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Original Research Article

Examining the Impact of Premium Tea Consumption Trends on Lotus-Infused Tea Growth in Vietnam

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Abstract— The global demand for luxury and specialized teas has created new opportunities for Vietnam's conventional tea sector, especially for lotus-infused tea. Lotus-infused tea, renowned for its flowery perfume and cultural legacy, mixes high-quality green tea leaves with the scent of lotus flowers (Nelumbo nucifera), appealing to current consumer aspirations for wellness in order authenticity, and luxury experiences. This research examines at the impact of premium tea consumption patterns on the development potential of lotus-infused tea in Vietnam. Structured questionnaires were used to obtain data from 387 respondents of various ages and genders on tea purchase behavior, flavor preferences, brand perception, and health awareness. The research took a mixed-method approach, including descriptive statistics and inferential techniques such as multiple regression analysis, ANOVA, Chi-square, and correlation analysis, which were carried out using SPSS software. The key variables examined were perceived quality, brand loyalty, health consciousness, price sensitivity, and cultural connection. Perceived quality and cultural significance significantly influenced customers' desire to purchase lotus-infused tea (p values less than 0.05). The research found that price sensitivity moderately deters customers from purchasing lotus-infused tea, as customers are more likely to purchase it when luxury elements like exquisite packaging, organic sourcing, and a strong scent are highlighted. Finally, increasing demand for premium teas contributes greatly to the growth of the lotus-infused tea market in Vietnam. To achieve sustainable growth, tea growers should focus on improving product quality and harnessing cultural storytelling to brand lotus tea as a premium, health-conscious beverage in both local and global markets.

Keywords: Premium Tea Consumption, Lotus-Infused Tea, Vietnam Tea Market, Tea Industry Growth, Product Premiumization, Consumer Behavior.

INTRODUCTION

In recent years, the global tea market has departed through changes because of shifting consumer behavior, health trends, and the demand for premium and specialty products. Historically, tea consumption has been dominated by the mass-market, commodity-based bulk section but now there are observable consumer trends to drinking teas that are more artisanal, sophisticated, and wellness-oriented (1 & 2) away from tea product categories that do not offer superior taste and wellness and authenticity preference. (3)Lotus-infused tea, a type of premium tea product, has recently gained popularity due to its flavor and health-related benefits. Lotus-infused tea is a traditional beverage that features green tea and the aroma of fresh lotus flowers (Nelumbonucifera); lotus-infused tea is aromatic and luxurious. (4)In the past, lotus-infused tea has been considered a specialty niche product. However, lotus-infused tea has great potential given the market's newfound appreciation for premium tea and the consumer demand for teas with distinctive flavors and health benefits.(5) The opportunity for lotus-infused tea will continue to expand as the consumer profile evolves to be increasingly more discerning and wellness-oriented.(6) The growth in advanced tea demand is due to a few reasons: greater awareness about the health benefits of tea, an increasing preference for organic and natural products, and the greater demand for interesting, unique high-quality tea experiences.(7) Consumers are willing to buy teas with very good quality, uniquely sourced teas, and teas that have associations with wellness.(8) In addition, e-commerce and social media enabled premium tea brands to promote themselves and reach and grow an audience locally and globally.(9)

The increasing consumption of premium tea over the past decade has generated a limited understanding of the specific factors involved in the consumption of lotus-infused tea. There is some understanding of the premium tea market; however, it is possible to understand the factors affecting the consumption of lotus-infused tea, including consumer preferences,

flavor expectations, and the constitutively significant essence of locating this beverage. The gap in research allows for an exploration of trends in premium tea consumption and demands on the lotus-infused tea planning such as purchasing behavior, perceived quality, and cultural influences of the product.(10)establishes a precise aim of being able to assess the premium tea consumption trends and their impacts on the demand for lotus-infused tea.(11) The main focus areas of the project will include aroma intensity, packaging quality, health benefit awareness, and behavior on price shifting.(12) The reasoning behind this project is to provide information to businesses on how to use the various factors involved in premium tea consumption trends to successfully market lotus-infused tea.(13)Improving business marketing avenues, and products, and contributing to more effective premium teas in the marketplace are ways the study can improve decisions for better strategies moving forward.(14 and 15)

With an emphasis on the Chinese tea market, (16) analyzed factors impacting consumer beliefs about how healthy herbal tea is substantial. The findings indicated that prestige, in-store experience, quality of products, client service, and inventiveness were significant factors. Perceived health increased purchase intent, with customer opinions serving as a mediating influence. An emphasis on demographic factors, (17) examined the intake trends of tea and infusions of herbs in Portuguese. Females between the ages of 40 and 60 who were medium consumers made up the bulk of responders. The most popular type of tea was green tea, and people favored herbal infusions. The analysis emphasized how crucial it was to use labels correctly and follow healthy consumption habits to ensure product quality. The relationship between tea drinking and memory retention in older persons is investigated in. (18)The findings indicated that green tea improved men, had a more preventive effect on brain function, and reduced the rate of Cognitive Impairment (CI)with increased drinking tea frequency. Drinking tea could be an easy way to avoid CI.

The effects of tea and coffee on cognitive performance (19) in office-related tasks were examined, and traditional and cognition-enhancing warm beverages improved brain efficiency. It was the first research to assess the effects of both types of liquids utilizing a unified strategy. The long-term effects of drinking coffee, tea, or both on a midlife crisis subclinical (20) left ventricle ventricular or systolic function. The research, which included 2735 participants from the Cardiovascular Artery Risks Progression in Youth (CARDIA) project, evaluated the relationship between echocardiogram results and caffeine, tea, and drinking coffee using model-based linear regression. The findings indicated that improved Left Ventricle (LV) hemodynamic and diastolic performance in the middle was linked to low-to-moderate daily caffeine intake from childhood to middle age. According to(21)a survey with 408 participants from throughout the world, the average purchase value and the quantity of green tea intake were inversely connected. This implied that to target the upscale consumer sector of the international tea industry, tea manufacturers had prioritized brand communication.

An important aspect of Indian social, cultural, and financial existence is tea.(22) Price, color, scent, brand loyalty, and recognition all have an impact on how consumers behave over time. To analyze customer needs, this analysis used SPSS along with chi-square analysis to assess buying patterns in Pune, Maharashtra. Having tea while on vacation could help India's tea tourism industry flourish.(23) Abnormal tourism could be better understood by using a taste cape which included locations, social conventions, and physical components. If marketing initiatives and quality improvements were executed, the Indian Tea Farms was able to rise as a top tea-related destination. The growth of the tea business with a focus on innovative ingredients, cutting-edge (24) processing methods, and consumer preference. It emphasized the value of innovation in making sustainable, healthier choices as well as the incorporation of digital and automated technologies into the tea-making process. The report made strategic suggestions and projects for tea beverage innovation in the future.To analyze the connection among objective price variability in Kenya's tea industry (25), it finds that both eastern and western areas fluctuate substantially in quality. The results indicated that supply has a detrimental moderating role in volatility in prices, but objectively has a considerable impact been suggested to improve tea quality.

As the second-biggest in the world, India's tea operations have an extensive past and make a substantial economic contribution to the country.(26) The primary tea-growing locations were Assam and Darjeeling, as well as the company has moved toward sustainable and natural processes. The sector kept expanding and promoted tea tourism, highlighting India's manufacturing of tea and origins, despite obstacles including competition, fluctuating pricing, and labor disputes. Comparing urban and rural families, (27) investigated the amount, spending, and caliber flexibility of the intake of tea in Pakistan. The findings revealed that rural individuals possessed larger quantities and expenditure elasticities, while urban households were more likely to buy excellent tea as their income increased. The quantity and spending elasticity were lower than unity, indicating essential products. Computer-Assisted Web Interviewing (CAWI)(28) was used to examine the tea-drinking patterns of 1700 senior Polish customers. Yerba mate consumers of beverages, tea gourmets, occasional consumers, undemanding tea consumers, and occasional potent tea consumers were the six groups that were identified. According to the findings, Poles consume black tea at home, multiple times a week, and prefer it without additives.

Growing resources and ecological issues have prompted growth in the demand for sustainable agriculture

products.(29) Tea was also extremely popular, being amongst the leading three beverages in the world. Product knowledge has a beneficial impact on behavior, buying intention, perceived product quality, and trust, according to research that examined 700 surveys. To assess the environmental impacts of various forms of energy in Kenyan tea manufacturers (30) over five years. The use of wood has a significant ecological impact, whereas solar power has the least. Turning discarded tea leaves into biogas energy reduced the impact on the environment. Macadamia briquettes were suitable for thermal energy because of their low environmental impact. According to the research, employing renewable energy sources could potentially slow down temperature rise and support Kenya's tea sector.

RESEARCH OBJECTIVE AND SYSTEM OVERVIEW

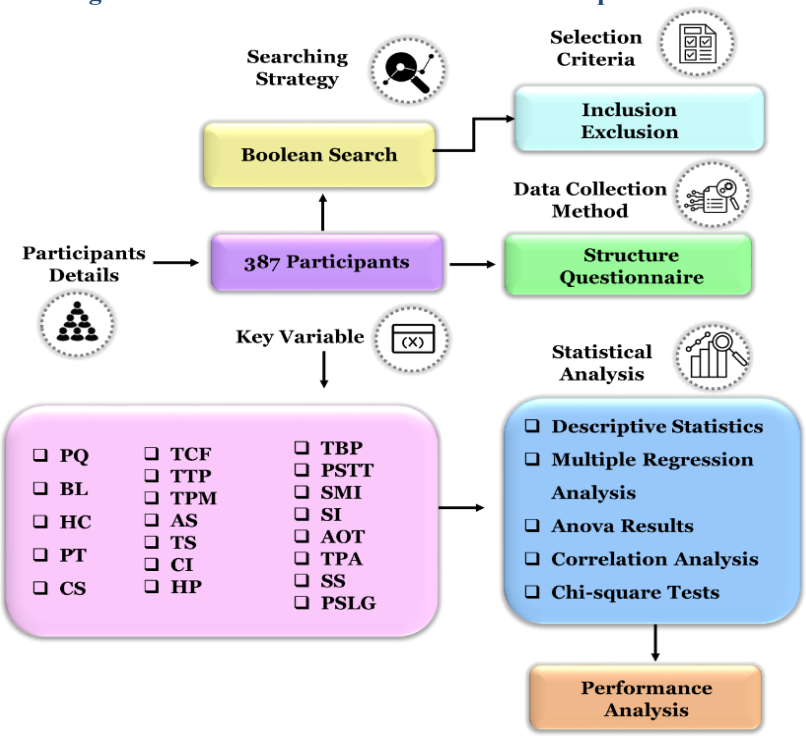
The goal of this research is to investigate the influence of premium tea consumption trends on the growth potential of lotus tea in Vietnam. It seeks to identify important factors such as perceived quality, brand loyalty, health-orientedness, and cultural significance, which impact consumer interest and purchasing decisions, and the extent of influence premium attributes have on the demand for lotus tea.

The organization of the research includes 4 sections. Phase 2 includes the methodological framework. Phase 3 contains the result and discussion. Phase 4 involves the conclusion.

MATERIALS AND METHODS

This research was done using quantitative methodology using structured surveys to collect data from participants. A diverse sample was selected to ensure adequate representation of important demographic variables. The survey was aimed to collect data focused on relevant consumer behavior and consumer preference factors. Statistical analysis using both descriptive and inferential techniques was used to analyze the results as it demonstrated important trends. Data analysis was conducted using statistical software as a way to enhance the accuracy and reliability of the results (Figure 1).

Figure 1. Framework of Premium Tea Consumption Trends.



Source: Own elaboration.

Participants Details

The data were gathered from 387 recorded participants, using a structured questionnaire that assessed consumer behavior about premium tea, specifically lotus-based tea. The sample was even between genders and even across ages, so the structure ensured that the entire population was represented in Table 1 and Figure 2. The survey investigated consumer behavior characteristics, such as product health consciousness, subjective connected expectations regarding brand reputation, flavor type, and demands of product effectiveness, which lead to a purchase. Other survey questions inquired about participants' knowledge of lotus tea's advantages and willingness to pay extra for a premium product. Perceptive customer habits and tastes are reflected by the entire spectrum of parameters examined.

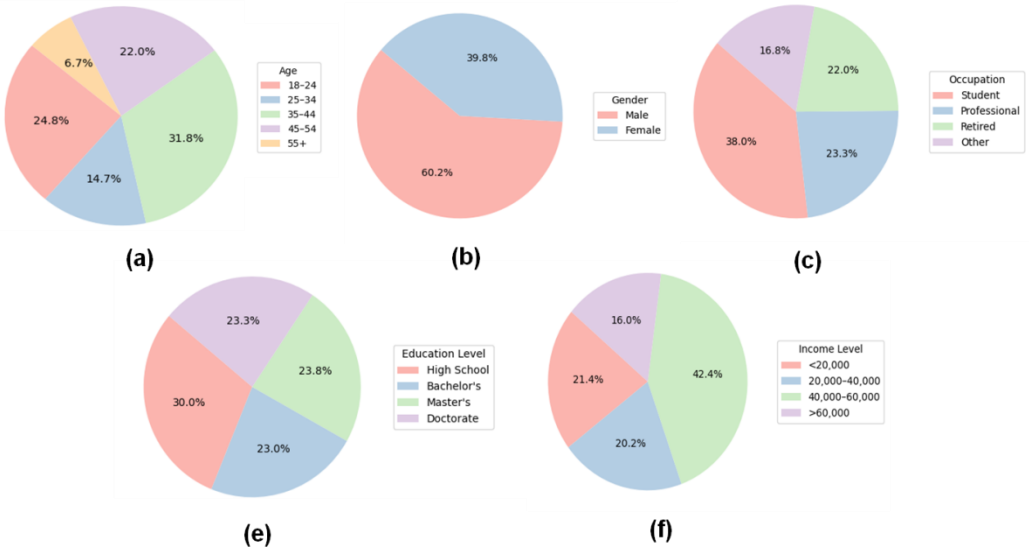
Table 1. Demographic Features of the Participants.

Demographic Feature	Category	N= 387	Percentage (%)

Age	18–24	96	24.8
	25–34	57	14.72
	35–44	123	31.78
	45–54	85	21.96
	55+	26	6.71
Gender	Male	233	60.20
	Female	154	39.79
Education Level	High School	116	29.97
	Bachelor's	89	22.99
	Master's	92	23.77
	Doctorate	90	23.25
Income Level	<20,000	83	21.44
	20,000–40,000	78	20.15
	40,000–60,000	164	42.37
	>60,000	62	16.02
Occupation	Student	147	37.98
	Professional	90	23.25
	Retired	85	21.96
	Other	65	16.79

Source: Own elaboration.

Figure 2. The Outcome of Participants' Features (a) age, (b) gender, (c) education level, (d) income level, and (e) occupation.



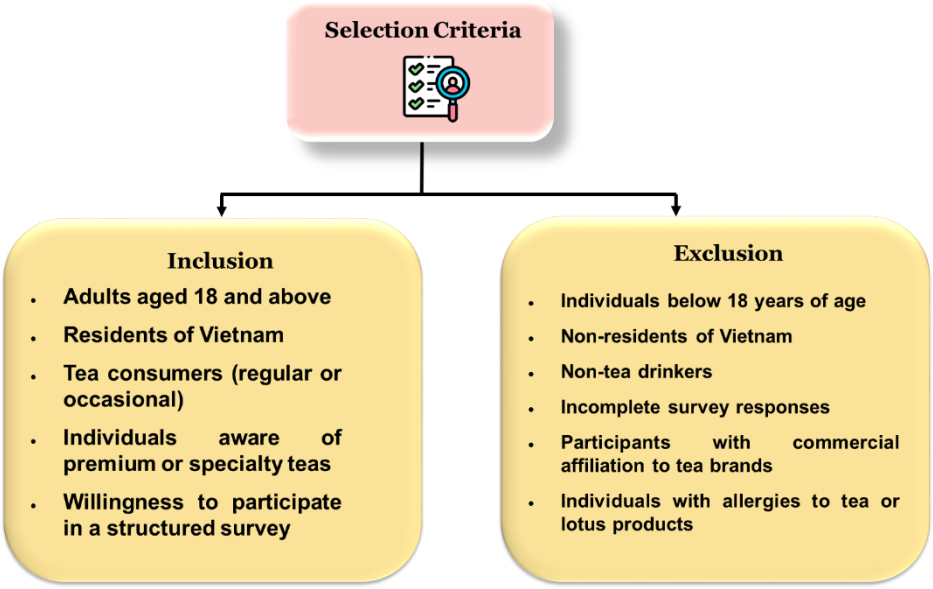
Source: Own elaboration.

Selection Criteria

The participants were selected through the criteria mentioned in Figure 3 and have two criteria for the enhanced tea consumption impact of lotus tea-infused consumption.

- Inclusion Criteria: The eligibility criteria for participating in this research included being an adult (age 18 or older), living in Vietnam, and consuming tea (regularly or not). Respondents also needed to have adequate knowledge and agree to a definition of fine or specialty tea. These excluded participants taking the survey irrespective of thought or impulse.
- Exclusion Criteria: The research excluded participants who were younger than 18, resided far from Vietnam, did not drink tea, gave incorrect answers, had financial links to tea organizations, or were aware of tea or lotus-flower product sensitivity to ensure relevant and reliable data. This was carried out to ensure a logical response to the research's conclusions, avoid prejudice, and maintain corporate and societal coherence.

Figure 3. Selection Criteria.



Source: Own elaboration.

Questionnaire Assessment

The structured questionnaire was developed to address key elements affecting consumer behavior about tea with lotus infusion. The questionnaire consisted of sections that assessed purchasing behavior, which included frequency of tea purchasing and expenditures, and expectations for flavor, which measure preferences for aroma, taste, and natural characteristics. Additionally, brand perceptions were assessed with trust, loyalty, and recognition of premium tea brands. Health awareness was assessed by looking at the participants' perceived health benefits of drinking tea, especially, drinking tea with lotus infusion. There were both qualitative and quantitative items in this questionnaire, including Likert scale items, multiple-choice items, and open-ended responses.

Table 2 presents a properly structured questionnaire item that aims to investigate consumer behavior towards lotus-infused tea. The survey looks across four main areas purchasing behavior, flavour expectations, brand image, and awareness of health benefits. Each section includes several questions that aim to explore specific items influencing purchasing trends toward premium tea consumption among Vietnamese consumers.

Table 2. Structured Questions for Lotus-Infused Tea Preference Analysis.

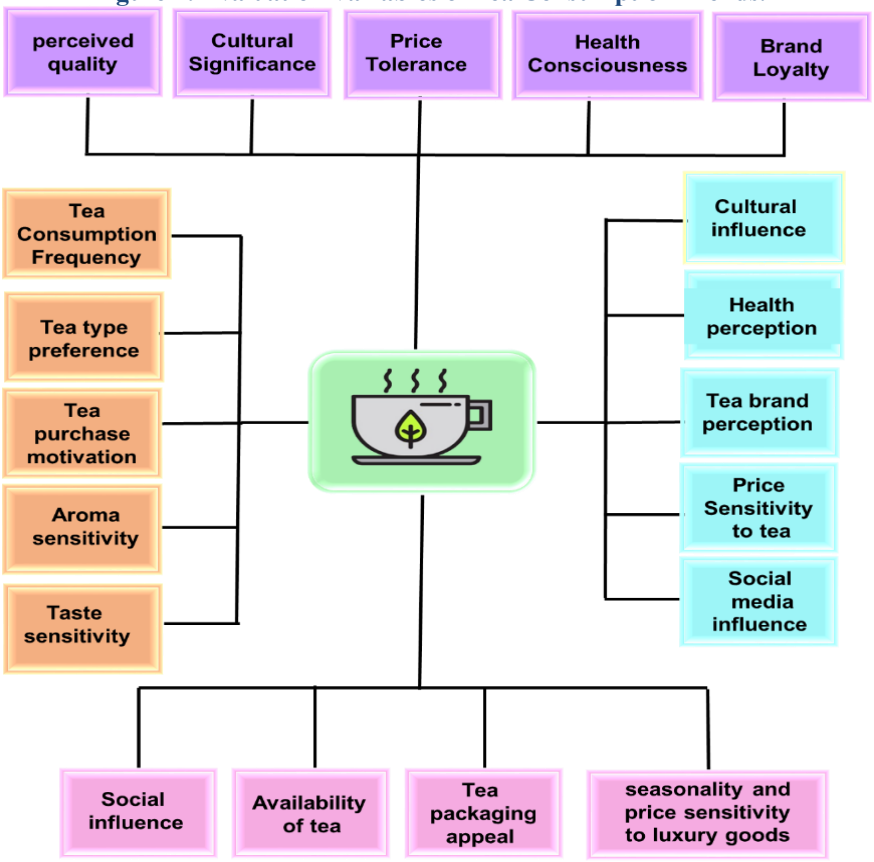
Focus Area	Sample Questions
Purchasing Behavior	1. How often do you purchase tea products? 2. What is your average monthly spending on tea? 3. Where do you typically buy your tea (e.g., supermarket, specialty shop, online)?
Flavor Expectations	1. How important is aroma when selecting a tea product? 2. What flavor profiles do you prefer in tea (e.g., floral, earthy, sweet)? 3. How willing are you to try new or unique tea flavors such as lotus-infused tea?
Brand Perception	1. How important is brand reputation when purchasing tea? 2. Which tea brands do you associate with premium quality? 3. How likely are you to remain loyal to a tea brand that consistently delivers high quality?
Health Awareness	1. How strongly do health benefits influence your choice of tea? 2. Are you aware of the health benefits associated with lotus-infused tea? 3. Do you prefer tea products labeled as organic or natural?

Source: Own elaboration.

Key Analysis Variables

The variables in this research include the perceived quality (PQ), brand loyalty (BL), health consciousness (HC), Price tolerance (PT), cultural significance (CS), Tea Consumption Frequency, tea type preference, tea purchase motivation, aroma sensitivity, taste sensitivity, cultural influence, health perception, tea brand perception, price sensitivity to tea, social media influence, social influence, availability of tea, tea packaging appeal, seasonality and price sensitivity to luxury goods. These variables represent consumer attitudes and behaviors that contribute to the consumption of premium tea as represented in Figure 4. PQ relates to how great consumers regard the product. BL refers to consumer behavior related to repeat purchases. HC relates to the thought of health and well-being. PT concerns whether the consumer is sensitive to changes in price and CS relates to the emotional and traditional aspects that represent overall demand for lotus-infused tea in the premium segment which is developing rapidly.

Figure 4. Evaluation Variables of Tea Consumption Trends.



Source: Own elaboration.

- PQ: Measures the consumer's evaluation of the overall quality and superiority of lotus-infused tea. It demonstrates reliance on the authenticity, aroma, and flavor of the product.
- BL: Measures the consumer's loyalty to a certain tea brand and the probability of continuing the purchased product frequently. It reveals the consumer's emotional connection to and satisfaction with the tea.
- HC: Indicates consciousness and consideration of unique health reflections in tea consumption. Consumers tend to choose teas with strong health claims.
- PT: Assesses the consumer's inclination to accept a higher price for premium tea. It indicates the disposition to spend more on quality products.
- CS: Evaluate the significance of tea consumption associated with cultural traditions and heritage. Lotus tea's historical symbolism has a strong impact on the behavior of consumption and customer decision-making.
- Tea consumption frequency: Assesses tea consumption frequency at daily, weekly, or monthly levels. More frequency can correlate with marketing engagement.
- Tea type preference: Recognizes consumer preference for types of tea green, black, infused with lotus, or herbal. Preference influences the choice of brand or product.
- Tea purchase motivation: Identifies important reasons for purchasing tea for relaxation, social ritual, health purpose, or luxury enjoyment. Motivations in direct marketing.
- Aroma sensitivity: Indicates the degree to which an individual can smell and appreciate the strength of the aroma in tea. Aroma is incredibly important in formulating a premium perception of tea.
- Taste sensitivity: Evaluates how finely a consumer can detect the nuanced flavor attributes of tea. Taste sensitivity in one's preferred tea style affects the consumption of richer, more delicate teas.
- Cultural influence: Explores the impacts of societal and cultural traditions, rituals, and norms on tea purchase and consumption behavior. Cultural connections increase the attractiveness of lotus tea.
- Health perception: Assesses the consumer's belief in the benefits to health of drinking specific tea and strong health beliefs support consistent purchases.
- Tea brand perception: Assesses how consumers perceive a tea brand about its quality, reliability, and branding. A positive brand perception produces greater loyalty and increases sales.
- Price sensitivity to tea: Evaluate the impact of tea price changes on consumer purchase decisions. For consumers who are highly price-sensitive, price and affordability can be more valuable than premium pricing.
- Social media influence: Determines how much social media campaigns and online analyses influence tea purchasing habits. Influencers and advertisements facilitate the discovery of tea brands.

- Social influence: Evaluates how social groups such as family, friends, and peer groups, influence the selection and consumption habits regarding tea. Where strong social ties exist, the potential for promoting particular tea brands could occur.
- Availability of tea: Analyses the availability of retail or online options for lotus-infused tea. High availability of this product will increase purchase likelihood and brand distribution.
- Tea packaging appeal: Analyses the consumer reaction to the tea packaging design, aesthetics, and quality. Attractive packaging is positively associated with product perception and purchase intention.
- Seasonality: Recognizes how seasonal changes affect tea purchasing behavior, for example, tea consumption tends to be higher in the festive season and during the colder months.
- Price sensitivity to luxury goods: Evaluates sensitivity to pricing of luxury items including tea and how it affects purchasing behaviour. Less sensitive buyers have adopted premium tea more readily.

Statistical Analysis

A mixed-method analytical approach was utilized to assess the data thoroughly. Descriptive statistics, including means, frequencies, and percentages, were calculated to summarize participant characteristics and general patterns. Inferential statistical models were utilized to evaluate the relationships between variables. IBM SPSS statistics (Version 26.0) was used to facilitate all analyses to enhance accuracy and decrease ambiguity/interpretation of the results.

- Descriptive Statistics: Descriptive statistics are used to summarize the main variables (perceived quality, brand loyalty, health consciousness) to provide a general picture of participants' purchasing patterns and attitudes toward premium lotus-infused tea consumption by Equation (1).

$$\sigma = \sqrt{\frac{\sum_{i=1}^{n} \left(Y_j - \frac{\sum_{i=1}^{n} Y_j}{n}\right)^2}{n}} \quad (1)$$

The symbolσ indicates the standard deviation in the data set, which is a measure of how far the data points spread out from one another. Data point in the data set, and denotes the number of data points. The standard deviation is a measure of how far the data points deviate from the mean.

- Multiple Regression Analysis: Multiple regression analysis describes how the predictor variables (perceived quality (PQ), cultural significance (CS), price tolerance (PT)) together explain the participants' inclination to consume lotus-infused tea, highlighting a strength of predictors in Equation (2).

$$Z = \beta_0 + \beta_1 QP + \beta_2 DT + \beta_3 OS + \epsilon \quad (2)$$

Purchase intention Z is considered a linear function of PQ, CS, PT, and an error term(ϵ). Which captures the unexplained variance in the model.

- ANOVA: ANOVA utilizes demographics (e.g., age, gender) for comparing differences between groups regarding tea preferences; by examining whether choices on the willingness of lotus tea purchase means differ significantly between groups in Equation (3).

$$E = \frac{Between\text{-}Group\ Variabillity}{Within\text{-}Group\ Variability} \quad (3)$$

The letter 'E ' stands for the E -statistic, which is often used in statistical testing to estimate the overall significance of the model. It reports the ratio of the variance explained by the model to the variance in the data and helps determine whether or not the model explains the variance in the data. The larger the E-E-statistic, the better indication that the model explains enough variance to be significant.

- Correlation Analysis:Correlation analysis examines the relationship between variables such as health consciousness, brand loyalty, and aroma sensitivity, as examples, and whether it is positive or negative, equation (4) impacts how decisions regarding purchasing lotus tea are being made.

$$q = \frac{\sum (W - \underline{W})(Z - \underline{Z})}{\sqrt{\sum (W - \underline{W})^2 (Z - \underline{Z})^2}} \quad (4)$$

$q$signifies the correlation coefficient that can be used to measure the strength and direction of the linear relationship between two variables. The closer the value of $q$is to 1, the stronger the positive correlation. The closer the value of $q$is to -1, the stronger the negative correlation. A value of $q$close to 0 implies there is little to no relationship between the variables.

- Chi-square Tests:Chi-squared tests examine the relationship between categorical factors like tea type preference, and health as also categorical factors to evaluate whether some relationships exist between variables influencing tea consumption patterns by Equation (5).

$$w^2 = \sum \frac{(P - F)^2}{F} \quad (5)$$

The symbol P refers to the observed frequency. Frefers to the expected frequency which is the theoretical count. The difference between the observed frequency and expected frequency is commonly used for statistical tests like the Chi-square test to look at the relation of the observed data to the expected data.

RESULT AND DISCUSSION

The results have shown that perceived quality and cultural connectedness share the combined strongest position in influencing consumer's interest in lotus-infused tea. Statistical analysis has confirmed a significant association between premium attributes and purchasing behavior. Discussion interprets the results concerning evolving consumer behavior indicating rising demand for authentic, health-based tea products in Vietnam's premium tea market.

Descriptive Statistics

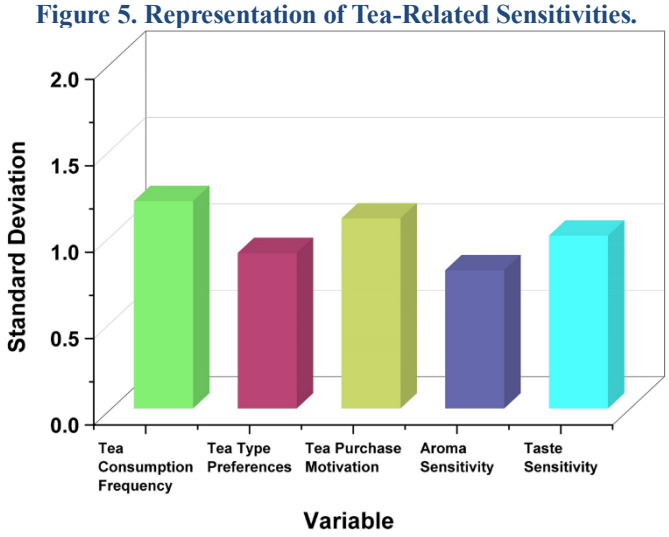
Table 3 and Figure 5 present descriptive statistics with the major consumer behavior variables. The average scores were moderate to strong engagement for all variables with AS having the highest average at 4.2. The standard deviations ranged between 0.8 and 1.2, indicating moderate variability in the responses. The skewness and kurtosis values were approximately zero, indicating that the data distributions could approach normality. The data indicates that respondents have moderate tea consumption frequency and high sensitivity to aroma, suggesting that aroma is a significant factor in purchasing decisions. The distribution of responses is nearly normal, which ensures the validity of statistical analysis methods such as regression and ANOVA. These findings directly support the research focus on premium tea attributes, particularly aroma and taste, in driving consumer interest in lotus-infused tea.

Table 3. Statistical Overview of Tea-Related Preferences and Sensitivities.

Variable	Mean	Median	Mode	Standard Deviation	Min	Max	Skewness	Kurtosis
Tea Consumption Frequency	3.1	3	3	1.2	1	7	0.45	-0.12
Tea Type Preferences	2.8	3	3	0.9	1	5	0.22	-0.47
Tea Purchase Motivation	3.5	4	4	1.1	1	7	-0.07	-0.02
Aroma Sensitivity	4.2	4	5	0.8	1	5	0.11	-0.40
Taste Sensitivity	3.8	4	4	1.0	1	5	0.33	-0.31

Source: Own elaboration.

Figure 5. Representation of Tea-Related Sensitivities.



Source: Own elaboration.

Multiple Regression Analysis

Table 4 shows the multiple regression output, which examines the effects of various factors on purchase intention for lotus-infused tea. CI, HP, TPB, and SMI', were all positive and statistically significant, with p-values of less than 0.05. TPB has the largest standardized ($\beta = 0.26$), matured significantly over time yet still shown to be positive in its influence. PSTT has an insignificant negative influence on the multiple regression ($p = 0.002$). These findings further reinforce the importance of cultural, health-related, and social factors in consumer behavior towards premium tea products.The results show that cultural influence, health perception, tea brand perception, and social media influence positively impact premium tea purchasing decisions, with tea brand perception being the most significant. Price sensitivity has a slight negative effect, though it is near the threshold of statistical significance. These findings align with your research by identifying key factors driving consumer interest in lotus-infused premium tea.

Table 4. Effects of Key Variables on Premium Tea Purchasing Decision.

Variable	Unstandardized Coefficients (B)	Standardized Coefficients (β)	t-value	p-value
Cultural Influence	0.15	0.18	2.85	0.005
Health Perception	0.12	0.14	2.38	0.018
Tea Brand Perception	0.22	0.26	4.15	0.000
Price Sensitivity to Tea	-0.08	-0.10	-1.95	0.002
Social Media Influence	0.13	0.16	2.75	0.005

Source: Own elaboration.

ANOVA Tests

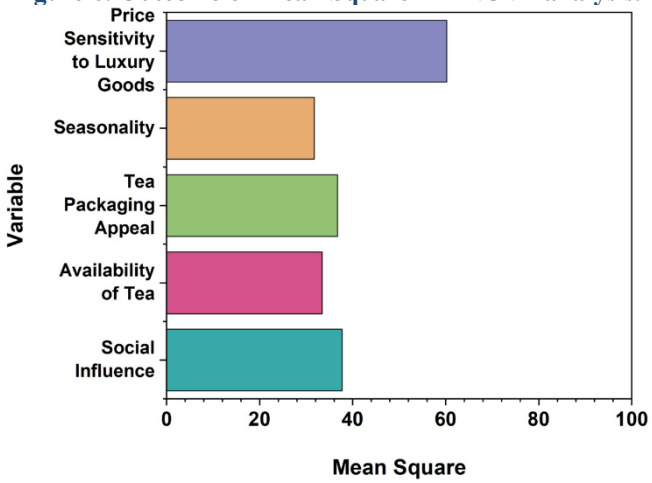
Table 5 and Figure 6 detail the results of the ANOVA tests exploring group differences in key variables influencing lotus-infused tea purchases. Statistically significant results were found for SI, AOT, TPA, SS, and Price Sensitivity to Luxury Goods, all of whom had p-values smaller than 0.05. The PSLG (7.74, p-value 0.000) value from the ANOVA indicates the highest F-value and hence the strongest independent variable from the tested models. The findings emphasize the role of psychological and sensory factors in consumer behaviors during the decision-making process.The results indicate that social influence, availability, tea packaging appeal, seasonality, and price sensitivity to luxury goods all significantly affect lotus-infused tea consumption, with price sensitivity having the strongest impact. The F-values and p-values confirm the statistical significance of these factors. These findings support research by identifying key drivers influencing consumer behavior and demand for lotus-infused premium tea.

Table 5. Significance of Factors Affecting Lotus-Infused Tea Consumption.

Variable	Sum of Squares	df	Mean Square	F-value	Sig. (p-value)
Social Influence	75.432	2	37.716	4.89	0.005
Availability of Tea	100.342	3	33.447	4.23	0.015
Tea Packaging Appeal	110.234	3	36.745	4.59	0.003
Seasonality	95.310	3	31.770	4.01	0.019
Price Sensitivity to Luxury Goods	120.432	2	60.216	7.74	0.000

Source: Own elaboration.

Figure 6. Outcome of Mean Square in ANOVA analysis.



Source: Own elaboration.

Correlation Analysis

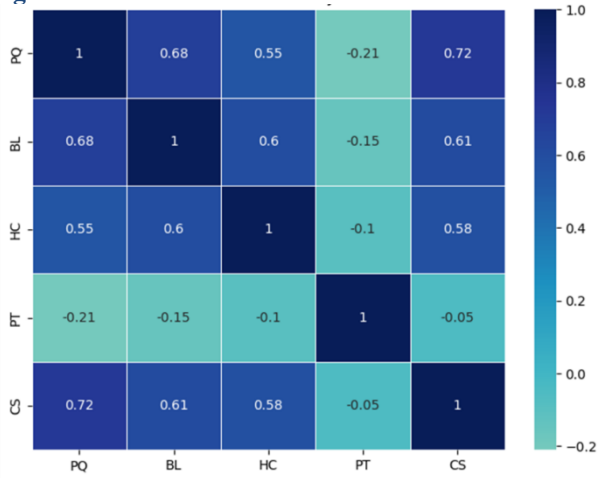
Table 6 and Figure 7 depict the correlation matrix for PQ, BL, HC, PT, and CS. There are strong positive correlations between PQ and BL (0.68) and PQ and CS (0.72) indicating that a high perceived quality will result in higher levels of brand loyalty and cultural significance. There is a moderately positive relationship between HC and BL (0.60). Price tolerance is weakly or negatively correlated to the other variables indicating its less impactful role comparatively. These findings assist in finding some essential links that promote comprehension of lotus tea customer behavior. Strong positive correlations between PQ, BL, and CS, while PT has weaker or negative relationships with other variables. The correlations indicate that quality, brand loyalty, and satisfaction are key drivers of consumer preferences. These findings are relevant to your research, emphasizing the importance of premium tea attributes, such as quality and brand, in driving demand for lotus-infused tea.

Table 6. Statistical Relationships between Tea Attributes and Consumer Preferences.

Variable	PQ	BL	HC	PT	CS
PQ	1.00	0.68	0.55	-0.21	0.72
BL	0.68	1.00	0.60	-0.15	0.61
HC	0.55	0.60	1.00	-0.10	0.58
PT	-0.21	-0.15	-0.10	1.00	-0.05
CS	0.72	0.61	0.58	-0.05	1.00

Source: Own elaboration.

Figure 7. Correlation matrix of Consumer Preferences.



Source: Own elaboration.

Chi-square Tests

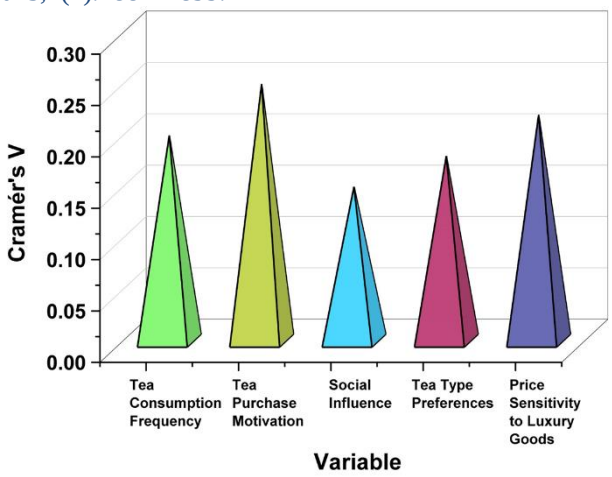
The results of the Chi-square tests are in Table 7 and Figure 8 there are significant associations with categorical variables of consumption of lotus-infused tea shown for tea consumption frequency, tea purchase motivation, social influences, tea type preference, and price signals of luxury goods. The p-values for the chi-square tests were less than 0.05, so there are significant associations between these five factors and behavior consumption of lotus-infused tea. Cramér's V values are between 0.15 and 0.25 indicating moderate associations for consumer behaviour with lotus-infused tea. The value of 0.25 for TPM had the highest degree of association with the categorical variables.The significant relationships between tea consumption frequency, purchase motivation, social influence, tea type preferences, and price sensitivity, with p-values all less than 0.05. Cramér's V values indicate a moderate strength of association between these variables and purchase behavior. These results are relevant to your research, demonstrating the key factors influencing consumer decisions to purchase lotus-infused premium tea.

Table 7. Statistical Tests of Relationships between Tea Attributes and Purchase Behavior.

Variable	Chi-Square Value	df	p-value	Cramér's V
Tea Consumption Frequency	16.42	4	0.003	0.20
Tea Purchase Motivation	22.15	3	0.000	0.25
Social Influence	9.56	2	0.008	0.15
Tea Type Preferences	12.73	5	0.025	0.18
Price Sensitivity to Luxury Goods	18.88	2	0.001	0.22

Source: Own elaboration.

Figure 8. The outcome of the Chi-square Test.



Source: Own elaboration.

DISCUSSION

The materials above have various weaknesses, including a lack of diversity in sample size (20) certainly, the results of the CARDIA project conducted in the USA could not be able to extended to the larger universe. In (21), the survey had inconsistent treatment of organic status which could be detrimental to the validity of the results. The data (22) was limited to just Pune, and Maharashtra, creating concerns about regional representation and applicability to the rest of India.

Teatourism (23) in India was investigated without considering critical factors such as infrastructure, legislation, and sustainability. The tea industry's innovation was highlighted (24), but the influence of technology on output remained unclear. This made the debate less clear and effective. Price changes in Kenya's tea industry were documented, but no measures for quality stability were proposed.

The tea industry's contribution to India's economy (25) is discussed but overlooks key issues like labor, environment, and sustainability. Tea consumption in urban and rural Pakistan is covered, yet lacks analysis of brand loyalty and health-conscious behaviors. This results (26) in an incomplete understanding of diverse consumer preferences. The study identifies perceived quality, brand loyalty, perceived health, price sensitivity, and cultural significance as key drivers of consumers.

The research explores psychological and sensory factors(27) influencing purchase intent in the premium tea sector, including aroma sensitivity, tea packaging appeal, and social influence. The study investigates psychological and sensory factors influencing purchase intent in premium tea, focusing on brand loyalty and health-conscious behaviors despite sample size limitations. It suggests a targeted marketing strategy emphasizing premium attributes, and health perceptions.

CONCLUSION

In total 387 participants were included in the research, with each demographic of participants being evenly distributed. The main variables analyzed in the data collection were perceived quality, brand loyalty, health consciousness, price tolerance, and cultural importance. Descriptive statistics were employed before conducting multiple regression analysis, ANOVA, Chi-square tests, and correlation tests with the data collected. The results demonstrated that the strongest positive influences in consumer demand for lotus-infused tea were perceived quality and culture. Conversely, price tolerance exhibited a moderate negative influence on purchasing behavior. While a large portion of participants expressed it would provide a high willingness to purchase lotus-infused tea regularly - noting that premium attributes were outlined. Limitations might include the limited geographic focus of the research, which may impact the applied implications of the findings. The analysis did not examine other external factors. Future research could examine other demographics, and use social media and other digital formats to analyse advertising effects, and longer-term purchasing patterns in premium tea consumption.

Ethical considerations

his study is committed to upholding the highest ethical standards in its collection and use of primary data involving human participants. The data collection was independent of any institutional affiliations, ensuring that participants were selected without bias or socioeconomic influence.

Conflict of Interest

The authors declare no conflicts of interest.

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REFERENCES

1. Rao, S., Chen, F., Hu, W., Gao, F., Huang, J., & Yi, H. (2023). Consumers' valuations of tea traceability and certification: Evidence from a blockchain knowledge experiment in six megacities of China. Food Control, 151, 109827.https://doi.org/10.1016/j.foodcont.2023.109827
2. Nam, K., Qiao, Y., & Ahn, B. I. (2021). Analysis of consumer preference for green tea with eco-friendly

certification in China. Sustainability, 14(1), 211. https://doi.org/10.3390/su14010211
3. Hazimeh, D., Massoud, G., Parish, M., Singh, B., Segars, J., & Islam, M. S. (2023). Green tea and benign gynecologic disorders: a new trick for an old beverage?. Nutrients, 15(6), 1439.https://doi.org/10.3390/nu15061439
4. Anumudu, C. K., Miri, T., & Onyeaka, H. (2024). Multifunctional Applications of Lactic Acid Bacteria: Enhancing Safety, Quality, and Nutritional Value in Foods and Fermented Beverages. Foods, 13(23), 3714. https://doi.org/10.3390/foods13233714
5. Tan, H. R., & Zhou, W. (2024). Metabolomics for tea authentication and fraud detection: recent applications and future directions. Trends in Food Science & Technology, 104558. https://doi.org/10.1016/j.tifs.2024.104558
6. Gruszecka-Kosowska, A., Mazur-Włodarczyk, K., & Laskowska, B. (2021). A Chinese tea phenomenon: trends of consumption in Poland in relation to pro-ecological behavior.https://doi.org/10.35808/ersj/2494
7. Langford, N. J. (2021). From global to local tea markets: the changing political economy of tea production within India's domestic value chain. Development and Change, 52(6), 1445-1472.https://doi.org/10.1111/dech.12652
8. Iweala, S., & Sun, Y. (2022). The many aspects of voluntary sustainability governance: Unpacking consumers' support for tea standards in China and the UK. Cleaner and Responsible Consumption, 7, 100080.https://doi.org/10.1016/j.clrc.2022.100080
9. Wang, W., Chen, Z., & Kuang, J. (2025). Artificial Intelligence-Driven Recommendations and Functional Food Purchases: Understanding Consumer Decision-Making. Foods, 14(6), 976.https://doi.org/10.3390/foods14060976
10. Safeer Abbas, M., Afzaal, M., Saeed, F., Asghar, A., Jianfeng, L., Ahmad, A., ... & Shah, M. A. (2023). Probiotic viability as affected by encapsulation materials: Recent updates and perspectives. International Journal of Food Properties, 26(1), 1324-1350.https://doi.org/10.1080/10942912.2023.2213408
11. Ye, J. H., Ye, Y., Yin, J. F., Jin, J., Liang, Y. R., Liu, R. Y., ... & Xu, Y. Q. (2022). Bitterness and astringency of tea leaves and products: Formation mechanism and reducing strategies. Trends in Food Science & Technology, 123, 130-143.https://doi.org/10.1016/j.tifs.2022.02.031
12. Tian, H., Siddik, A. B., & Masukujjaman, M. (2022). Factors affecting the repurchase intention of organic tea among millennial consumers: An empirical study. Behavioral Sciences, 12(2), 50.https://doi.org/10.3390/bs12020050
13. Boonerjee, S., Islam, M. A., Islam, S. M., Paul, S. K., Uddin, M. T., & Alamgir, M. S. (2025). Consumption and export potential of tea in Bangladesh: A field study. Journal of Agriculture and Food Research, 19, 101607.https://doi.org/10.1016/j.jafr.2024.101607
14. Koay, K. Y., Tan, S. Z., Idris, I., Leong, M. K., & Cheah, C. W. (2025). The bubble tea phenomenon: understanding the role of servicescape in consumers' responses. Asia-Pacific Journal of Business Administration, 17(2), 469-490.https://doi.org/10.1108/APJBA-01-2024-0015
15. Carloni, P., Albacete, A., Martínez-Melgarejo, P. A., Girolametti, F., Truzzi, C., & Damiani, E. (2023). Comparative Analysis of Hot and Cold Brews from Single-Estate Teas (Camellia sinensis) Grown across Europe: An Emerging Specialty Product. Antioxidants, 12(6), 1306.https://doi.org/10.3390/antiox12061306
16. Bu, X., Nguyen, H. V., Chou, T. P., & Chen, C. P. (2020). A comprehensive model of consumers' perceptions, attitudes and behavioral intention toward organic tea: evidence from an emerging economy. Sustainability, 12(16), 6619.https://doi.org/10.3390/su12166619
17. Sousa, A. C., Pádua, I., Gonçalves, V. M., Ribeiro, C., & Leal, S. (2024). Exploring tea and herbal infusions consumption patterns and behaviours: The case of Portuguese consumers. Heliyon, 10(7).https://doi.org/10.1016/j.heliyon.2024.e28779
18. Hong, B. X., Ichihashi, M., & Ngoc, N. T. B. (2024). Analysis of Consumer Preferences for Green Tea Products: A Randomized Conjoint Analysis in Thai Nguyen, Vietnam. Sustainability, 16(11), 4521.https://doi.org/10.3390/su16114521
19. Su, T. C., Yang, M. J., Huang, H. H., Kuo, C. C., & Chen, L. Y. (2021). Using sensory wheels to characterize consumers' perception for authentication of Taiwan specialty teas. Foods, 10(4), 836.https://doi.org/10.3390/foods10040836
20. Nwabuo, C. C., Betoko, A. S., Reis, J. P., Moreira, H. T., Vasconcellos, H. D., Guallar, E., ... & Lima, J. A. (2020). Coffee and tea consumption in the early adult lifespan and left ventricular function in middle age: the CARDIA study. ESC heart failure, 7(4), 1510-1519.https://doi.org/10.1002/ehf2.12684
21. Ong, A. K. S., Prasetyo, Y. T., Libiran, M. A. D. C., Lontoc, Y. M. A., Lunaria, J. A. V., Manalo, A. M., ... & Perwira Redi, A. A. N. (2021). Consumer preference analysis on attributes of milk tea: A conjoint analysis approach. Foods, 10(6), 1382. https://doi.org/10.3390/foods10061382
22. Inguglia, E. S., Song, Z., Kerry, J. P., O'Sullivan, M. G., & Hamill, R. M. (2023). Addressing clean label trends in commercial meat processing: Strategies, challenges and insights from consumer perspectives. Foods, 12(10), 2062.. https://doi.org/10.3390/foods12102062
23. Guiné, R. P., Florença, S. G., Barroca, M. J., & Anjos, O. (2020). The link between the consumer and the innovations in food product development. Foods, 9(9), 1317.https://doi.org/10.3390/foods9091317

24. Safdar, B., Zhou, H., Li, H., Cao, J., Zhang, T., Ying, Z., & Liu, X. (2022). Prospects for plant-based meat: Current standing, consumer perceptions, and shifting trends. Foods, 11(23), 3770.https://doi.org/10.3390/foods11233770
25. Lin, X., Yang, J., & Chen, Q. (2023). College students' preferences for milk tea: Results from a choice experiment. Foods, 12(7), 1491.https://doi.org/10.3390/foods12071491
26. DePaula, J., Cunha, S. C., Cruz, A., Sales, A. L., Revi, I., Fernandes, J., ... & Farah, A. (2022). Volatile fingerprinting and sensory profiles of coffee cascara teas produced in Latin American countries. Foods, 11(19), 3144.https://doi.org/10.3390/foods11193144
27. Baranowska-Wójcik, E., Szwajgier, D., & Winiarska-Mieczan, A. (2020). Regardless of the brewing conditions, various types of tea are a source of acetylcholinesterase inhibitors. Nutrients, 12(3), 709.https://doi.org/10.3390/nu12030709
28. Czarniecka-Skubina, E., Korzeniowska-Ginter, R., Pielak, M., Sałek, P., Owczarek, T., & Kozak, A. (2022). Consumer choices and habits related to tea consumption by poles. Foods, 11(18), 2873.https://doi.org/10.3390/foods11182873
29. Zheng, M., Tang, D., & Xu, A. (2022). Attribute-driven or green-driven: the impact of subjective and objective knowledge on sustainable tea consumption. Foods, 12(1), 152.https://doi.org/10.3390/foods12010152
30. Carvalho, R. L., Yadav, P., García-López, N., Lindgren, R., Nyberg, G., Diaz-Chavez, R., ... & Athanassiadis, D. (2020). Environmental sustainability of bioenergy strategies in western Kenya to address household air pollution. Energies, 13(3), 719.https://doi.org/10.3390/en13030719