

# Healthy breakfast perceptions: comparing private labels and national brands

International  
Journal of Retail &  
Distribution  
Management

53

Benedetta Grandi, Sofia Laudani, Maria Grazia Cardinali and  
Guido Cristini

*Department of Management and Economics, University of Parma, Parma, Italy*

Received 14 November 2025  
Revised 3 December 2025  
2 February 2026  
Accepted 3 March 2026

## Abstract

**Purpose** – In recent years, retailers' private labels (PLs) have increasingly established themselves as alternatives to national brands not only in terms of price but also regarding product quality and health-related attributes. However, it remains unclear which cues (intrinsic and extrinsic) guide consumers' perceptions of product healthiness in food retailing, and whether their effects differ between PLs and NBs in everyday supermarket choices. This research examines the influence of intrinsic factors (e.g. taste) and extrinsic factors (e.g. product name) on consumers' perceived healthiness across two breakfast food categories (biscuits and cereals), comparing PL and NB products.

**Design/methodology/approach** – A survey involving 876 Italian grocery shoppers was conducted. Data were collected through an online survey administered by a market research company to ensure sample representativeness in the Italian context and the generalisability of the results obtained. They were analysed using ANOVA, factor analysis and regression models.

**Findings** – Results reveal no significant difference in perceived healthiness between PLs and NBs. However, intrinsic cues are found to have a stronger positive effect on perceived product healthiness than extrinsic ones.

**Originality/value** – The study offers theoretical implications regarding perceptions of different brands and branding strategies, suggesting a maturation of PLs in grocery retailing and their ability to compete with NB products in satisfying consumers' health-related needs.

**Keywords** Grocery retailing, Private label, Brand perception, Health perception, Intrinsic cues, Extrinsic cues

**Paper type** Research article

## 1. Introduction

According to Ailawadi and Keller (2004, p. 332), a private label (PL) “identifies the goods and services of a retailer and differentiates them from those of competitors.” Historically introduced as low-cost alternatives to national brands, PLs have become a central strategic lever for retailers pursuing objectives of margin, differentiation and store loyalty (Mostafa and Elseidi, 2018; Karoui *et al.*, 2024; Chen *et al.*, 2023), evolving significantly alongside changes in food retailing formats and consumer behaviour (Czczotko *et al.*, 2022).

In their early stages, PLs were often generic, unbranded and strongly price-oriented (Anselmsson *et al.*, 2014; Beacom and Bergin, 2024), which led to higher perceived risk and lower purchase intentions compared with national brands (NBs) (Mathur and Gangwani, 2021; Beneke *et al.*, 2013). In recent years, however, investments in product innovation, line extensions and brand equity strategies have led retailers to the development of multi-tiered PL portfolios (cheap, standard, premium) and products that can compete with NBs also in terms of quality attributes (Keller *et al.*, 2022; Akcura *et al.*, 2019; Sethuraman and Gielens, 2014; Gielens *et al.*, 2021; Angelino *et al.*, 2021; Beacom *et al.*, 2022).

© Benedetta Grandi, Sofia Laudani, Maria Grazia Cardinali and Guido Cristini. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at [Link to the terms of the CC BY 4.0 licence](#).

**Funding:** This work was supported by Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Foods (award number: PE0000003).



International Journal of Retail &  
Distribution Management  
Vol. 54 No. 13, 2026  
pp. 53-67  
Emerald Publishing Limited  
e-ISSN: 1758-6690  
p-ISSN: 0959-0552  
DOI 10.1108/IJRDM-11-2025-0870

This evolution takes place within a market increasingly driven by health considerations, where consumers show a growing willingness to pay for products perceived as healthier and nutritionally adequate (Ali and Ali, 2020; Alsubhi *et al.*, 2023; Saba *et al.*, 2019; Alborno *et al.*, 2024).

To capture this demand and strengthen their product lines, many retailers have moved beyond the “value for money” proposition and introduced nutritionally improved items, often developed in partnership with national brand manufacturers (Hoskins *et al.*, 2024; Beacom *et al.*, 2022). This approach provides what Beneke (2010, p. 211) defines as “superior value for money,” combining price convenience and quality.

Consequently, the traditional “quality gap” between PLs and NBs is giving way to what may be called a “brand gap”: a divergence in perceived qualitative superiority and value between retailer and manufacturer brands, even when products are objectively comparable in quality (Rossi *et al.*, 2015; Nenycz-Thiel and Romaniuk, 2009; DelVecchio, 2001).

Although consumers claim to prioritize intrinsic attributes, such as taste and ingredients, when making food choices, they often base their judgments on extrinsic attributes such as the brand name, store image, perceived price and packaging (Rossi *et al.*, 2015; Younis and Elmeniahy, 2025).

In this context, the “brand gap” may also apply to products associated with health and well-being, as perceptions of healthiness depend not only on nutritional reformulation but also on the combined interpretation of multiple cues: intrinsic (e.g. taste, aroma, texture, nutritional content) and extrinsic (e.g. visual, tactile, colour, packaging and branding elements), that consumers use to infer the credibility of health claims and the perceived risk associated with consumption (Motoki *et al.*, 2025; Li *et al.*, 2024; Marozzo and Donato, 2025).

Previous research has examined both the competitive evolution of PLs and the multidimensional nature of perceived healthiness (Plasek *et al.*, 2020; Lusk, 2019). However, there is still a lack of coherent and comparative empirical evidence clarifying which cues are truly diagnostic of perceived healthiness when consumers compare PLs and NBs.

Specifically, it remains to be explored whether and to what extent substantive cues can bridge the brand gap in terms of perceived healthiness, and how personal factors such as health consciousness or perceived category risk affect the credibility and effectiveness of these signals.

In summary, this study aims to fill a gap in the literature on the relationship between brand type and perceived healthiness by providing empirical evidence on how different product cues shape consumers’ health evaluations of PL and NB products.

## 2. Literature review

### 2.1 Perceived quality: definitions, role and cue-based inference

Previous studies have highlighted the fundamental role of perceived quality in shaping purchase intentions toward PLs, sometimes even more than perceived value itself (Bao *et al.*, 2011b; Richardson *et al.*, 1994).

Perceived quality is defined as “the consumer’s judgment about a product’s overall excellence or superiority” (Zeithaml, 1988, p. 3) and represents a key criterion in product evaluation within retailing (Kakkos *et al.*, 2015). Unlike objective quality, which refers to measurable product attributes (e.g. ingredients, composition), perceived quality is an abstract construct built upon consumers’ experience, expectations and available information (Zeithaml, 1988).

Because consumers often lack the time or expertise to verify technical aspects, they rely on indirect cues to form their overall product judgments (Kara *et al.*, 2009).

According to the Cue Utilization Theory (Olson and Jacoby, 1972), consumers assess product quality based on a combination of intrinsic and extrinsic cues. Intrinsic cues include information related to a product’s composition and preparation (Bao *et al.*, 2011a). However,

in everyday purchase decisions, extrinsic cues tend to exert a stronger influence than intrinsic ones (Mostafa and Elseidi, 2018; Konuk, 2018), particularly when the brand is unfamiliar, making it more difficult for consumers to recognize intrinsic product properties (Mishra *et al.*, 2020).

Extrinsic cues can be divided into tangible (e.g. packaging design, price, brand name) and intangible attributes (e.g. store image, product endorsement, perceived quality variation within a product category) (Bao *et al.*, 2011b).

In food purchasing and consumption contexts, perceived quality is a multidimensional construct (Brunsø *et al.*, 2002), and perceived healthiness, the extent to which a product is regarded as beneficial to health, represents a critical subdimension (Petrescu *et al.*, 2020).

The objective quality gap between PL and NB products has progressively narrowed in many categories thanks to nutritional reformulations and PL upgrading strategies (Beacom *et al.*, 2022; Angelino *et al.*, 2021). In the specific case of breakfast foods, nutritional profiles of NBs and PLs have become increasingly similar, especially in terms of fibre, sugar and fat content (Angelino *et al.*, 2021).

Nevertheless, national brands still benefit from stronger brand equity and communication investments that enhance trust and perceived quality (DelVecchio, 2001; Nenycz-Thiel and Romaniuk, 2009; Lacoëuilhe *et al.*, 2020). PLs, by contrast, sometimes suffer from lower familiarity and higher perceived risk, linked to both price positioning and the retailer's overall reputation (Beneke *et al.*, 2013; González-Benito and Martos-Partal, 2014; Alić *et al.*, 2020). Based on these considerations, the following hypothesis can be proposed:

*H1a.* National-brand (NB) products are perceived as healthier than private-label (PL) products in the breakfast category.

The relationship between brand type (PL vs NB) and perceived healthiness may, however, vary depending on individual consumer characteristics, particularly health consciousness, defined as the degree to which individuals are attentive to the health aspects of their diet and try to monitor the nutritional value of foods (Jayanti and Burns, 1998). Highly health-conscious consumers are more motivated to analyse product information, more skilled at decoding labels and claims and less inclined to base evaluations only on symbolic cues (Mai and Hoffmann, 2012, 2015). Thus, when health consciousness is high, the perceptual advantage of national brands over PLs could tend to weaken, as informed and involved consumers rely more on diagnostic cues (e.g. ingredients, nutritional values, absence of additives) rather than on signals associated with the brand (Plasek *et al.*, 2020; Petrescu *et al.*, 2020). Conversely, among less health-conscious consumers, the brand may act as a cognitive shortcut to infer product quality and safety (Mai and Hoffmann, 2012, 2015).

*H1b.* Greater health consciousness reduces the perceptual gap in healthiness between NBs and PLs in the breakfast category.

Finally, it is important to consider the role of perceived category risk. Several studies have shown that perceived risk toward private-label products is linked to the characteristics of the product category (Batra and Sinha, 2000; Chen *et al.*, 2024). PLs tend to be preferred in low-risk contexts characterized by search attributes, features easily evaluated before purchase, rather than in categories dominated by experience or credence attributes, where consumers must infer quality after consumption or rely on indirect cues (Batra and Sinha, 2000; Glynn and Chen, 2009). As perceived risk increases, consumers rely more heavily on well-established extrinsic signals, such as brand familiarity and reputation (Batra and Sinha, 2000; Richardson *et al.*, 1994). Since NBs enjoy stronger brand equity and higher perceived credibility, risk may amplify the perceived healthiness gap between NBs and PLs. In more complex or "risky" categories, consumers are more likely to depend on the brand as a cue of trust and safety, reinforcing the "brand gap" (DelVecchio, 2001).

*H1c.* A higher level of perceived category risk increases the perceived healthiness gap between NBs and PLs for breakfast products.

## 2.2 Perceived healthiness and intrinsic versus extrinsic cues

[Mai and Hoffmann \(2015, p. 8\)](#) define perceived healthiness as “the consumer’s expectation of a product’s influence on his or her state of health.” Numerous studies show that consumers form this judgment by integrating a variety of cues, both intrinsic and extrinsic, which could be related to compositional aspects of the product or symbolic and communicative signals.

In particular, consumers tend to regard intrinsic cues (e.g. ingredients, nutrients, additives) as direct indicators of product quality and healthiness ([Plasek et al., 2020](#); [Petrescu et al., 2020](#)).

In light of Cue Utilization Theory ([Olson and Jacoby, 1972](#)) and the Total Food Quality Model ([Grunert, 2002](#)), cues that reflect the product’s substance are cognitively more diagnostic for evaluating quality and, consequently, perceived healthiness.

Even though intrinsic attributes are not always directly observable at the point of purchase, consumers can infer them from tangible signals (e.g. nutrition labels, ingredient lists) that represent them ([Grunert and Wills, 2007](#); [Kozup et al., 2003](#)).

Conversely, extrinsic attributes function as cognitive shortcuts, linked to brand reputation or retailer image, and do not necessarily align with the product’s actual quality.

Therefore, intrinsic-diagnostic attributes (those representing the substance and nutritional value of the product) are expected to exert a stronger influence on perceived healthiness than extrinsic ones.

*H2a.* The impact of intrinsic attributes on perceived healthiness is greater than that of extrinsic attributes.

According to the Elaboration Likelihood Model ([Petty and Cacioppo, 1986](#)), individuals highly involved in a topic, like for example health, process stimuli through the central route, focusing on the most diagnostic informational content and reducing reliance on heuristics or cognitive shortcuts. Thus, consumers with high health consciousness should base their evaluations on the product’s intrinsic and nutritional quality (e.g. ingredients, nutrient values, sugar or fat content) rather than on extrinsic signals such as brand or packaging design ([Mai and Hoffmann, 2012, 2015](#); [Plasek et al., 2020](#)). Conversely, consumers with low health consciousness process information more superficially, so they could rely more on easily accessible extrinsic cues ([Mai and Hoffmann, 2012, 2015](#)). Therefore, the positive effect of intrinsic attributes on perceived healthiness is expected to be stronger among highly health-conscious consumers, as they are more likely to use substantial and diagnostic cues when assessing a product’s health potential.

*H2b.* The impact of intrinsic attributes on perceived healthiness is stronger among consumers with higher health consciousness.

## 3. Methodology

### 3.1 Procedures and measures

The first step of the study was the selection of the product categories, to delimit the scope of analysis. After a careful analysis, we selected breakfast products: cereals and biscuits. Then, a questionnaire has been developed and administered online to a total sample of 876 Italian grocery retail shoppers. For the data collection a Market Research Company has been involved to ensure the representatives of the sample in the Italian context and the generalisability of the results obtained. The questionnaire was divided into different sections. After the socio-

demographic profile (Table 1), questions about healthy products were asked. After providing a brief definition of healthy products, a filter question related to whether respondents were buyers of health-oriented products guaranteed that the sample was familiar to the products and brands and had the knowledge and experience to answer the questions. Then, information about the reasons to buy healthy products, the category where they lastly bought a healthy product to assure the familiarity with the product (biscuits – 517 respondents and breakfast cereals – 359 respondents), the drivers that guide the selection of products in that category were asked. For each category, participants were invited to cite the brand names of a healthy product from a retailer (PL) and a manufacturer (NB), the ones they were more familiar with to guarantee enough closeness with the brands. Then, for both brands mentioned, participants were invited to evaluate on a 7-point Likert scale different product, brand and company attributes (Table 2). We operationalized the theoretical construct of “health consciousness”

**Table 1.** Sample characteristics

| Sociodemographic profile of the sample |                                                          |           |                |
|----------------------------------------|----------------------------------------------------------|-----------|----------------|
| Variable name                          | Options                                                  | Frequency | Percentage (%) |
| Gender                                 | Female                                                   | 442       | 50.5           |
|                                        | Male                                                     | 434       | 49.5           |
| Age (average)                          | 51.14 (min 20, max 89)                                   |           |                |
| Region of residence                    | North-West Italy                                         | 353       | 29.8           |
|                                        | North-East Italy                                         | 159       | 18.2           |
|                                        | Central Italy                                            | 181       | 20.7           |
|                                        | Southern Italy                                           | 204       | 23.3           |
|                                        | Islands                                                  | 79        | 9.0            |
| Size of the urban area of residence    | Large urban area (>100,000 inhabitants)                  | 263       | 30.0           |
|                                        | Medium-sized urban area (40,000–100,000 inhabitants)     | 239       | 27.3           |
|                                        | Rural area (<40,000 inhabitants)                         | 374       | 42.7           |
| Level of education                     | Lower secondary school certificate (middle school)       | 57        | 6.5            |
|                                        | Upper secondary school certificate (high school diploma) | 445       | 50.8           |
|                                        | Bachelor's degree (3 years)                              | 102       | 11.6           |
|                                        | Master's degree or equivalent (5 years or more)          | 202       | 23.1           |
|                                        | Doctorate/Master's/Postgraduate diploma                  | 70        | 8.0            |
| House hold size                        | One person                                               | 113       | 12.9           |
|                                        | Two people                                               | 279       | 31.8           |
|                                        | Three people                                             | 231       | 26.4           |
|                                        | ≥ Four people                                            | 235       | 28.9           |
| Employment status                      | Permanently employed (open-ended contract)               | 496       | 56.6           |
|                                        | Temporarily employed (fixed-term contract)               | 75        | 8.6            |
|                                        | Looking for first job                                    | 4         | 0.5            |
|                                        | Unemployed                                               | 52        | 5.9            |
|                                        | Student                                                  | 30        | 3.4            |
|                                        | Homemaker                                                | 80        | 9.1            |
|                                        | Retired from work                                        | 5         | 0.6            |
|                                        | Pensioner                                                | 134       | 15.3           |

Table 2. Scales and items

| Scale                                 | Items                                                                                                                                                                                                                                                                                                                                                                       | Reference                            | $\alpha$<br>NB <sup>a</sup> | $\alpha$<br>PL <sup>b</sup> |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------|-----------------------------|
| Perceived health                      | <ul style="list-style-type: none"><li>- They are part of a healthy diet</li><li>- They are good for my health</li><li>- They have a good nutritional profile</li></ul>                                                                                                                                                                                                      | Kozup <i>et al.</i> (2003)           | 0.891                       | 0.886                       |
| Taste                                 | <ul style="list-style-type: none"><li>- They taste better than others</li><li>- They are good</li><li>- They have a taste that satisfies me</li></ul>                                                                                                                                                                                                                       | Peryam and Pilgrim (1957)            | 0.873                       | 0.881                       |
| Naming                                | <ul style="list-style-type: none"><li>- The brand name used for health-oriented products is one of the reasons for their market success</li><li>- I am satisfied with the name used for health-oriented products</li><li>- I believe the chosen name for the products can be well-received by consumers</li><li>- The chosen brand name conveys a sense of health</li></ul> | Zhang and Schmitt (2001)             | 0.890                       | 0.886                       |
| Health adv                            | <ul style="list-style-type: none"><li>- Its advertisements focus on communicating a commitment to health and a healthy diet</li></ul>                                                                                                                                                                                                                                       | Jin and Lutz (2013)                  | –                           | –                           |
| Health information                    | <ul style="list-style-type: none"><li>- They provide complete information (through claims/slogans and labels)</li><li>- They provide useful information (through claims/slogans and labels) for making a choice</li><li>- They provide relevant information (through claims/slogans and labels) for making a choice</li></ul>                                               | Mason <i>et al.</i> (2001)           | 0.880                       | 0.868                       |
| Perceived health risk of the category | <ul style="list-style-type: none"><li>- (product category) . . . could have negative consequences on my health</li><li>- (product category) . . . could be risky because the quality is not optimal</li></ul>                                                                                                                                                               | González Mieres <i>et al.</i> (2006) | 0.820                       |                             |
| Diet (health commitment)              | <ul style="list-style-type: none"><li>- I try to reduce my salt intake</li><li>- I pay attention to the amount of fat I consume</li><li>- I follow a balanced diet</li><li>- I regularly eat fruits and vegetables</li><li>- I try to moderate my red meat intake</li><li>- I try to avoid eating snacks and sweets</li></ul>                                               | Moorman and Matulich (1993)          | 0.844                       |                             |
| Brand trust                           | <ul style="list-style-type: none"><li>- I trust the brand</li><li>- The brand is honest</li><li>- The brand is reliable</li></ul>                                                                                                                                                                                                                                           | Herbst <i>et al.</i> (2012)          | 0.865                       | 0.854                       |
| Product familiarity                   | <ul style="list-style-type: none"><li>- I know the products</li><li>- I am familiar with the products</li><li>- I have enough information to evaluate the products</li></ul>                                                                                                                                                                                                | Freling <i>et al.</i> (2011)         | 0.943                       |                             |

**Note(s):** <sup>a</sup> Cronbach's Alpha of the scales for the national brands' perceptions, <sup>b</sup> Cronbach's Alpha of the scales for the private labels' perceptions

through health commitment to better assess consumers' involvement in their health. Indeed, in line with Gould (1990), health consciousness is defined as a multidimensional trait reflecting an individual's internal focus on their health. An active commitment to monitoring one's diet represents the behavioural manifestation of health involvement, which is one of the fundamental dimensions of health consciousness. Data were analysed using SPSS Statistics; ANOVA and linear regressions were run to test the hypotheses.

#### 4. Results

The first part of the analysis was dedicated to the understanding of the existence of a difference in health perceptions between PL and NB products in the two categories selected. Since participants were asked to evaluate both PL and NB products in one of the two categories presented, a repeated measures ANOVA was conducted. Age, gender, education and category familiarity served as covariates, since it has been found that they could affect consumers' responses (Step toe *et al.*, 1995; Wardle *et al.*, 2000). The differences between health perceptions were measured for both the categories selected to identify possible different patterns that reflect the different products' characteristics in terms of health perception. Furthermore, the level of health commitment was measured to understand if and to what extent it can affect the health perception of products. Participants were then divided into two groups based on the median split method for the health commitment variable (median = 6.00). Before the analysis we conducted a repeated measure ANOVA to assess trust toward the PL and national brand for each participant and we did not find a significant difference ( $M_{PL} = 5.49$ ,  $M_{NB} = 5.49$ ,  $p = 0.942$ ). This was done to ensure the same level of commitment of each participant towards the two brands.

The two categories selected (biscuits and cereals) were perceived having a different health risk ( $M_b = 3.101$ ,  $M_c = 2.526$ ,  $p < 0.001$ ). In the same way, results revealed that private brands in the cereals category were found healthier than biscuits ( $M_b = 5.209$ ,  $M_c = 5.536$ ,  $p < 0.001$ ), and the same happened for national brands ( $M_b = 5.178$ ,  $M_c = 5.533$ ,  $p < 0.001$ ). Overall, cereals were perceived healthier than biscuits, confirming a different health nature in the mind of the customers and allowing the researchers to test differences between PL and NB products in different contexts.

Analysing the different health perception between PL and national brand products across the two categories, despite the differences among the products, we found no differences in breakfast cereals ( $M_{PL} = 5.536$ ,  $M_{NB} = 5.553$ ,  $p = 0.932$ ) and in biscuits ( $M_{PL} = 5.209$ ,  $M_{NB} = 5.178$ ,  $p = 0.344$ ).

Considering the level of health commitment, we found that overall consumers who stated to have higher level of health commitment, perceived brands to be healthier than consumers with low level of health commitment ( $M_{HIGH} = 5.531$ ,  $M_{LOW} = 5.184$ ,  $p < 0.001$ ). Both groups with high and low level of health commitment perceived PL and national brands to be similar on the nutritional profile ( $M_{LOWPL} = 5.064$ ,  $M_{LOWNB} = 5.056$ ,  $p = 0.998$ ;  $M_{HIGHPL} = 5.657$ ,  $M_{HIGHNB} = 5.623$ ,  $p = 0.160$ ).

We did not find any interactive effect between health commitment and category: in both categories, no matter what the level of health commitment is, consumers perceived national brand and PL product to have the same health profile.

To test the impact of different cues (both external and internal) on the perceived health image of PL and NB products we ran a regression using SPSS including taste, nutritional information available, value for money, naming, out-of-store health advertising and quality of the ingredients. Before running the regression, in order to manage multicollinearity given by the similarity of the concepts analysed (Barbaranelli and D'Olimpio, 2007), a Principal Component Analysis (PCA) with Varimax rotation was conducted for both NB (KMO = 0.746; Bartlett <0.001) and PL (KMO = 0.727; Bartlett <0.001). In both cases, two components were extracted: the first one comprises the extrinsic cues (health advertising and naming) while the second one includes the intrinsic ones (taste and nutritional information). The results of the extraction for the PL and NB products are reported in Table 3.

Then the coefficients were used to run a regression and measure the impact of intrinsic and extrinsic cues on the perceived health image of PL and NB products. Results of the regressions show that for both PL and NB products, the impact of intrinsic cues on perceived health image is greater than the impact of extrinsic ones (NB:  $B_{EXT} = 0.402$ ,  $p < 0.001$ ,  $B_{INT} = 0.661$ ,  $p < 0.001$ , R-square = 0.599, Adjusted R-square = 0.598; PL:  $B_{EXT} = 0.358$ ,  $p < 0.001$ ,  $B_{INT} = 0.702$ ,  $p < 0.001$ , R-square = 0.621, Adjusted R-square = 0.620).

**Table 3.** Extraction of the components for PL and NB

|                         | National brand<br>Component 1 | Component 2 | Private label<br>Component 1 | Component 2 |
|-------------------------|-------------------------------|-------------|------------------------------|-------------|
| Taste                   | 0.258                         | 0.913       | 0.223                        | 0.909       |
| Nutritional information | 0.401                         | 0.835       | 0.363                        | 0.832       |
| Naming                  | 0.848                         | 0.378       | 0.830                        | 0.411       |
| Health advertising      | 0.908                         | 0.269       | 0.929                        | 0.211       |

A regression model including brand  $\times$  attribute interaction terms was estimated to test whether the effects of extrinsic and intrinsic attributes on perceived healthiness differed across brand types. The  $t$ -tests on the interaction coefficients were not significant ( $p > 0.05$ ). In other words, both national brands and PLs follow a very similar structural pattern in how internal and external cues predict perceived healthiness.

Two separate moderation analyses were conducted to test whether attention to diet moderated the relationship between product attribute factors (Factor 1 – extrinsic cues; Factor 2 – intrinsic cues) and perceived healthiness for the PL and national brand products.

Results show that neither of the interaction terms - Factor1PL  $\times$  Attention to diet ( $B = -0.010$ ,  $p = 0.687$ ) nor Factor2PL  $\times$  Attention to diet ( $B = -0.024$ ,  $p = 0.360$ ) - reached statistical significance. This indicates that the strength of the relationships between product attributes and perceived healthiness does not vary as a function of health commitment in the PL condition. Attention to diet was also a positive predictor ( $B = 0.101$ ,  $p < 0.001$ ). Yet, the interaction terms - Factor1NB  $\times$  Attention to diet ( $B = 0.000$ ,  $p = 0.991$ ) and Factor2NB  $\times$  Attention to diet ( $B = -0.026$ ,  $p = 0.337$ ) - were non-significant, indicating that health commitment did not moderate the influence of either attribute dimension on perceived healthiness for the NB product.

Overall, the results suggest that individuals who are more attentive to their diet perceive products as generally healthier. However, the role of health commitment is additive rather than interactive - it enhances perceived healthiness directly but does not alter the impact of product attributes on this perception. The results of the study are summarized in the table below (Table 4).

**Table 4.** Presentation of results

| Hypothesis | Predicted effect                                                                                                             | Statistical evidence                                                         | Conclusion    |
|------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------|
| H1a        | National-brand (NB) products are perceived as healthier than private-label (PL) products in the breakfast category           | No sig. difference ( $p > 0.05$ )                                            | Not Supported |
| H1b        | Greater health consciousness reduces the perceptual gap in healthiness between NBs and PLs in the breakfast category         | Interaction non-sig. ( $p > 0.05$ )                                          | Not Supported |
| H1c        | A higher level of perceived category risk increases the perceived healthiness gap between NBs and PLs for breakfast products | No brand gap found in either category ( $p > 0.05$ )                         | Not Supported |
| H2a        | The impact of intrinsic attributes on perceived healthiness is greater than that of extrinsic attributes                     | $B_{int} > B_{ext}$ both for PL and NB perceived healthiness ( $p < 0.001$ ) | Supported     |
| H2b        | The impact of intrinsic attributes on perceived healthiness is stronger among consumers with higher health consciousness     | Interaction non-sig. ( $p > 0.05$ )                                          | Not Supported |

## 5. General discussion

The present study explored consumer health perceptions of retailers' PL and national brand (NB) products in the grocery retail context, across two food categories (biscuits and breakfast cereals), and examined the influence of intrinsic and extrinsic product cues on health-related brand perceptions. Utilizing repeated measures ANOVA and linear regression, the findings provide a nuanced understanding of the variables affecting perceived healthiness and consumer attitudes. The results indicate that product category significantly influences health perceptions. Cereals were consistently rated as healthier than biscuits, a finding that aligns with prevailing consumer associations of cereals with nutrition and dietary fibre, as opposed to the more indulgent connotations of biscuits. Importantly, this categorization effect persisted regardless of the type of brand (PL or NB): all brands in the cereal category were perceived healthier than the brands in the biscuit one, in contrast with [H1c](#). Contrary to conventional assumptions about brand superiority ([Rossi et al., 2015](#); [Nenycz-Thiel and Romaniuk, 2009](#); [DelVecchio, 2001](#)), no significant differences were identified between PL and NB products in terms of perceived healthiness across the two categories disconfirming [H1a](#). This suggests that PL offerings in grocery retailing are now viewed as viable alternatives to NB products in the context of health, potentially reflecting improvements in PL quality, formulation or consumer trust in retailer brands. In fact, for both brands, customers feel the same level of trust, confirming that both retailers and manufacturers can offer valuable health products.

In addition, we found that health commitment did not affect the health-related brand gap perceptions, not confirming [H1b](#). We previously hypothesized that a greater health commitment could lead individuals to be more motivated to analyse product information, more skilled at decoding labels and claims and less inclined to base their evaluations on symbolic cues such as the brand ([Mai and Hoffmann, 2015](#)), reducing the differences between PL and NB products. As a matter of fact, researcher found that PL products have a nutritional composition similar to or better than NB equivalents ([Beacom et al., 2022](#); [Bodur et al., 2016](#)) and thus, higher commitment leads to a more objective evaluation of the nutritional profile and a reduces the effect of perceptions of the product and brand judgement. From a marketing perspective, this finding creates opportunity for retailers to promote health towards PL products as well as price for competitive advantage and to increase overall brand equity.

Then, after dividing intrinsic and extrinsic cues using PCA, linear regressions were run to find the factors contributing to the perceived health image of PL and NB products. Results show that when dealing with health, customers rely more on intrinsic cues (taste, ingredients) to evaluate the healthiness of a product, no matter which is the brand they are asked to judge. These results confirm [H2a](#). We hypothesized that intrinsic-diagnostic attributes (those that represent the substance and nutritional value of the product) can exert a stronger influence on perceived healthiness than extrinsic attributes of a symbolic nature. In fact, consumers tend to rely on intrinsic cues (e.g. ingredients, nutrients, additives) as direct indicators of a product's quality and healthiness ([Plasek et al., 2020](#); [Petrescu et al., 2020](#)).

However, data did not confirm [H2b](#). Results revealed that health commitment is a significant positive predictor of brand health perception: individuals who are more attentive to their diet perceive products as generally healthier compared to those who state having a poorer diet. However, the interaction terms between health commitment and each attribute factor were non-significant, indicating that health commitment did not moderate the effects of product attributes on perceived healthiness for either brand type. Intrinsic cues are equally important: no matter which is the level of health commitment, people rely on taste and food content to assess the healthiness of their choices. The literature states that high involvement in a given topic leads individuals to concentrate more on the content and less on symbolic features ([Plasek et al., 2020](#)). When dealing with health, content is relevant no matter which is the level of commitment. In line with these results, retailers and manufacturers need to put more attention into the development of clear, detailed and transparent information since are fundamental in the development of brand health image. At the same time, arranging product tasting events, by stimulating the senses, can positively affect the image of the brand.

Coherently, the Global Health and Wellness survey ([NIELSENIQ, 2025](#)), posits that 44% of participants involved claimed for trial or sample products before the choice and the 45% wanted detailed information and performance claims.

One last consideration has to be done about dietary habits and the variable used in the present study. The level of involvement has been measured with the health commitment of the participants involved, considered as an indicator of how much people care about what they eat. However, this measure can be misleading given that there is a difference between what people state and what people actually do. Moreover, future studies may consider different measures such as health consciousness or health literacy, health knowledge or a combination of them in order to detect possible interaction effects and different results. Previous studies pointed out that also health consciousness can lead to misinformation on nutrition since people with high levels of health consciousness are more vulnerable. Misinformation is in turn associated to poor health behaviours and outcomes ([Peng and Shen, 2025](#)). Self-stated health motivation does not necessarily give to individuals the ability to identify misinformation, evaluate the sources of information and distinguish the valuable ones from the unreliable ones. When measuring the health consciousness and knowledge, is important to consider both subjective and objective knowledge. In fact, a comparison between subjective knowledge (refers to individuals' perceptions of their own knowledge) and objective knowledge (refers to absolute knowledge measured against objective standards) can be measured to identify overconfidence (average objective knowledge exceeds average subjective knowledge) knowledge calibrated (average objective knowledge and average subjective knowledge correspond to each other) or knowledge overconfident (average objective knowledge exceeds average subjective knowledge) ([Hansen and Thomsen, 2022](#)). Analysing these phenomena can be helpful to understand the consumers' way of collecting and processing data and predict the role of different cues in the evaluation of health brand image.

Despite the valuable insights provided, this study presents several limitations. Firstly, the research relies entirely on self-reported measures to assess perceptions of healthiness, trust and consumer attitudes. Such measures are inherently subjective and may be influenced by individual interpretation or social desirability bias, potentially limiting the accuracy of the findings. The scope of the study was confined to three product categories which, although representative of common consumer goods, may not adequately reflect the full spectrum of food products available in the market. As such, the generalisability of the findings to other product categories, particularly those with different health connotations or usage contexts, remains limited outside the breakfast products. Another methodological constraint lies in the use of a median split to categorize continuous variables such as trust and health commitment. While this approach simplifies analysis, it can reduce statistical power and overlook the subtleties present within a continuous distribution, leading to potential misclassification of respondents. Moreover, while the study explored consumer attitudes and their willingness to repurchase the brand, it did not measure actual purchase behaviour. The absence of behavioural data limits the ability to draw firm conclusions about how perceived healthiness translates into concrete consumer actions. Furthermore, although the analysis included some advertising-related variables, it did not consider the actual content, tone or reach of promotional materials. Lastly, the findings are context-specific and may reflect particular cultural, economic or retail market conditions. The perception and acceptance of PL versus NB products can vary significantly across countries and retail environments, suggesting that caution is warranted when attempting to generalize these results beyond the studied context.

## 6. Conclusion

This study contributes to the growing body of literature on consumer perceptions of food healthiness by revealing the increasing parity between PL and NB products in health-related evaluations. While product category remains a dominant influence on perceived health risk,

the absence of significant differences between PL and NB products suggests a maturation of the PL market and increasing consumer confidence in retailer brands in different categories.

Level of health commitment was found to influence the overall perceived healthiness of the brands sold in a specific category, but not the differences between brands inside the product categories. However, level of commitment did not moderate the role of different cues on perceived health brand image. Further studies are required to enrich the topic and provide more insight.

Future analysis can investigate also the relationship between store image and store brand image as a relevant aspect in shaping brand perceptions, especially the PL ones. Finally, the present study analysed only health perceptions, deliberately ignoring the relationship between health perceptions and actual purchase behaviour, especially regarding price sensitivity and willingness to pay for health enhancing features.

## References

- Ailawadi, K.L. and Keller, K.L. (2004), "Understanding retail branding: conceptual insights and research priorities", *Journal of Retailing*, Vol. 80 No. 4, pp. 331-342, doi: [10.1016/j.jretai.2004.10.008](https://doi.org/10.1016/j.jretai.2004.10.008).
- Akcura, M.T., Sinapuelas, I.C. and Wang, H.M.D. (2019), "Effects of multitier private labels on marketing national brands", *The Journal of Product and Brand Management*, Vol. 28 No. 3, pp. 391-407, doi: [10.1108/jpbm-10-2017-1623](https://doi.org/10.1108/jpbm-10-2017-1623).
- Albornoz, R., García-Salirrosas, E.E., Millones-Liza, D.Y., Villar-Guevara, M. and Toyohama-Pocco, G. (2024), "Using the theory of perceived value to determine the willingness to consume foods from a healthy brand: the role of health consciousness", *Nutrients*, Vol. 16 No. 13, p. 1995, doi: [10.3390/nu16131995](https://doi.org/10.3390/nu16131995).
- Ali, T. and Ali, J. (2020), "Factors affecting the consumers' willingness to pay for health and wellness food products", *Journal of Agriculture and Food Research*, Vol. 2, 100076, doi: [10.1016/j.jafr.2020.100076](https://doi.org/10.1016/j.jafr.2020.100076).
- Alić, A., Činjurević, M. and Agić, E. (2020), "The role of brand image in consumer-brand relationships: similarities and differences between national and private label brands", *Management and Marketing*, Vol. 15 No. 1, pp. 1-16, doi: [10.2478/mmcks-2020-0001](https://doi.org/10.2478/mmcks-2020-0001).
- Alsubhi, M., Blake, M., Nguyen, T., Majmudar, I., Moodie, M. and Ananthapavan, J. (2023), "Consumer willingness to pay for healthier food products: a systematic review", *Obesity Reviews*, Vol. 24 No. 1, e13525, doi: [10.1111/obr.13525](https://doi.org/10.1111/obr.13525).
- Angelino, D., Del Bo', C., Pellegrini, N. and Martini, D. and SINU Young Working Group (2021), "Comparison of the nutritional quality of branded and private-label food products sold in Italy: focus on the cereal-based products collected from the food labeling of Italian products study", *Frontiers in Nutrition*, Vol. 8, 660766, doi: [10.3389/fnut.2021.660766](https://doi.org/10.3389/fnut.2021.660766).
- Anselmsson, J., Vestman Bondesson, N. and Johansson, U. (2014), "Brand image and customers' willingness to pay a price premium for food brands", *The Journal of Product and Brand Management*, Vol. 23 No. 2, pp. 90-102, doi: [10.1108/jpbm-10-2013-0414](https://doi.org/10.1108/jpbm-10-2013-0414).
- Bao, Y., Sheng, S., Bao, Y. and Stewart, D. (2011a), "Assessing quality perception of private labels: intransient cues and consumer characteristics", *Journal of Consumer Marketing*, Vol. 28 No. 6, pp. 448-458, doi: [10.1108/07363761111165967](https://doi.org/10.1108/07363761111165967).
- Bao, Y., Bao, Y. and Sheng, S. (2011b), "Motivating purchase of private brands: effects of store image, product signatureness, and quality variation", *Journal of Business Research*, Vol. 64 No. 2, pp. 220-226, doi: [10.1016/j.jbusres.2010.02.007](https://doi.org/10.1016/j.jbusres.2010.02.007).
- Barbaranelli, C. and D'Olimpio, F. (2007), *Analisi dei dati con SPSS vol. 1 Le analisi di base*, Milano LED Edizioni Universitarie.
- Batra, R. and Sinha, I. (2000), "Consumer-level factors moderating the success of private label brands", *Journal of Retailing*, Vol. 76 No. 2, pp. 175-191, doi: [10.1016/s0022-4359\(00\)00027-0](https://doi.org/10.1016/s0022-4359(00)00027-0).

- Beacom, E. and Bergin, A. (2024), "Private label partnerships with retailers: a risk or opportunity for producers?", *International Journal of Retail and Distribution Management*, Vol. 52 No. 13, pp. 16-30, doi: [10.1108/ijrdm-08-2023-0494](https://doi.org/10.1108/ijrdm-08-2023-0494).
- Beacom, E., Hollywood, L.E., McLaughlin, C., Furey, S., Price, R., McMahon-Beattie, U. and Burns, A. (2022), "Investigating the healthiness of food products on promotion: market brands and own brands", *British Food Journal*, Vol. 124 No. 4, pp. 1221-1237, doi: [10.1108/bfj-04-2021-0371](https://doi.org/10.1108/bfj-04-2021-0371).
- Beneke, J. (2010), "Consumer perceptions of private label brands within the retail grocery sector of South Africa", *African Journal of Business Management*, Vol. 4 No. 2, pp. 203-220.
- Beneke, J., Flynn, R., Greig, T. and Mukaiwa, M. (2013), "The influence of perceived product quality, relative price and risk on customer value and willingness to buy: a study of private label merchandise", *The Journal of Product and Brand Management*, Vol. 22 No. 3, pp. 218-228, doi: [10.1108/jpbm-02-2013-0262](https://doi.org/10.1108/jpbm-02-2013-0262).
- Bodur, H.O., Tofighi, M. and Grohmann, B. (2016), "When should private label brands endorse ethical attributes?", *Journal of Retailing*, Vol. 92 No. 2, pp. 204-217, doi: [10.1016/j.jretai.2015.11.001](https://doi.org/10.1016/j.jretai.2015.11.001).
- Brunsø, K., Fjord, T.A. and Grunert, K.G. (2002), *Consumers' Food Choice and Quality Perception*.
- Chen, S., Wang, P. and Wood, J. (2023), "What is a retail brand-a systematic review of terms and definitions", *International Journal of Retail and Distribution Management*, Vol. 51 No. 5, pp. 653-673, doi: [10.1108/ijrdm-06-2022-0187](https://doi.org/10.1108/ijrdm-06-2022-0187).
- Chen, S., Wang, P. and Wood, J. (2024), "Economy or premium? A systematic review of factors influencing retailers' own product brand strategies", *International Journal of Retail and Distribution Management*, Vol. 52 No. 4, pp. 477-492, doi: [10.1108/ijrdm-08-2023-0528](https://doi.org/10.1108/ijrdm-08-2023-0528).
- Czeczotko, M., Górska-Warsewicz, H. and Zaremba, R. (2022), "Health and non-health determinants of consumer behavior toward private label products—a systematic literature review", *International Journal of Environmental Research and Public Health*, Vol. 19 No. 3, p. 1768, doi: [10.3390/ijerph19031768](https://doi.org/10.3390/ijerph19031768).
- DelVecchio, D. (2001), "Consumer perceptions of private label quality: the role of product category characteristics and consumer use of heuristics", *Journal of Retailing and Consumer Services*, Vol. 8 No. 5, pp. 239-249, doi: [10.1016/S0969-6989\(00\)00030-8](https://doi.org/10.1016/S0969-6989(00)00030-8).
- Freling, T.H., Crosno, J.L. and Henard, D.H. (2011), "Brand personality appeal: conceptualization and empirical validation", *Journal of the Academy of Marketing Science*, Vol. 39 No. 3, pp. 392-406, doi: [10.1007/s11747-010-0208-3](https://doi.org/10.1007/s11747-010-0208-3).
- Gielens, K., Ma, Y., Namin, A., Sethuraman, R., Smith, R.J., Bachtel, R.C. and Jervis, S. (2021), "The future of private labels: towards a smart private label strategy", *Journal of Retailing*, Vol. 97 No. 1, pp. 99-115, doi: [10.1016/j.jretai.2020.10.007](https://doi.org/10.1016/j.jretai.2020.10.007).
- Glynn, M.S. and Chen, S. (2009), "Consumer-factors moderating private label brand success: further empirical results", *International Journal of Retail and Distribution Management*, Vol. 37 No. 11, pp. 896-914, doi: [10.1108/09590550910999343](https://doi.org/10.1108/09590550910999343).
- González Mieres, C., María Díaz Martín, A. and Trespalacios Gutiérrez, J.A. (2006), "Antecedents of the difference in perceived risk between store brands and national brands", *European Journal of Marketing*, Vol. 40 Nos 1-2, pp. 61-82, doi: [10.1108/03090560610637310](https://doi.org/10.1108/03090560610637310).
- González-Benito, Ó. and Martos-Partal, M. (2014), "Price sensitivity versus perceived quality: moderating effects of retailer positioning on private label consumption", *Journal of Business Economics and Management*, Vol. 15 No. 5, pp. 935-950, doi: [10.3846/16111699.2012.744346](https://doi.org/10.3846/16111699.2012.744346).
- Gould, S.J. (1990), "Health consciousness and health behavior: the application of a new health consciousness scale", *American Journal of Preventive Medicine*, Vol. 6 No. 4, pp. 228-237, doi: [10.1016/S0749-3797\(18\)31009-2](https://doi.org/10.1016/S0749-3797(18)31009-2).
- Grunert, K.G. (2002), "Current issues in the understanding of consumer food choice", *Trends in Food Science and Technology*, Vol. 13 No. 8, pp. 275-285, doi: [10.1016/S0924-2244\(02\)00137-1](https://doi.org/10.1016/S0924-2244(02)00137-1).
- Grunert, K.G. and Wills, J.M. (2007), "A review of European research on consumer response to nutrition information on food labels", *Journal of Public Health*, Vol. 15 No. 5, pp. 385-399, doi: [10.1007/s10389-007-0101-9](https://doi.org/10.1007/s10389-007-0101-9).

- Herbst, K.C., Finkel, E.J., Allan, D. and Fitzsimons, G.M. (2012), "On the dangers of pulling a fast one: advertisement disclaimer speed, brand trust, and purchase intention", *Journal of Consumer Research*, Vol. 38 No. 5, pp. 909-919, doi: [10.1086/660854](https://doi.org/10.1086/660854).
- Hoskins, J., Konuk, F.A. and Machin, J.E. (2024), "The contribution of organic private label products to private label share outcomes", *European Journal of Marketing*, Vol. 58 No. 9, pp. 2031-2060, doi: [10.1108/ejm-02-2023-0114](https://doi.org/10.1108/ejm-02-2023-0114).
- Hansen, T. and Thomsen, T.U. (2022), "How individual differences in knowledge over-/underconfidence impede dietary consumer decision making under time pressure", *Personality and Individual Differences*, Vol. 195, 111701, doi: [10.1016/j.paid.2022.111701](https://doi.org/10.1016/j.paid.2022.111701).
- Jayanti, R.K. and Burns, A.C. (1998), "The antecedents of preventive health care behavior: an empirical study", *Journal of the Academy of Marketing Science*, Vol. 26 No. 1, pp. 6-15, doi: [10.1177/0092070398261002](https://doi.org/10.1177/0092070398261002).
- Jin, H.S. and Lutz, R.J. (2013), "The typicality and accessibility of consumer attitudes toward television advertising: implications for the measurement of attitudes toward advertising in general", *Journal of Advertising*, Vol. 42 No. 4, pp. 343-357, doi: [10.1080/00913367.2013.803184](https://doi.org/10.1080/00913367.2013.803184).
- Kakkos, N., Trivellas, P. and Sdrolas, L. (2015), "Identifying drivers of purchase intention for private label brands. Preliminary evidence from Greek consumers", *Procedia - Social and Behavioral Sciences*, Vol. 175, pp. 522-528, doi: [10.1016/j.sbspro.2015.01.1232](https://doi.org/10.1016/j.sbspro.2015.01.1232).
- Kara, A., Rojas-Méndez, J.I., Kucukemiroglu, O. and Hancar, T. (2009), "Consumer preferences of store brands: role of prior experiences and value consciousness", *Journal of Targeting, Measurement and Analysis for Marketing*, Vol. 17 No. 2, pp. 127-137, doi: [10.1057/jt.2009.6](https://doi.org/10.1057/jt.2009.6).
- Karoui, S., Behi, A.T., Fehri, D., Belaid, S. and Lacoëuilhe, J. (2024), "Predicting label brand loyalty: a comparison of two models using a partial least square-structural equation modeling", *Journal of Retailing and Consumer Services*, Vol. 79, 103852, doi: [10.1016/j.jretconser.2024.103852](https://doi.org/10.1016/j.jretconser.2024.103852).
- Keller, K.O., Dekimpe, M.G. and Geyskens, I. (2022), "Adding budget and premium private labels to standard private labels: established empirical generalizations, emerging empirical insights, and future research", *Journal of Retailing*, Vol. 98 No. 1, pp. 5-23, doi: [10.1016/j.jretai.2022.02.004](https://doi.org/10.1016/j.jretai.2022.02.004).
- Konuk, F.A. (2018), "The role of store image, perceived quality, trust and perceived value in predicting consumers' purchase intentions towards organic private label food", *Journal of Retailing and Consumer Services*, Vol. 43, pp. 304-310, doi: [10.1016/j.jretconser.2018.04.011](https://doi.org/10.1016/j.jretconser.2018.04.011).
- Kozup, J.C., Creyer, E.H. and Burton, S. (2003), "Making healthful food choices: the influence of health claims and nutrition information on consumers' evaluations of packaged food products and restaurant menu items", *Journal of Marketing*, Vol. 67 No. 2, pp. 19-34, doi: [10.1509/jmkg.67.2.19.18608](https://doi.org/10.1509/jmkg.67.2.19.18608).
- Lacoëuilhe, J., Louis, D., Lombart, C. and Labbé-Pinlon, B. (2020), "The impacts of comparative ads used by retailers to compare their store brands with national brands", *International Journal of Retail and Distribution Management*, Vol. 49 No. 1, pp. 1-22, doi: [10.1108/ijrdm-11-2019-0364](https://doi.org/10.1108/ijrdm-11-2019-0364).
- Li, X., Wang, S., Ruan, Y., Pan, Y. and Huang, Y. (2024), "Taste or health: the impact of packaging cues on consumer decision-making in healthy foods", *Appetite*, Vol. 203, 107636, doi: [10.1016/j.appet.2024.107636](https://doi.org/10.1016/j.appet.2024.107636).
- Lusk, J.L. (2019), "Consumer beliefs about healthy foods and diets", *PLoS One*, Vol. 14 No. 10, e0223098, doi: [10.1371/journal.pone.0223098](https://doi.org/10.1371/journal.pone.0223098).
- Mai, R. and Hoffmann, S. (2012), "Taste lovers versus nutrition fact seekers: how health consciousness and self-efficacy determine the way consumers choose food products", *Journal of Consumer Behaviour*, Vol. 11 No. 4, pp. 316-328, doi: [10.1002/cb.1390](https://doi.org/10.1002/cb.1390).
- Mai, R. and Hoffmann, S. (2015), "How to combat the unhealthy= tasty intuition: the influencing role of health consciousness", *Journal of Public Policy and Marketing*, Vol. 34 No. 1, pp. 63-83, doi: [10.1509/jppm.14.006](https://doi.org/10.1509/jppm.14.006).
- Marozzo, V. and Donato, C. (2025), "The impact of packaging color and sustainable labels on perceived food healthfulness", *Journal of Marketing Theory and Practice*, pp. 1-23, doi: [10.1080/10696679.2025.2566310](https://doi.org/10.1080/10696679.2025.2566310).

- Mason, K., Jensen, T., Burton, S. and Roach, D. (2001), "The accuracy of brand and attribute judgments: the role of information relevancy, product experience, and attribute-relationship schemata", *Journal of the Academy of Marketing Science*, Vol. 29 No. 3, pp. 308-318, doi: [10.1177/03079459994650](https://doi.org/10.1177/03079459994650).
- Mathur, M. and Gangwani, S. (2021), "Mediating role of perceived value on the relationship among perceived risks, perceived quality, and purchase intention of private label brands", *International Journal of Applied Management and Technology*, Vol. 20 No. 1, p. 4, doi: [10.5590/ijamt.2021.20.1.04](https://doi.org/10.5590/ijamt.2021.20.1.04).
- Mishra, S., Malhotra, G. and Saxena, G. (2020), "In-store marketing of private labels: applying cue utilisation theory", *International Journal of Retail and Distribution Management*, Vol. 49 No. 1, pp. 145-163, doi: [10.1108/ijrdm-04-2020-0152](https://doi.org/10.1108/ijrdm-04-2020-0152).
- Moorman, C. and Matulich, E. (1993), "A model of consumers' preventive health behaviors: the role of health motivation and health ability", *Journal of Consumer Research*, Vol. 20 No. 2, pp. 208-228, doi: [10.1086/209344](https://doi.org/10.1086/209344).
- Mostafa, R.H. and Elseidi, R.I. (2018), "Factors affecting consumers' willingness to buy private label brands (PLBs) applied study on hypermarkets", *Spanish journal of marketing-ESIC*, Vol. 22 No. 3, pp. 338-358, doi: [10.1108/sjme-07-2018-0034](https://doi.org/10.1108/sjme-07-2018-0034).
- Motoki, K., Park, J. and Togawa, T. (2025), "The role of sensory cues in promoting healthy eating: a narrative synthesis and gastronomic implications", *Gastronomy*, Vol. 3 No. 2, p. 6, doi: [10.3390/gastronomy3020006](https://doi.org/10.3390/gastronomy3020006).
- NIELSENIQ (2025), "Global state of health and wellness 2025: navigating the shift from health trends to lifestyle choices", available at: <https://nielseniq.com/global/en/insights/report/2025/global-state-of-health-wellness-2025/> (accessed 30 January 2026).
- Nenycz-Thiel, M. and Romaniuk, J. (2009), "Perceptual categorization of private labels and national brands", *The Journal of Product and Brand Management*, Vol. 18 No. 4, pp. 251-261, doi: [10.1108/10610420910972774](https://doi.org/10.1108/10610420910972774).
- Olson, J.C. and Jacoby, J. (1972), "Cue utilization in the quality perception process", in Venkatesan, M. (Ed.), *Proceedings of 3rd Annual Conference of the Association for Consumer Research*, Association for Consumer Research, Chicago, IL, pp. 167-179.
- Peng, R.X. and Shen, F. (2025), "Why fall for misinformation? Role of information processing strategies, health consciousness, and overconfidence in health literacy", *Journal of Health Psychology*, Vol. 30 No. 8, pp. 2030-2045, doi: [10.1177/13591053241273647](https://doi.org/10.1177/13591053241273647).
- Peryam, D.R. and Pilgrim, F.J. (1957), "Hedonic scale method of measuring food preferences", *Food Technology*, Vol. 11 No. 9, pp. 9-14.
- Petrescu, D.C., Vermeir, I. and Petrescu-Mag, R.M. (2020), "Consumer understanding of food quality, healthiness, and environmental impact: a cross-national perspective", *International Journal of Environmental Research and Public Health*, Vol. 17 No. 1, p. 169, doi: [10.3390/ijerph17010169](https://doi.org/10.3390/ijerph17010169).
- Petty, R.E. and Cacioppo, J.T. (1986), "The elaboration likelihood model of persuasion", *Advances in Experimental Social Psychology*, Vol. 19, pp. 123-205.
- Plasek, B., Lakner, Z. and Temesi, Á. (2020), "Factors that influence the perceived healthiness of food", *Nutrients*, Vol. 12 No. 6, p. 1881, doi: [10.3390/nu12061881](https://doi.org/10.3390/nu12061881).
- Richardson, P.S., Dick, A.S. and Jain, A.K. (1994), "Extrinsic and intrinsic cue effects on perceptions of store brand quality", *Journal of Marketing*, Vol. 58 No. 4, pp. 28-36, doi: [10.1177/002224299405800403](https://doi.org/10.1177/002224299405800403).
- Rossi, P., Borges, A. and Bakpayev, M. (2015), "Private labels versus national brands: the effects of branding on sensory perceptions and purchase intentions", *Journal of Retailing and Consumer Services*, Vol. 27, pp. 74-79, doi: [10.1016/j.jretconser.2015.07.006](https://doi.org/10.1016/j.jretconser.2015.07.006).
- Saba, A., Sinesio, F., Moneta, E., Dinnella, C., Laureati, M., Torri, L., Peparaio, M., Civitelli, E.S., Endrizzi, I., Gasperi, F., Bendini, A., Gallina Toschi, T., Predieri, S., Abbà, S., Bailetti, L., Prosperio, C. and Spinelli, S. (2019), "Measuring consumers attitudes towards health and taste and their association with food-related life-styles and preferences", *Food Quality and Preference*, Vol. 73, pp. 25-37, doi: [10.1016/j.foodqual.2018.11.017](https://doi.org/10.1016/j.foodqual.2018.11.017).

- Sethuraman, R. and Gielens, K. (2014), "Determinants of store brand share", *Journal of Retailing*, Vol. 90 No. 2, pp. 141-153, doi: [10.1016/j.jretai.2014.04.002](https://doi.org/10.1016/j.jretai.2014.04.002).
- Steptoe, A., Pollard, T.M. and Wardle, J. (1995), "Development of a measure of the motives underlying the selection of food: the food choice questionnaire", *Appetite*, Vol. 25, pp. 267-284, doi: [10.1006/appe.1995.0061](https://doi.org/10.1006/appe.1995.0061).
- Wardle, J., Parmenter, K. and Waller, J. (2000), "Nutrition knowledge and food intake", *Appetite*, Vol. 34 No. 3, pp. 269-275, doi: [10.1006/appe.1999.0311](https://doi.org/10.1006/appe.1999.0311).
- Younis, R.H. and Elmenawy, A. (2025), "Neophobia of private labels won't buy it, never tried it", *International Journal of Retail and Distribution Management*, Vol. 53 No. 1, pp. 94-108, doi: [10.1108/ijrdm-05-2024-0236](https://doi.org/10.1108/ijrdm-05-2024-0236).
- Zeithaml, V.A. (1988), "Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence", *Journal of Marketing*, Vol. 52 No. 3, pp. 2-22, doi: [10.1177/002224298805200302](https://doi.org/10.1177/002224298805200302).
- Zhang, S. and Schmitt, B.H. (2001), "Creating local brands in multilingual international markets", *Journal of Marketing Research*, Vol. 38 No. 3, pp. 313-325, doi: [10.1509/jmkr.38.3.313.18869](https://doi.org/10.1509/jmkr.38.3.313.18869).

#### Corresponding author

Benedetta Grandi can be contacted at: [benedetta.grandi@unipr.it](mailto:benedetta.grandi@unipr.it)