha Womans University (Seoul, Republic of Korea) and at the University of Gastronomic Sciences (Bra, Italy). They had received an invitation to participate in the study and volunteered based on their interest and availability. All were interested in balsamic vinegar products, declared to experience them, and they were non-rejecters of balsamic vinegar at least. All tests were conducted in individual booths, and social interaction was not permitted.

2.2.2. Evaluation procedure

At the arrival to the sensory laboratories, consumers were verbally instructed by the experimenter to ensure compliance and invited to have a seat at individual booth, where they found the same instructions written on the evaluation sheet. The evaluation sheet was written in Korean and Italian languages, respectively according to the testing site. Subjects were provided with bottled water (Evian) to rinse their mouths between tasting each sample. The nine balsamic vinegar samples were evaluated in random order. The subjects were required to dispense 2 drops of a sample (approximately $0.074 \text{ ml} \pm 0.006$) on a disposable spoon and taste it as quick as possible each time they tasted to avoid contamination of the test area with volatiles. Ventilation also was on during the test. The tasting method was adopted from a previous study of soy sauce (Jeong, Chung, Suh, Suh, & Kim, 2004), since the balsamic vinegar samples also have a strong flavor. The samples were tested under blue light to prevent being recognized by color differences when it was dropped on the spoon for tasting. The consumer tasks were performed in 2 sessions: 1st session included sorted napping test and 2nd session, familiarity rating, food matching, and background questionnaire. There was a 10-min break between the sessions.

2.2.2.1. Sorted napping. Sorted napping was performed according to Pagès et al. (2010). Participants received nine samples and a 40×60 cm white paper. Subjects were required to taste the samples and to position them on the paper as a function of their similarities

Table 1
Description of the balsamic vinegar samples.

| Code | Product name | Origin country | Aging time | Ingredients |
|------|--|----------------|------------|--|
| K | Balsamic vinegar | Korea | Unaged | Balsamic vinegar, concentrated grape juice, concentrated of red grapes, fructose syrup, red wine flavor, citric acid, caramel color E 150d, oligosaccharides |
| I25T | Traditional balsamic vinegar of Modena | Italy | 25 years | Cooked grape must |
| I12T | Traditional balsamic vinegar of Modena | Italy | 12 years | Cooked grape must |
| I12 | Balsamic vinegar of Modena | Italy | 12 years | Wine vinegar, concentrated grape must, cooked grape must, caramel color E 150d |
| I8 | Balsamic vinegar of Modena | Italy | 8 years | Wine vinegar, concentrated grape must, cooked grape must, caramel color E 150d |
| Ia | Balsamic vinegar of Modena | Italy | Unaged | Grape must, red wine vinegar |
| Ib | Balsamic vinegar of Modena | Italy | Unaged | Wine vinegar, concentrated grape must, caramel color E 150d |
| G | Balsamic vinegar | Germany | Unaged | Red wine vinegar, concentrated grape must, caramel color E 150d |
| S | Balsamic vinegar | Spain | Unaged | Wine vinegar, concentrated grape must, boiled grape must, caramel color E 150d |

Download English Version:

<https://daneshyari.com/en/article/5767881>

Download Persian Version:

<https://daneshyari.com/article/5767881>

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