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A Study of Milk Tea Consumption Behavior among University Students Based on Structural Equation Modeling: The Mediating Role of Health Consciousness

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Abstract: To explore the mechanisms influencing university students' milk tea consumption behavior amidst trends favoring healthy consumption and to clarify the mediating role of health consciousness, this study employed the Theory of Planned Behavior (TPB) and established a structural equation model (SEM) with health consciousness as a mediating variable. An empirical study was conducted with 547 university students in Lijiang. The results indicate that attitude toward the behavior and subjective norm positively influence consumption behavior, whereas perceived behavioral control has no significant effect on consumption behavior. Health consciousness partially mediates the relationship between attitude toward the behavior and consumption behavior, with a more pronounced effect among lower-year students. This study validates the theoretical framework and provides empirical support for the health-oriented upgrading of milk tea products, differentiated communication strategies, and optimization of consumption scenarios.

Keywords: University students; milk tea consumption behavior; Theory of Planned Behavior; health consciousness; structural equation modeling.

1. Introduction

In recent years, the market size of new-style tea drinks in China has surpassed 100 billion yuan. In 2025, as the industry entered a phase of competition for existing market shares, the number of stores specializing in freshly made tea drinks nationwide exceeded 415,000, with the total number of tea-related outlets reaching 669,000. University students are the primary consumer demographic in this market because of their high consumption frequency, strong social needs, and role in spearheading trendy consumption cultures. Milk tea consumption has evolved from a simple means of quenching thirst into a complex activity encompassing social interaction, entertainment, emotional regulation, and lifestyle expression. Meanwhile, as the concept of healthy living gains traction among young people, consumers are increasingly attentive to health metrics such as sugar, calorie, and trans-fat content. Consequently, consumption behavior is characterized by a state of tension in which the enjoyment of taste coexists with rational health concerns, while impulsive desires to purchase are intertwined with a mindset of prudent restraint. Adopting the Theory of Planned Behavior (TPB) as the primary analytical framework and situating the study within the consumption context of tourism cities, this study employs structural equation modeling to empirically examine the key psychological factors and the strength of their effects on university students' milk tea consumption behavior. It investigates the mediating mechanism through which health consciousness influences the relationship between attitude toward the behavior and consumption behavior, thereby advancing consumer behavior research from the analysis of direct effects toward an understanding of mediating mechanisms and providing a reference for tea beverage brands to formulate precisely segmented marketing strategies.

2. Literature Review

2.1. Review of international research

Many foreign scholars have conducted various empirical studies on the application of TPB to food consumption [1]. According to the above studies, the primary factors of TPB consistently predict dietary behaviour, and among them, attitude and behavioural intention are the strongest predictors [2]. In consumption situations for hedonic foods, such as sugary drinks, the correlation between perceived behavioural control and behaviour is relatively high compared to that in the choice of healthy foods. Koay and Cheah (2022) studied a sample of 166 milk tea consumers in Malaysia to find that attitude, subjective norm and perceived behavioural control all positively affected consumers' intention to visit the store again, and product quality, price fairness and store atmosphere had an indirect effect through attitude [3]. Maleewat et al. (2023), studied bubble tea consumers in Bangkok and found that attitude, subjective norm and perceived behavioural control all positively affected the intention to purchase [4].

Some scholars have extended the TPB model to include a dimension of health consciousness. For example, in their study on the purchasing behaviour for organic food in green packaging, Li and Shan (2025) found that both health consciousness and environmental consciousness directly influenced the intention to purchase, as well as indirectly through attitude, subjective norm and perceived behavioural control [5]. Luyện (2024) found that health consciousness indirectly promoted the intention to purchase sugar-free products through attitudes, and the role of perceived behavioural control was relatively small, in line with the expectations of the present study [6]. In general, the existing international research has focused on treating health consciousness as an independent predictor or a distant cause;

it has seldom been used as a mediator in the path from attitude to behaviour to explore whether it may hinder the realisation of this path.

2.2. Review of domestic research

One of the reasons consumers are interested in a specific product or service is taste; others include price and packaging design, and promotions have also led some consumers to purchase on impulse [7]. Therefore, it can be concluded that all the samples from different areas support the view that sensory experience and value for money are driving consumer choices. Li (2025) has indicated, in terms of social psychology and social values, that milk tea consumption has become a kind of social medium and a type of social currency for university students; the symbolic value and sense of group belonging associated with it go beyond functional needs and provide empirical support for the driving role of subjective norms [8]. Wang et al. (2021) surveyed university students on their knowledge of the nutritional content of milk tea according to the KAP model and found that, although most students had a relatively low level of knowledge about these nutritional factors, their frequency of consumption had not decreased. This phenomenon, in which a positive attitude overpowers deficient health knowledge and creates a discrepancy between awareness and behaviour, indicates that the propagation route of health cognition and consumption behaviour is complex [9]. Some studies have used a system of health awareness to conduct their research. Tang et al. (2021) pointed out that health awareness increases people's demand for sugar-free tea-based desserts due to a sense of value [10], and Huang et al. (2025) determined that health awareness and attribute perception positively influence adolescents' willingness to drink modern tea beverages indirectly [11].

2.3. Critical literature review and research gaps

Currently, the three deficiencies in research are: first, most studies treat health consciousness as an independent variable or a distant antecedent and have failed to demonstrate the mediating role it plays in the connection between attitude and behaviour; second, applications of the TPB to milk tea consumption rarely incorporate mediating variables, thus failing to reveal the internal psychological trade-offs experienced by consumers; and third, research on heterogeneity in milk tea consumption among university students in tourism contexts is lacking. Therefore, this study puts forward a change in the main theoretical view: to relocate health consciousness from the category of attitudes to a mediator in the path between attitude towards behaviour and consumption behaviour, it proposes that the effect of attitude towards behaviour on consumption behaviour consists of both a direct positive effect and an indirect negative effect.

3. Theoretical Analysis and Hypotheses

3.1. Theoretical foundation

The first TPB is a general model for understanding why people behave as they do. Ajzen (1991) believed that the direct cause of behaviour is a behavioural intention; this intention, in turn, is influenced by three factors: one's attitude towards the behaviour, subjective norms and perceived behavioural control (PBC). Many regions have been selected to study consumer behaviour using this theory [12]. However, the original TPB model has a limited explanatory ability for complex consumption behaviour with internal conflict [13]. Based on the classic model, add mediating variables in this study to consider how consumers' internal conflicts occur and what paths these effects take.

3.2. Theoretical model and hypothesis derivation

Based on the theoretical foundation and a review of previous studies, an extended model of the Theory of Planned Behaviour that incorporates mediating paths and contextual elements is proposed here. Keep the direct path from attitude towards behaviour to consumption behaviour, as well as subjective norm and perceived behavioural control, and add health consciousness as a mediator between attitude towards behaviour and consumption behaviour to examine the indirect inhibitory path. Perception of tourism culture and price sensitivity have also been added as context variables to better suit the special consumption culture in Lijiang.

Therefore, the following four core research hypotheses are proposed: regarding direct effects, consumers' positive attitudes toward the taste and hedonic value of milk tea serve as the most immediate psychological drivers of consumption behaviour; for university students deeply embedded in social networks, peer modelling effects and normative group pressure act as significant external driving forces; and given the high density of milk tea shops near campus, convenient delivery services, and affordable prices, the perceived economic costs and barriers to acquisition have been substantially reduced and no longer constrain consumption decisions. Therefore, the following hypotheses have been put forward:

H1: The attitude of individuals towards a particular behaviour positively influences their behaviour.

H2: Subjective norm has a positive effect on consumption behaviour.

H3: Perceived behavioural control does not significantly affect consumption behaviour.

The first novelty of this paper is that it adds the mediating variable of health consciousness. Consumer attitude towards milk tea does not directly lead to behaviour because health consciousness intervenes in this path. Therefore, this paper proposes:

H4: Health consciousness mediates the path from attitude toward behaviour to consumption behaviour; that is to say, an attitude towards behaviour increases one's health consciousness and, as a result, has a negative indirect effect on consumption behaviour.

4. Research Design

4.1. Research methods

This study primarily employed a questionnaire survey to collect data and used structural equation modeling (SEM) as the main analytical method. The theoretical model incorporates latent variables, such as attitude toward the behavior and health consciousness, along with complex path relationships. SEM offers distinct advantages over traditional regression analysis by enabling the direct handling of measurement errors, testing of structural relationships between latent variables, and decomposition and assessment of direct, indirect, and total effects [13].

The model specification of this study consists of two sets of matrix equations:

1. Structural model equation, used to describe the causal relationships among latent variables:

$$\eta = B\eta + \Gamma\xi + \zeta \quad (1)$$

Here, η is the vector of endogenous latent variables, ξ is the vector of exogenous latent variables, B and Γ are matrices of path coefficients, and ζ is the vector of residuals.

2. Measurement model equations, used to describe the relationships between latent variables and observed indicators:

$$Y = \Lambda_Y\eta + \varepsilon \quad (2)$$

$$X = \Lambda_X\xi + \delta \quad (3)$$

The vectors of endogenous and exogenous observed variables are denoted by Y and X, respectively; the factor loading matrices are denoted by Λ_Y and Λ_X, respectively; and the measurement error vectors are denoted by ε and δ, respectively.

4.2. Questionnaire design and variable measurement

All of the core constructs were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The measurement items for attitude towards behaviour, subjective norm and perceived behavioural control were developed according to the standard scale construction model and the context of related domestic studies. The items for health consciousness were adapted from the original scale in the previous study by Tang et al. [10]. Items for perceived tourism culture and price sensitivity were adapted to the environment of this study. A small-scale pilot study was carried out before the main survey. Based on the feedback from the respondents, the wording of the items has been adjusted to avoid ambiguity and ensure face validity of the scale.

4.3. Data collection

This study took all currently enrolled university students in Lijiang City as the subjects and used a convenience sampling method combining online and offline collection. Through the "Wenjuanxing" platform, online questionnaires were distributed to the student community, and random-intercept interviews were conducted both in the school and the surrounding commercial area for offline data collection. A total of 572 questionnaires were distributed, and after excluding invalid responses, such as those with too short a completion time or patterned answer choices, 547 valid questionnaires were obtained, with an actual response rate of 95.96%. The distribution of the sample in terms of gender, academic year, place of origin and monthly living expenses is presented in the descriptive statistics below.

4.4. Reliability and validity testing

Before testing the research hypotheses, it was essential to assess the scientific validity and reliability of the measurement instruments. In this study, confirmatory factor analysis (CFA) was employed to evaluate the reliability and validity of a measurement model comprising multiple scales. Reliability was assessed using composite reliability (CR) and Cronbach's alpha coefficient. As shown in Table 1, the CR values for all latent variables exceeded 0.7, indicating satisfactory internal stability and consistency for each of the constructs.

Table 1. Results of confirmatory factor analysis and reliability and validity tests

Latent Variable	Example Item	Standardized Factor Loading	CR	AVE
Attitude toward the Behavior	Impulse to try new flavors	0.77	0.81	0.52
Subjective Norm	Purchase when friends suggest it	0.63	0.82	0.50
Perceived Behavioral Control	Disposable income limits purchases	0.83	0.79	0.50
Health Consciousness	Attention to sugar, calories, and ingredients	0.79	0.80	0.50
Tourism Culture Perception	Distinctive packaging stimulates purchases	0.84	0.79	0.50
Consumption Behavior	—	0.73	0.79	0.50

Validity was assessed in terms of convergent and discriminant validity. Regarding convergent validity, the standardized factor loadings for all items exceeded 0.6, and the average variance extracted (AVE) for each latent variable surpassed the 0.5 threshold, indicating satisfactory convergence among items within the same construct. As for discriminant validity, Table 2 shows that the square root of the AVE for each latent variable was greater than the correlation coefficients between that variable and the other latent variables in the model, demonstrating good distinctiveness among the constructs.

Table 2. Correlation matrix and square roots of AVE

	Attitude toward the Behavior	Subjectiv e Norm	Perceived Behavioral Control	Health Consciousness	Consumption Behavior
Attitude toward the Behavior	0.72				
Subjective Norm	0.38	0.71			
Perceived Behavioral Control	0.25	0.42	0.71		
Health Consciousness	0.30	0.20	0.15	0.71	
Consumption Behavior	0.61	0.52	0.18	0.15	0.71

Note: Bold values on the diagonal are the square roots of AVE for the corresponding latent variables.

The measurement model in this study demonstrated satisfactory overall reliability, convergent validity, and discriminant validity, making it suitable for subsequent structural model analysis and hypothesis testing.

5. Data Analysis and Empirical Study

5.1. Descriptive analysis

Before conducting model testing, descriptive statistics regarding the sample's demographic characteristics and consumption behavior were generated to lay the foundation for the subsequent empirical analysis (see Table 3).

Table 3. Distribution of sample demographic characteristics

Variable	Category	Frequency	Percentage
Gender	Male	196	35.83%
	Female	351	64.17%
Year of Study	First year	86	15.72%
	Second year	274	50.09%
	Third year	99	18.10%
	Fourth year	88	16.09%
Place of Origin	City	112	20.48%
	Town	156	28.52%
	Rural area	279	51.01%
Monthly Living Expenses	Below RMB 1,000	36	6.58%
	RMB 1,000–1,500	200	36.56%
	RMB 1,501–2,000	212	38.76%
	RMB 2,001–3,000	76	13.89%
	Above RMB 3,000	23	4.20%

Women accounted for 64.17% of the valid sample, and men accounted for 35.83%, reflecting the general trend of the tea beverage market being dominated by female consumers. Regarding academic year distribution, second-year students made up 50.09% of the sample, while monthly living expenses were concentrated in the RMB 1,000–2,000 range, accounting for a combined 75.32%. These economic characteristics provide context for understanding the group's price sensitivity and brand preferences.

To further investigate whether the region of origin influences brand preference, this study conducted a cross-analysis using region of origin and frequently purchased brands as variables; the results are shown in Figure 1.

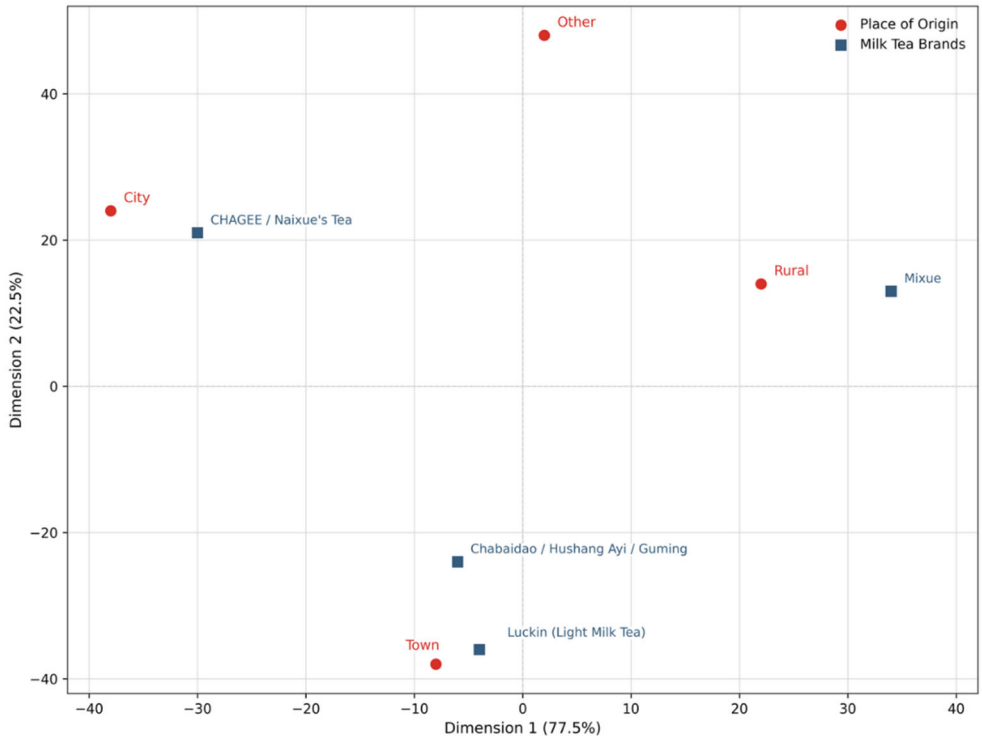


Figure 1. Two-dimensional correspondence analysis plot of region of origin and brand choice

The figure reveals that students from urban backgrounds prefer premium tea brands, those from towns tend to favor mid-range brands, and students from rural areas prefer products that offer good value for money. This indicates that the consumption environment of a student's hometown subtly influences their brand choices, with students from different backgrounds having distinct brand preferences regarding milk tea. These findings provide empirical support for the characteristics of the price-sensitive segment identified in the subsequent cluster analysis and indirectly confirm that perceived behavioral control continues to constrain certain groups.

The internal structure of consumption behavior was further analyzed using a bubble chart plotting consumption frequency against the amount spent per transaction; the results are shown in Figure 2.

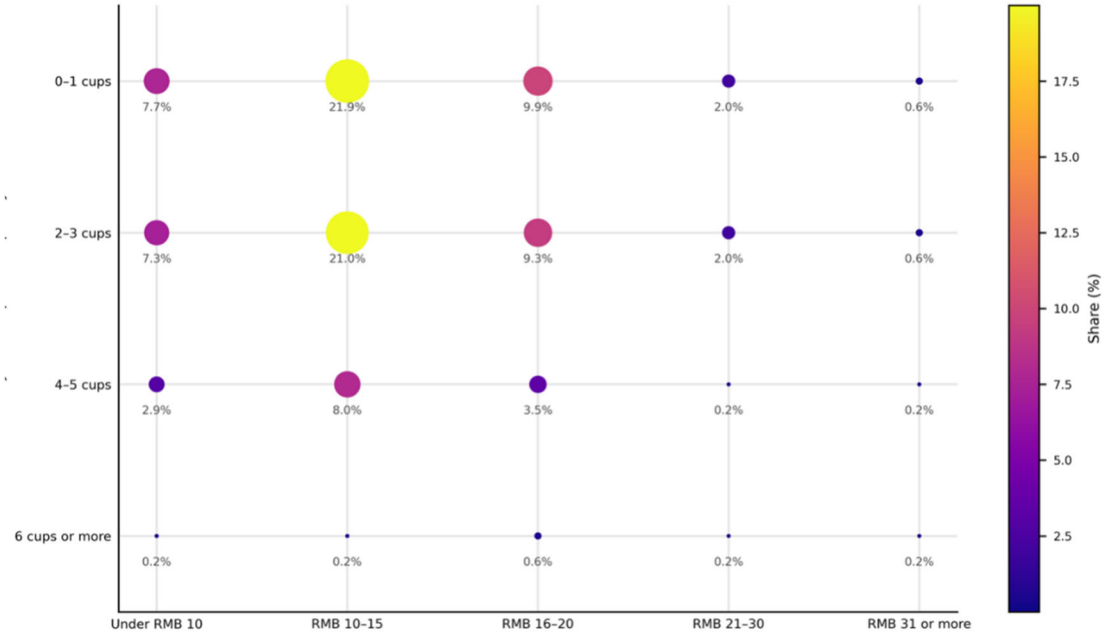


Figure 2. Cross-tabulated bubble chart of consumption amount and consumption frequency

Overall, milk tea consumption among university students is characterized by moderate frequency and affordability [7]. Consumption upgrading manifests as a rational compensatory strategy, trading frequency for quality, whereby some consumers reduce their intake to enjoy a higher-quality, intermittent ritual experience, making premium-priced milk tea an unlikely choice for daily consumption. This consumption pattern aligns closely with the dominant drivers of attitude toward the behavior: most students prioritize taste and emotional satisfaction, opting for an approach involving less frequent but higher-quality consumption as a form of self-reward in specific instances. This model of rational compensation indirectly reflects the inhibiting influence of health consciousness; while consumers cut back on frequency to alleviate health concerns, this does not fundamentally alter the positive drivers shaping their consumption behavior.

5.2. Structural model and hypothesis testing

To determine the extent of the influence exerted by various psychological variables on consumption behavior and the pattern of their relative effects, this study employed path analysis to test the hypotheses. The results indicate that the model explains 53.2% of the variance in consumption behavior, demonstrating strong explanatory power (see Table 4).

Table 4. Results of SEM path analysis and hypothesis testing

No.	Hypothesized Path	Standardized Path Coefficient (β)	t-value	p-value	Result
H1	Attitude toward the Behavior → Consumption Behavior	0.45	11.98	***	Supported
H2	Subjective Norm → Consumption Behavior	0.19	4.48	***	Supported
H3	Perceived Behavioral Control → Consumption Behavior	0.07	1.60	0.111	Not supported

Note: *** indicates $p < 0.001$.

Attitude toward the behavior exerted the strongest influence ($\beta = 0.45$, $p < 0.001$), confirming H1. This demonstrates that consumers' intrinsic preferences regarding the taste and emotional value of milk tea are the most powerful psychological factors driving their purchase behavior.

Subjective norm exerted a positive influence ($\beta = 0.19$, $p < 0.001$), confirming H2 and quantitatively demonstrating the significant role that peer effects and group social culture play in university students' milk tea consumption.

The path coefficient for perceived behavioral control was very low and failed to reach statistical significance ($\beta = 0.07$, $p > 0.05$); thus, H3 was not supported. These results indicate that in a market environment characterized by a high density of milk tea shops and well-developed delivery networks, where the convenience of purchasing is high and cost barriers are significantly lowered, an individual's perception of their purchasing ability and the ease of acquisition is no longer a primary determinant of consumption frequency.

5.3. Test of the mediating effect

This study primarily investigated the mediating role of health consciousness. What is the mechanism by which health consciousness operates? Does it transmit or inhibit the effect of attitude toward the behavior on consumption behavior? To address this question, this study employed a bias-corrected non-parametric percentile bootstrap method with 5,000 resamples to estimate the indirect effect. The results are shown in Table 5.

Table 5. Bootstrap test of the mediating effect of health consciousness

Effect Type	Path	Effect Size	95% Bias-Corrected Confidence Interval	Significance
Indirect Effect	Attitude toward the Behavior → Health Consciousness → Consumption Behavior	0.124	[0.072, 0.181]	Significant
Direct Effect	Attitude toward the Behavior → Consumption Behavior	0.452	[0.350, 0.554]	Significant

The test results indicate that the indirect path effect from attitude toward the behavior to consumption behavior via health consciousness is 0.124, with a 95% confidence interval of [0.072, 0.181]. Because this interval does not include zero, the mediating effect is statistically significant. Attitude toward the behavior continues to exert a highly significant direct influence on consumption behavior, while health consciousness plays a partial mediating role between the two; thus, H4 is supported.

This suggests that consumers' hedonic preferences and health concerns constitute an internal psychological interplay characterized by mutual constraints and influence. The total effect of attitude toward the behavior is the resultant force of a positive direct push and a negative indirect pull, specifically, a positive direct push of 0.452 and a negative indirect pull of −0.124, reflecting a negative correlation between health consciousness and consumption behavior. For tea beverage brands, it is crucial to focus not only on positively driving consumption behavior but also on effectively mitigating or transforming the negative inhibitory effect stemming from health consciousness.

5.4. Multi-group analysis

Following the overall model analysis, this study examined whether these psychological mechanisms differed across various groups. Using factor scores from six dimensions—attitude toward the behavior, subjective norm, perceived behavioral control, health consciousness, price sensitivity, and perception of tourism culture—as input variables, K-means cluster analysis was performed on a sample of 547 participants. Subsequently, a one-way ANOVA was conducted to compare the scores of the three clusters across these dimensions. The results revealed significant differences between the groups across all dimensions ($p < 0.001$), indicating distinct characteristics for the three clusters (see Table 6).

Table 6. Final cluster centers and ANOVA results

Construct	Cluster 1	Cluster 2	Cluster 3	F-value	Significance
Subjective Norm	0.72	−0.65	−0.10	135.67	***
Perceived Behavioral Control	−0.45	0.83	−0.30	142.31	***
Attitude toward the Behavior	−0.20	−0.15	0.40	22.48	***
Tourism Culture Perception	0.68	−0.55	1.35	256.84	***
Price Sensitivity	−0.80	0.92	−0.15	187.42	***
Health Consciousness	0.35	0.10	−0.60	109.53	***

Note: *** indicates $p < 0.001$; all variables are standardized mean scores.

The differences in group characteristics shown in the radar chart (see Figure 3) are further reflected in the distribution of consumption frequency (see Figure 4).



Figure 3. Radar chart of characteristics for three consumer groups

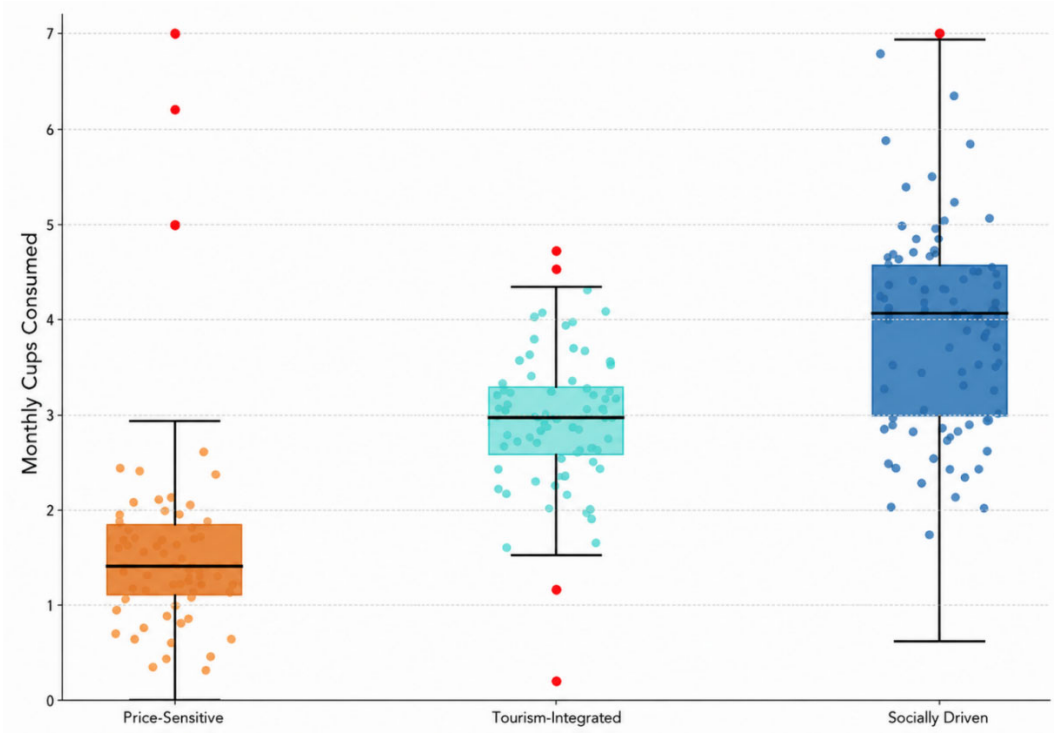


Figure 4. Box plots of consumption frequency across different groups

Based on the clustering characteristics, the three groups were named and interpreted as follows (see Table 7):

Table 7. Group analysis

Cluster	Analysis
Socially Driven (approximately 42%)	This group scores very high on subjective norm and tourism culture perception and has low price sensitivity.
Price-Sensitive (approximately 36%)	This group is highly sensitive to value for money and promotional discounts and has relatively strong health consciousness.
Tourism-Integrated (approximately 22%)	This group exhibits the strongest Lijiang-specific characteristics, with a high score for tourism culture perception and relatively low health consciousness.

The divergent characteristics of the three groups reveal group heterogeneity regarding the mediating role of health consciousness: the mediating effect of health consciousness is insignificant for the socially driven group, the negative mediating effect is strongest for the price-sensitive group, and the consumption behavior of the tourism-integrated group is driven by perceptions of tourism. Overall, the results indicate that average effects mask significant intra-group differences, and the underlying drivers of consumption vary substantially across the market segments.

To further test the statistical significance of inter-group differences in these psychological mechanisms, this study employed a multi-group structural equation model. Year of study and cluster type were used as grouping variables. Equality constraints were imposed on the core path coefficients across groups, and a chi-square difference test was used to determine whether structural divergence existed in the path coefficients.

Multi-group analysis by year of study

The sample was divided into lower-year (freshmen and sophomores) and upper-year (juniors and seniors) groups based on the academic year, and cross-group differences in the core path coefficients were examined. The fit indices were CFI = 0.92 and RMSEA = 0.06 for the lower-year group, and CFI = 0.90 and RMSEA = 0.07 for the upper-year group; the model fit for both groups met the acceptable standards (see Table 8).

Table 8. Multi-group analysis by year of study

Path	Lower-Year Group β	Upper-Year Group β	$\Delta\chi^2$ ($\Delta df = 1$)
Attitude toward the Behavior → Consumption Behavior	0.38***	0.52***	4.21*
Attitude toward the Behavior → Health Consciousness	0.42***	0.21**	7.35**
Health Consciousness → Consumption Behavior	−0.35***	−0.11	6.18*
Subjective Norm → Consumption Behavior	0.13*	0.28***	3.89*

Note: * indicates $p < 0.05$, ** indicates $p < 0.01$, and *** indicates $p < 0.001$.

The results indicate that the negative mediating effect of health consciousness is more pronounced in the lower-year group. The indirect effect of attitude toward the behavior on consumption behavior via health consciousness is −0.15 ($p < 0.01$) for the lower-year group and −0.02 ($p > 0.05$) for the upper-year group, respectively. Correspondingly, the positive effect of subjective norm on consumption behavior is significantly stronger in the upper-year group ($\beta = 0.28$) than in the lower-year group ($\beta = 0.13$). While consumption behavior among lower-year students is driven more by intrinsic health considerations, reflecting a psychological state in which the desire for enjoyment coexists with health concerns, upper-year students face greater pressure from social norms; for them, the inhibitory effect of health consciousness diminishes, leading to a situation in which social needs override health-related rationality.

Cluster-based multi-group analysis

The differences in the core path structures across market segments were examined using the three groups identified through cluster analysis as grouping variables. The results are presented in Table 9.

Table 9. Analysis of the three consumer groups

Path	Socially Driven	Price-Sensitive	Tourism-Integrated	Between-Group Difference
Subjective Norm → Consumption Behavior	0.35***	−0.02	0.18*	Significant
Perceived Behavioral Control → Consumption Behavior	−0.05	0.28**	0.06	Significant
Attitude toward the Behavior → Health Consciousness	0.18*	0.46***	0.04	Significant
Health Consciousness → Consumption Behavior	−0.10	−0.38***	−0.05	Significant

Note: * indicates $p < 0.05$, ** indicates $p < 0.01$, and *** indicates $p < 0.001$.

Within the socially driven group, subjective norm exerted the strongest influence on consumption behavior ($\beta = 0.35$), serving as the primary driving force; the mediating effect of health consciousness was insignificant, indicating that consumption decisions were largely shaped by social contexts. For the price-sensitive group, the negative mediating effect of health consciousness was most pronounced (indirect effect = −0.17, $p < 0.001$), whereas perceived behavioral control had a significant positive impact on consumption behavior ($\beta = 0.28$). In the tourism-integrated group, the path coefficients were relatively low, suggesting that consumption behavior among group members was driven more by external contextual factors, such as the perception of tourism culture.

Consequently, the multi-group analysis reveals mechanisms of group differentiation that are otherwise obscured by overall average effects: the mediating role of health consciousness is concentrated primarily among lower-year students and members of the price-sensitive group, whereas consumption behavior among upper-year students and socially driven consumers is largely determined by external social norms. These findings provide empirical support for stratified marketing strategies in the milk tea consumption market.

5.5. Summary of issues

Based on the empirical analysis above, three issues regarding the milk tea consumption behavior of university students warrant further attention.

(1) *The persistent tension between health concerns and consumption behavior*

Tests for mediating effects indicate that health consciousness exerts a significant negative mediating effect on the relationship between attitude toward the behavior and consumption behavior; however, the direct effect far outweighs the indirect effect, suggesting that most consumers ultimately choose to make a purchase, resulting in a disconnect between knowledge and action. This prolonged internal psychological conflict hinders the formation of rational and healthy dietary habits among consumers and leaves tea beverage brands vulnerable due to the fragile foundation of consumer trust.

(2) The suppressive effect of social norms on health-conscious rationality

Multi-group analysis by year of study indicates that subjective norm exerts a stronger influence on consumption behavior in the upper-year group than in the lower-year group, whereas the negative impact of health consciousness on consumption behavior is not significant among upper-year students. As students progress to later years of study, peer social pressure increasingly becomes the dominant factor, serving as their primary driver of consumption.

(3) Mismatch between segmented market demands and uniform supply

Cluster analysis categorized the sample into three distinct groups, each driven by vastly different consumption logics. The "socially driven" group is motivated by subjective norm; the "price-sensitive" group is influenced by perceived behavioral control and the negative mediating effect of health consciousness; and the "tourism-integrated" group is primarily driven by perceptions of tourism culture. Currently, most tea beverage brands engage in homogenized marketing without precisely matching their offerings to diverse consumer needs, resulting in suboptimal consumer experience and low brand loyalty.

6. Research Conclusions and Policy Recommendations

6.1. Research conclusions

Using an extended TPB model, this paper investigates the psychological reasons for consumption behaviour among university students in relation to milk tea. The first is that the main reasons for this consumption are a favourable attitude towards the behaviour and subjective norms. Notably, the limiting effect of perceived behavioural control on consumption is relatively weak in areas with a high degree of

convenience, such as campus areas and tourist cities. Second, health concerns significantly restrict milk tea consumption for lower-year students; at the same time, upper-year students face greater pressure from social norms, thus weakening the inhibitory effect of health consciousness and resulting in situations where social needs override rational behaviour based on health. Third, a substantial result was the identification of a mediating effect of health consciousness in the path from attitude towards behaviour to actual behaviour. The combination of health awareness and a positive consumption attitude is a type of consumption paradox caused by the conflict between pleasure-seeking desires and health-conscious reason.

6.2. Marketing strategy recommendations

Based on the research results, the following marketing strategy recommendations are proposed for the milk tea market among university students.

Product upgrading

Health consciousness is a relatively strong negative path in the chain connecting attitude towards behaviour and consumption behaviour; thus, tea beverage enterprises need to address the psychological conflict that consumers face between their desire for pleasure and their health concerns proactively. Rather than limiting natural sugar substitutes and low-calorie toppings to the high-end product line, companies can add them to the main products of their companies; display health information through visual icons on the front of the packaging; and thus convert health attributes into indispensable features of their products.

Communication strategy

The mediator thinks that consumers are unwilling to buy health food because they associate it with a loss of pleasure; therefore, brands should use positive descriptors instead of negative-sounding words such as 'low sugar' or 'sugar-free', and promote the idea of 'guilt-free self-care' by describing healthy food as 'light' or 'refreshing' to lower the psychological barrier to consumption.

Scenario creation

Among upper-year students and socially driven individuals, subjective norm positively influences consumption behavior. Brands can launch study companion packages in collaboration with campus study rooms and library cafés, strengthening peer group purchasing mechanisms to amplify the impact of social context. Additionally, catering to the characteristics of travel-oriented consumer segments, brands can introduce destination-exclusive products that leverage the unique culture of tourist cities, thereby enhancing the driving force of travel-related cultural experiences for consumers.

Segmented marketing

Multi-group analysis indicates that lower-year students and price-sensitive groups are more significantly influenced by health concerns, suggesting that interventions should begin by alleviating health anxiety. Conversely, upper-year students and socially driven groups are largely guided by external norms, indicating a need for social empowerment. For price-sensitive groups, engagement is primarily driven by the value-for-money proposition; therefore, strategies should focus on facilitating their natural adoption of health products through price-based incentives.

Funded Projects

Research project of Lijiang College of Culture and Tourism, “Study on Factors Influencing University Students’ Intentions to Study Abroad Based on the SEM Model—A Case Study of Lijiang College of Culture and Tourism” (2025XY21).

2026 Research Project of the Working Committee for the Care of the Next Generation (WCCNG) of the Yunnan Education System, “Research on Innovation in Internship and Practical Training Models for Accounting Majors Facilitated by the WCCNG in the Context of Digital-Intelligent Transformation” (YJGG2026029).

2024 Class C Research Project of the Yunnan Provincial Association For Non-Government Education, “Study on the Willingness of Students from Private Colleges in Yunnan Province to Return to Their Hometowns for Employment and Entrepreneurship.”

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