



## EXPLORING LOCAL CUISINE DINING EXPERIENCES: A MULTISENSORY ANALYSIS FROM EAST JAVA

Santirianingrum Soebandhi<sup>a,\*</sup> , Kristiningsih Kristiningsih<sup>b</sup> , Aryo Nugroho<sup>c</sup> ,  
Adri Gabriel Sooi<sup>d</sup> 

<sup>a</sup> Universitas Wijaya Kusuma Surabaya (Surabaya, Indonesia), Faculty of Economics and Business; <https://orcid.org/0000-0002-2204-2266>; e-mail: santirianingrum@uwks.ac.id

<sup>b</sup> Universitas Wijaya Kusuma Surabaya (Surabaya, Indonesia), Faculty of Economics and Business; <https://orcid.org/0000-0002-2125-2819>; e-mail: kristiningsih@uwks.ac.id

<sup>c</sup> Universitas Narotama (Surabaya, Indonesia); Faculty of Computer Science; <https://orcid.org/0000-0002-6350-9088>; e-mail: aryo.nugroho@narotama.ac.id

<sup>d</sup> Universitas Katolik Widya Mandira (Kupang, Indonesia); <https://orcid.org/0000-0001-5653-0420>; e-mail: adrigabriel@unwira.ac.id

\* Corresponding author.

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### ABSTRACT

This study examines the role of multisensory experiences in enhancing tourists' satisfaction with local culinary experiences and their intention to share these experiences online. It investigates how the interplay of sensory modalities influences tourists' perceptions and behavioral responses. A quantitative research approach was adopted, employing an online survey with a structured questionnaire. Data were collected from 250 tourists who had tested East Java's local cuisine, using a convenience sampling method. The relationships between sensory experiences, satisfaction and online sharing intention were analyzed using partial least squares structural equation modeling (PLS-SEM). The findings reveal that taste and aroma significantly influence tourist satisfaction, whereas visual, auditory and tactile experiences do not exhibit a direct impact. Furthermore, higher satisfaction levels are positively associated with tourists' willingness to share their culinary experiences online. This study contributes to the tourism and hospitality literature by highlighting the critical role of taste and aroma in shaping memorable culinary experiences. The findings provide practical insights for restaurant owners and destination marketers, emphasizing the need to design marketing strategies that leverage dominant sensory cues to enhance engagement and encourage electronic word-of-mouth (e-WOM) sharing.

### KEYWORDS

Indonesia, dining experience, satisfaction, e-WOM intention

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## 1. INTRODUCTION

Tourism has become a leading and rapidly growing industry globally, closely tied to the attractiveness of natural landscapes and the variety of local cuisine offerings (Hernández-Rojas et al., 2021; Ullah et al., 2022). Understanding how incorporating local cuisine enhances tourists' culinary experiences is crucial for grasping their perception of a destination and predicting future behaviors, including their intention to revisit, share their experience, and their willingness to recommend the destination to others (Braumah et al., 2024; Choe & Kim, 2018). Local cuisine serves as a marketing strategy for developing profitable tourist destinations and supporting socio-economic aspects (Hall & Gössling, 2013; Stalmirska, 2021). According to the World Food Travel Association (WFTA), tourists allocate 25% of their travel expenses to food and beverages (University of Central Florida, n.d.; Wolf, 2020). In Bali, the Head of Bank Indonesia Representative revealed that 65% of tourist expenditures are allocated to food and beverages (Muliantari, 2022; Mulya, 2024). This highlights how culinary tourism can benefit local communities and governments through taxation, contributing to area promotion and increased profits for hospitality, dining and transportation services. Additionally, it can help reduce unemployment rates, especially in rural areas with limited economic activity (Wolf, 2020).

Local cuisine, known for its unique flavors and cooking methods, has become a global culinary fascination. It refers to food and beverages that are part of a specific territorial food system, embodying the cultural, historical and social elements unique to that area. This includes not only traditional dishes but also contemporary and fusion foods that have been integrated into the local food culture (Stalmirska, 2021). The uniqueness of local cuisines goes beyond taste; it involves a combination of various sensory elements that collectively establish a meaningful connection to heritage and tradition. Local cuisines stand out not just for their flavors but also for the cultural significance they hold, reflecting the region's history, geography, traditions and social norms (Frisvoll et al., 2016; Huete-Alcocer & Hernández-Rojas, 2022; Stalmirska, 2021). Dining on local dishes offers visitors a chance to experience a culture, even if they are far from its place of origin (Ellis et al., 2018). Such a culinary experience can be as remarkable as tasting street food in Bangkok or New Delhi, or as comforting as savouring a traditional Italian meal in Rome (Ab Karim & Chi, 2010; Kaushal & Yadav, 2021).

Indonesia, with its vast archipelago, is recognized as one of the most culturally diverse nations in the world (Legge et al., 2026). This diversity makes Indonesia incredibly rich in cultural and environmental heritage,

offering significant potential in the tourism sector (PwC Indonesia, n.d.). Each region showcases unique local cuisines with distinct flavors, ingredients, preparation methods and presentation styles. This diversity becomes a tourist attraction, providing a different culinary experience. For instance, Indonesia offers a wide variety of *soto* dishes, ranging from Madura beef soup, Lamongan chicken soup, Betawi, to Aceh soup, each infused with a plethora of spices. The presentation varies, using earthenware cauldrons, *beseke* woven from bamboo, and *pincuk* made from banana leaves. Additionally, diverse processing methods, such as charcoal or bamboo, contribute to the unique taste of local culinary delights. Given its vast geographical and cultural diversity, Indonesian cuisine offers a rich array of flavors and experiences.

Eating and drinking are highly sensory experiences in our daily lives, influencing decision-making (Spence, 2020; Velasco & Obrist, 2021; Velasco et al., 2018). These experiences involve the interplay of various senses throughout the consumption process. The food's flavor not only affects overall enjoyment but also the presentation, ambient music, decor and the distinctive aroma of the dishes (Tran et al., 2023). Each dish has characteristics like color, shape, smell, texture, taste and sometimes even sound that impact how it is perceived. For visual sensation, color can indicate the freshness of ingredients or the use of natural or artificial coloring. Sound sensation includes the noise of food being bitten (e.g. a crunchy sound denoting crispiness, such as when eating *rempeyek kacang*, or crispy peanut crackers) or the music in the eating environment (e.g. Balinese, Javanese, or Sundanese gamelan accompaniment). Connected to smell and taste, traditional or local food has distinct qualities due to unique spices and cooking methods, resulting in a unique taste and aroma (Darsana & Susanti, 2022). Additionally, tactile sensation in food is often linked to its mouth texture, such as crispiness, tenderness or fibrous quality (Barbosa Escobar et al., 2022; Morgan, 2021).

The growth of sensory marketing in the restaurant industry is changing how we perceive dining. With an increasing number of tourists sharing their experiences on social media, these trends play a role in decision-making. However, there is a lack of attention paid to the multisensory aspects of local culinary diversity that could attract tourists (Silaban et al., 2023). Moreover, there is a significant gap in understanding the comprehensive dynamics of multisensory experiences. Current research often focuses on individual sensory elements like taste, aroma or visual presentation separately (e.g. Delwiche, 2012; Guedes et al., 2023). There is a need for a more holistic examination of how these sensory elements interact to create a unified and immersive dining experience.

This research aims to uncover the various layers of the local cuisine dining experience, exploring the diverse dimensions that contribute to its unique appeal. Specifically, the study seeks to:

- identify the multisensory aspects influencing overall dining satisfaction, and
- understand tourists' motivations for sharing their experiences online.

Using a quantitative research approach, the study examines how different sensory factors impact satisfaction with local cuisine dining and tourists' intentions to share their experiences online. Through an internet-based survey with a self-completion question-naire, we aim to offer a comprehensive understanding of the multisensory aspects of local cuisine dining and their implications for the restaurant industry. In today's interconnected world, where globalization prevails, local cuisines serve as cultural ambassadors that represent national identity and heritage. This perspective aligns with the concept of gastrodiplo-macy, as seen in South Korea's use of cuisine as part of the Korean Wave to strengthen its cultural influence in Indonesia (Asy'ari et al., 2024). Similarly, Indonesia has advanced its culinary diplomacy in Saudi Arabia by opening restaurants and organizing food events to increase the visibility of its cuisine abroad (Renta et al., 2025). With skillful coordination of sensory elements, local cuisine establishments have the potential to go beyond mere culinary delights, crafting an unforgettable multisensory experience for their customers.

## 2. THEORETICAL FRAMEWORK

### 2.1. FOOD AND TOURISM

Food has transitioned from being merely a necessity for tourists to becoming a significant element of the travel experience (Hjalager & Richards, 2002; Kement et al., 2024). According to Kovalenko et al. (2023), tourists tend to learn about and discover a destination through its local cuisine. They also consider the variety and quality of places where food can be consumed, which significantly contributes to their overall satisfaction. Wondirad and Verheye (2023) also emphasize that local food as a tourism product remains a vital factor in tourists' destination choices.

Recent studies highlight the significant role of culinary experiences in shaping tourists' overall travel experience. Björk and Kauppinen-Räsänen (2019) states that tourists are increasingly drawn to unique culinary experiences that reflect the cultural identity of a destination. Yang et al. (2024) support this view, find that the quality and diversity of a destination's cuisine significantly influence tourists' satisfaction and

their intention to revisit. Furthermore, the geography and climate of a specific region dictate the types of locally used foods: spices, herbs and ingredients that can be grown there, creating a unique and distinctive flavor in the local cuisine, which provides tourists with a memorable culinary experience (Boesen et al., 2017; Roy, 2024; Smith & Xiao, 2008). However, only a small proportion of tourists actively seek authentic local food, and such experiences are often difficult to access in tourist-oriented areas unless visitors venture beyond mainstream routes or rely on local knowledge (Charzyński et al., 2015).

Tourists find motivation to search for local cuisine in several ways. For some, this involves appreciating and enjoying local or regional cuisine as part of the travel experience (Palupi & Abdillah, 2019). For others, food itself becomes the primary motivation for their journey, leading them to participate in activities specifically centered around culinary experiences (Huete-Alcocer & Hernández-Rojas, 2022; Palupi & Abdillah, 2019; Sooi et al., 2025). This indicates that food serves not only as a basic need but also as a crucial means for exploring and understanding a place. Therefore, to capitalize on food as a main attraction and develop effective marketing strategies around culinary experiences, marketers should first understand the perspectives of their target customers and the factors that attract travelers interested in exploring diverse culinary offerings.

### 2.2. TOURIST SATISFACTION

Tourist satisfaction encompasses a range of tourists' attitudes about specific aspects of their vacation experiences (Brammah et al., 2024; Pizam et al., 1978). Oliver (2010) expands this definition, stating that tourist satisfaction results from a judgment that a product or service feature has provided a pleasurable level of consumption-related fulfilment, whether it meets, exceeds or falls short of expectations. This satisfaction process typically involves comparing perceived product/service performance against a set of standards or expectations (Ryu, Um & Leet et al., 2012; Soebandhi et al., 2020; Yi, 1990). Bakti et al. (2020) describe satisfaction as an emotional state that arises when there is a minimal gap between what customers expect and what they perceive to receive from a service provider.

Tourist satisfaction is influenced by destination attributes (Baitalik et al., 2022). Previous studies such as those by Carvalho (2022), Ragavan et al. (2014) and Valduga et al. (2020), have assessed tourist satisfaction by evaluating factors such as food, accommodation, image, attractions, climate, accessibility, culture and price. When these attributes meet tourists' expectations, satisfaction levels are high, whereas unmet expectations lead to dissatisfaction (Asmelash & Kumar,

2019; Braimah et al., 2024). These findings highlight the importance of effectively managing destination attributes to ensure tourist satisfaction and foster positive emotional responses.

### 2.3. MULTISENSORY DINING EXPERIENCE

The literature on multisensory dining underscores the importance of engaging all the senses for an immersive and memorable experience. While individual sensory elements like taste, aroma, sound, texture and visual presentation have been studied separately, it is their harmonious interplay that turns a meal into a multisensory journey (Chang, 2020; Hultén et al., 2009). For instance, the taste of a dish is not only experienced through actual tasting but also influenced by its presentation and aroma. Moreover, factors beyond taste, including aesthetics, background music and fragrances, together with the authenticity of local settings such as street food stalls, contribute to an enjoyable dining experience (Chompupor et al., 2024; Spence, 2015; Spence, 2020). Engaging all senses serves as the initial stimulus that influences consumer attitudes and emotions, highlighting the significant potential of multisensory approaches in shaping consumer decision-making within local food experiences during tourist visits (Silaban et al., 2023). Therefore, understanding the importance of sensory elements is crucial in creating memorable dining experiences.

#### 2.3.1. VISUAL

A common saying among culinary experts emphasizes this notion: "You eat with your eyes first". Visual perception holds a significant influence as people are naturally drawn to what they see (Liu et al., 2022). This phrase highlights that unappealing-looking foods are often left uneaten (Delwiche, 2012). The visual aspect is powerful because it not only captures attention, raises awareness, and shapes an image but also deeply impacts consumers' emotions (Schifferstein et al., 2013; Schifferstein et al., 2022). Research indicates that incorporating visual elements into the dining experience significantly enhances tourists' satisfaction with local cuisine (Ryu, Lee & Kim, 2012). Based on the above discussion, we develop the following hypotheses:

H<sub>1</sub>: Visual experience will increase tourist satisfaction while eating local cuisine.

#### 2.3.2. OLFACTION

Exposure to food-related sensory cues, particularly olfactory stimuli, can elicit physiological responses that significantly influence appetite and food consumption (Morquecho-Campos et al., 2020; Stevenson, 2009). For instance, the aroma of pizza can increase the desire

to eat it. The sense of smell also shapes memories and emotions during meals, activating specific brain regions and generating positive feelings like enjoyment, satisfaction, relaxation and valuable memories (Chang, 2020; Krishna & Schwarz, 2014). While enjoying local dishes, the olfactory experience can significantly enhance the overall dining experience, influenced not only by the aroma of the food itself but also by surrounding kitchen scents and cooking processes. These environmental aromas contribute to the perceived authenticity and memorability of a meal, leaving tourists with a heightened sense of satisfaction (Schifferstein et al., 2022; Silaban et al., 2023). Based on this explanation, we propose the following hypothesis:

H<sub>2</sub>: Olfaction experience will increase tourist satisfaction while eating local cuisine.

#### 2.3.3. TASTE

Culinary traditions from different regions and nations offer diverse tastes and unique experiences. Flavor characteristics are crucial in contributing to the diversity and distinctiveness of each destination (Hoang & Tučková, 2021). The perception of taste plays a central role in shaping food preferences and choices, arising from the integration of all the senses (Chamoun et al., 2019; Guedes et al., 2023). Taste and smell are closely connected, and taste is intertwined with other sensory experiences (Liu et al., 2022). For example, specific aromas like vanilla or caramel are perceived as "sweet" and can enhance taste intensity (Guedes et al., 2023; Stevenson et al., 1999). Visual sensations also impact taste; the colors of foods and beverages can influence taste perceptions and experiences (Spence, 2019). Exploring the unique tastes and textures of local dishes can significantly enhance travelers' journeys and leave them feeling content (Schifferstein et al., 2022). Trying traditional cuisine is an essential activity for any tourist seeking an immersive and authentic adventure.

Beyond its sensory function, taste in culinary tourism should be understood as a holistic experience that is embedded in the social and cultural contexts in which food is consumed. Tourists do not perceive taste in isolation; rather, it is interpreted through cultural familiarity, local dining norms, and shared social interactions that accompany the eating experience. These contextual elements can enhance emotional engagement and strengthen perceptions of authenticity, allowing taste to function as a medium through which tourists connect with local culture rather than merely as a source of hedonic pleasure (Björk & Kauppinen-Räisänen, 2016; Mak et al., 2012).

In addition to these sensory and cultural dimensions, tourists' evaluations of local cuisine also involve cognitive judgments related to perceived value. Research suggests that assessments of food quality are often

balanced against expectations regarding portion size and price, indicating that satisfaction emerges when taste aligns with perceptions of fairness and economic value (Ge et al., 2023). This perspective is further supported by studies analyzing Google Maps reviews, which show that online consumer feedback frequently integrates evaluations of food quality, price/value and dining atmosphere as interconnected components of overall satisfaction (Koç & Şahin, 2023).

Drawing on existing literature, taste experience in local cuisine is embedded in broader cultural, social, and value-related contexts and is expected to influence tourists' satisfaction during culinary encounters. Accordingly, the following hypothesis is proposed:

H<sub>3</sub>: Taste experience will increase tourist satisfaction while eating local cuisine.

#### 2.3.4. SOUND

Concerning dining, sound plays a crucial role in influencing consumers' emotions, preferences, behaviors and eating habits (Alpert et al., 2005; Hoang & Tučková, 2021; Randhir et al., 2016). Various aspects of music, including volume, style, rhythm and genre, affecting the auditory senses, can influence consumers' emotional states (Liu et al., 2022). For instance, calming music can enhance meal enjoyment, while background noise like traffic or restaurant chatter can diminish it (Spence, 2012; Spence & Shankar, 2010). Değermen Erenkol and MK (2015) and Mathiesen et al. (2020) also suggest that upbeat music tends to energize consumers and prompt quicker eating. Enhancing the culinary experience for tourists can be achieved by providing an exceptional auditory experience, undoubtedly boosting the overall enjoyment of local dishes and contributing to their overall travel satisfaction. Based on the explanation above, we propose the following hypothesis:

H<sub>4</sub>: Sound experience will increase tourist satisfaction while eating local cuisine.

#### 2.3.5. TACTILE

When we touch and assess food directly with our hands, we can gather important information about its temperature, freshness and ripeness or tenderness. Various forms of "finger food" establish a direct tactile connection between our hands and the food we are eating. The tactile interactions involved in handling food contribute to our overall dining experience and can heighten sensory enjoyment during meals (Spence, 2022). Research by Nederkoorn et al. (2018) emphasized the importance of food texture, especially in influencing food acceptance among children. This suggests that children, who are typically more sensitive to touch, might be more inclined to reject certain foods due to their dislike of texture or mouthfeel. Beyond visual

and auditory experiences, the tactile encounter also significantly influences the overall satisfaction derived from local cuisine (Chang, 2020; Silaban et al., 2023). The texture and mouthfeel of a dish can profoundly affect the overall enjoyment, even when the flavors are delightful. Based on this information, the following hypothesis is proposed:

H<sub>5</sub>: Tactile experience will increase tourist satisfaction while eating local cuisine.

### 2.4. E-WOM INTENTION

Word of mouth (WOM), traditionally an informal exchange of opinions among consumers about products and services, has been transformed with the advent of internet technology and social media (Doan Do et al., 2024; Hapsari et al., 2024). This evolution has given rise to electronic word of mouth (e-WOM), enabling users worldwide to share their experiences, opinions and feedback about products and services through online platforms (Goyal & Taneja, 2023; Pandey & Sahu, 2020; Puspitasari et al., 2019). In the context of tourism, consuming local cuisine plays a significant role in shaping tourists' likelihood of sharing their experiences (Bigné et al., 2001; Braimah et al., 2024). Satisfied tourists are likely to recommend and promote local food, while dissatisfied tourists often share negative experiences even more actively, highlighting the dual nature of e-WOM (Poyoi et al., 2023). Evidence from studies on tourists' culinary experiences in New Delhi shows that memorable food experiences enhance satisfaction and the intention to share them (Piramanayagam et al., 2020). Based on this premise, we propose the following hypothesis:

H<sub>6</sub>: Satisfaction will increase tourists' e-WOM intention about local cuisine.

### 2.5. CONCEPTUAL FRAMEWORK

As shown in Figure 1, the research's conceptual framework is built on six hypotheses. In this model, satisfaction and e-WOM intention are the dependent variables.

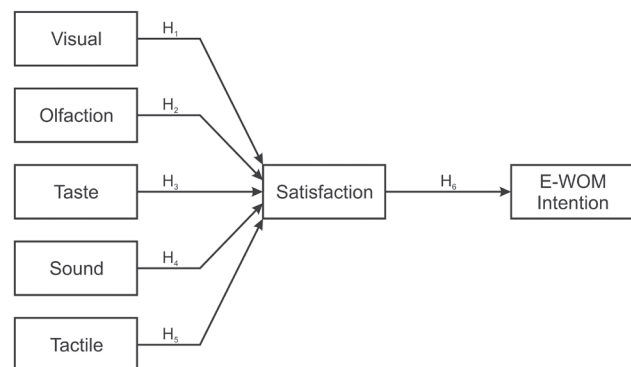


Figure 1. Research framework  
Source: authors

Simultaneously, independent variables encompass multisensory experiences related to sight (visual), smell (olfaction), taste (taste), sound (auditory) and touch (tactile) since they are crucial factors influencing customer satisfaction.

### 3. METHODS

#### 3.1. POPULATION AND SAMPLING

Data was gathered through online questionnaires using a convenience sampling method (Ullah et al., 2022). The population for this study consists of domestic tourists who have experienced East Javanese cuisine. East Java was chosen as the focal area due to its diverse cultural and natural attractions (Pemrov Jatim, 2023), which are significant for tourism research. Importantly, it also records the highest number of domestic tourist arrivals in Indonesia (Antara – Indonesian News Agency, 2024), further underscoring its relevance as a setting for examining multisensory culinary experiences. Following the recommendations of Hair et al. (2019, p. 280), we applied a 10:1 ratio of respondents to indicators, requiring a minimum of 240 respondents for 10 indicators. This approach is also recommended by other researchers such as Memon et al. (2020) and Rahman (2023). Since the study was conducted at local culinary venues, which do not track the exact number of visitors, we applied this ratio as a guideline to determine an appropriate sample size. We received a total of 265 responses, exceeding the required baseline of 240, which confirms the adequacy of our sample size for survey-based research. However, 15 responses were excluded because the locations visited by these tourists were not within East Java.

#### 3.2. MEASURES

A survey was conducted with participants who had visited East Java, sampled East Javanese cuisine, and were at least 15 years old. This age threshold is deemed suitable because individuals aged 15 and older are generally capable of offering informed and reliable responses. Additionally, they already have established preferences, which can provide valuable insights into the study (Borgers et al., 2000).

The questionnaire was structured into three main sections to facilitate comprehensive data collection. The first section introduced the topic and established eligibility criteria for survey participation, ensuring respondents understood the study's purpose and confirmed their eligibility. The second section collected demographic information such as age, gender, education level and other pertinent variables, providing insights

into participant backgrounds and ensuring sample representativeness. In the third section, which focused on specific research variables concerning respondents' experiences and opinions regarding East Javanese cuisine, a 5-point Likert scale was employed to gather detailed information for achieving the study's objectives.

Survey questions were based on existing research and were translated into Indonesian to align with the original English version. The questionnaire encompassed various sensory aspects: visual aspects included inquiries about food presentation, servers and restaurant layout; auditory aspects addressed background sounds; tactile aspects examined physical items and the food served; taste aspects focused on perceptions of food and beverage flavors; and olfaction aspects explored aroma perceptions. These questions were adapted from studies by Lv et al. (2023), Silaban et al. (2023), Tran et al. (2023) and Wiedmann et al. (2018).

### 4. RESULTS AND DISCUSSION

An analysis of respondent profiles, presented in Table 1, using descriptive analysis, shows a slightly higher representation of female respondents at 55.6% ( $n = 139$ ) compared to male. Respondents' ages range from 15 to more than 40, with the largest segment falling in the  $\geq 40$  age category, making up 40.8% of the total ( $n = 102$ ). Initially, we focused on the age range up to 40 due to Indonesia's predominant population of Generation Z and Millennials (IDN Research Institute, 2024), as 78% of Millennials express a strong interest in exploring local cuisine. However, the survey results unexpectedly revealed a notable number of respondents aged over 40, adding an additional perspective to the findings. In addition to gender and age, employment status provides further insight into the respondent profile. The majority of respondents work in the private sector, representing 39.2% of the sample ( $n = 98$ ).

Table 1. Respondent profile ( $n = 250$ )

Variables		Number	%
Gender	Female	139	55.6
	Male	111	44.4
Age	<20	13	5.2
	20–24	47	18.8
	25–29	17	6.8
	30–34	37	14.8
	35–39	34	13.6
	$\geq 40$	102	40.8

Employment	Students	58	23.2
	Private sector	98	39.2
	Self-employed	20	8.0
	Professional	45	18.0
	Others	29	11.6
Monthly spending (million Rp) <sup>a</sup>	<5	142	56.8
	5–10	75	30.0
	11–19	25	10.0
	>20	8	3.2

<sup>a</sup> Exchange rate based on Bank Indonesia (29 September 2025): 1 EUR ≈ IDR 19,681.06.

Source: authors.

Building on prior studies that emphasize gender-related differences in sensory sensitivity and food-related perception, the present analysis examines whether such distinctions are also reflected in the multisensory dining context investigated in this study. Following the presentation of respondent demographics, gender-based differences in perceived multisensory dining experiences are explored using ordinal descriptive statistics, reported as the median and interquartile range (Q25–Q75), and subsequently assessed using the Mann-Whitney U test. Gender was selected as the grouping variable because previous research has documented systematic differences between males and females in sensory processing, particularly in taste, olfactory and tactile domains that are central to multisensory dining experiences (Koubaa & Eleuch, 2020; Puleo et al., 2021; Ullah et al., 2023). In contrast, age was not employed as a comparison variable, as age-related influences are more closely associated with long-term physiological changes in sensory functioning, such as declines in taste and olfactory sensitivity, rather than perceptual evaluations formed within a dining encounter (Honnens de Lichtenberg Broge et al., 2021; Methven et al., 2012). Descriptively, the results reveal largely similar perception patterns across genders, as indicated by the same median scores for visual (16), auditory (11), tactile (20), olfactory (12), satisfaction (12) and e-WOM intention (12). For taste perception, male respondents report a slightly higher median score (13) than female (12); however, the interquartile ranges overlap substantially (Q25–Q75 = 12–15 for both genders), suggesting limited practical differentiation. These descriptive tendencies are supported by the Mann-Whitney U test results, which indicate no statistically significant gender-based differences across all constructs, including visual ( $U = 7454.00$ ;  $p = 0.643$ ), auditory ( $U = 7315.50$ ;  $p = 0.478$ ), tactile ( $U = 7460.00$ ;  $p = 0.651$ ), taste ( $U = 7258.50$ ;  $p = 0.410$ ), olfactory ( $U = 7590.50$ ;  $p = 0.824$ ), satisfaction ( $U = 7447.50$ ;  $p = 0.622$ ), and e-WOM intention ( $U = 7612.00$ ;  $p = 0.855$ ).

Although minor variations in mean ranks are observed, such as slightly higher ranks for females in visual and auditory dimensions and for males in tactile and taste dimensions, these differences do not reach statistical significance, indicating that they reflect modest distributional variability rather than meaningful experiential divergence. Overall, the findings suggest that multisensory dining experiences and their associated evaluative and behavioral outcomes are perceived in a broadly comparable manner across genders, providing a stable empirical basis for subsequent structural equation modeling that focuses on the relationships among sensory dimensions, satisfaction, and behavioral intention rather than on demographic segmentation.

Building on these descriptive insights, the next stage of analysis focuses on validating the measurement model to confirm the clarity and comprehensibility of the questionnaire items used in the study for the respondents. When using data analysis methods like partial least squares, an indicator's validity relies on its outer loading score. The outer model, or measurement model, evaluates indicators with latent variables, measuring how effectively the indicator can explain its corresponding latent variable. Convergent validity (outer model) is confirmed if loading factor values range from 0.50 to 0.60, indicating sufficiency. Indicators with loading scores between 0.5 and 0.7 can be removed, as long as the average variance extracted (AVE) score and indicator commonality both exceed 0.5 (Hair et al., 2022, pp. 117–126).

All indicators used have met the criteria for convergent validity based on the data processing results (Table 2). This suggests that the questions posed to the respondents were clear and well-understood. Convergent and discriminant validity are assessed using the AVE and composite reliability (CR). Average variance extracted values, ranging from 0.784 to 0.938, surpass the acceptable threshold of 0.5, indicating strong convergent validity. Additionally, CR values, falling between 0.830 and 0.957, surpass the 0.7 benchmark, indicating robust internal consistency (Hair et al., 2014).

Table 2. Value of average variance extracted (AVE), composite reliability (CR), and R-squared

Variables	AVE	CR	R-squared
Visual	0.814	0.887	–
Olfaction	0.917	0.941	–
Taste	0.924	0.946	–
Auditory	0.787	0.830	–
Tactile	0.784	0.888	–
Satisfaction	0.938	0.957	0.678
e-WOM intention	0.859	0.894	0.487

Source: authors.

To establish discriminant validity, the analysis examined cross-loadings for each indicator. The findings revealed that all indicator loadings on their respective constructs exceeded their loadings on other constructs, confirming discriminant validity. Moreover,  $R$ -squared calculations indicated values of 0.678 for satisfaction and 0.487 for e-WOM intention. These values signify that the independent variables predict the dependent variable. However, it's worth noting that the  $R$ -squared value for e-WOM intention is relatively low, below 0.5, suggesting a comparatively modest influence on the dependent variable (Hair et al., 2011; Hair et al., 2014).

Next, to scrutinize the suggested hypotheses, we conducted a path analysis and evaluated the results using critical  $t$ -values at 1.96 (at a 5% significance level). Figure 2 offers a summary of the path analysis outcomes, indicating that  $H_1$ ,  $H_4$  and  $H_5$  were not supported.

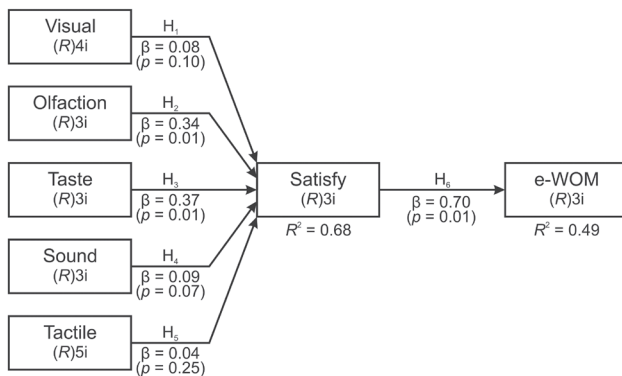


Figure 2. Hypotheses testing results  
Source: authors

The investigation into multisensory local cuisine dining experiences reveals the complex interaction of sensory elements and cultural significance in the restaurant industry. This section delves into the findings, emphasizing the crucial role of the five senses – taste, smell, touch, sight and sound – in shaping tourist satisfaction and e-WOM intention.

The visual aspect of food plays a crucial role in shaping the overall dining experience, as presentation reflects the essence of the cuisine. Local eateries often incorporate traditional elements to enhance cultural authenticity, immersing diners in a distinctive culinary atmosphere (Schifferstein et al., 2022). However, our findings indicate that visual factors do not significantly impact tourist satisfaction. This suggests that tourists prioritize authenticity over elaborate presentation, particularly in traditional establishments where food is served with minimal embellishment. Furthermore, the ambiance of traditional restaurants differs from modern dining settings, which may explain the limited influence of visual appeal on overall satisfaction. These findings align with previous research emphasizing that

visual elements do not determine satisfaction (Kim et al., 2020; Silaban et al., 2023).

The sense of smell further enhances the culinary experience, as olfactory cues contribute to both anticipation and enjoyment of food. Our findings highlight a strong correlation between olfaction and tourist satisfaction, supporting the notion that individuals who can discern distinctive food aromas experience greater contentment. The use of region-specific ingredients, such as *petis* (a fermented shrimp paste) in dishes like *rujak cingur* (a traditional salad made with vegetables, fruits, rice cake and slices of cooked cow snout served with a savory *petis* sauce) and *tahu campur* (a noodle and tofu dish enriched with *petis* broth and fresh vegetables), creates memorable sensory experiences that reinforce cultural identity. These results are consistent with previous research emphasizing the significant role of olfactory perception in shaping customer satisfaction (Satti et al., 2021).

Similarly, taste plays a pivotal role in determining tourist satisfaction with local cuisine. The distinct flavors of regional dishes, shaped by centuries of culinary evolution, offer a sensory link to cultural heritage. Our findings confirm a positive relationship between taste and satisfaction, indicating that individuals who appreciate the complexity of flavors are more likely to report higher levels of enjoyment. East Javanese cuisine, known for its distinctive blend of saltiness and spiciness, exemplifies regional diversity in preparation methods and local ingredients. These unique taste profiles significantly enhance the dining experience and contribute to overall tourist satisfaction, aligning with prior studies that emphasize the dominant role of taste in shaping consumer preferences (Schifferstein et al., 2022; Soebandhi et al., 2023; Wiastuti & Rashid, 2024).

Auditory elements, such as background music or ambient noise, are often considered essential in enhancing the dining experience. Traditional or contemporary music can create an immersive cultural environment, reinforcing the connection between food and local heritage. However, our results contradict the assumption that sound significantly affects satisfaction. Tourists appear to place little emphasis on auditory factors, suggesting that music and surrounding noise do not substantially influence their dining enjoyment. This finding supports previous studies that highlight the limited role of auditory cues in shaping consumer behavior (Lv et al., 2023; Silaban et al., 2023).

The tactile experience, including food texture and temperature, also contributes to the sensory richness of local cuisine. The variety of textures, from crispy to tender, enhances the complexity of traditional dishes and provides a unique culinary experience. Despite this, our study reveals that tactile sensations do not significantly impact tourist satisfaction. Factors such as food texture, temperature and restaurant set-up appear

to be secondary considerations for tourists, who tend to prioritize the uniqueness of local specialties over the physical attributes of the dining experience. This challenges previous findings that suggested a stronger relationship between tactile sensations and consumer satisfaction (Chang, 2020; Silaban et al., 2023).

Beyond the multisensory aspects of dining, tourist satisfaction plays a crucial role in influencing e-WOM intentions. Satisfied tourists are more likely to share their positive dining experiences and recommend local cuisine to fellow travelers. Our findings align with existing literature, which suggests that customer satisfaction directly impacts the likelihood of engaging in e-WOM and sharing positive recommendations online. When tourists experience a high level of satisfaction, they tend to communicate their experiences through online platforms, influencing the perceptions and decisions of other potential visitors (Jeong & Jang, 2011; Prayag et al., 2017).

## 5. CONCLUSION

This study highlights the role of sensory elements in shaping dining experiences, showing that taste and olfaction contribute most strongly to satisfaction, while visual presentation, auditory ambiance and tactile sensations serve more as complementary factors. Tourists appear to value the authenticity and memorability of flavor and aroma above other sensory cues. In turn, higher satisfaction increases the likelihood of sharing experiences through e-WOM, underscoring the importance of focusing on core sensory elements to enhance memorable dining experiences and foster stronger connections with customers.

The study contributes to both academic research and industry practice. Theoretically, it deepens the understanding of multisensory dining dynamics by exploring how sensory modalities shape satisfaction and e-WOM intentions. The proposed evaluation framework offers a valuable reference for scholars and industry professionals, highlighting the role of sensory engagement in enhancing consumer experiences. Practically, the findings provide insights for the restaurant industry. Identifying key sensory drivers of satisfaction can guide improvements in menu design, restaurant ambiance and overall dining experiences. These insights help businesses develop strategies that increase customer engagement and encourage positive word-of-mouth promotion.

While this study focuses on East Java, further research is needed to explore multisensory dining experiences across different cultural and regional contexts. Future studies could extend the analysis beyond domestic settings by including international tourists, whose cultural

backgrounds may shape different perceptions of local food experiences. Considering demographic factors such as age, income, gender and digital literacy in combination with cultural diversity would provide a more comprehensive understanding. A comparative approach would thus yield deeper insights into both universal patterns and context-specific aspects of sensory dining experiences.

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