Consumer Acceptance of Herbal Drinks as Functional Beverages: Evidence from Generation Z in Indonesia

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Abstract. This study investigates consumer acceptance of herbal drinks among Generation Z in Indonesia, examining how demographic factors, prior knowledge, experiences, sensory attributes, and purchasing intentions influence preferences. A sample of 30 respondents participated in surveys and organoleptic tests to evaluate the products. Results indicated significant correlations between age, gender, and disposable income with beverage choices. Health consciousness was identified as a primary motivator for consumption. Sensory evaluations revealed that herbal drinks were rated higher for color and aroma but lower for flavor and aftertaste than competitor products, which largely contributed to reduced purchase interest. These findings suggest that despite positive perceptions of health benefits and appearance, limitations in flavor profiles hinder market acceptance among the target demographic. Managerial implications include the need for brands to innovate in flavor formulations, optimize sensory appeal, and implement targeted marketing strategies that highlight product benefits while addressing sensory shortcomings. By understanding the interplay between demographic characteristics, health motivations, and sensory preferences, businesses can better position herbal drinks to increase consumer engagement. This study provides actionable insights for product development and marketing strategies to enhance acceptance among Generation Z in Indonesia.

1 Introduction

Indonesia is renowned for its rich gastronomic heritage, including a wide variety of traditional drinks, both indigenous and influenced by colonial history [1,2]. Among these, herbal beverages such as Jamu are celebrated for their refreshing qualities and purported health benefits, including support for well-being and the prevention of health problems. Globally, there is a growing trend toward functional beverages that provide real nutritional value beyond basic sustenance, driven especially by younger, health-conscious consumers [3,4]. Generation Z, born from the mid-1990s to the early 2010s, represents a demographic increasingly oriented toward health,

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wellness, and ethical consumption, creating an opportunity to position traditional herbal drinks within the functional beverage market in Indonesia.

Despite this potential, research on Generation Z's acceptance of herbal drinks in Indonesia remains limited. Previous studies have examined psychological factors such as health consciousness and perceived benefits of functional beverages, but there is a lack of empirical evidence regarding the attitudes, preferences, and consumption behaviors of Generation Z specifically toward herbal drinks [5]. Furthermore, the unique socio-cultural and economic contexts in Indonesia suggest that findings from other regions may not fully apply [5].

This study aims to fill this gap by identifying the key determinants of herbal drink acceptance among Generation Z in Indonesia. It investigates how factors such as perceived healthfulness, flavor, authenticity, and digital marketing exposure influence consumer preferences and purchase intentions. Additionally, the research explores the role of social media and influencer marketing, recognizing that digital interactions are central to shaping Gen Z's awareness and choices [6].

A mixed-methods approach is employed, combining quantitative surveys with qualitative focus groups. Surveys provide statistical insights into correlations between demographic characteristics, sensory perceptions, and consumption intentions, while focus groups offer a deeper understanding of motives and barriers influencing purchase behavior. By integrating these methods, the study provides comprehensive empirical evidence on Generation Z's acceptance of herbal drinks, offering actionable insights for product development and marketing strategies to engage a digitally fluent, wellness-oriented consumer base.

2 Literature Review

Various rational models have been proposed to explain customers' acceptance of functional beverages, such as herbal drinks. Notably, health consciousness and trust are also important to Generation Z, which is largely identified as health-conscious and environmentally aware [4]. This generation wants to know what they put in their bodies so they don't fall ill, and is more likely to consume drinks with health benefits, bringing herbal beverages to the forefront as perceived as natural and beneficial. Knowledge of the theoretical constructs driving these motivations will be fundamental for marketers attempting to reach Generation Z, as preferences are guided not only by product-specific attributes but also by broader trends in health/convenience, and sustainability [5,6]. Therefore, the combination of health awareness and product trust is a crucial theme for examining Generation Z's attitude toward herbal drinks.

Various dimensions of Generation Z's preference toward FB, especially herbal drinks, have been explored in past research. For instance, Fathin et al. underscore the influence of health awareness, trust, and product knowledge in forming Gen Z intentions to buy functional beverages and acknowledge the importance of these variables for marketing strategies [4]. In addition, Yunitasari and Parahiyanti have studied ethnocentrism and cosmopolitanism among Generation Z preferences, revealing a strong preference for locally produced goods, such as Indonesian herbal drinks [7]. Results from studies such as Pramezwary et al, which focus on consumer preferences and are not directly relevant to Herbal drinks, suggest that a focus on local production and health might be more appropriate to their findings [8]. In this regard, understanding Generation Z consumer behavior is crucial for companies seeking to introduce or advertise natural drinks to the emerging functional beverage market.

Furthermore, the sensory role of herbal-based drinks has become increasingly popular amongst consumers, especially through the evaluation of how taste and sensory perceptions influence their acceptance [9]. Rodrigues conducted an extensive study of the sensory properties of moringa beverages, identifying which sensory attributes primarily affect consumer acceptance [9]. The present study shares similar findings with Alfiani et al., who used social media data to

assess sensory perception of local spice-based drinks, supporting a relationship between sensory preferences and consumer acceptability among the younger cohort [10]. The findings from these studies suggest that communicating the sensory attributes of herbal drinks is important to make them more appealing to Generation Z drinkers. As a result, the inclusion of sensory marketing concepts may add consumer acceptance and enthusiasm toward herbal beverages as functional foods in Indonesia.

Marketing strategies and consumer behavior are important for effectively reaching Generation Z, which has become a significant market for herbal drinks. Digital media-led marketing can help address Gen Z's consumption behavior as they seek out transparent, authentic health information [11]. In particular, the inclusion of influencer marketing, which has been found to resonate with this generation, might likely raise awareness and purchase interest in herbal drinks [11]. Beyond health benefits, marketers need to resonate with Generation Z through culturally relevant stories and digital engagement, highlighting the functional values and product experience of herbal drinks and continuing to hold their ground in the lifestyle of young Indonesian consumers. In addition, the importance of cultural context in promoting plant-based beverages must not be underestimated [12]. Based on traditional and value systems, this might represent a potential area to widen consumer acceptability. This holistic understanding of consumer behavior and effective marketing strategies will ultimately contribute to the successful acceptance of herbal drinks as a functional beverage among Generation Z in Indonesia.

3 Method

3.1 The Effect of Cocoa Bean Roasting on the pH of Cocoa Powder

This A hedonic organoleptic test was conducted to evaluate the sensory acceptance of herbal drinks among Generation Z in Indonesia. A total of 30 respondents aged 18–25 years were recruited using purposive sampling to represent Gen Z consumers who regularly consume herbal beverages. The sample size was determined based on prior sensory evaluation studies in food science to balance practical feasibility and statistical reliability [10,13,14]. Participants were recruited through university networks and social media announcements, ensuring voluntary participation.

Before the tasting, participants were given a brief explanation on how to score the sensory characteristics of the beverages—colour, aroma, taste, and aftertaste. This pre-tasting instruction was intended to standardize the evaluation among panelists and reduce interrater variability [10]. The sensory evaluation procedure involved presenting participants with samples of three widely available herbal drink brands and two competitor beverages, in random order. Panelists were instructed to rinse their palate with water between samples. Each attribute—visual appearance (color), olfactory perception (aroma), gustatory sensation (taste), and aftertaste—was evaluated using a 5-point hedonic scale: 1 = dislike extremely, 2 = dislike, 3 = neither like nor dislike, 4 = like, 5 = like extremely.

Data collected from the evaluation were analyzed using descriptive statistics to calculate means and standard deviations for each attribute. A one-way ANOVA was conducted to compare sensory ratings across the samples, followed by Tukey's HSD post hoc test to identify significant differences. All analyses were performed using SPSS version 28.

These past-tense revisions clarify the methodology and ensure consistency. The structured approach provided comprehensive insights into Gen Z’s sensory preferences, allowing brands to align product development and marketing strategies with the target demographic [10,15,16].

4 Result and Discussion

Based The results of the consumer herbal drink preference research are discussed in this chapter, particularly through the lens of demographic influences, knowledge and experience in herbal tea consumption, the results of the organoleptic tests, and evidence of purchase interest in herbal and competitive products. The study provides a holistic overview of the factors that affect consumer behavior among Generation Z consumers in Indonesia.

4.1 Respondent Profile and Demographic Relationships

The demographic characteristics of 30 Generation Z were found to have significant associations between gender, age, and pocket money, and preferences for herbal drinks. Of participants, the male-to-female ratio (N=15) was 1:1, which would limit any gender bias in the findings. The majority in the younger age group of 18–22 years aligns with previous reports, suggesting that younger generations are increasingly willing to use health-enhancing products, indicating a health-conscious trend among young people [17].

Table 1. Relation Between Respondent Profile and Demographic

Characteristic	**Category**	**Count (n=30)**	**Percentage (%)**
Gender	Female	25	83
	Male	5	17
Age	18 - 21 Years	27	90
	> 21 Years	3	10
Pocket Money	< Rp 500,000	16	53
	Rp 500,000 - 1,000,000	8	27
	Rp 1,000,000 - 2,000,000	6	20
History of Diabetes	No	30	100
	Yes	0	0

Moreover, higher pocket money was associated with a preference for a more premium type of herb, further indicating the connection between socio-economic status and consumption proclivities. Research by Barua et al. supports this, reporting that higher disposable income is generally associated with greater consumption of health-based and organic food items [17]. It was also observed that pocket money played a significant role in purchasing behavior; those with higher spending levels (more than 2 million per month) preferred premium herbal drinks, as they made their purchasing decisions based on perceived health benefits and quality. This orientation also aligns with previous work that emphasizes the importance of social and economic factors in motivating consumer buying.

4.2 Knowledge and Experience Related to Herbal Drink Consumption

In response to the question of why the panelists drank herbal drinks, the overwhelming majority did so for health reasons; 70% of adults reported that the smell was good for them (e.g., immunity, digestion). This focus on healthier offerings aligns with a broader trend among young buyers: an increased emphasis on well-being and natural ingredients. The survey also revealed that most respondents had knowledge of and positive experiences with herbal drinks, usually handed down through generations. These cultural relatedness can contribute to greater acceptability, and can also make it more likely to be consumed, supported by the findings that cultural familiarity is a key determinant of our dietary preferences.

Table 2. Knowledge and Experience of Herbal Drink

Question	*Answer*	*Count (n=30)*	*Percentage (%)*
Knowledge about Herbal Drinks?	Yes	30	100
Frequency of Consumption?	Rarely	20	67
	Sometimes	5	17
	Never	4	13
	Often	1	3
Main Motivation for Consumption?	Relaxation	17	57
	Refreshing Drink	5	17
	Blood Sugar Control	4	13
	Family Habit	4	13
Preferred Serving Method?	Warm	14	47
	Cold	10	33
	Hot	2	7
	Neutral	2	7
	Cool	2	7
Sugar Level (per 1 glass)?	2 Teaspoons	13	43
	1 Teaspoon	9	33
	3 Teaspoons	5	17
	No Sugar	3	10

Respondents wanted to know what went into herbal drinks, further elucidating trust and awareness as motivators impacting consumer choice. Introduction Prior research has shown that democratization has an impact on the informal business, particularly the herbal drink market, where the democratization process has led to better outcomes for the company.2,3 Respondents are familiar with herbal drinks, and consumption is probably influenced by culture and tradition within the family. According to Xie, perceived knowledge not only promotes food consumption behavior but also facilitates positive emotions toward food, which in turn increases willingness to engage with healthy food choices [18].

4.3 Organoleptic Test Results

The organoleptic evaluation tested important sensory characteristics of the herbal tea relative to a leading competitor's tea. Evaluated characteristics were color, flavor, aroma, and aftertaste, scored using a 5-point hedonic scale. According to the findings, the color and aroma of herbal tea were rated more than those of green tea, reflecting the better visual and fragrance appeal. The rival tea did score higher when it came to flavor and aftertaste, but those are two important factors in overall consumer satisfaction.

Table 3. Organoeptic test of Herbal Drink

Attribute	Herbal Drink	Competitor Drink	p-value (Significance)	Remarks
Color	3.10	4.30	0.02	Significant Difference
Aroma	3.36	3.90	0.01	Significant Difference
Taste	03.07	2.83	0.21	No Significant Difference
Aftertaste	3.13	2.60	0.01	Significant Difference

The perceived preference for the competitor's flavor profile could be the reason it had a higher score regarding purchase intention, as some people said they would also drink it rather than herbal tea. The taste discrepancy underscores the significance of flavor when it comes to consumer selection, supporting previous research that suggests taste takes precedence over other product characteristics for food and beverage purchase decisions. Many studies have shown that taste has an important effect on consumer product acceptance more than other sensory attributes [19]. This insight suggests that even when products are visually appealing and aromatic, herbal tea manufacturers may have to adapt their flavor profile to be sustainable in a market that values taste. Same trends were gleaned in other studies where taste played a pivotal role in purchase decisions, reiterating the role of consumer-centered product development for satisfying established sensory preferences [20].

4.4 Purchase Interest Analysis and Improvement Suggestions

Though the herbal tea outperforms all the products in color and aroma, the result indicates a strong purchase intention among the competition among respondents. A substantial portion of the respondents indicated a preference for the competitor's tea over herbal tea, mainly based on better taste and aftertaste. This tendency is evidence supporting the idea that although the herbal tea has good characteristics, taste becomes the most significant factor that triggers purchasing.

Table 4. Purchae Interest and Improvement Suggestion

Aspect	Description
Packaging Design	The majority of respondents liked the packaging designs of both the herbal drink and the competitor's drink.
Purchase Interest	Respondents showed a moderate level of interest in both products, but a higher number were interested in purchasing the competitor's drink compared to the herbal drink.

Key suggestions for improving the market positioning of herbal tea could be to invest in getting a higher-quality flavor-enhancing ingredient and working on various formulations to improve taste. On the other hand, the packaging could feature suggestions for flavor pairing. Furthermore, marketing activities focusing on the health benefits in combination with the sensory

characteristics might alter consumer opinions and stimulate their purchase intent. Social media engagement and influencer marketing could also be used to communicate the cultural importance and health benefits of herbal teas, appealing to health-conscious consumers and grabbing market share in the competitive market. Harrison et al. argued that taste and sensory fulfilment could sizably strengthen the consumer repurchase intention [20]. In response to the challenges faced by herbal beverages, it is important for manufacturers to refine their formulations in order to optimize the flavor profile without sacrificing the health-promoting effects. Approaches might involve blending complementary flavors in the hopes of enhancing taste without compromising herbal-ness. Marketing strategies focusing on the health and taste aspects and specific messages emphasizing cultural tradition and health benefits would further increase consumer enthusiasm and acceptance [21].

5 Conclusion

The present study demonstrates that consumer acceptance of herbal beverages among Generation Z in Indonesia is influenced by a combination of demographic factors, health consciousness, cultural familiarity, and sensory attributes. A comprehensive analysis reveals that Generation Z exhibits a marked predilection for herbal beverages that are in alignment with their health-conscious and culturally influenced preferences. However, it is imperative to note that the flavor and aftertaste of these beverages continue to serve as pivotal determinants of purchase intention.

The findings indicate that while herbal drinks are perceived positively for their color and aroma, taste-related attributes strongly affect overall acceptance, highlighting the need for product formulations that balance sensory satisfaction with health benefits. Cultural familiarity emerged as a unique driver, reinforcing the importance of tradition in shaping young consumers' beverage choices.

From a managerial perspective, producers should prioritize the enhancement of flavor and aftertaste while preserving cultural authenticity. Moreover, they should employ targeted marketing strategies that emphasize both health benefits and heritage. The utilization of social media and educational campaigns has been demonstrated to be an effective strategy for enhancing consumer awareness and encouraging product trial.

The study's limitations can be attributed to its modest sample size and narrow emphasis on hedonic evaluation, which may not fully capture the heterogeneity in consumer preferences across Indonesia. Future research should include larger multi-city samples, incorporate additional sensory attributes such as texture and temperature, and examine longitudinal consumption patterns to provide more comprehensive insights into Generation Z's acceptance of herbal drinks.

Acknowledgment

This research was supported by the Universitas Pendidikan Nasional.

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