

Received: July 2, 2025 --- Accepted: August 22, 2025 --- Online First: August 29, 2025 ---
Published: Jan 01, 2026

PERCEPTION AND INFLUENCE ON THE PURCHASE DECISION OF SENSORY MARKETING ACTIONS IN COMMERCIAL ESTABLISHMENTS

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How to cite the article:

Fondevila-Gascón, Joan-Francesc; Gutiérrez-Aragón, Óscar; Berbel-Giménez, Gaspar, & Fàbrega-Hereu, Aina (2026). Perception and influence on the purchase decision of sensory marketing actions in commercial establishments. *Vivat Academia*, 159, 1-20.
<https://doi.org/10.15178/va.2026.159.e1638>

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ABSTRACT

Introduction: The use of sensory marketing tools in commercial establishments is a practice that has become popular, primarily in the last two decades. Through innovative techniques that appeal to emotions, stores and large chains or shopping centers seek to promote favorable purchasing decisions and consolidate the image, memory, and commitment of their customers. **Methodology:** The main objective of this study is to assess the degree of public awareness of sensory marketing strategies, as well as their perception and influence on purchasing decisions. To this end, a combination of quantitative analysis methodologies was used, based on the results of a survey conducted among residents of Spain. **Results:** The main findings indicate that public awareness of these commercial techniques and the perception or awareness of their influence in establishments exist but are not widespread. **Discussion:** This contrasts with the scientific literature on the subject. **Conclusions:** It is concluded that, among its various modalities, visual marketing actions are the most effective sensory marketing, and that consumers, in general, recognize that, if the strategies are adequate, they favor access to the establishment, increase the time spent and encourage purchases and recommendations.

Keywords: Sensory marketing, communication, emotions, perceptions, commercial actions.

1. INTRODUCTION

Commercial establishments of all kinds carry out sensory marketing actions to appeal to consumers and influence their purchasing behavior through emotions and senses. These actions aim to optimize customer satisfaction, increase loyalty, and strengthen commitment to the brand, company, or business (Spangenberg et al., 2005; Bagheri). Although sensory techniques have been applied to marketing for several decades, technological advances, communication methods, and approaches have significantly increased their ability to understand consumers' feelings and emotions, capture their attention, and improve brand recall (Krishna, 2012; Fondevila-Gascón et al., 2022; Pandey & Tripathi, 2025).

Sensory marketing currently plays an important role in the retail environment. Through integrated sensory stimulation, it influences the behavior, intentions, and purchasing decisions of the target audience to consolidate a satisfactory shopping experience (Jiménez-Marín et al., 2019; Pal et al., 2025). This commercial technique uses visual, auditory, olfactory, gustatory, and tactile stimuli to influence customer satisfaction, perception of service quality, and shopping experience (Torabi et al., 2021; Tran et al., 2025). A comparative study revealed differences between French and English consumers. The English were more sensitive than the French to the variables "sharing experiences," "hearing," and "sight," while the French were more sensitive to "smell" (Alaoui & Flambard, 2017).

Of the sensory marketing dimensions, visual marketing has the greatest impact on purchase decisions (Luna-Fernández et al., 2021; Yana-Salluca et al., 2022). Various visual marketing strategies start outside the establishment with window display design and continue inside with product arrangement and the visual configuration of the public space (Han, 2022; Jiménez-Marín et al., 2022). Through the use of posters, visual elements, attractive designs, shapes, color combinations, logos, and displays, this type of marketing captures the public's attention within the establishment. It improves the shopping experience and increases the likelihood that customers will return (Chen et al., 2021; Fondevila-Gascón et al., 2022).

Meanwhile, commercial establishments design sound marketing strategies, such as playing background music or ambient sounds, to create a soundscape that interacts with the shopping environment and influences consumer behavior and purchasing decisions (Krawczak, 2016; Benzaoui & Cheriet, 2021). The appropriate use of effective auditory strategies attracts customers and induces purchases by encouraging a longer stay in commercial spaces with a more sensorially attractive environment (Avendaño-Castro et al., 2015; Ungureanu, 2021), a factor extrapolated to interactive television consumption (Fondevila-Gascón, 2012; Fondevila-Gascón et al., 2017). Businesses use various structural (e.g., rhythm, volume, genre) and affective/cultural characteristics of music or ambient sound to generate pleasant shopping experiences. These experiences improve consumers' cognitive responses to products or services, positively influencing purchase decisions and repeat visits (Ahmed et al., 2023; Zhang et al., 2024).

In recent years, olfactory marketing has increased its presence in commercial environments due to its effectiveness in influencing the perception and evaluation of products and services, as well as consumer behavior and purchasing decisions (Paluchová et al., 2017; Vega-Gómez et al., 2020). Using odotypes or aromas to promote products creates an emotional connection between customers and establishments, providing memorable shopping experiences that influence long-term brand perception, adding value to products and services (Fernández-Muñoz et al., 2021; Ramšak, 2024). Olfactory stimuli improve the image of stores or businesses, especially when the brand image of the establishment is coherent with the odotype or fragrance used for environmental aromatization. This fosters overall satisfaction with the service received, strengthening customer loyalty and the intention to revisit the establishment (Beerli et al., 2021; Errajaa et al., 2021).

The influence of taste on consumers' experiences and purchasing decisions is particularly significant for certain products, such as food and beverages, where tasting encourages consumption (Ramanankonenana & Randriamamonjy, 2022; Nayak & Satpathy, 2024). Taste marketing enables establishments in these sectors to differentiate themselves from competitors by allowing consumers to experience the taste of products and the sensations they generate (Nadanyiova et al., 2018; Isaac et al., 2023). Sensory perceptions provided by flavors have an intrinsic, positive relationship with the evaluation of the shopping experience. Therefore, they are closely related to

customer satisfaction and repeat visits to the establishment (Nanekum and Solomon, 2022; Alves-Santos et al., 2025).

Finally, tactile marketing actions allow for direct interaction with touchable products, people, and other elements in the shopping environment. This interaction generates physical and psychological responses, affecting both cognition and emotion (Brondino-Pompeo, 2012; Akarsu, 2021). Consumers often need to interact with products they wish to purchase in a store; for example, clothing. This interaction generates higher recall rates, a better emotional connection, and increased purchase intention (Krishna, 2012; Grębosz & Wrońska, 2013; Priporas et al., 2017; Frank, 2022). In the fashion sector, in particular, the effects of tactile stimuli and garment material properties on perceived product quality, purchase decisions, and shopping experiences are widely evaluated (Ornati, 2021; Han et al., 2024).

2. OBJECTIVES

Based on these premises, the main objective of this study is to evaluate society's awareness of this marketing strategy. Secondary objectives include determining the level of perception among visitors to a commercial establishment regarding sensory marketing actions and the hierarchy of relevance of each sense in the decision-making process for purchasing. To this end, a research study combining different quantitative analysis methodologies was designed, structuring the study into six parts. After this brief introduction, a review of previous academic sources on the subject is conducted, and the applied methodology is explained. Then, the results obtained and conclusions of the research are presented. Finally, the used bibliography is listed.

3. METHODOLOGY

The study uses a combination of quantitative analysis methodologies on data obtained from a survey to assess the degree of knowledge and perception of sensory marketing strategies carried out by commercial establishments. This technique has traditionally offered optimal results in social science research, especially sociodemographic analysis (Fondevila-Gascón et al., 2024; Alabart-Algueró). To chronologically categorize the age group of the sample, previous studies were considered in which it was estimated that those born between 1946 and 1964 belong to the Boomer Generation, those born between 1965 and 1980 belong to Generation X, those born between 1981 and 1996 belong to Generation Y (Millennials), and those born between 1997 and 2012 belong to Generation Z (Centennials) (Fondevila-Gascón et al., 2024; Gutiérrez-Aragón et al., 2024).

The survey was conducted from February to May of 2025 on a sample of 444 adults residing in Spain who belonged to one of the four generational groups under study. A pretest was conducted to validate the survey, considering that some questions were referenced in previous studies. Sampling was random, and data were collected through a digital survey form distributed electronically via social media (Facebook, LinkedIn, Instagram, and WhatsApp) and email. Considering the profile of the study

population (the Spanish population), the sampling error was 4.65% at a 95% confidence interval.

The questionnaire consisted of 25 questions divided into seven sections. The questions in each section were based on items from previous academic research (see Table 1). The first section collected sociodemographic data on the participants, such as gender, age, and highest educational level. The second section surveyed participants' knowledge of and perceptions about the sensory marketing strategies used by commercial establishments. Sections three through seven explored respondents' perceptions of the influence of each type of sensory marketing (visual, sound, olfactory, gustatory, and tactile) on the purchasing process in commercial establishments.

Table 1. *Blocks of the questionnaire used in the survey by references, items and responses*

Block	References	
Sociodemographic profile	Fondevila -Gascón et al. (2024), Gutiérrez-Aragón et al. (2024), Alabart -Algueró et al. (2025)	
Knowledge and perception of sensory marketing	Spangenberg et al. (2005), Jiménez-Marín et al. (2019), Torabi et al. (2021), Bagheri et al. (2023)	
Perceptions on visual marketing	Luna-Fernández et al. (2021), Han (2022), Jiménez-Marín et al. (2022), Yana- Salluca et al. (2022)	
Perceptions of sound marketing	Avendaño-Castro et al. (2015), Krawczak (2016), Benzaoui & Cheriet (2021), Zhang et al. (2024)	
Perceptions on olfactory marketing	Paluchová et al. (2017), Vega-Gómez et al. (2020), Beerli et al. (2021), Errajaa et al. (2021)	
Perceptions on taste marketing	Nadanyova et al. (2018), Isaac et al. (2023), Nanekum & Solomon (2022), Nayak & Satpathy (2024)	
Perceptions on tactile marketing	Brondino -Pompeo (2012), Krishna (2012), Akarsu (2021), Ornati (2021), Frank (2022)	
No.	Item	Answers
Block 1. Sociodemographic profile		
1	Sex	<ul style="list-style-type: none"> • Man • Woman
2	Age (generational group)	<ul style="list-style-type: none"> • Centennials • Millennials • Generation X • Baby Boomers

No.	Item	Answers
3	Level of completed studies	<ul style="list-style-type: none"> • Primary Education • Secondary Education • High School / Vocational Training • University degree • University postgraduate studies
Block 2. Knowledge and perception of sensory marketing		
4	Knowledge of the concept of sensory marketing	Likert scale from 1 to 5
5	Perception of the use of sensory marketing strategies in establishments	Likert scale from 1 to 5
6	Influence of visual marketing on motivation to enter a store	Likert scale from 1 to 5
7	Influence of sound marketing on motivation to enter a store	Likert scale from 1 to 5
8	Influence of olfactory marketing on motivation to enter a store	Likert scale from 1 to 5
9	Influence of gustatory marketing on motivation to enter a store	Likert scale from 1 to 5
10	Influence of tactile marketing on motivation to enter a store	Likert scale from 1 to 5
Block 3. Perceptions on visual marketing		
11	Perception of visual marketing actions in the establishment	Likert scale from 1 to 5
12	Influence of visual marketing on the purchasing decision	Likert scale from 1 to 5
13	Preferred visual marketing stimuli	Open response
Block 4. Perceptions on sound marketing		
14	Perception of sound marketing actions in the establishment	Likert scale from 1 to 5
15	Influence of sound marketing on the purchasing decision	Likert scale from 1 to 5
16	Preferred sound marketing stimuli	Open response
Block 5. Perceptions on olfactory marketing		
17	Perception of olfactory marketing actions in the establishment	Likert scale from 1 to 5
18	Influence of olfactory marketing on the purchasing decision	Likert scale from 1 to 5
19	Preferred olfactory marketing stimuli	Open response
Block 6. Perceptions on taste marketing		
20	Perception of taste marketing actions in the establishment	Likert scale from 1 to 5
21	Influence of taste marketing on the purchase decision	Likert scale from 1 to 5
22	Preferred taste marketing stimuli	Open response
Block 7. Perceptions on tactile marketing		

No.	Item	Answers
23	Perception of tactile marketing actions in the establishment	Likert scale from 1 to 5
24	Influence of tactile marketing on the purchasing decision	Likert scale from 1 to 5
25	Preferred tactile marketing stimuli	Open response

Source: Elaborated by the authors.

The sociodemographic profile of the sample respondents was 60.4% women and 39.6% men. By age group, 21.6% were centennials, 31.1% were millennials, 24.3% were Generation X, and 23% were baby boomers. Of the respondents, 19.4% had completed primary or secondary education, 32.7% had completed high school or vocational training, and 48% had completed undergraduate or postgraduate university studies (Figure 1).

Univariate and bivariate descriptive statistical analyses were carried out using the IBM SPSS Statistics program to assess differences between items under analysis based on sociodemographic profile components such as sex and generational group membership.

The research hypotheses are as follows:

H1: The level of social knowledge about sensory marketing is high.

H2. The visual sense is the most relevant in the purchasing decision-making process.

H3. The auditory sense has a moderate impact on people who visit a commercial establishment.

4. RESULTS

The results of the statistical analysis of survey data from a sample of 444 Spanish residents belonging to one of the four generational groups examined in the study show that the level of awareness of sensory marketing is generally moderate (3.06 out of 5 on a Likert scale, where 1 is very low and 5 is very high). Awareness is higher among women than men (3.16 versus 2.89) and among younger individuals than older ones (Table 1). The perceived use of sensory marketing strategies by commercial establishments is slightly higher (3.45), and is also higher among women (3.64) than men (3.31), as well as among the youngest members of the sample (centennials and millennials). In any case, H1 is partially validated: The level of social knowledge about sensory marketing is high.

When asked about the influence of various sensory marketing strategies on the motivation to enter a commercial establishment, respondents rated visual marketing strategies as having a significant effect (4.73 out of 5), more than olfactory (2.49) and auditory (2.40) marketing strategies (Table 2). Tactile and gustatory marketing actions had relatively low influence on entering the establishment (1.94 and 1.45, respectively).

Women recognize a greater influence from visual, olfactory, gustatory, and tactile actions than men do, while men are more influenced by sound marketing actions. In general, younger generational groups are more influenced to enter a store by visual, auditory, and tactile marketing actions. As age increases, however, the influence of olfactory and gustatory marketing actions increases.

Table 2.

Degree of influence of sensory marketing actions on the motivation to enter an establishment based on sex and age (generational group)

Item	Total	Sex		Generation			
		Man	Woman	Gen Z	Gen Y	Gen X	Gen BB
Influence of visual marketing actions on the motivation to enter a store	4.73	4.71	4.75	4.79	4.74	4.62	4.68
Influence of sound marketing actions on the motivation to enter a store	2.40	2.45	2.36	2.51	2.48	2.35	2.36
Influence of olfactory marketing actions on the motivation to enter a store	2.49	2.46	2.53	2.45	2.52	2.47	2.55
Influence of taste marketing actions on the motivation to enter a store	1.45	1.44	1.46	1.22	1.35	1.55	1.58
Influence of tactile marketing actions on store entry motivation	1.94	1.90	2.01	2.00	1.99	1.85	1.87

Source: Elaborated by the authors.

The last five sections of the questionnaire contained questions that aimed to explore how much the study participants appreciated the different sensory marketing actions carried out in establishments. The questions also explored the degree to which these actions influenced the final purchase decision once the participants were aware of them (Table 3, Table 4, Table 5, Table 6, Table 7). The findings determined that, in general, visual marketing actions in stores are perceived much more highly (4.74 out of 5 on a Likert scale, where 1 is very low and 5 is very high) than other types of sensory marketing actions, which tend to go unnoticed. In fact, gustatory and tactile marketing are perceived at extremely low levels (1.66 and 1.51, respectively). Nevertheless, there is a general consensus that, once detected, any of these marketing actions have a high or very high influence on the purchase decision (4.82 out of 5 for visual marketing, 4.16 for sound marketing, 4.50 for olfactory marketing, 3.88 for gustatory marketing, and 4.23 for tactile marketing).

In the case of visual marketing, women perceive it slightly more than men do (4.76 versus 4.74). They also recognize a greater influence on the purchasing decision (4.84 versus 4.80) (Table 3). By age group, Centennials and Millennials report higher rates of both perception and influence than other generations. When asked about the types

of visual sensory marketing stimuli they typically perceive in stores, 45.3% of respondents chose the organization and arrangement of products, 27.5% chose interior design, 14.6% chose window display design and organization, and 10.1% chose lighting. The remaining 2.5% selected other types of stimuli. These results validate H2: The visual sense is the most relevant in the purchasing decision-making process.

Table 3.

Perception and relevance of visual marketing on purchasing decisions based on gender and age (generational group)

Item	Total	Sex		Generation			
		Man	Woman	Gen Z	Gen Y	Gen X	Gen BB
Perception of visual marketing actions in the establishment	4.74	4.72	4.76	4.80	4.75	4.63	4.69
Influence of visual marketing on the purchasing decision	4.82	4.80	4.84	4.88	4.83	4.71	4.77

Source: Elaborated by the authors.

Sound marketing strategies are moderately perceived within establishments, with higher scores among men (2.48) than women (2.39) and younger generations (Table 4). The most perceived sound marketing actions are those involving soft background music (83.3%), followed by those involving loud music (8.1%), relaxing sounds (5.4%), and other sounds (3.2%). Furthermore, these actions have a high degree of influence on purchase decisions, with a higher influence on men than women (4.25 vs. 4.09) and on younger age groups than older ones. Thus, H3 is validated: The auditory sense has a moderate impact on people who visit a commercial establishment.

Table 4.

Perception and relevance of sound marketing on purchasing decisions based on gender and age (generational group)

Item	Total	Sex		Generation			
		Man	Woman	Gen Z	Gen Y	Gen X	Gen BB
Perception of sound marketing actions in the establishment	2.43	2.48	2.39	2.54	2.51	2.38	2.39
Influence of sound marketing on the purchasing decision	4.16	4.25	4.09	4.35	4.30	4.07	4.09

Source: Elaborated by the authors.

The perception of olfactory marketing actions within establishments is also relatively

low. In this case, it is higher among women than men (2.62 versus 2.55). Recognition rates are fairly consistent across age groups, with the Boomer Generation showing the highest rates (Table 5). The olfactory marketing actions with the highest recognition rates are those derived from mild odors in the environment (92.8%). A small percentage of respondents acknowledged perceiving actions based on strong fragrances (5.4%), while the rest perceived other types of actions (1.8%). The Boomer Generation admits to being influenced by olfactory marketing actions more than younger groups when making a purchasing decision (4.60 versus an average of 4.48). Women recognize a greater degree of influence on their purchasing decisions than men do (4.57 versus 4.44).

Table 5.

Perception and relevance of olfactory marketing on purchasing decisions based on sex and age (generational group)

Item	Total	Sex		Generation			
		Man	Woman	Gen Z	Gen Y	Gen X	Gen BB
Perception of olfactory marketing actions in the establishment	2.58	2.55	2.62	2.54	2.61	2.56	2.64
Influence of olfactory marketing on the purchasing decision	4.50	4.44	4.57	4.42	4.55	4.46	4.60

Source: Elaborated by the authors.

The perception of in-store gustatory marketing is quite low. Although the perception is similar between men and women (1.65 and 1.66, respectively), there are significant differences by age. Members of Generation X and the Baby Boomer generation show a greater perception (average of 1.79) than younger respondents (average of 1.47) (Table 6). Older age groups also recognize a greater influence of taste marketing on purchasing decisions (an average of 4.19) than younger respondents (an average of 3.44), and women recognize a greater influence than men do (an average of 3.91 versus 3.86). The most recognized types of taste marketing are free samples of food (51.6%) and beverages (35.1%).

Table 6.

Perception and relevance of taste marketing on the purchase decision based on sex and age (generational group)

Item	Total	Sex		Generation			
		Man	Woman	Gen Z	Gen Y	Gen X	Gen BB
Perception of taste marketing actions in the establishment	1.66	1.65	1.66	1.40	1.55	1.78	1.81
Influence of taste marketing on the purchase decision	3.88	3.86	3.91	3.27	3.62	4.15	4.23

Source: Elaborated by the authors.

Finally, tactile stimuli related to sensory marketing are perceived the least of all the senses (Table 7). Women perceive these stimuli more than men do (1.56 versus 1.44), as do younger people compared to older ones. Once the action is perceived, it has a relatively high influence on purchase decisions, which is greater in women than in men (4.37 versus 4.13) and in Centennials and Millennials (average of 4.34) than in Generation X and Baby Boomers (average of 4.05). The most recognized tactile marketing actions are free samples of cosmetic products (45.5%), clothes arranged on shelves so they can easily be touched (26.6%), and the ability to touch products (21.4%).

Table 7.*Perception and relevance of tactile marketing on the purchasing decision based on sex and age (generational group)*

Item	Total	Sex		Generation			
		Man	Woman	Gen Z	Gen Y	Gen X	Gen BB
Perception of tactile marketing actions in the establishment	1.51	1.48	1.56	1.55	1.55	1.44	1.45
Influence of tactile marketing on the purchasing decision	4.23	4.13	4.37	4.35	4.33	4.03	4.07

Source: Elaborated by the authors.

5. DISCUSSION

The main objective of this study was to assess the knowledge and perception levels of sensory marketing strategies in commercial establishments among the following generational groups: Centennials, Millennials, Generation X, and Baby Boomers. To this end, a combination of quantitative analysis methodologies was used, as this technique is estimated to produce good results in social science studies, particularly those discriminating based on sociodemographic variables (Fondevila-Gascón et al., 2024; Alabart-Algueró et al., 2025).

The results verify a high level of awareness, though not widespread, of sensory marketing among the population. Nevertheless, the perception of these strategies is

higher when they are implemented, thus capturing the public's attention in commercial establishments and improving brand image and recall (Krishna, 2012; Fondevila-Gascón et al., 2022; Pandey & Tripathi, 2025).

In conclusion, visual marketing strategies are perceived as more effective by women than by men. Similarly, women are recognized as having a greater influence on purchasing decisions. Centennials and millennials recognize the greatest influence of these actions on purchases. The most perceived visual sensory marketing stimulus in establishments is the order and organization of products, which predominates over interior decoration, window display design, and lighting. These findings have practical implications for retail professionals, suggesting the need to strengthen visual marketing strategies and tailor them to the gender most likely to purchase, while also emphasizing order and organization of products, according to the respondents' assessments.

These types of actions are generally recognized as highly effective in the purchasing decision process, especially those related to visual (Luna-Fernández et al., 2021; Yana-Salluca et al., 2022) and olfactory (Paluchová et al., 2017; Vega-Gómez et al., 2020) marketing. It is confirmed that the visual sense is the most relevant factor in the decision-making process.

To a lesser extent, a certain influence of tactile, auditory, and gustatory marketing actions carried out in commercial establishments on the purchase decision has also been identified (Krawczak, 2016; Ornati, 2021; Benzaoui & Cheriet, 2021; Han et al., 2024; Nayak & Satpathy, 2024). However, sensory stimuli usually do not have a significant effect on encouraging people to enter establishments, with the sole exception of visual marketing actions (Chen et al., 2021; Fondevila-Gascón et al., 2022).

Likewise, research findings reveal that awareness of, perception of, and influence on final purchase decisions of this type of action differ by gender and age. These indicators generally have a greater impact on women than men (except for sound marketing actions) and on younger people than older ones (except for olfactory and gustatory stimuli) (Grębosz and Wrońska, 2013; Priporas et al., 2017).

In any case, sensory marketing actions carried out in stores by appealing to emotions through visual, auditory, olfactory, gustatory, and tactile stimuli have a high probability of influencing purchasing behavior and perceived experience (Torabi et al., 2021; Tran et al., 2025). In short, when designed appropriately for a given commercial establishment, an integrated set of these actions usually has positive effects on purchase intention, customer satisfaction, loyalty, and perceived service quality (Spangenberg et al., 2005; Jiménez-Marín et al., 2019; Bagheri et al., 2023; Pal et al., 2025).

As a limitation of the study, the large sample size does not preclude the possibility of conducting further research using qualitative tools. This is a concrete suggestion for future research: the inclusion of focus groups or in-depth interviews following visits to commercial establishments that use sensory marketing strategies could provide

knowledge-transfer insights. Similarly, the study could be replicated in other European countries or on other continents to identify similarities and differences, and neuroscientific methods could be employed to detect correlations between activated senses and product acquisition.

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AUTHOR'S CONTRIBUTIONS, FUNDING AND ACKNOWLEDGMENTS

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Funding: This research did not receive external funding.

Acknowledgments: This text is part of a sensory marketing project by the University of Girona and the SIMPED Research Group.

Conflict of interest: none.

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Sosa, G. H., Ávalos, D. A. H., Barriga, V. D. V., & Falconí, P. R. P. (2024). Influencia del marketing sensorial en el comportamiento del consumidor de alimentos y bebidas. *Polo del Conocimiento*, 9(1), 1171-1215. <https://www.polodelconocimiento.com/ojs/index.php/es/article/view/6431>