



Green Tea Consumer Preferences: Consumption Patterns and Influencing Factors in Banyumas Regency, Central Java

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Abstract

Individuals consume green tea according to their needs and desires. Product evaluations reflect consumer preferences and influence consumer attitudes. The purpose of this study was to examine consumer characteristics, and identify factors influencing consumer preferences for green tea. The study location was Banyumas Regency, Central Java, from June to July 2025. This study used a survey method with a sample selected through multistage random sampling. Respondents consisted of 120 green tea consumers. Data analysis used descriptive analysis and principal component analysis (PCA). The results showed that most green tea consumers were women of various ages. Furthermore, married consumers purchased green tea to share with their families. Most consumers had a bachelor's degree and earned more than IDR 3,500,000. Regarding consumption habits, on average, individuals drank green tea once a day with breakfast. The average monthly consumption was 50 grams, which they shared with their families. Green tea was usually purchased once a month at supermarkets, with an average of 50 grams. Preference for green tea was shaped by three main factors: the value attached to tea (character), appearance (identity), and product image.

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Introduction

Tea is one of the most widely consumed beverages and is deeply connected to the cultural traditions of various societies. It is often the primary choice in households due to its distinctive flavor, health benefits, and values passed down from generation to generation (Khan & Mukhtar, 2018). Furthermore, tea consumption is seen not only as an everyday beverage but also as an essential element of social practices and traditions. In Asia, tea has a meaning that goes beyond its function as a refreshing beverage, it is part of banquet culture and an expression of hospitality between communities (Mukhopadhyay & Mondal, 2017).

Increasing domestic tea consumption can be achieved through the development of tea products that meet consumer preferences and needs, thereby increasing satisfaction and driving sales growth. Consumer characteristics and behaviors play a crucial role in shaping tea consumption patterns (X. Li *et al.*, 2024). Health awareness is also a strong influence on people's decisions about tea consumption. Currently, more and more consumers are aware of the health benefits of various types of tea, such as green tea and herbal tea (Tran *et al.*, 2023). Furthermore, demographic

variables including age, gender, and socioeconomic status have been shown to significantly influence tea consumption patterns (Shen *et al.*, 2019). The effectiveness of tea in providing protection against certain health conditions can also vary depending on individual demographic factors and lifestyle (F. Chen *et al.*, 2017).

Consumption patterns, particularly in the context of eating habits, are influenced by various interrelated factors, ranging from socio-cultural aspects and economic conditions to psychological considerations (Magalhaes *et al.*, 2023). These eating habits ultimately play a role in determining the quality and quantity of food consumed, including the frequency of consumption (Bühlmeier *et al.*, 2022). In general, consumption patterns can be observed through several indicators, such as consumption frequency, amount consumed, purchase location, purchase intensity, consumption situation, number of purchases per transaction, and activities accompanying the consumption process. Product evaluations reflect consumers' attitudes and tendencies toward purchasing and consuming the product (Auralia, Mulyo, *et al.*, 2023). Consumer attitudes toward new products are shaped by their

perceptions of the value offered, encompassing aspects of quality, image, and ethical considerations (Perrea *et al.*, 2017). In this context, the alignment between product characteristics and consumer values and beliefs is a crucial factor influencing preferences and purchasing decisions.

Consumer preferences are shaped by various interacting factors, ranging from personal tendencies and cultural values to marketing strategies implemented by producers. These diverse factors ultimately influence how consumers make decisions in the marketplace, including how they evaluate, select, and consume products and services (Dowling *et al.*, 2019; Kumo, 2023). In consumer behavior studies, the influence of product attributes on preferences is often understood as complex, as numerous variables can influence consumer choices (Chrysochou *et al.*, 2021; Sparacino *et al.*, 2022). These attributes can be seen through brand, product type (Tfouni *et al.*, 2018), aroma (Leitzmann, 2016), shape (Liu *et al.*, 2018), brewing color, taste (Saklar *et al.*, 2015), packaging, size, price, and the benefits offered, particularly for green tea products (Jin *et al.*, 2019). In 2025, a preliminary survey conducted in Banyumas Regency recorded the presence of seven brands of black tea circulating in the market, namely Sariwangi, Tongtjie, 2Tang, Tjatoet, Teh Poci, Dandang, and Sosro.

Banyumas Regency is the second most populous region in Central Java Province and is exhibiting rapid economic growth. This is reflected in the construction of 12,099 new residential units, which is expected to impact infrastructure development, public transportation services, and stimulate activity in various other sectors. The people of Banyumas come from diverse socioeconomic backgrounds, but the majority still maintain the habit of consuming tea daily, whether for health reasons or simply as a beverage to accompany daily activities. This situation prompted the author to further examine public perceptions regarding the choice of green tea that aligns with consumer preferences in this region. Nearly every household in Banyumas Regency serves green tea at least once a day, making it important to examine the various product attributes that influence consumer decisions.

This research differs from previous studies in that it specifically highlights the current phenomenon of tea consumption, which is now seen not only as a traditional beverage but also as a lifestyle and new consumption pattern in Indonesia. While various literature has discussed consumer behavior in general, this study makes a new contribution by focusing on the consumer decision-making process regarding tea within the context of these changes. Therefore, this study was conducted to analyze the characteristics of green tea consumers and identify the key components considered in the product selection process.

Materials and Methods

This study was conducted in Banyumas Regency in June-July 2025. This method utilizes a survey method with a unit study of the sub-districts. The location selected for this study included five districts, Purwokerto Barat, Purwokerto Selatan, Sokaraja, Sumbang, and Ajibarang, which were selected using a

purposive sampling method for consumers who consume green tea with original flavor purchasing decisions. The district was selected because it has the largest number of households in the province. The respondents selected by the researcher were consumers at the committed buyer level, as they had been consuming tea of the same brand for a long time, specifically for the past two years, and felt proud when consuming that brand.

The study determined a quota of 120 samples to fulfill the requirements of the nine variables in the model. A sample size of more than 100 can often help minimize issues related to statistical power and significance (Ulva Putri Ramadani *et al.*, 2025). Total of 120 respondents were evenly distributed across each district using proportional random sampling. Thus, the number of samples in each sub-district was 24, which is considered representative of the region. Primary and secondary data for this study were gathered through interviews and observations of consumers and related institutions. The questionnaire was distributed offline. The measurement used in this study was a Likert scale with the following criteria: strongly agree, 5; agree, 4; neutral, 3; disagree, 2; and strongly disagree, 1. The validity test results showed validity which indicated by the value loading factor $> 0,500$ (Xu & Leung, 2018) and the reliability test showed reliability which indicated by the value construct reliability $> 0,600$ (Auralia *et al.*, 2025).

The fundamental theory used for the analysis is the marketing management theory of consumer behavior, particularly consumer loyalty from consumer behavior. The consumers assumed to loyalty given attitudes, purchase decision, and satisfaction (Kotler & Armstrong, 2015). In theory, consumers seek loyalty to consumption based on perceived product attributes, consumer attitudes, consumer decision-making, and consumer satisfaction. The variables used in the study were brand (Chovanová *et al.*, 2015), type of tea, aroma (C. Chen *et al.*, 2024), form, color of the brew (Yeager *et al.*, 2022), taste (Noel & Dando, 2015), elements on the packaging (Steenis *et al.*, 2017), size, price, and the benefits (T.-S. Wang *et al.*, 2022) of consuming green tea. The data analysis method used in this study was principal component analysis (PCA) to analyze the components considered by green tea consumers. To test the accuracy of the formed components, Bartlett's Test of Sphericity and the KMO test were used. It is necessary to determine the amount of variance that comes from each variable in the component analysis. After groups that represent the components have been formed, the process of naming the components is carried out with SPSS program assistance (Ghozali, 2018).

Result and Discussion

Characteristics Consumers

Variations in consumer demographic characteristics and behavioral patterns contribute to changes in consumption preferences, including preferences related to tea products. Demographic attributes of consumers have a significant influence on their selection of products or services (Kotler & Armstrong, 2015). Fundamentally, consumer perceptions and preferences are closely associated with individual decision-making behavior regarding the products or

Table 1. Characteristics of Green Tea Consumers

Consumer Characteristics	Number (people)	Percentage (%)
Gender		
Male	56	47
Woman	64	53
Age		
12-16	5	4
17-25	23	19
26-35	24	20
36-45	13	11
46-55	29	24
46-65	24	20
>65	2	2
Marital Status		
Marriage	90	75
Not Married	30	25
Number of Family Members		
1	3	3
2	5	4
3	33	28
4	40	33
5	39	33
Level of Education		
Elementary school	2	2
Junior high school	8	7
Senior high school	31	26
Bachelor's degree	75	63
Master's degree	4	3
Job Type		
Student	16	13
Civil servant	63	53
Entrepreneurship	6	5
Housewife	12	10
Private	20	17
Not Working	3	3
Household Income		
>Rp3,500,000	114	95
Rp2,500,000 – Rp3,500,000	2	2
Rp1,500,000 – Rp2,500,000	3	3
<Rp1,500,000	1	1
Number of Consumers	120	100

services they desire (Schiffman *et al.*, 2016). Characteristics of green tea consumers such as age, gender, education level, and income show a strong correlation with their consumption behavior patterns. Table 1 presents a detailed description of the characteristics of respondents who consume green tea.

The results of this study indicate that each consumer characteristic has a distinct influence on green tea consumption patterns. Most green tea consumers are women aged 46–55, married, have a family of around three, have a college degree, many work as civil servants, and generally have a household income above IDR 3,500,000. Younger to middle-aged individuals tend to consume green tea more regularly because its health benefits are perceived as aligned with a health-oriented lifestyle (Mohd Suki & Mohd Suki, 2015). Higher levels of education are also associated with a greater understanding of health benefits, thus driving increased consumption (Shimbo *et al.*, 2005).

Gender differences are evident, with several studies showing that women consume green tea more

frequently than men. Women generally have a higher health awareness and a preference for beverages perceived to offer health benefits, leading to a greater preference for green tea (Tran *et al.*, 2023). Furthermore, consumer purchasing decisions are influenced by marital status and family size, as both factors are related to household health priorities, which ultimately shape green tea consumption patterns (Lee *et al.*, 2009). Socioeconomic factors, such as occupation and income level, also play a role in shaping consumption habits. Individuals with higher incomes tend to purchase green tea more regularly as part of their commitment to a healthy lifestyle (S.-T. Wang, 2014).

Product Attributes

The product attributes examined in this study included aroma, shape, color, price, taste, size, packaging, benefits, and brand. Consumers evaluated these attributes based on their knowledge and experience with the product. The results of the analysis

Table 2. Green Tea Product Attributes

Product Attributes	Number (People)	Percentage (%)
Brand		
TongTji	14	12
2Tang	13	11
Djenggot	32	27
Kaligua	7	6
Teh Gopek	54	45
Aroma		
Astringent	34	28
Fresh	86	72
Form		
Tea pack	42	35
Brewed loose-leaf	78	65
Brew Color		
Red	60	50
Brown	52	43
Yellow	8	7
Price		
Rp 2,500 – Rp 4,999	4	3
Rp 5,000 – Rp 7,499	26	22
Rp 7,500 – Rp 9,999	34	28
>Rp 10,000	56	47
Taste		
Astringent	71	59
Bitter	6	5
Sharp	17	14
Soft	26	22
Size		
1 – 50 grams	84	70
51 – 100 grams	36	30
Packaging Attribute Elements		
BPOM	33	28
Composition	5	4
Production Code	9	8
Nutritional Information	3	3
MUI Halal	5	4
BPOM and MUI Halal	7	6
BPOM and Production Code	7	6
BPOM and Composition	7	6
Serving Suggestions, and MUI Halal	3	3
Production Code and MUI Halal	5	4
BPOM, Production Code, and MUI Halal	5	4
BPOM, Composition, and Nutrition Facts Information	3	3
Production Code, Nutrition Facts Information, and MUI Halal	3	3
Composition, Production Code, and MUI Halal Certification	3	3
BPOM, Composition, Production Code, and Halal MUI	5	4
BPOM, Composition, Production Code, Nutrition Information, and MUI Halal	5	4
BPOM, Composition, Production Code, and Nutrition Facts Information	2	2
BPOM, Serving Suggestions, Production Code, and MUI Halal	2	2
BPOM, Serving Suggestions, Nutritional Information, and MUI Halal	2	2
BPOM, Weight Information, Production Code, Nutritional Value Information, and MUI Halal	2	2
BPOM, Composition, Serving Suggestions, Production Location Information, Nutritional Value Information, and MUI Halal	2	2
BPOM, Composition, Serving Suggestions, Production Location Information, Weight Information, and Production Code	2	2

of consumer knowledge of green tea attributes are presented in Table 2. In general, green tea is valued by consumers for its fresh aroma and calming sensation. The most preferred brewing method is the tubruk

method, which involves brewing tea leaves without a filter. This characteristic is related to the processing of green tea, which undergoes minimal oxidation, unlike black or oolong tea which undergo a longer oxidation

Table 3. KMO and Bartlett's Test of Sphericity Green Tea

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.67
Bartlett's Test of Sphericity	Approx. Chi-Square	424.68
	Df	45
	Sig.	0.000

process (Ho *et al.*, 2018; Hirono *et al.*, 2024). In terms of price, a price range above IDR 10,000 is considered an average standard that consumers consider reasonable. Although observational data may indicate certain trends, the dynamics of price preferences are actually influenced by various interrelated factors (Kharabsheh, 2024). The astringent or slightly sour aftertaste that lingers after drinking is a distinctive characteristic that enhances the experience of enjoying green tea.

Consumers also prefer green tea in 1-50 gram packages because they allow them to customize their usage to their individual needs. The presence of BPOM legality on the packaging is an important indicator that increases public trust in product authenticity. Besides taste, consumers choose green tea for its health and beauty benefits, as well as their knowledge of its bioactive compounds. Green tea is known to have high antioxidant properties, thus playing a role in reducing oxidative stress and lowering the risk of chronic disease (Parvez & Wani, 2024). Catechin compounds, particularly EGCG, are also widely studied for their potential in supporting cancer prevention and treatment efforts (Parish *et al.*, 2023). The Gopek brand offers a wide variety of flavors, such as jasmine, jasmine, and black tea, in both tea pack and brewed form. Although Gopek products are based on green tea, most consumers choose it for its distinctive flavor—the natural astringency and fresh aroma that are the hallmarks of quality tea.

Marketers must carefully evaluate product attributes in relation to consumer attitudes prior to the purchasing decision. Fundamentally, an excessive number of product attributes may increase consumers' cognitive burden, thereby extending the time required to assess each attribute presented. By aligning product features with consumer needs, desires, and preferences, marketers can enhance consumer satisfaction and ultimately improve product sales performance (Kotler & Keller, 2012).

Factor Analysis

The analysis results show that the Kaiser-

Meyer-Olkin (KMO) value and Bartlett's Test of Sphericity in Table 3 reached 0.67. This value is above the minimum threshold of 0.5 with a significance level of 0.000 ($p < 0.05$) (Bamgbose *et al.*, 2024), thus concluding that the variables and sample size used are sufficient for further analysis.

Based on the extraction results, the form variable had the highest value, while the benefit variable showed the lowest value. The factoring process was carried out using the Principal Component Analysis (PCA) method, which is based on eigenvalue scores. In the factor analysis, components with eigenvalues greater than 1 in Table 4 were retained, while components with values less than 1 were excluded from the new model (Auralia, Sumanto, *et al.*, 2023).

Further analysis in Table 5 reveals three components with eigenvalues above 1. The first component explains 55.53% of the data variance, the second 15.32%, and the third 12.38%. Overall, these three components explain 81.13% of the total variance in green tea characteristics.

Table 6 shows that the first component is primarily influenced by five variables: brand, type, aroma, taste, and benefits. With the exception of the brand variable, all these attributes reflect the intrinsic value or personality characteristics of the product, with taste being a primary consideration in the personality component when consumers make decisions. Attributes such as aroma, taste, and product benefits are generally important parts of the consumer decision-making process. These characteristics are closely related to an individual's emotional and cognitive aspects, illustrating how personal preferences and values can shape purchasing behavior (Shaw, 2024).

The unique taste of green tea and its health-promoting effects are related to its complex metabolite composition (Mozumder *et al.*, 2025). Therefore, when choosing green tea, consumers tend to prioritize taste and health benefits over brand. The identity component relates to the visual aspects of the product, with packaging attributes being the most dominant consideration in decision-making. Packaging plays a

Table 4. Communalities Green Tea

	Beginning	Extraction
Brand	1.000	0.73
Type	1.000	0.78
Aroma	1.000	0.77
Form	1.000	0.98
Brew Color	1.000	0.83
Taste	1.000	0.75
Packaging Attribute Elements	1.000	0.85
Size	1.000	0.79
Price	1.000	0.97
Benefits	1.000	0.68

Table 5. Total Variance Explained Green Tea

Component	Initial Eigenvalue			Number of Extractions from Squared Loadings			Number of Rotations of Squared Loadings		
	Total	% of the Variant	Amount %	Total	% of the Variant	Amount %	Total	% of the Variant	Amount %
1	5.54	55.53	55.53	5.54	55.53	55.53	5.54	55.53	55.53
2	1.53	15.32	68.75	1.53	15.32	68.75	1.53	15.32	68.75
3	1.23	12.38	81.13	1.23	12.38	81.13	1.23	12.38	81.13
4	0.68	6.80	87.95						
5	0.39	3.93	91.88						
6	0.28	2.82	94.70						
7	0.21	2.13	96.85						
8	0.18	1.87	98.72						
9	0.09	0.95	99.66						
10	0.03	0.33	100.00						

crucial role in influencing consumer perceptions, particularly for green tea products, where sensitivity to packaging appearance is relatively high (Santoso & Fitriani, 2016). Consumer preference for green tea products is strongly influenced by the visual appeal and perceived environmental sustainability of the packaging. Transparent packaging designed with environmentally friendly principles can enhance product appeal and encourage more sustainability-oriented consumption behavior, in line with the growing trend toward sustainable products (Baca & Reshidi, 2025).

The image component describes the external aspects of green tea product attributes, with price being a primary consideration in the decision-making process. Price remains a crucial factor, as it can both encourage and hinder purchasing decisions. Various external aspects of green tea products, combined with consumer price sensitivity and cultural influences, create a complex web of considerations that shape consumer behavior in the marketplace (Srivastava & Gupta, 2022; Sheikh *et al.*, 2023). Price awareness, in particular, acts as a mediator, strengthening the influence of these factors on

purchasing decisions for environmentally friendly products (Lopes *et al.*, 2024). Strategic pricing, when integrated with other elements such as packaging, can be an important instrument in guiding consumer choices (Zhao *et al.*, 2021).

Conclusion

Green tea consumers are generally married women who work as civil servants and have a bachelor's degree. Preferences for green tea are grouped based on loading factor values influenced by three main components: the personality or character of the tea with the taste variable, the appearance or identity of the product with the packaging attribute element variable, and the product image with the price variable. Based on research findings, taste, packaging attribute element, and price are the most dominant factors in shaping consumer preferences. Therefore, tea companies are advised to develop products that emphasize product development on taste attributes, packaging attribute elements, and affordable prices without neglecting other product attributes.

Table 6. Rotated Component Matrix of Green Tea

	Component		
	Personality	Identity	Image
Brand	0.77	0.32	0.13
Type	0.82	0.25	0.20
Aroma	0.78	0.16	0.36
Form	0.26	0.13	0.95
Brew Color	0.55	0.77	0.16
Taste	0.85	0.03	0.07
Packaging Attribute Elements	-0.03	0.92	0.08
Size	0.45	0.75	0.15
Price	0.20	0.13	0.95
Benefits	0.71	0.19	0.35

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