International Journal of Asian Social Science Research; Vol.3, No.1; 2026
E-ISSN: 3006-2179 P-ISSN：3006-754X
DOI: https://doi.org/10.70267/ijassr.260301.8093
Published by: Zeus Press

The Transmission Path of Tourists' Perceived Crowding and Consumption Behavior: Evidence from Lijiang Ancient Town

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Abstract

Ancient towns designated as World Cultural Heritage sites attract large-scale tourist flows due to their unique landscape features, often resulting in severe crowding issues. However, the internal mechanisms through which perceived crowding influences tourists' consumption decisions remain underexplored. This study conducts a questionnaire survey in Lijiang Ancient Town, collecting 323 valid samples, and constructs a structural equation model (SEM) of "perceived crowding-conformity psychology-tourist consumption behavior." The findings indicate that perceived crowding has no direct significant impact on tourists' immediate consumption behavior or sustained consumption intention. Perceived crowding significantly positively induces tourists' conformity psychology, as individuals in high-density environments tend to seek group identification to mitigate decision-making risks. Conformity psychology plays a complete mediating role between perceived crowding and tourist consumption behavior, serving as the core transmission "bridge" linking spatial environmental perception to actual consumption actions. This study reveals the psychological mechanisms underlying the "the more crowded, the more they buy" phenomenon in tourism settings and provides practical implications for ancient town scenic areas to enhance commercial conversion efficiency through optimized crowd guidance and consumption atmosphere creation.

Keywords

perceived crowding, conformity psychology, consumption intention, Lijiang ancient town

1. Introduction

1.1 Research Background and Significance

Ancient towns and historic cities, as bearers of irreplaceable historical and cultural heritage and distinctive landscape features, have become highly popular destinations for domestic and international tourists. Lijiang Ancient Town, as a typical representative of such sites, is both a World Cultural Heritage property and a benchmark among China's ancient town 5A-level scenic areas. Its traditional Naxi dwellings, "small bridges over flowing water" spatial patterns, and Dongba cultural experiences attract large numbers of visitors. However, "crowding" has become a normal condition in Lijiang, serving as a prominent bottleneck that constrains consumption experiences and sustainable operations. The influencing factors of perceived crowding,

the related effects generated under such perception, and how to mitigate the negative impacts of crowding are all critical issues that urgently need resolution. Therefore, this study takes Lijiang Ancient Town as a case site, introduces the dimension of conformity psychology, and explores the influence mechanism of conformity psychology on tourist consumption behavior under perceived crowding. The aim is to enrich relevant theoretical applications, provide practical references for the operators of ancient town and historic city scenic areas, and ultimately contribute to the high-quality development goals of the cultural tourism industry.

1.2 Literature Review

Research on crowding can be traced back to the 1960s. When the number of tourists at a destination exceeds its environmental carrying capacity, objective crowding emerges. Stokols [1] defined perceived crowding as "an individual's subjective negative evaluation of objective population density." Lee et al. [2] argued that spatial crowding increases negative emotions while reducing positive ones. These views have been widely accepted by most scholars. However, more recent studies, such as Zhang Yuangang et al. [3], have pointed out that crowd-induced crowding in specific contexts like festival events or ancient village tourism can enhance tourists' positive emotions. Chen Weiru et al. [4] found that tourists' emotions are not affected by crowding in night market leisure settings. Hu Ting et al. [5] categorized perceived crowding into three dimensions-physical spatial crowding, personal space crowding, and social space crowding-and noted that crowding does not necessarily lead to negative emotions among tourists; rather, it depends on whether crowding restricts interpersonal interaction in the given context. Synthesizing prior research, tourists' perceived crowding can mainly be classified into quantity-density perceived crowding and experiential interference perceived crowding.

Previous studies have predominantly examined the effects of crowding perception from behavioral regulation [6], sensory regulation [7], and physiological perspectives, with relatively few exploring the psychological dimension. Therefore, this paper investigates the mechanism of conformity psychology, a psychological factor, on perceived crowding.

Conformity psychology is a common social psychological phenomenon in everyday life, referring to the tendency of individuals to change their views under group pressure in order to align with the majority; it is also known as the herd effect [8]. According to social psychology, conformity-driven behavior typically involves individuals following others to avoid uncertainty or seek a sense of belonging, rather than acting based on their own judgments or beliefs [9]. Conformity psychology and behavior have been extensively studied in fields such as consumer behavior [10], live-streaming e-commerce [11], and finance [12], but research in the tourism domain remains limited.

Studies on conformity psychology and consumer behavior are relatively abundant in online live-streaming consumption scenarios. For example, Xie Ying [13] and others found that, under the sense of co-presence in live-streaming contexts, conformity psychology has a significant positive effect on consumption behavior. Yu Yuhe [14] noted that ambiguous product information during online shopping tends to trigger conformity consumption. Huang Yixiang et al. [15] pointed out that conformity psychology exerts an amplifying effect on residents' consumption of miscellaneous grains. However, few scholars have examined conformity consumption in tourism contexts.

Tourist consumption behavior is a necessary condition for the normal conduct of tourism activities and the healthy operation of the tourism economy, and it is also one of the most prominent characteristics of tourists. From existing research, most scholars have empirically investigated the influencing factors of tourist consumption behavior from a micro perspective. The conclusions in the literature can generally be summarized into economic and non-economic factors [16]. Regarding economic factors, Diao Zongguang [17]summarized that economic constraints in family or individual travel are typically related to income level. Jiang Guohua [18] further noted that consumption levels increase with rising income. Wei Xiang [19] demonstrated through empirical research that the positive effect of expected income on tourism consumption is greater than that of current income. In terms of non-economic factors, Brida [20] indicated that tourism consumption is influenced by demographic factors, travel characteristics, and individual psychological factors. The impact of individual psychological characteristics on tourism consumption mainly includes tourism motivation, interest preferences, and similar aspects [21, 22]. Thus, most scholars have studied tourist consumption behavior from the individual

tourist's perspective, with relatively few exploring the influence of group-level factors on individual tourism consumption behavior.

In summary, existing research on perceived crowding has largely focused on its causes, influencing factors, and direct effects on experience, with limited attention to the role of "psychological variables" in the mechanism linking perceived crowding and consumption behavior. Studies on conformity psychology have primarily concentrated on online shopping consumption scenarios, and its application in crowded tourism contexts remains underdeveloped. Moreover, most crowding research has targeted open-type attractions such as theme parks and national parks. For ancient towns like Lijiang Ancient Town-with narrow streets and densely clustered commercial formats-the characteristics of perceived crowding, manifestations of conformity psychology, and patterns of consumption behavior exhibit distinct differences, and relevant research is relatively scarce. Therefore, this paper supplements research on this type of scenic area by clarifying the relational characteristics among perceived crowding, conformity psychology, and consumption behavior.

2. Research Design

2.1 Questionnaire Design and Scale Development

The questionnaire was developed after extensive reference to domestic and international literature. Measurement items were assessed using a five-point Likert scale. The questionnaire consists of four main sections: (1) Demographic information, including gender, age group, place of permanent residence, education level, occupation, daily tourism expenditure, and number of visits to Lijiang Ancient Town; (2) Tourists' perceived crowding (CR), primarily adapted from Stokols's [23] scale, which divides crowding into spatial perception and social-emotional dimensions, consistent with the items designed in this study; (3) Tourists' conformity psychology (HM), mainly drawing on the scales of Lascu and Zinkhan [24] and Wen Bing [25], comprising 5 items in total; (4) Tourist consumption behavior, primarily based on the scales of Caldwell and Hibbert [26] and Jang and Namkung [27], divided into two dimensions: immediate consumption intention (TR) and sustained consumption behavior (PR). Immediate consumption behavior measures consumers' on-the-spot purchase intention in the buying scenario, while sustained consumption behavior assesses revisit or repeat purchase intention after leaving the scenario; this section includes 5 items in total.

2.2 Data Collection and Sample Characteristics

The target population for this questionnaire consisted of tourists who had visited Lijiang Ancient Town. Data were collected online from September 20 to October 20, 2025, targeting groups with prior experience in Lijiang Ancient Town. A total of 469 questionnaires were collected via the Wenjuanxing platform. After rigorous screening, 146 invalid questionnaires were excluded (due to respondents not having actually visited Lijiang Ancient Town, excessively short response times, responses not meeting requirements, or random answering), resulting in 323 valid questionnaires. The effective response rate was 68.86%.

2.3 Theoretical Hypotheses and Structural Equation Model Construction

2.3.1 Perceived Crowding and Tourist Consumption Behavior

Eroglu and Machleit [28], in their classic empirical study on retail crowding, pointed out that perceived crowding is a subjective psychological experience triggered by physical spatial constraints and excessive social density, which influences subsequent consumption behavior through effects on consumer emotions and cognitive evaluations. This perception also serves as a key environmental cue affecting tourists' behavioral decision-making in tourism consumption scenarios, with its intensity increasing positively with scene population density and typically exerting a negative impact on overall tourist experience quality. Cheng Pingping et al. [29], through a systematic review of domestic and international tourism crowding research, confirmed a significant negative correlation between perceived crowding in tourism settings and tourist experience; high-density environments easily induce negative emotions such as irritation and anxiety in tourists, thereby altering their consumption decision tendencies. Oliver's[30] loyalty stage theory clearly delineates the progression logic from consumption intention to behavior, distinguishing between immediate purchase impulses and trans-temporal sustained consumption behavior. Oppermann [31], in research on destination loyalty, further validated the dimensional differences between short-term immediate decisions and

long-term sustained behavior in tourism consumption. Grönroos [32], from the perspective of transaction and relationship marketing, defined the core characteristics of single immediate consumption versus long-term sustained consumption. Drawing on the above theories and research, and based on the temporal dimension of consumption decisions and the questionnaire items TR1-PR3, this study divides tourist consumption behavior into two core dimensions: sustained consumption intention and immediate consumption behavior. This classification aligns with the consumption behavior categorization logic of Shen Manqiong et al. [33], which shows differentiated response mechanisms of consumption behavior across temporal dimensions under the influence of perceived crowding. Based on the theoretical and empirical foundations above, the following hypotheses are proposed:

H1: Perceived crowding is negatively related to tourist consumption behavior.

H1a: Perceived crowding is negatively related to tourists' sustained consumption intention.

H1b: Perceived crowding is negatively related to tourists' immediate consumption behavior.

2.3.2 Perceived Crowding and Conformity Psychology

This paper proposes using risk aversion theory to explain the mechanism by which crowding induces conformity psychology. According to L. B. Kaplan [34], consumers' perceived risk can be divided into five categories: functional risk, physical risk, economic risk, social risk, and psychological risk. From the formation mechanism of perceived risk in tourism consumption, triggering factors can be summarized into six major dimensions [35]: ambiguity of purchase goals, uncertainty of purchase returns, lack of consumption experience, dual possibilities of consumption outcomes, influence of reference groups, and economic cost considerations. After perceiving these risks, most consumers tend to adopt targeted risk-avoidance behaviors to reduce the probability of potential losses. Henry Assael categorizes consumers' risk-reduction strategies into two core dimensions: first, increasing the certainty of purchase outcomes by broadening information channels, deepening information processing, maintaining brand loyalty, and choosing mainstream market brands; second, mitigating the negative effects of purchase failure by selecting the lowest-priced products, controlling purchase quantities, obtaining product guarantees or quality assurances, and lowering psychological expectations. Based on these conclusions, it can be inferred that in high-density crowded tourism scenarios such as ancient towns and internet-famous streets, dense crowds easily cause information overload and psychological loss of control among tourists, thereby inducing anxiety, reducing decision-making judgment ability, and elevating perceived risk levels. To simultaneously meet the dual needs of quickly navigating crowded areas and reducing consumption decision uncertainty, tourists' psychological demands shift toward seeking group identification and decision-making protection. They tend to treat group aggregation behavior as a decision reference signal, following a "crowd aggregation-oriented" group behavior pattern to avoid individual decision risks, ultimately giving rise to conformity consumption behavior. Accordingly, the following hypothesis is proposed:

H2: Perceived crowding is positively related to tourists' conformity psychology.

2.3.3 Conformity Psychology and Tourist Consumption Behavior

Tajfel's [36] social identity theory posits that individuals have a strong need for group belonging and tend to adjust their behavioral choices by conforming to group behavioral norms to obtain group identification. Sun Zehui et al. [37] also noted that conformity psychology enables consumers to align with other individuals or groups, exerting influence on consumer psychology through group norms and thereby shaping consumption behavior. Kara et al. [38] found that group behavioral demonstration can reduce uncertainty in individual consumption decisions, thereby triggering conformity consumption behavior. Roth et al. [39] further verified through empirical research that group aggregation in tourism settings produces a clear conformity effect, positively influencing tourists' immediate consumption decisions, while sustained group identification also reinforces revisit intention. Additionally, Correia et al. [40] pointed out that tourists' conformity psychology, through the transmission of group norms, simultaneously affects both immediate consumption behavior and long-term revisit intention. Therefore, the following hypotheses are proposed:

H3: Conformity psychology is positively related to tourist consumption behavior.

H3a: Conformity psychology is positively related to tourists' sustained consumption intention.

H3b: Conformity psychology is positively related to tourists' immediate consumption behavior.

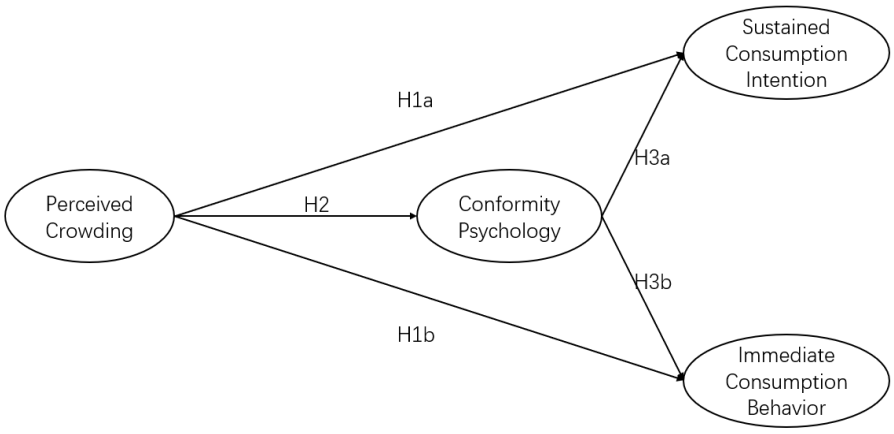
2.3.4 Perceived Crowding, Conformity Psychology, and Tourist Consumption Behavior

In scenic areas such as ancient towns, historic cities, and internet-famous streets, commercialization is typically high, consumption scenarios are abundant, and tourist numbers are usually large, resulting in strong perceived crowding. Most studies indicate that perceived crowding negatively affects tourist consumption behavior. At the same time, group behavior can trigger conformity psychology, thereby guiding individual consumption, making offline conformity consumption phenomena ubiquitous [13]. It is therefore posited that conformity psychology may play a mediating role between perceived crowding and tourist consumption behavior. The fourth hypothesis is proposed as follows:

H4: Conformity psychology plays a mediating role in the influence of perceived crowding on tourist consumption behavior.

Based on the research hypotheses above, this paper constructs a theoretical hypothesis model of "perceived crowding–conformity psychology–tourist consumption behavior" (Figure 1), with conformity psychology treated as the mediating variable.

Figure 1 Theoretical Model of "Perceived Crowding – Conformity Psychology – Tourist Consumption Behavior"



3. Data Analysis and Model Testing

3.1 Descriptive Statistics and Heterogeneity Analysis

Table 1: Sample Descriptive Statistics

Variable		Number (persons)	Percentage (%)
Gender	Male	158	48.9
	Female	165	51.1
Age	Under 18	27	8.4
	18-30 years	181	56
	31-45 years	80	24.8
	46-60 years	25	7.7
	Over 60	10	3.1
Place of Permanent Residence	Lijiang City	30	9.3
	Other areas in Yunnan Province	41	12.7
	Other provinces in China	240	74.3
	Hong Kong, Macao, Taiwan	6	1.9
	Overseas	6	1.9

Variable		Number (persons)	Percentage (%)
Education Level	High school or below	33	10.2
	Junior college	58	18.0
	Undergraduate	182	56.3
	Postgraduate or above	50	15.5
Occupation	Enterprise/institutional employee	50	15.5
	Professional/technical personnel	26	8.0
	Self-employed/business owner	69	21.4
	Manual/service worker	38	11.8
	Non-employed group	140	43.3
Daily Tourism Expenditure	≤ 200 CNY	54	16.7
	201-500 CNY	113	35.0
	501-1000 CNY	86	26.6
	1001-2000 CNY	52	16.1
	2001-3000 CNY	10	3.1
	≥ 3001 CNY	8	2.5
Number of Visits to Lijiang Ancient Town	1-3 times	221	68.4
	3-5 times	84	26.0
	More than 5 times	18	5.6

From the analysis of Table 1, the gender distribution of respondents is roughly balanced. The age group is dominated by young and middle-aged individuals. Visitors from provinces outside Yunnan account for as high as 74.3%, indicating that the majority are tourists, which aligns well with the sample requirements of this study. Respondents generally have a relatively high level of education, a large proportion belong to non-employed groups, and their average daily tourism expenditure is relatively low. 68.4% of respondents have visited Lijiang Ancient Town 1-3 times. Overall, the sampling is reasonable, comprehensive, and representative, meeting the thematic requirements of this study.

3.2 Data Analysis

3.2.1 Reliability and Validity Testing

Reliability and validity analyses were conducted across all dimensions of the survey data. Cronbach's Alpha (CA) coefficients for each dimension ranged from 0.851 to 0.867, with the overall scale reliability reaching 0.886, indicating high reliability of the questionnaire. The Bartlett's test of sphericity yielded a p-value of 0.000 ($p < 0.001$), and the KMO value was 0.898 (> 0.70), confirming that the sample data are suitable for factor analysis.

3.2.2 Confirmatory Factor Analysis

This study further employed Confirmatory Factor Analysis (CFA) to examine the convergent validity and discriminant validity of the measurement model. Based on the results of exploratory factor analysis, the originally designated "tourist consumption behavior" dimension was decomposed into two sub-dimensions: "immediate consumption behavior" and "sustained consumption intention." A measurement model encompassing four latent variables-perceived crowding, conformity psychology, immediate consumption behavior, and sustained consumption intention-was ultimately constructed. To ensure overall reliability and validity, items with factor loadings below 0.6 were removed (specifically, CR1 from perceived crowding and HM1 from conformity psychology), leaving 13 items for final analysis.

As shown in Table 2, the standardized factor loadings (SFL) of all items ranged from 0.645 to 0.836, well above the 0.5 threshold, indicating strong explanatory power of the observed variables for the latent variables. Standard errors (SE) ranged from 0.035 to 0.049, with t-values far exceeding the standard 1.96, demonstrating small fluctuations and high precision in factor loadings. Composite reliability (CR) values were 0.823, 0.799, 0.793, and 0.795, all exceeding the 0.7 threshold. Cronbach's α coefficients were 0.818, 0.803, 0.792, and 0.788, all above the recommended 0.7 standard. Average variance extracted (AVE) values were 0.537, 0.502, 0.656, and 0.561, all meeting or exceeding the good standard of 0.5 (Fornell & Larcker, 1981), confirming convergent validity in line with Anderson's criteria [41].

Table 2: Confirmatory Factor Analysis Results

Dimension	Indicator	SFL	SE	t-value	CR	α	AVE
Perceived Crowding (PC)	CR2	0.659	0.043	11.156	0.823	0.818	0.537
	CR3	0.826	0.036	7.567			
	CR4	0.785	0.037	8.962			
	CR5	0.645	0.035	11.361			
Conformity Psychology (CP)	HM2	0.785	0.033	9.983	0.799	0.803	0.502
	HM3	0.710	0.038	11.221			
	HM4	0.669	0.049	11.596			
	HM5	0.664	0.045	11.623			
Immediate Consumption Behavior (ICB)	TR1	0.802	0.035	8.501	0.793	0.792	0.656
	TR2	0.817	0.041	7.955			
Sustained Consumption Intention (SCI)	PR1	0.836	0.037	7.072	0.795	0.788	0.561
	PR2	0.660	0.038	11.304			
	PR3	0.742	0.037	9.808			

Additionally, this study conducted a test of discriminant validity to examine whether there are significant differentiating characteristics among the different latent variables. This study employed the Heterotrait-Monotrait Ratio (HTMT) to assess discriminant validity. Compared to the traditional Fornell-Larcker criterion, HTMT is more sensitive and accurate in detecting discriminant validity (Henseler et al., 2015).

As shown in Table 3, HTMT values between latent variables ranged mainly from 0.139 to 0.858. The HTMT value between "immediate consumption behavior" and "conformity psychology" was 0.858, slightly above the strict 0.85 threshold but below the lenient 0.90 threshold, remaining acceptable. All other inter-variable HTMT values were well below 0.85. These results indicate good statistical distinctiveness among the latent variables and confirm the discriminant validity of the measurement model.

Table 3: Heterotrait-Monotrait Ratio (HTMT)

Variable	1	2	3	4
Conformity Psychology	-			
Immediate Consumption Behavior	0.858	-		
Perceived Crowding	0.281	0.251	-	
Sustained Consumption Intention	0.769	0.705	0.139	-

3.3 Structural Equation Model Fit, Modification, and Hypothesis Testing

3.3.1 Model Fit Analysis

Model fit assesses the degree of match between the hypothesized model and the observed data. This study evaluated multiple mainstream indices, including chi-square to degrees of freedom ratio, root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), and comparative fit index (CFI).

Table 4: Model Fit Indices

Index	x^2/df	RMSEA	SRMR	TLI	NFI	GFI	AGFI	CFI
Standard	1-3	<0.08	<0.08	>0.80	>0.80	>0.80	>0.80	>0.80
Model	1.596	0.041	0.036	0.975	0.951	0.959	0.938	0.981

Note: N = 323 observations; $\chi^2 = 95.741$ (df = 60, $p < 0.01$).

As shown in Table 4, for absolute fit indices, the chi-square to degrees of freedom ratio was 1.596 (< 3.0 threshold); RMSEA was 0.041 (90% CI: 0.025-0.056, both bounds < 0.08), indicating excellent fit; standardized root mean square residual (SRMR) was 0.036 (< 0.05 strict standard). For incremental fit indices, CFI reached 0.981, TLI was 0.975, and NFI was 0.951-all significantly above 0.90 and close to the excellent 0.95 benchmark. For parsimony fit indices, GFI was 0.959 and AGFI was 0.938, both exceeding 0.90. Overall, all fit indices satisfy core academic judgment criteria, confirming good overall fit of the measurement model for subsequent hypothesis testing.

3.3.2 Direct Effect Testing

Hypothesis testing results (Table 5) show that perceived crowding has a significant positive effect on conformity psychology ($\beta = 0.255$, $p < 0.001$), supporting H2. This reveals that in the high-density crowd scenario of Lijiang Ancient Town, higher perceived crowding strengthens tourists' tendency to seek group identification and follow majority behavior, consistent with social psychology's "uncertainty avoidance" theory-individuals in complex crowded environments rely on group cues to reduce personal decision risk.

Conformity psychology exerts a very strong positive driving effect on consumption behavior, with $\beta = 0.867$ ($p < 0.001$) for immediate consumption behavior and $\beta = 0.803$ ($p < 0.001$) for sustained consumption intention, supporting both H3a and H3b. These results confirm that conformity psychology is a core driver of tourist consumption behavior: when tourists exhibit follow-the-crowd tendencies, it not only significantly promotes on-site purchases (e.g., popular snacks, souvenirs) but also substantially increases willingness to recommend the destination or revisit in the future.

Notably, the direct path effects of perceived crowding on consumption behavior were not significant: $\beta = 0.014$ ($p = 0.787 > 0.05$) for immediate consumption behavior and $\beta = -0.079$ ($p = 0.143 > 0.05$) for sustained consumption intention, failing to support H1a and H1b. This non-significant result carries important theoretical implications: mere physical spatial crowding or subjective psychological crowding neither directly promotes nor significantly inhibits tourist consumption behavior. Thus, the influence of perceived crowding on tourist consumption behavior is not direct but requires specific mediating mechanisms (such as conformity psychology), providing a key logical premise for subsequent mediation effect testing-perceived crowding may exert a complete mediating effect on consumption behavior through conformity psychology.

Table 5: Structural Model Results

Hypothesis (H)	Hypothesis (H) Standardized Coefficient	p-value	Supported?
H1a: Perceived Crowding → Sustained Consumption Intention	-0.079	0.143	Rejected
H1b: Perceived Crowding → Immediate Consumption Behavior	0.014	0.787	Rejected
H2: Perceived Crowding → Conformity Psychology	0.255	0.001	Supported
H3a: Conformity Psychology → Sustained Consumption Intention	0.803	0.001	Supported
H3b: Conformity Psychology → Immediate Consumption Behavior	0.867	0.001	Supported
H4: Perceived Crowding → Conformity Psychology → Tourist Consumption Behavior	0.530	0.001	Supported
H4a: Perceived Crowding → Conformity Psychology → Immediate Consumption Behavior	0.267	0.001	Supported
H4b: Perceived Crowding → Conformity Psychology → Sustained Consumption Intention	0.263	0.001	Supported

3.3.3 Mediation Effect Testing

To verify the mediating role of conformity psychology between perceived crowding and tourist consumption behavior (H4), this study adopted the Bootstrap resampling method with 5000 iterations and 95% confidence intervals. Following Wen Zhonglin et al.'s mediation effect judgment criteria [42]: if the mediation path's confidence interval excludes 0 (or p is significant) and the direct effect path is non-significant, a complete mediation effect exists.

Based on the well-fitting model, this study focused on testing the mediating role of conformity psychology between perceived crowding and consumption behavior, conducting the analysis along two separate paths (Table 5). The results are as follows:

First, for the "perceived crowding–conformity psychology–immediate consumption behavior" path, the indirect effect was 0.221, $t = 3.382$, $p = 0.001$ (< 0.01), indicating a significant mediation effect. Combined with prior path analysis, the direct effect of perceived crowding on immediate consumption behavior was non-significant ($p = 0.787 > 0.05$). Following Wen Zhonglin et al.'s[42] mediation judgment procedure, conformity psychology exerts a complete mediating role in this path. This reveals that in the specific context of Lijiang

Ancient Town, perceived crowding from high-density crowds does not directly trigger immediate purchase behavior but requires conformity psychology as a mediating carrier-through evoking group identification and follow-the-crowd tendencies-to convert crowding perception into actual immediate consumption behavior.

Second, for the "perceived crowding–conformity psychology–sustained consumption intention" path, results were consistent: indirect effect = 0.205, t = 3.383, p = 0.001 (< 0.01), with significant mediation. The direct effect of perceived crowding on sustained consumption intention was also non-significant (p = 0.143 > 0.05), confirming a complete mediating role for conformity psychology in this path. This indicates that tourists' revisit intention or destination recommendation willingness (sustained consumption intention) arising from the crowded environment of Lijiang Ancient Town is not directly driven by the crowding itself but fully stems from the positive experience generated by conformity psychology induced by the on-site group atmosphere. Conformity psychology serves as the key transmission carrier linking perceived crowding to sustained consumption intention.

In summary, the mediation test results across both paths fully support H4 (conformity psychology plays a mediating role between perceived crowding and tourist consumption behavior). This study confirms that conformity psychology is the core "bridge" mechanism connecting perceived crowding and consumption behavior: the negative pressures, e.g., spatial constraints, inconvenience, and potential positive signals, e.g., bustling popularity, reliable consumption choices, embedded in perceived crowding are interwoven and ultimately transformed into positive consumption behavior, including immediate consumption behavior and sustained consumption intention, through the psychological filtering and conversion mechanism of "conformity psychology." This core finding provides key theoretical evidence to explain the real-world paradox of "Lijiang Ancient Town remains crowded yet tourist consumption stays booming"-the "the more crowded, the more they buy" phenomenon does not stem from tourists' preference for crowded environments but is dominantly driven by "group identification–induced follow-the-crowd consumption" via conformity psychology.

4. Results Analysis and Discussion

Based on the structural equation model testing and mediation effect analysis presented earlier, this chapter provides an in-depth interpretation of the research findings. It focuses on the non-direct influence pathway of perceived crowding on consumption behavior, elucidates the complete mediating mechanism of conformity psychology, and conducts comparative discussions in relation to prior studies.

4.1 Summary of Hypothesis Testing Results

This study proposed four core hypotheses, and the empirical results from the structural equation model are summarized as follows:

(1) The hypothesis that perceived crowding has a direct impact on consumption behavior (H1) is not supported. Statistical results show no significant direct effect on either immediate consumption behavior or sustained consumption intention, indicating that in the context of Lijiang Ancient Town, mere high crowd density neither inhibits nor promotes tourists' consumption decisions. This study unexpectedly found that the direct effect of perceived crowding on tourist consumption behavior was not significant (H1a and H1b rejected). This finding diverges from Stokols' [1]classic theory that crowding triggers negative evaluations and avoidance behavior, yet aligns with Zhang Yuangang et al.'s[3] conclusion that crowding can carry positive meanings in specific contexts. The reasons are as follows: First, as a leisure and vacation-oriented scenic area, Lijiang Ancient Town's "lively marketplace atmosphere" is a core attraction; high crowd density is interpreted by tourists as a positive signal of "vibrant popularity," whose "atmospheric quality" offsets the negative effects of crowding-unlike scenarios such as subways or museums that require quiet space. Second, perceived crowding exhibits a "threshold effect." Tourists visiting 5A-level popular attractions already have psychological expectations of crowding; when actual crowding remains within an acceptable threshold, it does not trigger escape or termination of consumption behavior and may even prompt more efficient group-based consumption decisions.

(2) The hypothesis that perceived crowding positively influences conformity psychology (H2) is supported. Empirical results confirm that crowded environments significantly strengthen tourists' conformity tendencies.

This positive driving effect can be explained from two aspects: On one hand, crowding intensifies tourists' psychological tension and information asymmetry. The intertwined streets and densely packed shops in the ancient town, combined with high crowd density, place tourists in decision dilemmas and make it difficult to quickly filter consumption information, leading them to rely on group behavior to reduce decision costs. On the other hand, crowding reinforces tourists' sense of group belonging; tourists readily perceive the presence of a shared tourist group, and conformity-as a social adaptation strategy-helps them quickly integrate into the group and avoid psychological discomfort, thereby further activating conformity tendencies and enabling perceived crowding to effectively trigger conformity psychology.

(3) The hypothesis that conformity psychology positively influences consumption behavior (H3) is supported. The data show that conformity psychology is a core driver of both immediate consumption and sustained consumption intention, with path coefficients exceeding 0.8 and extremely strong positive effects. This strong driving effect aligns with prior reasoning: First, it reduces decision risk-tourists have limited knowledge of local consumption, so "what most people choose" serves as a reliable signal that alleviates decision anxiety and promotes immediate consumption. Second, it enhances emotional experience-the group consumption atmosphere stimulates consumption desire, and following the group provides emotional satisfaction from feeling integrated into the locale, thereby increasing sustained consumption intention.

(4) The hypothesis that conformity psychology plays a complete mediating role (H4) is supported. The test results indicate that perceived crowding does not directly affect tourist consumption behavior but is entirely transmitted indirectly through conformity psychology. This finding reveals the internal mechanism behind the "the more crowded, the more they buy" phenomenon and constitutes the core theoretical contribution of this study. The underlying logic has two main aspects: First, risk aversion and social identification mechanisms-in the complex consumption scenarios of the ancient town, crowding exacerbates information overload; according to social psychology theory, tourists reduce decision risk by using "busy shops must be good" as a judgment heuristic, with perceived crowding activating conformity psychology and thereby driving consumption. Second, the "contagious" nature of consumption behavior-the path coefficient shows conformity psychology's effect on immediate consumption reaching as high as 0.867. The "consumption field" constructed by crowding weakens individual decision-making capacity, promoting consumption conversion through the "herd effect" rather than crowding directly generating benefits.

4.2 Discussion of Differences Across Consumption Dimensions

This study decomposed consumption behavior into "immediate consumption behavior" and "sustained consumption intention." The results show that conformity psychology has highly significant effects on both, but its influence coefficient on immediate consumption (0.867) is slightly higher than on sustained consumption intention (0.803). This indicates that conformity psychology primarily functions as an impulsive factor stimulating on-the-spot purchases, e.g., buying popular snacks or souvenirs, whereas its strong driving effect on subsequent recommendation and revisit intentions (sustained consumption) may also be jointly influenced by other factors such as product quality and service experience.

5. Conclusion and Policy Recommendations

5.1 Practical Implications and Optimization Suggestions

The findings of this study indicate that appropriate levels of crowding can promote tourist consumption and enhance revenue for scenic areas and merchants. Accordingly, the following recommendations are proposed for Lijiang Ancient Town and similar scenic sites:

For Lijiang Ancient Town, efforts should anchor on the cultural foundation of Naxi ethnicity and the spatial pattern of its streets and lanes. Reasonable guidance of crowded scenarios should be achieved through Dongba culture-themed signage systems and flow-line design to direct tourist movement. Cultural popularity clusters should be developed around local intangible cultural heritage and distinctive cultural creative products, transforming perceived crowding into a consumption signal. In line with the ancient town's brick-wood architecture and linear street layout, a refined dynamic crowd monitoring and early-warning mechanism should be established. Through micro-renovations that add buffer spaces and optimize the layout of consumption points, crowding thresholds can be precisely regulated to balance consumption experience and conversion

efficiency. Leveraging conformity psychology, localized and visually appealing consumption scenarios should be created. Experiential features of intangible heritage workshops and native cuisine should be utilized to strengthen the aggregation effect of onlookers. Centered on Lijiang's local cultural tourism IP, a closed loop of offline consumption and online dissemination should be built through signature check-in spots, community operations, and other means to extend consumption value and drive the conversion of sustained consumption intention.

For similar or comparable scenic areas such as ancient towns and internet-famous streets, the optimization logic of Lijiang Ancient Town can be adapted by combining local cultural genes and spatial carrying capacity to construct an integrated strategy of "scene guidance–crowd regulation–value extension." Cultural elements should serve as the core to develop distinctive consumption clusters; crowd regulation mechanisms tailored to the site's spatial characteristics should be established; dominant consumption formats should be leveraged to optimize conformity-guided consumption scenarios; and the value of local cultural tourism IPs should be explored. Through online-offline integration, post-consumption group identity maintenance, and similar approaches, the positive effects of crowding can be maximized, thereby promoting high-quality consumption development in scenic areas.

5.2 Research Limitations and Future Directions

The research model in this study clearly delineates the relationships among perceived crowding, conformity psychology, and tourist consumption behavior, and confirms the complete mediating role of conformity psychology. However, this paper does not fully explore the threshold at which perceived crowding triggers conformity psychology and subsequently influences consumption behavior. Therefore, future research could expand the sample size and conduct qualitative studies to further investigate other psychological factors affecting tourist consumption behavior.

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Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

Acknowledgment

This paper is an output of the science project.