TOURIST HETEROGENEITY IN FOOD DESTINATION IMAGE: GENDER, AGE AND LENGTH OF STAY DIFFERENCES, MALAYSIA

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Abstract. This study examines whether food destination image perceptions differ across selected dimensions of tourist heterogeneity, specifically gender, age, and length of stay in the Malaysian food tourism context. A quantitative, descriptive and cross-sectional survey design was employed using data from 653 tourists who participated in food-related tourism activities in Malaysia. Independent samples t-tests and Welch's analysis of variance (ANOVA), followed by Games-Howell post-hoc comparisons, were used by using SPSS to examine differences in food destination image across tourist groups. Effect sizes were also reported to assess the practical magnitude of statistically significant differences. The findings indicate statistically significant differences in food destination image across gender, age, and length of stay groups. Male respondents reported higher food destination image scores than female respondents, although the magnitude of the difference was small. The findings suggest that destination management organisations and food tourism marketers should recognise tourist heterogeneity when developing destination communication and experience strategies. The study provides empirical evidence that food destination image perceptions are not necessarily uniform across tourist groups within the Malaysian food tourism context. By considering both statistical significance and effect size, the study offers a more cautious understanding of tourist heterogeneity in food destination image.
Keywords: *destination image, tourist heterogeneity, food tourism, tourist segmentation, Malaysia*

Introduction

Food tourism has increasingly become an important component of destination experiences because food provides visitors with opportunities to encounter local culture, traditions, and everyday practices. Beyond satisfying physiological needs, food-related experiences can contribute to tourists' evaluations of places (Liu et al., 2024) and their overall perceptions of a destination (Rather, 2020; Madden et al., 2016). In Malaysia, the diversity of culinary traditions and the integration of food with cultural and tourism experiences provide an important context for understanding how visitors evaluate the destination. Accordingly, food-related attributes may form an important component of destination image, particularly when tourists encounter local cuisine, food heritage, and culturally embedded culinary experiences (Guerreiro et al., 2025). For a multi-ethnic

culinary hub like Malaysia, maintaining a destination image requires the continuous mobilisation of internal destination capabilities. Destination image refers broadly to the perceptions and evaluations that individuals hold regarding a destination (Wang et al., 2024). These perceptions are shaped through tourists' exposure to destination attributes, experiences, and information, and may differ between those who encounter the same destination (Hamdy et al., 2024). In food tourism, destination image may be particularly relevant because culinary experiences provide tourists with direct encounters with local products, cultural practices, and destination identities (Ibrahim et al., 2025). Specifically, the food operators and local culinary stakeholders, alongside capabilities generated within the gastronomic ecosystem, serve as critical pillars (Vu et al., 2025). When these capabilities are applied through such as modernised street food presentation, digitalised food landscapes, and heritage preservation techniques, they are able to determine the quality of the destination image projected in the market. However, treating destination image as uniform across all tourists may overlook differences in how visitors evaluate food-related destination attributes.

Tourists' evaluations of destinations may vary according to demographic and behavioural characteristics (Brochado et al., 2022). Gender, age, and length of stay represent observable dimensions of tourist heterogeneity that may correspond with differences in tourists' experiences, preferences, and evaluations (Moisa et al., 2025; Brochado et al., 2022). Previous tourism research has examined these characteristics in relation to travel behaviour and destination experiences, but the evidence remains fragmented regarding whether such differences are reflected in food destination image (Liat et al., 2021; Lombardi et al., 2021), leaving a substantial gap in structural relationships. Hence, examining destination image across tourist groups provides an opportunity to move beyond an aggregate understanding of tourist perceptions and to consider whether food destinations are evaluated consistently across heterogeneous visitor segments. Despite growing interest in food tourism and destination image, limited attention has been given to the extent to which food destination image perceptions differ systematically across tourist groups. Much of the destination image literature focuses on the overall evaluation of destinations while market segmentation research commonly examines demographic and behavioural differences without necessarily connecting these differences directly to destination image perceptions (Torres-Pruñonosa et al., 2024). This creates a gap concerning whether food destination image should be understood as a relatively homogenous evaluation or as a perception that varies across identifiable tourist segments (Chen et al., 2025; Tkaczynski et al., 2009; Dolnicar, 2004). Addressing this gap is particularly relevant in the Malaysian context where domestic and international tourists encounter a diverse culinary environment but may not evaluate food-related destination attributes in the same way.

Theoretically, this study adopts a consumer behaviour perspective to examine tourists' heterogeneity in destination image perceptions. From this perspective, individuals may differ in how they evaluate consumption experience according to their personal characteristics and experiential circumstances (Berdejo Fariña and Espino-Rodríguez, 2026; Lee et al., 2016). The present study therefore does not assume that gender, age, or length of stay causes differences in destination image; instead, it examines whether statistically significant variations in food destination image can be identified across these tourist groups. This comparative approach provides an empirical basis for considering tourist heterogeneity within destination image research while recognising that demographic and behavioural characteristics represent only some of the

factors that may account for variation in tourists' perceptions. The study contributes to the food tourism and destination image literature in three ways. First, it provides empirical evidence concerning variation in food destination image across selected dimensions of tourist heterogeneity. Second, it extends the application of a consumer behaviour perspective to food tourism by examining whether demographic and behavioural characteristics correspond with differences in destination image perceptions. Third, by focusing on Malaysia, the study provides evidence from a culturally and gastronomically diverse destination. These contributions are intended to complement existing destination image and tourist segmentation perspectives. Accordingly, this study addresses the following research questions: RQ1: Are there significant differences in food destination image perceptions between male and female tourists in Malaysia? RQ2: Are there significant differences in food destination image perceptions across different age groups? RQ3: Are there significant differences in food destination image perceptions across different length of stay groups?

Literature review

Food tourism and destination image

Food tourism provides tourists with opportunities to experience destinations through local cuisine, food-related activities, and food heritage. Food may contribute to tourists' perceptions of a destination by connecting consumption experiences with cultural, social, and destination experiences. Previous research has examined food as an experiential component of tourism and has highlighted the role of sensory and cultural encounters in shaping tourists' evaluations of destinations (Rather, 2020; Madden et al., 2016). More recent work has also recognised the relevance of destination sensory experiences and gastronomic attributes in visitors' perceptions and engagement (Guerreiro et al., 2025; Ai et al., 2022). In the Malaysian context, the country's multicultural culinary environment provides a particular setting for examining food destination perceptions because tourists may encounter diverse cuisines, food traditions, and forms of food cultural expression.

Destination image can be understood as the perceptions and evaluations that individuals associate with a destination. Rather than representing an objective characteristic of a place, destination image reflects how individuals interpret destination attributes and experiences. Within food tourism, these evaluations may include perceptions of local food, culinary authenticity, food experiences and the cultural meanings associated with cuisine. Research has increasingly considered food as part of the broader experiential image of destinations (Liu et al., 2024; Rather, 2020; Madden et al., 2016). However, tourists who encounter similar destination attributes may not necessarily evaluate them in the same way. This possibility provides a basis for considering tourist heterogeneity when examining food destination image.

Consumer behaviour Pperspective and tourist heterogeneity

Consumer behaviour provides an appropriate perspective for examining why individuals may differ in their evaluation of similar consumption environments. Consumer behaviour research recognises that individuals interpret products, services, and environments according to their characteristics and experiences (Reina Paz and Rodríguez Vargas, 2023). In the context of tourism, this perspective suggests that tourists may evaluate destination attributes differently even when they are exposed to

broadly similar experiences. In food tourism, such variation may be particularly relevant because food experiences involve personal preferences and individual evaluations. Tourist heterogeneity refers to the differences that exist among visitors in terms of their demographic, behavioural, and experiential characteristics. Previous tourism research has recognised that tourist differ in their motivations, preferences, and behaviours rather than forming a homogenous market (Tkaczynski et al., 2009; Dolnicar, 2004). Recent tourism research similarly indicates that individual characteristics can be associated with differences in how visitors perceive and engage with destination experiences (Berdejo Fariña and Espino-Rodríguez, 2026; Lee et al., 2016). Nevertheless, the existence of tourist heterogeneity does not necessarily mean that every demographic characteristic produces substantial differences in destination image. The magnitude and direction of such differences remain an empirical question that may vary across destinations and tourism contexts. Accordingly, this study adopts consumer behaviour as a broad theoretical perspective rather than a causal model. Gender, age, and length of stay are considered observable variables through which tourist heterogeneity can be examined.

Gender, age, length of stay, and food destination image

Gender has been examined in tourism and food research as one potential source of variation in consumer preferences. Existing studies suggest that male and female consumers may differ in the attributes they prioritise when evaluating consumption experiences, although the direction and magnitude of these differences are not necessarily consistent across contexts (Feraco et al., 2024; Cavazza et al., 2017). Tourism research has also considered gender in relation to perceptions of travel risk, service environments, and experiential priorities (Polko and Kimic, 2022; Okumus et al., 2021). These differences provide a possible basis for examining gender in the context of food destination image. Food tourism in Malaysia frequently involves a range of environments including street food and public culinary spaces. Visitors may attach different levels of importance to attributes in different settings. Previous literature provides a rationale for examining whether food destination image differs by gender (Chu et al., 2022), however, gender was mentioned as not necessarily producing a particular pattern of destination image evaluation (Leong et al., 2024).

Furthermore, age represents another observable dimension of tourist heterogeneity because tourists at different stages of life may differ in travel experience and expectations. Consumer behaviour literature has long recognised that individual needs and consumption priorities may change across the life course (Schiffman et al., 2010). Tourism research has similarly considered age in relation to travel preferences and experiences, although age patterns are not necessarily uniform across destinations (Leijen et al., 2022). In food tourism, age may be relevant because food experiences can involve different things. Younger tourists may be more receptive towards contemporary food experiences and digitally mediated food discovery, whereas other age groups may place greater emphasis on familiarity and cultural meaning. Previous research has identified differences in tourism and food preferences across age groups (Das et al., 2025; McKercher, 2023). However, these tendencies should be interpreted as contextual patterns rather than universal characteristics of particular age groups.

On the other hand, length of stay represents a behavioural characteristic of tourists and may reflect the amount of time visitors spend within a destination. The duration of a trip can be associated with the number and variety of experiences that tourists

encounter, although tourists who choose different lengths of stay may also differ in travel purpose and motivation. Previous research has considered length of stay in relation to tourist behaviour and destination experiences, suggesting that duration may be a useful characteristic for understanding differences among visitor groups (Gemar et al., 2022). From a food tourism perspective, visitors with different lengths of stay may encounter different levels of exposure to local culinary environments. Shorter stays may involve a relatively selective set of food experiences, whereas longer stays may provide opportunities to encounter a broader range of environments. However, greater exposure should not automatically be interpreted as producing a more favourable destination image. The present study does not measure the number of food experiences, cultural involvement, familiarity, adaptation or other mechanisms that could potentially explain differences between lengths of stay.

Gender, age, and length of stay have each been examined in tourism research, but evidence concerning their relationship with food destination image remains contextually dependent. Existing studies provide reasons to expect variation across tourist groups, yet they do not establish that these characteristics consistently produce particular destination image outcomes. Furthermore, much of the existing literature considers tourist characteristics separately from destination image rather than examining them together as dimensions of tourist heterogeneity within a food tourism setting (*Figure 1*).

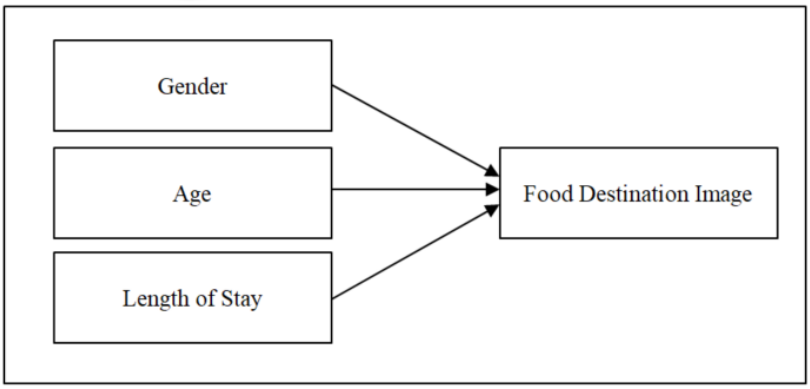


Figure 1. *Research Framework.*

Materials and Methods

This study adopts a quantitative, descriptive research design by using a cross-sectional study to examine the influence of tourist heterogeneity on food tourism destination image formation in Malaysia. A quantitative approach was considered for this investigation as it allows for the systematic measurement of tourist perceptions and enables robust statistical profiling across diverse demographic groups (Sekaran and Bougie, 2013). By focusing on a descriptive design, this study can effectively map out the precise characteristics, variances, and non-linear patterns (Deckert and Wilson, 2023) within consumer subsets without manipulating the natural environment of the respondents, while the cross-sectional survey captured tourists' perceptions at a single point in time. The target population comprised adults who had participated in food tourism activities in Malaysia. Respondents were required to be at least 18 years old and to have experienced local food or food cultural attractions during their visit. A non-probability convenience sampling approach was adopted because a comprehensive

sampling frame of food tourists was not available. Data were collected using a structured self-administered questionnaire distributed through field and online channels.

The questionnaire was administered in both English and Malay to accommodate respondents with different language preferences. Responses from both versions were merged into a single analytical dataset following the corresponding variable names, response categories and coding schemes. During data auditing, equivalent Malay and English response categories were consolidated to ensure that identical substantive categories were treated consistently across the two questionnaire versions. A total of 653 valid questionnaires were retained for analysis after the screening process, providing an adequate sample for robust subgroup comparisons. Sample adequacy was guided by the principles proposed by Cochran (1977) for survey research. Because domestic tourists account for the majority of tourism expenditure in Malaysia, a larger proportion of domestic respondents were intentionally represented while ensuring sufficient international tourist participation. The final dataset comprised 653 valid respondents. Based on the residency or origin information available in the dataset, 510 respondents reported being born and raised in Malaysia, while 143 respondents were visitors whose reported duration of stay could be classified into three categories, namely 1-3 days, 4-7 days, and more than 7 days. Residency or origin status and duration of stay were treated as separate variables and were not used interchangeably (*Table 1*).

Table 1. *Demographic profile (Gender, age, length of stay).*

Category	Frequency	Percentage
Gender		
Male	328	50.2%
Female	325	49.8%
Age		
18–21 years old	44	6.7%
22–26 years old	191	29.3%
27–30 years old	80	12.3%
31–35 years old	126	19.3%
36–40 years old	106	16.2%
40 and above	106	16.2%
Length of Stay		
1–3 days	37	5.7%
4–7 days	39	6.0%
> 7 days	67	10.2%
Residency/Origin		
Born and raised in Malaysia	510	78.1%

As part of the measurement, the contribution of individual items to internal consistency was examined. REV5 was identified as conceptually less aligned with the remaining items because it referred specifically to the respondent's decision to visit Malaysia for halal-friendly travel. A sensitivity analysis showed that removing REV5 did not alter the internal consistency of the dimension (Cronbach's Alpha = 0.910 with REV5; Cronbach's Alpha = 0.904 without REV5). The gender difference remained statistically significant in both specifications. Nevertheless, because internal consistency alone does not establish construct validity, the factor structure of the destination image measure was reassessed before the final composite score was interpreted. *Table 2* shows the FDI measurement.

Table 2. *Food destination image measurement.*

Construct/Operational Dimension and Items	FL	KMO	Bartlett (Sig.)
Food Destination Image (FDI)		0.909	<0.001
Dimension 1: Perceived Food Destination Image (Cognitive – Affective)			
INT1: The quality of food and service in Malaysia is excellent.	0.811		

INT2: Malaysia has well-known food brands.	0.663
INT3: Malaysia is innovative in its food offerings.	0.855
INT4: I have authentic food experience in Malaysia.	0.868
INT5: I experience a new and different lifestyle through food tourism in Malaysia.	0.841
INT1: The quality of food and service in Malaysia is excellent.	0.811
Dimension 2: Conative/Behavioural Response	
REV1: I plan to visit Malaysia again in the near future.	0.862
REV2: I am willing to revisit Malaysia soon.	0.841
REV3: I would recommend Malaysia to others for a visit.	0.798
REV4: I will share positive things about Malaysia as a tourist destination.	0.830

Note: FL=Factor Loading.

Data collection was facilitated through a structured, self-administered questionnaire divided into two primary operational sections: Section A investigates demographic and behavioural profile, and Section B investigates food destination image (FDI). Section A captured the core independent sorting variables required to evaluate tourist heterogeneity, including gender, age, and duration of stay within the destination (Sekaran and Bougie, 2013), while Section B measured the dependent variable, focusing on the cognitive and conative response to food destination image attributes. The items in this section were adapted from established food tourism literature and measured using a 10-point Likert scale to maximise data sensitivity and variance detection during subsequent statistical testing (Preston and Colman, 2000). To maximise reach and ensure a diverse cross-section of respondents, a hybrid distribution approach was deployed. The survey was self-administered and distributed simultaneously through two channels; (1) field-based or hands on which were distributed at key transportation hub stations such as Kuala Lumpur International Airport 1 (KLIA 1), Kuala Lumpur International Airport 2 (KLIA2), and train and bus station hubs to capture immediate, real-time consumer evaluations, (2) online surveys which were disseminated via specialised travel, food, and expatriate social groups on social media to capture individuals who had recently completed their visits.

Data were analysed using IBM SPSS Statistics. Descriptive statistics were first computed to summarise respondents' demographic characteristics. Independent samples t-tests were used to examine differences in food destination image between male and female respondents. For age and length of stay, one-way analysis of the homogeneity of variance was initially considered; however, Levene's tests indicated violations of the homogeneity of variance assumption. Accordingly, Welch's variance-adjusted ANOVA was used for the relevant comparisons (Siregar, 2026; Chen and Liu, 2019), followed by Games-Howell post-hoc tests to identify pairwise differences while accounting for unequal variances and group sizes. Effect sizes were reported alongside statistical significance to assess the practical magnitude of the observed differences. For the length of stay analysis, only respondents with an identifiable duration of stay were included. The analysis therefore compared three visitor groups: 1-3 days, 4-7 days, and more than 7 days. Respondents classified as born and raised in Malaysia were not included as a fourth category because residency/origin does not represent duration of stay.

Results and Discussion

The final analysed dataset comprised a robust sample of N=653 valid respondents participating in food tourism across Malaysia. The sample demonstrated an even distribution between genders, consisting of 328 males (50.2%) and 325 females (49.8%). In terms of age distribution, the sample spanned six distinct age cohorts, with

the largest group concentrated in the 22-26 age bracket (n=191) and a well-consolidated mature cohort aged 40 and above (n=106). Regarding behavioural stay characteristics, local Malaysian residents represented the dominant subset (n=510), while temporary visitors were segmented across short, medium, and extended stay durations. To examine whether perceptions of the destination image varied between male and female respondents, an independent samples t-test was conducted (Chen and Liu, 2019) on the dependent variable, FDI. Prior to interpreting the structural differences, Levene's test for equality of variances was assessed. The test revealed that the assumption of equal variances across genders was statistically violated, F=6.719, p=0.010. Consequently, the standard t-test values were bypassed and the robust equal variances not assumed parameters were utilised (Lewis-Beck et al., 2004), known as Welch-Satterthwaite corrected. The inferential results demonstrated a statistically significant difference in FDI scores between genders, t(639.51)=2.281,p=0.023. As shown in *Table 3*, male tourists reported a significantly higher mean perception (M=9.10, SD=0.98) compared to their female counterparts (M=8.91, SD=1.11), indicating that gender acts as a distinct differentiator in how Malaysia's food attributes are evaluated. The result of Cohen's d is also shown in *Table 3*, which indicates a small effect size (Cohen's d=0.18). Cohen's d was employed to measure how many standard deviations separate two group means, and it indicates practical significance and meaningfulness. Cohen (1988) and Miles and Shevlin (2001) suggest that the values of 0.20, 0.50, and 0.80 are considered small, medium, and large effect sizes. This suggests that although male tourists reported significantly higher destination image perceptions than female tourists, the magnitude of this difference is relatively small. To identify variations in culinary destination perceptions across different age groups, a one-way analysis of variance was performed. Diagnostic testing via Levene's test indicated a clear violation of the homogeneity of variance assumption, $F(5, 647) = 6.55$, $p<0.001$. To protect against Type I error inflation caused by heteroscedasticity and unequal group sizes, the robust Welch variance-adjusted test was applied (Lewis-Beck et al., 2004).

***Table 3**. Demographic distribution and independent samples t-test for gender on FDI.*

Gender	Mean (M)	Std. Deviation (SD)	Corrected t-value	df	p-value	Cohen's d
Male	9.10	0.98	2.281	639.51	0.023*	0.18
Female	8.91	1.11				

Note: Levene's Test was significant (F=6.719, p=0.010); Equal Variances Not Assumed parameters were reported. Significant at the 0.05 level. Cohen's d values of 0.20, 0.50, and 0.80 indicate small, medium, and large effects.

As shown in *Table 4*, the robust main effect for age was highly statistically significant, Welch's $F(5, 291.07) = 5.118$, $p<0.001$. It appears that destination image evaluations are heavily influenced by the respondent's age cohort. To pinpoint exactly where the significant differences resided, a Games-Gowell post-hoc test was deployed. The pairwise comparisons revealed a unique, non-linear peak concentrated strictly in mid-adulthood. As detailed in *Table 4*, the 36-40 age bracket (M=9.33, SD=0.77) scored significantly higher on the FDI dimension as almost all surrounding groups, young adults aged 22-26 (M=8.86, SD=1.21, p=0.008), emerging adults aged 31-35 (M=8.92, SD=1.00, p=0.007), and the oldest cohort aged 40 and above (M=8.81, SD=1.20, p=0.004). No other cross-group comparisons reached statistical significance. Partial Eta squared (η^2) was also assessed to see the differences. As suggested by previous scholars, Partial Eta squared (η^2) measures effect size primarily within analysis of variance

models in a dependent variable that is explained by independent variables. Values of 0.01, 0.06 and 0.14 are considered small, medium, and large effect sizes (Miles and Shevlin, 2001; Cohen, 1988). The result shows that η^2=0.03 which is a small effect and represents approximately 3.0% of the variance in FDI associated with differences among age groups. Finally, the behavioural impact of stay duration on destination image formation was evaluated. Levene's test indicated a significant violation of the homogeneity of variance assumption, F (2, 140) = 3.603, p=0.030. Therefore, the Welch-adjusted statistic was used. The analysis indicated a statistically significant difference across the three stay groups, Welch's F (2, 65.05) = 3.861, p=0.026, with a small effect size (partial η^2 = 0.047). Mean food destination image was 0.05 (SD = 1.33) among visitors staying 1-3 days, 9.02 (SD = 1.11) among those staying 4-7 days, and 9.48 (SD = 0.66) among those staying more than seven days. However, Games-Howell post-hoc comparisons did not identify any pairwise difference that reached the conventional 0.05 significance level, although the comparison between the 4-7 day and more than seven-day groups approached significance (p = 0.055). These results suggest an overall difference across stay duration groups, but the evidence is insufficient to identify a specific pair of groups as significantly different. *Table 5* shows the relevant results for length of stay. An additional independent samples t-test was conducted to examine whether food destination image differed between respondents born and raised in Malaysia and other visitors. The analysis indicated a statistically significant difference with t (651) = -2.401, p=0.017. Visitors reported a higher mean in food destination image score (M=9.24, SD=1.02) than respondents born and raised in Malaysia (M=9.01, SD=0.99). However, the magnitude of the difference was small (Cohen's d = 0.23). This finding indicates a modest difference in destination image perceptions between the two groups, but it does not establish that visitor status causes more favourable destination image perceptions.

Table 4. *Welch's Analysis of Variance and Games-Howell Post Hoc Comparisons for Age Cohorts.*

Age Cohort	Mean (M)	Std Deviation (SD)	Pairwise Comparisons (Games-Howell)
18-21 years old	8.93	1.11	No significant differences
22-26 years old	8.86	1.21	Group 2 < Group 5
27-30 years old	9.04	1.05	No significant differences
31-35 years old	8.92	1.00	Group 4 < Group 5
36-40 years old	9.33	0.77	Group 5 > Groups 2, 4, 6
40 and above	8.81	1.20	Group 6 < Group 5

Note: Robust Welch F (5, 291.07) = 5.118, p < 0.01. Leneve's test for homogeneity of variance was significant (F = 6.551, p < .001), justifying the use of robust variance-adjusted metrics. Partial η^2=0.030. Partial η^2 values of 0.01, 0.06, and 0.14 represent small, medium, and large effects.

Table 5. *Welch's Analysis of Variance and Gomes-Howell Post Hoc Comparisons for Length of Stay.*

Length of stay	Mean (M)	Std Deviation (SD)	Pairwise Comparisons (Games-Howell)
1-3 days	9.05	1.33	No significant differences
4-5 days	9.02	1.11	No significant differences
More than 7 days	9.48	0.66	No significant differences

Note: Robust Welch F (2, 65.05) = 3.861, p < 0.026. Levene's test for homogeneity of variance was significant (F = 3.603, p < .030), justifying the use of robust variance-adjusted metrics. Partial η^2p values of 0.047.

The empirical results of this study offer crucial insights into how tourist heterogeneity shapes the formation of a food tourism destination image (FDI) in Malaysia. By examining gender, age, and duration of stay, this paper demonstrates that a destination image is not decoded uniformly by the market. Existing evidence suggests that distinct socio-psychological and behavioural (Choi, 2025; Nazir et al., 2021; Baloglu and McCleary, 1999) filters shape how different segments perceive the destination's food identity (Meng et al., 2021). The independent samples t-test revealed a statistically significant divergence between genders, with male respondents evaluating the food destination image significantly higher than female respondents. This finding highlights how gendered socialisation influences the evaluation of service environments and travel risks (Darley and Smith, 1995). In the context of Malaysian food tourism, iconic food destinations are located in strategic destinations with high-density populations, such as street food vendors, local night markets, and small stalls (Arifen et al., 2026; Zaeimoedin et al., 2022; Karim et al., 2010). Male consumers frequently evaluate these settings based on how practical they are and whether they offer new and interesting food experiences. This result is broadly consistent with tourism and consumer research (Feraco et al., 2024; Horovitz, 2024), suggesting that demographic characteristics can correspond with differences in tourists' evaluations and preferences. Subsequently, female tourists routinely employ a more holistic evaluation style that places substantial structural weight on safety, environmental sanitation, and ambient comfort (Sparks and Pan, 2009). The relatively small effect observed in the present study indicates that gender alone provides limited explanatory power for food destination image. The finding suggests that gender represents one dimension of tourist heterogeneity that may be relevant when examining food destination perceptions.

Perceptions of the FDI do not follow a traditional linear progression. Instead, they peak sharply within the 36-40 age cohort, outperforming all younger and older segments. This phenomenon is associated with the life-stage subcultures related to consumer behaviour. Younger cohorts (ages 22-26) are heavily driven by budget-conscious, highly globalised, and social media behaviours (Doan et al., 2025). They often prioritise photogenic café aesthetics and modern fusion dining concepts over deeply historic, traditional heritage food infrastructure. At the older end of the progression (ages 40 and above), tourists show heightened critical benchmarks driven by extensive experience and strict physiological comfort requirements. The age differences may be considered in light of previous tourism research suggesting that travel preferences and consumption evaluations can vary across stages. However, the present study did not directly measure the psychological, motivational or experiential mechanisms underlying these differences. The findings indicate that age differences are observable within the Malaysian food tourism context and warrant further investigation using variables that can explain the underlying reasons.

Extended stay tourists (More than 7 days) evaluated the gastronomic FDI significantly higher than medium stay tourists (4-7 days) and, remarkably, local Malaysian residents. Prior studies posit that the length of stay has a significant influence when the tourist travels with their family or children (Gemar et al., 2022). This particular factor often makes the length of stay longer. This is aligned with previous studies that concluded the length of stay is commonly longer when the visitors or travellers have a notably better attitude in understanding the local culture (Gemar et al., 2022; Gang-Hoan et al., 2008). When international or domestic tourists first enter Malaysia's multi-ethnic foodscape, they undergo a phase of sensory negotiation.

Passing the 7-day mark allows for adaptation and cultural acculturation. The pattern nevertheless provides an interesting direction for future research. However, such explanations remain speculative because the present study did not measure the number of food experiences, cultural engagement, familiarity with local cuisine, travel motivation, or other forms of experiential exposure. The findings provide evidence that tourists are not entirely homogenous in their perceptions of food destinations. Statistically significant differences were identified across gender, age, and length of stay groups. However, the associated effect sizes were relatively small. The findings therefore suggest that demographic and behavioural characteristics may contribute to variation in food destination image, but they should not be regarded as sufficient explanations of destination image formation. The findings also extend the discussion of tourist heterogeneity by demonstrating that group differences can be observed even when tourists are considered within the same Malaysian food tourism context. At the same time, the relatively modest effect sizes indicate that destination image is likely to reflect a combination of individual, experiential, and destination factors rather than any demographic characteristics. This interpretation is consistent with the broader consumer behaviour perspective adopted in this study.

Study implication

Theoretically, this study contributes to the understanding of tourist heterogeneity in food destination image by showing that destination image perceptions can differ across gender, age, and length of stay groups. However, the relatively small effect sizes indicate that these characteristics explain only a limited amount of variation in destination image. Therefore, the findings should be viewed as empirical evidence supporting the consideration of tourist heterogeneity rather than as evidence that demographic characteristics independently determine destination image. Future studies may extend this perspective by incorporating experiential, motivational, and behavioural variables to provide a more comprehensive explanation of destination image differences. Practically, the findings suggest that food tourism destinations should recognise differences among tourist groups when designing communication and promotional strategies while avoiding overly rigid demographic segmentation. Gender, age, and length of stay may be considered alongside other visitor characteristics when developing food tourism experiences and marketing content. However, because the observed effects were generally small and no specific stay duration showed a significant difference, destination managers should not assume that particular demographic groups or longer stay necessarily result in different destination image perceptions. Instead, a flexible segmentation approach that combines demographic, behavioural, and experiential information may provide a more appropriate basis for food tourism marketing and destination management.

Limitations and future research

Despite its theoretical and practical contributions, this study has several limitations that should be acknowledged. First, the study employed a descriptive research design, which captures tourists' perceptions at a single point in time. As destination image is dynamic and may evolve, future studies could adopt longitudinal research designs to examine how destination image changes across different stages of the tourist journey. Second, although this study provides empirical evidence from a Malaysian food tourism

destination, the findings should be interpreted within their specific geographical and cultural context. Food tourism experiences are shaped by local culture and destination characteristics, which may differ across countries and tourism settings. Consequently, future research is encouraged to replicate this study in different destinations, including emerging food tourism markets, to evaluate the generalisability of the findings. Third, the present study focused on demographic (gender and age) and behavioural (length of stay) segmentation variables as determinants of food destination image. While these characteristics provide valuable insights into tourist heterogeneity, they do not fully capture the complexity of destination image formation. Future studies should incorporate additional segmentation variables such as travel motivation, travel lifestyle, cultural involvement, and previous experience to develop a comprehensive understanding of how different tourist profiles shape destination image perceptions.

Finally, this study examined demographic differences using mean comparison techniques, which are appropriate for identifying significant group differences but do not explain the underlying causal mechanisms influencing destination image. Future research could employ more advanced analytical approaches such as SEM to investigate the complex relationships among demographic characteristics and destination image formation. Overall, addressing these limitations would not only strengthen the generalisability of the findings but also advance the theoretical development of destination image by integrating demographic, behavioural, and psychological perspectives within diverse food tourism contexts.

Conclusion

This study demonstrates that food destination image varies across demographic and behavioural segments within food tourism. Rather than perceiving destinations uniformly, tourists interpret destination attributes through different demographic and experiential lenses. Ultimately, these findings reinforce the argument that food destination image is not universally interpreted. Instead, tourists filter destination attributes through demographic and behavioural characteristics, supporting consumer behaviour theory and extending destination image research by demonstrating the importance of tourist heterogeneity in food tourism.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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