



The impact of using a written scenario when measuring emotional response to beer



Rocio Dorado ^{a,b}, Carolina Chaya ^a, Amparo Tarrega ^b, Joanne Hort ^{b,*}

^a Department of Agricultural Economics, Statistics and Business Management, Technical University of Madrid, Spain

^b International Centre for Brewing Science and Sensory Science Centre, Sutton Bonington Campus, University of Nottingham, Loughborough, Leicestershire LE12 5RD, UK

ARTICLE INFO

Article history:

Received 14 October 2015

Received in revised form 7 January 2016

Accepted 11 January 2016

Available online 12 January 2016

Keywords:

Beer

Emotional response

Expectation

Liking

Written scenario

ABSTRACT

Emotional response to food has been demonstrated to provide valuable information in today's competitive markets. However, emotional response is likely to be context dependant and hence using a written scenario in, for example, central location tests may increase the relevance of the emotional response profile data collected for products. This study aimed to evaluate the effects of using a freely elicited scenario on the emotional response profile, liking and familiarity of commercial beers. The impact of serving temperature was also investigated. Two groups of 100 beer consumers were recruited to evaluate five commercial beers, presented at two different temperatures (ambient and cold), either with or without a scenario. Consumers under the 'with scenario' condition also reported their expected emotional response to drinking a beer in that situation. On average beers were more familiar and less shocking when served at a cold temperature. Using a scenario caused significant changes in the mean rating scores for seven out of ten emotions and in familiarity, but not liking. Certain emotions were more discriminating under the scenario condition indicating that some emotions may be more relevant in particular contexts. Measuring the expected emotional response for the elicited scenario itself provided valuable information showing that on average consumers assimilated towards the expected emotional profile when using a scenario, except for negative emotions for disliked products. Hence, degree of liking was shown to impact level of assimilation. The value of using a scenario for improved measurement of emotional response in central location tests is highlighted and discussed.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

It is believed that decisions rely on previous cognitive processes but neuropsychology has also highlighted that emotions play an important role in decision making (Bechara, 2004). Emotions are known to be a key factor affecting food choice decisions (Desmet & Schifferstein, 2008; Edwards, Hartwell, & Brown, 2013) and hence in today's competitive markets food and beverage companies can benefit from understanding the emotional connotations associated with their products and the advantages of marketing them in a consonant manner (Thomson & Crocker, 2015). A key question is how consumer emotional response can be best evaluated.

Although emotional research is a relatively new area within sensory and consumer science, verbal self-reported questionnaires have been one of the most common techniques used so far to measure emotional response due to their ease of application, cost

effectiveness and good discrimination. These questionnaires consist of lists of emotions where consumers rate terms or select only those emotions experienced (check-all-that-apply). The terms included can be drawn from the literature and applied to a wide range of products – as is the case with The EsSense Profile[®] (King & Meiselman, 2010), GEOS (Geneva Emotion and Odour scale) (Chrea et al., 2009) or, its new version, ScentMove[™] (Porcherot et al., 2010, 2012) – or developed by consumers for a specific product category (Chaya, Eaton, et al., 2015; Ng, Chaya, & Hort, 2013a; Thomson & Crocker, 2015; Thomson, Crocker, & Marketo, 2010). Self-reported questionnaires are normally applied in sensory laboratory conditions. However, the emotional response elicited by a product is likely to be context dependant and sensory booths do not mimic real life conditions.

Indeed Desmet and Schifferstein (2008) identified five sources of food emotions: sensory attributes, anticipated consequences, personal and cultural meaning and behaviour of others agents involved. Noticeably, the last four sources are closely linked with the personal scenario in which a product is consumed and the impact of context has already been demonstrated in other aspects

* Corresponding author.

E-mail address: joanne.hort@nottingham.ac.uk (J. Hort).

related to food consumption such as product acceptability (Bechara, 2004; Giménez, Gagliardi, & Ares, 2015; Hersleth, Mevik, Naes, & Guinard, 2003; King, Meiselman, Hottenstein, Work, & Cronk, 2007; King, Weber, Meiselman, & Lv, 2004)

In this study, context is defined as all the conscious and unconscious elements involved in the act of eating (e.g. location, social events, feelings, cultural associations, etc.), that are beyond the specific food of interest, but that exert an influence on the perception of that food (Bisogni et al., 2007; Köster, 2009). Even though it is accepted that context plays an important part in driving emotional response, a challenge is how to set a realistic consumption scenario in central location or laboratory type conditions as testing in real situations is currently very expensive and difficult to control.

One way to set a context is to ask consumers to imagine a scenario where they are consuming the product of interest and only then rate their emotional response to it. Remembered or imagined events evoke emotions (Piqueras-Fiszman & Jaeger, 2014b, 2014c), for example, thinking about a wedding celebration can immediately produce feelings of joy and happiness. Food consumption contexts can also arouse strong emotional responses; drinking a glass of water on a warm day after exercise can evoke feelings of relief, but if the water is served at a warm temperature, feelings of disappointment or dissatisfaction would ensue. Written scenarios – brief texts that serve to place consumers in a real and everyday occasion – have been used to evoke such contexts. Written scenarios can be predefined by the researcher (Abdi, 2002; Hein, Hamid, Jaeger, & Delahunty, 2012; Piqueras-Fiszman & Jaeger, 2014a, 2014c, 2015) or freely defined by consumers (Hein, Hamid, Jaeger, & Delahunty, 2010; Lusk, Hamid, Delahunty, & Jaeger, 2015).

In a predefined scenario, either using images or written text, there is a risk that consumers will not identify themselves with that situation or will not consider that specific scenario appropriate to the consumption of the food evaluated and hence emotional response varies (Piqueras-Fiszman & Jaeger, 2015). On the other hand, a freely defined scenario seems to be highly individual although large groups of people may share the same idealised situation as these may be commonly influenced by learning, culture and society. Hein et al. (2010) showed that the use of a freely elicited scenario affected mean hedonic ratings of juices and increased product discrimination. However, to date, the influence of a freely elicited scenario on measures of consumers' emotional response to foods they consume has not been explored.

Under a specific scenario, the way in which a product is presented to consumers can also affect emotional response. The tableware (Piqueras-Fiszman & Jaeger, 2014c), the container (Spence & Wan, 2015) or the packaging (Chaya, Pacoud, Ng, Fenton, & Hort, 2015; Ng, Chaya, & Hort, 2013b) are factors that can impact how the food is perceived. In the case of beverages and especially in beers, the serving temperature plays a special important role. The literature shows that different serving temperatures affect hedonic ratings in beverages. For example Boulze, Montastruc, and Cabanac (1983) found that most water consumption occurs at 15 °C, and that both intake and the affective response dropped when serving temperature was increased. Cardello and Maller (1982) showed that for those beverages traditionally served at cold temperatures, such as lemonade and milk, the hedonic response decreased with increasing serving temperature. Meanwhile, in the case of coffee, which can be served cold or warm, the hedonic response has a U-shape function with its minimum at ambient temperature. Serving temperature also modifies sensory properties. A warmer temperature can change the partition coefficient of volatile compounds (Engelen et al., 2003; Ventanas, Mustonen, Puolanne, & Tuorila, 2010) and the perception of the flavour of the product (Ryynänen, Tuorila, & Hyvönen, 2001). Furthermore,

appropriate serving temperature might vary across different consumption scenarios. Currently, no data is available in the literature concerning how beer acceptability and emotional response are modified by serving temperature.

The aims of this study were to: (i) determine if serving temperature modifies emotional response, liking and familiarity of beer, (ii) study the impact of a freely elicited scenario on emotional response, liking and familiarity towards commercial beers and (iii) determine the relative contribution of the scenario itself and the products to emotional response.

2. Materials and methods

To meet the aims of this study, consumers were recruited to evaluate commercial lager beers served at two different temperatures. A first group assessed the samples without a scenario and a second group of consumers with a freely elicited scenario.

2.1. Participants

This study was approved by the University of Nottingham Medical School Research Ethics Committee (M19062014 SoBS Food) and all subjects gave informed consent before enrolling. Beer consumers ($n = 200$) (aged 18–51 years old, 61% female) were recruited among staff and students at the University of Nottingham (UoN) and the local residential population. Criteria for selection were that they were over 18, drank lager beer more than once a month and had lived in the United Kingdom or in another English speaking country for at least a year. This last requirement was to ensure comprehension of an English emotional lexicon. Pregnant women, or those intending to become pregnant, were excluded from participation. Subjects received an inconvenience allowance for participation in the study.

Subjects took part in one of two investigations: one without and one with a scenario. In order to facilitate comparisons between the two groups, age and beer consumption patterns were matched closely. Age ranges were comparable in that 80% of participants were aged between 20 and 35 years in the without scenario condition and 77% of participants were aged between 20 and 35 years in the with scenario condition (mean ages were 27 years and 23 years respectively). In both groups approximately 50% consumed beer 'once', or 'more than once', a week and 50% consumed beer 'more than once a month' but less than 'once' or 'more than once a week'.

2.2. Products

Five commercial lager style beers (P1–P5) were chosen as representative of the mainstream lager market. Beers were provided by SABMiller plc (Woking, UK) and presented as 15 ml samples in transparent closed screw cap universal tubes labelled with random three digit codes. Samples were presented at two different temperatures: 4 ± 2 °C (cold) and 19 ± 2 °C (ambient).

2.3. Emotional lexicon

A beer specific emotion lexicon, previously developed at the UoN (Eaton, 2015) following the approach of Chaya, Pacoud, et al. (2015), was employed to measure emotional response. Originally Eaton defined nine emotion categories; however, Multiple Factor Analysis showed that the emotion *curious* (originally included in the emotion category *excited*) was scored differently to the rest of the terms in its emotion category. Hence, in the present study the term *curious* was removed from the *excited* category to form a further category on its own. Table 1 lists the 10 emotional categories, and associated terms as used in this study.

Download English Version:

<https://daneshyari.com/en/article/6261097>

Download Persian Version:

<https://daneshyari.com/article/6261097>

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