

CONSUMER PERCEPTION ANALYSIS OF HERBAVITA: A FUNCTIONAL READY-TO-DRINK SPICE BEVERAGE BASED ON LOCAL WISDOM IN SOUTH LAMPUNG

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Abstract

Ready-to-drink (RTD) herbal drinks are liquid products based on natural ingredients such as spices and medicinal plants that are packaged practically and consumed directly as functional drinks that support health. This study aims to analyze consumer perceptions of Herbavita, a functional ready-to-drink (RTD) herbal drink product based on local wisdom developed in South Lampung. This product is formulated from red ginger and turmeric with varying ratios, then tested using the hedonic method by 20 respondents. The study used a mixed methods approach with quantitative analysis through assessments of taste, aroma, and color, as well as qualitative analysis of criticism and suggestions for product development. The results showed that the sample with a balanced composition (50% red ginger and 50% turmeric) obtained the highest score for all sensory parameters, indicating consumer preference for balanced taste and aroma. Respondent profile analysis revealed that the majority were from the young age group and domiciled in Pasuruan, with a relatively balanced gender distribution. Suggestions from respondents emphasized the importance of attractive, functional, and informative packaging design as a supporting factor for product appeal. These findings demonstrate that product innovations based on traditional ingredients can be well-received if presented in a format that aligns with modern consumer preferences. Therefore, combining traditional values with innovative approaches is key to developing adaptive, competitive, and sustainable RTD spiced beverage products.

Keywords: *spiced beverages, ready-to-drink (RTD), local wisdom, consumer perception, red ginger and turmeric.*

INTRODUCTION

Spiced drinks have long been a part of Indonesian health traditions, particularly in the form of jamu (traditional herbal drinks). Currently, healthy lifestyle trends are driving the emergence of easy-to-consume functional beverage products, one of which is ready-to-drink (RTD) beverages. (Estiasih et al., 2025) This innovation is important to meet the needs of modern society who want practicality without sacrificing health benefits. (Kaur et al., 2024). Amidst globalization, developing products based on local wisdom is a strategic approach to preserving cultural identity and traditional values. South Lampung, as a region rich in spice resources and herbal traditions, has great potential for development in this context. Shifting consumer lifestyles demand adaptive product innovation, particularly in meeting market demand for practical and nutritious functional beverages. (Fitriarni et al., 2021; Sari & Zulfainarni, 2017). However, the success of product innovation is not only determined by the composition of ingredients and functional claims, but also by consumer perception and acceptance. (Immanuel et al., 2020)

Consumer perception encompasses their views on the product's taste, packaging, benefits, and cultural values. Understanding these perceptions is an important foundation for developing targeted products. (Muzayyanah et al., 2021) On the other hand, criticism and suggestions from consumers can be a valuable source of information for refining marketing formulations and strategies. (Ramadhan et al., 2021). Therefore, an approach that combines local values with consumer analysis is essential in creating competitive and sustainable RTD products. (Junaedi & Pogowonto, 2020) This approach aligns with the challenges faced by traditional herbal medicine producers, where a lack of clarity regarding labels, quality, and product information often reduces consumer comfort. (Suteja et al., 2021). This study aims to analyze consumer perceptions of five samples of functional RTD spiced beverage products based

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on local wisdom in South Lampung. The primary focus is directed at consumer responses in the form of criticism, suggestions, and non-quantitative preferences. Furthermore, assessment data on taste, aroma, and color attributes are analyzed descriptively to strengthen the general understanding of taste trends. The results of this study are expected to serve as a reference in developing products that better suit the needs and expectations of the community. Thus, locally based innovations can be optimized not only from a health perspective, but also socially and culturally.

METHOD

This study used a descriptive quantitative and qualitative approach (mixed methods). The quantitative approach was used to analyze numerical data related to the respondents' age, domicile, and assessment parameters for the taste, aroma, and color of each ready-to-drink (RTD) spiced beverage sample. (Mulyani, 2020) Quantitative analysis includes descriptive statistical calculations, correlation analysis, and cross-sample trend assessments. Meanwhile, a qualitative approach is used to explore consumer criticism and suggestions for each product variant, as well as general product development suggestions. (Lestari *et al.*, 2021) This research was conducted in South Lampung Regency, Lampung Province. The location was selected based on the region's potential for utilizing traditional spices and its potential market for functional beverage products. Data collection took place from June 1 to June 30, 2025. The process of making the spiced drink begins with the selection of the main ingredients, namely fresh red ginger and fresh turmeric with a total weight of 100 g, which are used in various compositions as presented in Table 1. Other additional ingredients used are palm sugar or brown sugar at 25%, tamarind 3%, salt 1%, and water as much as 200 mL. The red ginger and turmeric are washed thoroughly, then thinly sliced or grated to speed up the extraction process. All main ingredients are boiled in water for 15–20 minutes, with tamarind and salt added after the water boils. After boiling is complete, the sugar is added to the solution and stirred until completely dissolved. The liquid is then filtered through a fine sieve, cooled to room temperature, and packaged into sterile bottles. The final product is then tested by respondents using a hedonic method to assess the sensory characteristics of taste, aroma, and color.

Table1. Composition of Red Ginger and Turmeric

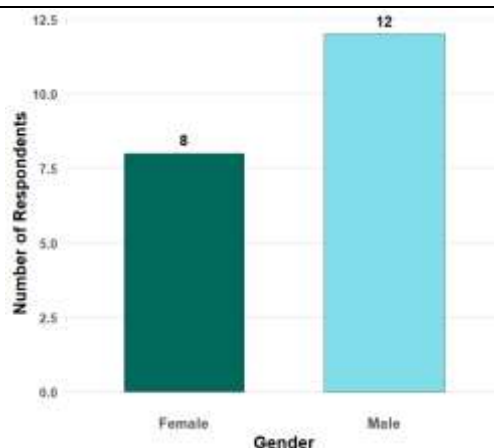
Sample	Red Ginger (%)	Turmeric (%)
P1	100	100
P2	33	67
P3	67	33
P4	50	50
P5	100	0
P6	0	100

Organoleptic assessment of taste, aroma, and color was conducted using a Likert scale of 1–9 with a hedonic test approach, ranging from Very Dislike (1) to Very Like (9). The trial and general product perception data involved 20 respondents or small respondents who were collected randomly in the South Lampung region. Quantitative data processing was carried out through descriptive statistics, correlation, and trend analysis, while qualitative data were analyzed narratively to formulate product development input. Data analysis used the R programming language.

RESULTS AND DISCUSSION

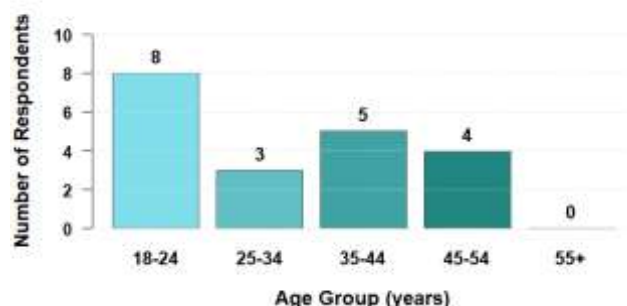
Respondent Profile

Gender is one of the important demographic variables to analyze in understanding the characteristics of respondents. (Ramadhany *et al.*, 2020). Information regarding gender distribution can provide an initial overview of market segmentation and consumer preferences based on gender. (Wijaya *et al.*, 2021) In the context of this research, respondent gender data was collected to determine the level of interest between men and women in ready-to-drink spiced beverage products. Understanding the differences in the number of respondents based on gender can also help in formulating more effective and targeted marketing strategies. The results of the respondent gender distribution are presented in Figure 1.



Picture1. Distribution of Respondent Gender Data.

Based on the data visualization of respondent gender in Figure 1, it is known that the majority of respondents were male. Twelve people, or approximately 60% of the total respondents, were male, while eight respondents, or approximately 40%, were female. This indicates that interest in ready-to-drink spiced beverage products comes not only from women but also from men. This balance can be used as a basis for the product's potential acceptance by both gender segments.(Rusli et al., 2021)Therefore, marketing communication strategies should reach both of them proportionally. This distribution also demonstrates the importance of an inclusive approach in product design and promotional messaging. Men may be attracted to the practical and functional benefits of herbal drinks, such as increased stamina or endurance. Meanwhile, women may be more concerned with long-term health and beauty. By understanding gender preferences and proportions, as shown in the graph, Herbavita product development can be more targeted.(Aqmarina et al., 2019)Overall, the fairly even gender distribution opens up vast opportunities for market expansion. Respondent age is an important factor in demographic analysis because it can influence consumption patterns and preferences for a product.(Ramadhany et al., 2020). Different age groups usually have different needs, lifestyles, and purchasing power.(Amrullah et al., 2021)Therefore, understanding the age distribution of respondents can aid in market segmentation and the determination of more appropriate marketing strategies. In this study, respondents were grouped into five age categories, ranging from 18 to 55 years and above. The distribution of respondents by age group is presented in Figure 2.



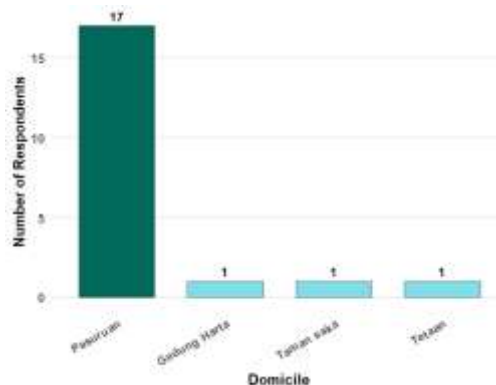
Picture2. Respondent Age Distribution.

The age distribution of respondents presented in Figure 2 shows that the 18–24 age group dominates with 8 respondents. This age group reflects the active involvement of young people, who are most likely to be interested in functional beverage innovations such as Herbavita products. The 35–44 age group is in second place with 5 respondents, followed by the 45–54 age group with 4 respondents. Meanwhile, the 25–34 age group only has 3 respondents, and there are no respondents at all in the 55 and above age group. This indicates that respondent participation tends to decrease with age. The dominance of young age in this distribution could be an indication that product marketing strategies are more effective if they are directed at the early productive age consumer segment.(Rahman et al., 2021)Respondents in the 18–24 and 25–34 age groups generally have a high interest in practical and innovative health products.(Roy et al., 2023)On the other hand, the involvement of older age groups

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such as 45–54 years remains important because they are often active consumers of herbal products traditionally. (Liu *et al.*, 2015) The absence of respondents aged 55 and over is likely due to limited access to the survey or a lack of interest in modern products. Therefore, product communication strategies need to be adjusted to reach all potential age groups. Respondent domicile is a crucial aspect in understanding the geographic distribution and market potential of a region. This information is useful for determining the concentration of respondents in specific areas and serves as a basis for designing more efficient product distribution strategies. In the context of this study, the majority of respondents were found to reside in Pasuruan, while the remainder were spread across several other locations, such as Gedung Harta, Taman Seka, and Tetaan. This indicates that respondents are fairly concentrated in one main area. The distribution of respondents' domiciles is presented in Figure 3.



Picture3. Distribution of Respondents' Domiciles.

The majority of respondents presented in Figure 3 came from the Pasuruan area, significantly dominating the number of participants. This indicates that the questionnaire distribution was more focused on this area, both due to geographic proximity and ease of access. Besides Pasuruan, there were several other domiciles, such as Tetaan, Taman Saka, and Gedung Harta, but these were much smaller in number. This uneven distribution should be noted for drawing representative conclusions about the broader population. (Aini *et al.*, 2022) Therefore, future data distribution strategies need to be more comprehensive to cover diverse domiciles evenly. Furthermore, this domicile data also provides an overview of potential target areas for marketing herbal medicine products. The predominance of respondents from Pasuruan can serve as an initial reference for market testing or product launches. However, areas with low participation remain important to consider, as they could become targets for future expansion. (Listyana *et al.*, 2022) Regional diversity can also represent variations in consumer tastes and preferences for traditional herbal products. (Suteja *et al.*, 2021). Thus, domicile data not only helps in understanding the geographic distribution of respondents, but also serves as the basis for more effective marketing strategies and product development.

Herbavita Product Design

The ready-to-consume spiced beverage product developed in this research has a variety of colors and packaging designs that are uniform but attractive, as shown in Figure 4.



Picture 4. Herbavita in Packaging.

Figure 4 shows six bottles of ready-to-drink herbal drinks under the Herbavita brand, neatly arranged in a row. Each bottle is uniform in shape and size, with a gray cap and a modern label design that clearly displays the product logo and identity. The color of the liquid inside the bottles varies, from deep yellow to dark brown, reflecting

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the different compositions of key ingredients such as red ginger and turmeric. Furthermore, the varying colors of the liquids in the bottles create a natural feel and provide a visual indicator of the differences in active ingredient formulations. This simple yet elegant packaging reflects the concept of modern herbal medicine that is practical and attractive, while maintaining a traditional feel. The transparent bottle design also allows consumers to see the color and consistency of the product, which can increase confidence in the quality and authenticity of the drink. The Herbavita logo represents the visual identity of this functional herbal drink product based on local wisdom developed in South Lampung. The design combines traditional and modern elements to reflect the product's health, authenticity, and innovation values, as shown in Figure 5.



Picture 5. Herbavita logo.

Based on Figure 5, the Herbavita logo represents a ready-to-drink spiced beverage based on red ginger and turmeric that highlights the local wisdom of South Lampung. With an illustration of a glass of herbal medicine on a wooden plate, this logo reflects natural freshness and traditional values combined with modern innovation. The slogan "Natural Health from Ruwai Jurai" emphasizes local cultural roots, while elements of a traditional house and the institution's symbol demonstrate the collaboration between tradition and science. The clean and elegant design depicts a healthy product ready to reach today's market without losing its original identity.

Sensory Assessment Parameters

Assessments of organoleptic attributes such as taste, aroma, and color were conducted to determine respondents' preference for various formulations of red ginger and turmeric-based spice drinks. Each sample had a different ingredient composition, thus expected to produce varying sensory characteristics. The results of this assessment served as the basis for determining the most optimal formulation and consumer acceptance. The data obtained represent the average value of respondents' assessments of each attribute in each sample. The complete results of the organoleptic test are presented in Table 2.

Table 2. Average and Median Sensory Assessment of Herbavita

Sample	Mean			Median		
	Flavor	Aroma	Color	Flavor	Aroma	Color
P1	4.30	4.30	4.40	4.00	4.00	4.00
P2	3.40	3.50	3.55	3.00	3.00	3.00
P3	3.45	3.60	3.50	3.00	3.00	3.00
P4	6.10	6.20	6.10	6.00	6.00	6.00
P5	3.30	3.35	3.45	3.00	3.00	3.00
P6	1.80	1.80	2.35	2.00	2.00	2.00

The test results showed that Sample P4, which had a composition of 50% red ginger and 50% turmeric, obtained the highest scores for all parameters, namely taste (6.1), aroma (6.2), and color (6.1). This indicates that a balanced ratio of red ginger and turmeric provides the sensory balance that is most preferred by respondents. Both ingredients in moderate amounts appear to complement each other in terms of delicious taste, fragrant aroma, and color appearance. In contrast, Sample P6 with a composition of 100% turmeric and no red ginger obtained the lowest scores for all parameters, namely taste (1.8), aroma (1.8), and color (2.35). This indicates that the dominance of turmeric without the addition of red ginger tends to produce a less preferred drink, perhaps due to the bitter taste and

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Product Development Suggestions

[illegible]

Based on the suggestions provided by respondents, it can be concluded that packaging is a primary concern in the development of herbal drink products. Many suggested that packaging be made as attractive as possible with a colorful appearance and modern design to attract attention, especially among young people. Besides being visually appealing, packaging should also be practical for carrying and consumption, for example in the form of small, ready-to-drink bottles. Several respondents suggested the use of glass bottles or airtight bottles to maintain the quality, taste, and authenticity of herbal drinks, while extending the product's shelf life. Functional packaging not only increases sales value but also reflects the quality and seriousness of the manufacturer in maintaining product quality, as well as creating a strong brand identity in the functional beverage market. Beyond packaging, respondents also highlighted the importance of innovation in ingredient composition. Some suggested making the jamu flavor more ginger-driven, or adding a little brown sugar and sour flavor for a more balanced and enjoyable experience. Respondents also hoped for a more varied combination of ingredients to broaden the benefits of jamu. Furthermore, it was crucial to maintain the traditional values of jamu, including maintaining the original recipe while remaining open to innovation. Several also emphasized the importance of including clear information on product labels, particularly regarding benefits, efficacy, and potential side effects, to provide consumers with a sense of security and confidence in the product.

This study shows that consumer perceptions of ready-to-drink (RTD) spiced beverages based on red ginger and turmeric are strongly influenced by the composition of the ingredients used, particularly in terms of taste, aroma, and color. Samples with a balanced composition of red ginger and turmeric (50%:50%) obtained the highest scores across all organoleptic parameters, indicating that consumers tend to prefer harmonious formulations. Furthermore,

the majority of respondents stated that product packaging plays an important role in increasing purchase intention, with a preference for attractive, practical, and informative designs. These findings reinforce the importance of combining formulation innovation, sensory quality, and appropriate packaging strategies in the development of functional beverage products based on local wisdom. Therefore, Herbavita has great potential to be developed as a modern health beverage product that still upholds traditional values.

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