

Revitalising food heritage: A behavioural model of traditional Malay kuih muih consumption among Malaysian millennials

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ABSTRACT

Traditional Malay kuih muih represents a vital component of Malaysia's intangible cultural heritage, embodying culinary identity, intergenerational continuity, and socio-cultural values. However, its continuity is increasingly threatened by the declining interest and participation of Malaysian millennials (aged 29–44) in traditional food preparation and consumption. This decline is attributed to modern lifestyle shifts, convenience-oriented eating habits, time scarcity, and diminishing culinary knowledge and skills. While existing studies highlight cultural appreciation for traditional foods, limited empirical research explains the behavioural mechanisms driving heritage food consumption among younger generations. Addressing this gap, this study investigates the influence of four traditional foodway dimensions—ingredients, cooking methods, cooking equipment, and eating decorum—on the consumption of traditional Malay kuih muih, with perceived knowledge and perceived skills examined as mediating variables. Grounded in the Theory of Planned Behavior (TPB) and Foodways Theory, this study proposes that cultural heritage alone is insufficient to sustain consumption behaviour unless reinforced by cognitive understanding and practical capabilities related to traditional food production. A quantitative research design will be employed using a stratified random sampling technique to ensure representation across Malaysia's major ethnic and regional groups. Data will be collected through a structured online questionnaire administered to a minimum of 385 respondents, as recommended by PLS-SEM power analysis. Measurement items will be adapted from validated scales and assessed through a pilot study to ensure clarity and instrument reliability, targeting a Cronbach's alpha ≥ 0.70 . Data analysis will include Partial Least

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Squares Structural Equation Modeling (PLS-SEM) for hypothesis testing and mediation analysis, supported by Pearson correlation and regression to determine strength and direction of relationships. The findings are expected to advance behavioural theory in the heritage food context and inform strategic interventions—including culinary education programmes, digital knowledge-sharing platforms, and policy frameworks—to revitalise traditional Malay kuih muih and support Malaysia's cultural sustainability agenda.

1. INTRODUCTION

Traditional food heritage embodies the cultural memory, social cohesion, and identity continuity of a community, making it a vital component of intangible cultural heritage recognised by UNESCO and widely acknowledged in cultural anthropology and food studies research (UNESCO, 2023; Bessi re & Tib re, 2021; Fontefrancesco, 2022). Across the globe, traditional foods face increasing threats due to globalisation, rapid urbanisation, industrial food systems, and the homogenisation of eating habits, which have accelerated the cultural standardisation of diets and weakened localised culinary knowledge (Trichopoulou et al., 2022; Bowen & Zapata, 2021; Guerrero et al., 2023). These changes have disrupted intergenerational knowledge transfer, diminished traditional cooking practices, and weakened local food identities.

According to contemporary cultural heritage scholars, the disappearance of traditional foods signals not merely a culinary loss but also an erosion of cultural sovereignty and community identity (Kim et al., 2023; Santich, 2022). In response, the United Nations Sustainable Development Goals (SDG 11.4) emphasise safeguarding cultural heritage, including traditional food knowledge. Preserving traditional gastronomy has therefore gained global academic and policy interest as a pathway to protect cultural diversity, strengthen community resilience, and foster sustainable tourism and hospitality development.

Within Southeast Asia, food is deeply intertwined with cultural expression, ethnic heritage, and community ritual practices, serving as a medium of social cohesion, identity reproduction, and intergenerational continuity (Kittler et al., 2023; Teng & Keh, 2022; Othman et al., 2024). Malaysia, as a multicultural nation, is endowed with a rich food heritage shaped by Malay, Chinese, Indian, and indigenous culinary traditions. Among these, traditional Malay foodways constitute a cornerstone of national food identity, with kuih muih—bite-sized sweet and savoury delicacies—occupying a significant cultural and gastronomic space.

These delicacies are not only consumed daily but are also embedded in communal activities, festive celebrations, life-cycle events, and religious rituals. Historically, knowledge of kuih muih preparation was transmitted orally among women through family tradition, communal cooking, and kampung-based culinary practices. However, in recent decades, contemporary eating habits, time scarcity, and exposure to globalised food cultures have contributed to a decline in the production and consumption of traditional Malay kuih muih (Sharif et al., 2023; Abdullah & Hasan, 2024; Yusoff et al., 2022; Ahmad et al., 2025; Muhammad, 2023).

Millennials, who represent a dominant demographic segment in Malaysia and play a significant role in shaping future consumption patterns, are central to the continuity of traditional food heritage (Rahman et

al., 2022; Omar et al., 2024; Che Omar & Ab Karim, 2023). Born between 1981 and 1996, millennials are technologically savvy, urbanised, and exposed to diverse global food trends. Scholars argue that their higher preference for convenience foods, digital food culture, and fast-paced lifestyles contributes to the declining interest in traditional food preparation and consumption (Kamaruzaman et al., 2022; Ng & Jamaluddin, 2023; Chamhuri et al., 2024; Tan et al., 2023). Previous studies suggest that although millennials may recognise the cultural value of traditional foods, their actual consumption behaviour remains low due to limited culinary knowledge, lack of cooking skills, and weak cultural attachment (Rahman et al., 2021; Ishak et al., 2023; Musa et al., 2024; Hamzah & Othman, 2022). This trend poses a serious cultural threat, as millennials serve as the bridge for intergenerational transmission of traditional food knowledge to future generations.

The concept of foodways provides a strong cultural framework to examine traditional food practices and their sociocultural meanings, emphasising that food is not merely for sustenance but also functions as a cultural system that conveys identity, hierarchy, and heritage (Long, 2019; Counihan, 2022; Brellas & Martinez, 2023; Pilcher, 2024). Foodways encompass ingredients, preparation methods, equipment, and eating decorum, reflecting the cultural, social, and symbolic meanings of food within a community (Long, 2019; Brellas & Martinez, 2023). In the context of Malay kuih muih, local ingredients such as rice flour, coconut milk, pandan leaves, and palm sugar carry agricultural heritage and ecological significance.

Traditional tools like the kukur kelapa and lesung batu preserve authenticity in preparation, while traditional cooking methods like steaming and slow fire cooking shape texture and aroma. Eating decorum, including notions of sharing, hospitality, and communal unity, reflects Malay values of togetherness (Rahim et al., 2022). However, these traditional elements are increasingly displaced by modern kitchen technology, commercially processed ingredients, and individualised eating habits, raising concerns about cultural dilution and the loss of authentic culinary identity (Mahmud et al., 2023; Ghazali & Othman, 2024; Raji et al., 2022; Muhammad, 2022).

Behavioural theories are essential to explain how food heritage consumption can be sustained among younger generations, particularly in contexts where cultural practices intersect with changing lifestyles and global food choices (Ajzen, 2005; Hussein et al., 2023; Vanany et al., 2024). The Theory of Planned Behaviour (TPB) posits that attitudes, subjective norms, and perceived behavioural control influence behavioural intention, which in turn determines actual consumption (Ajzen, 2005; Hussein et al., 2023). In traditional food studies, TPB has been applied to explain how cultural attachment, taste perception, and social influence drive consumption decisions. However, existing TPB applications often overlook cultural mediators such as knowledge and skills. Integrating TPB with Foodways Theory offers a more holistic perspective, recognising that perceived knowledge about traditional ingredients and cooking methods, as well as practical culinary skills, may strengthen positive attitudes and perceived control, thereby encouraging traditional food consumption (Zainal & Cheong, 2021; Hassan & Ismail, 2019).

Despite the growing literature on traditional food heritage, several research gaps remain. First, empirical studies exploring traditional Malay kuih muih consumption among millennials are still limited and fragmented, with most focusing on general traditional food consumption but not specifically addressing foodway dimensions (Sharif et al., 2017; Jamaluddin et al., 2018). Second, very few studies have examined how cultural food practices are mediated by knowledge and skills, which are essential for sustaining culinary traditions. Third, studies often highlight cultural appreciation, but there is minimal investigation into behavioural mechanisms, making it necessary to adopt a theory-driven approach. Fourth, traditional

Malay kuih muih remains underrepresented in hospitality and tourism heritage research despite its potential for cultural tourism, community-based gastronomy, and culinary entrepreneurship.

Therefore, this study investigates the influence of traditional foodways—specifically ingredients, cooking methods, cooking equipment, and eating decorum—on the consumption of traditional Malay kuih muih among Malaysian millennials. It further examines the mediating role of perceived knowledge and perceived skills, integrating Foodways Theory and the Theory of Planned Behaviour as a conceptual foundation. This study contributes to both cultural heritage and hospitality research by developing a behaviourally grounded framework to explain traditional food consumption. It also provides practical implications for policymakers, culinary educators, cultural preservation agencies, and halal food entrepreneurs seeking to revitalise and commercialise Malay kuih muih heritage.

Guided by the research aim, this study seeks to examine how traditional foodways shape consumption behaviour among millennials, with a focus on four core dimensions: ingredients, cooking methods, cooking equipment and eating decorum. In doing so, the study aims to determine whether these cultural foodway elements significantly influence the consumption of traditional Malay kuih muih and whether perceived knowledge and perceived skills act as mediating variables that strengthen this relationship. Accordingly, this investigation is driven by several fundamental questions concerning the extent to which traditional foodways contribute to the preservation of food heritage, the mechanisms through which knowledge and skills influence consumption behaviour, and the behavioural dynamics that sustain or weaken traditional food practices among younger generations in Malaysia. In line with these motivations, this study hypothesises that each traditional foodway factor—ingredients, cooking methods, equipment and eating decorum—exerts a positive and significant influence on kuih muih consumption, and that perceived knowledge and perceived skills mediate these relationships by enhancing cultural appreciation and behavioural intention.

Overall, this study advances the preservation of traditional Malay food heritage by examining behavioural determinants of kuih muih consumption among millennials. It is timely and socially relevant, contributing to Malaysia's cultural sustainability agenda and supporting tourism and hospitality strategies aligned with cultural preservation and gastronomic identity (Mohamed & Rosli, 2024; Karim et al., 2023; Ramli et al., 2024). Furthermore, this study aligns with the National Heritage Act 2005 and Malaysia's National Culture Policy, which emphasise safeguarding food heritage as part of national identity preservation (Jabatan Warisan Negara, 2023).

By addressing the behavioural and cultural mechanisms influencing traditional food continuity, this work also supports United Nations SDG 11.4 and SDG 12.3, which advocate for sustainable cultural and food systems (UNESCO, 2023; FAO, 2024). Importantly, this study offers hospitality and tourism stakeholders deeper insights into how traditional Malay kuih muih can be repositioned as a cultural asset for gastrotourism, rural economic development, and heritage-based entrepreneurship (Muhammad, 2023; Hassan et al., 2025).

2. LITERATURE REVIEW

This section critically synthesises contemporary scholarship on traditional food heritage and behavioural consumption to ground the study's model. It is organised around: (i) traditional Malay kuih muih as cultural heritage, (ii) foodway determinants (ingredients, cooking methods, equipment, eating decorum), (iii)

perceived knowledge and perceived skills as mediators, and (iv) the Theory of Planned Behaviour (TPB) as the behavioural scaffold linking cultural determinants to consumption among millennials.

2.1 Traditional Malay Kuih Muih as Intangible Cultural Heritage

Traditional Malay kuih muih represents a repertoire of small, sweet–savoury delicacies whose production techniques, ingredient ecologies, and social meanings have been transmitted intergenerationally through domestic and communal practices. Beyond gustatory value, kuih function as cultural signifiers that encode hospitality, reciprocity, and festivity within Malay social life. Recent work in heritage and gastronomy warns that the acceleration of globalised supply chains and convenience-oriented diets is narrowing the everyday spaces where such foods are prepared and shared, thereby weakening cultural continuity (Bowen & Zapata, 2021; Trichopoulou et al., 2022; Kittler et al., 2023; Othman et al., 2024). In Malaysia, empirical studies document declining hands-on preparation among younger cohorts despite positive attitudes toward heritage foods, indicating an intention–behaviour gap with implications for cultural sustainability and gastrotourism potential (Rahman et al., 2021; Ishak et al., 2023; Omar et al., 2024; Muhammad, 2023).

Beyond their cultural symbolism, traditional kuih muih also support socio-economic resilience through cottage industries and small-scale enterprises dominated by rural women and B40 communities, who depend on traditional food entrepreneurship for livelihood (Haron et al., 2023; Zainuddin & Ali, 2024). As heritage-based products, kuih muih have been recognised as potential assets for cultural tourism, experiential gastronomy, and destination branding within Malaysia’s tourism development strategies (Jalis et al., 2022; Ibrahim & Mohd Shariff, 2023). However, scholars warn that uncontrolled commercialisation may dilute authenticity, resulting in modified forms that prioritise cost and efficiency over cultural integrity (Omar et al., 2024; Nor et al., 2022). This reinforces the urgency of understanding consumption patterns among millennials, who will determine whether traditional kuih muih endure as living heritage or become static museum artefacts.

2.2 Ingredients and Authenticity Perception

Ingredients are the most visible carriers of heritage, embedding agro-ecological provenance (e.g., rice, coconut, pandan, palm sugar) and sensory markers that anchor authenticity. Perceptions of ingredient authenticity shape product evaluation, trust, and willingness to consume, particularly when local origin and traditional processing are salient (Hamzah & Othman, 2022; Gingell et al., 2024). Substitutions driven by cost or convenience (e.g., refined sugars or flavouring agents) may erode perceived quality and cultural value, while transparent sourcing and local labels can strengthen attachment and repeat purchase intentions (Ng & Jamaluddin, 2023; Tan et al., 2023; Guerrero et al., 2023). For millennials, ingredient narratives framed around locality, wellness, and sustainability resonate but require knowledge to decode and appreciate (Kamaruzaman et al., 2022; Musa et al., 2024).

Recent studies also highlight that ingredient perception extends beyond sensory acceptance and authenticity to include contemporary value dimensions such as health consciousness and sustainability alignment. Traditional ingredients like coconut milk, palm sugar, and glutinous rice are increasingly re-evaluated in light of nutritional awareness trends, creating both opportunities and tensions in heritage food consumption (Ahmad et al., 2023; Rani et al., 2023). For instance, while gula Melaka is culturally valued, some millennials perceive it as healthier than refined sugar due to its lower processing level and traditional image, despite limited scientific validation (Tan & Tee, 2024). At the same time, provenance-based

marketing such as geographical indication (GI) labelling and farm-to-table sourcing has been shown to increase trust and strengthen cultural attachment to traditional ingredients (Karim et al., 2023; Ramli et al., 2024). Therefore, ingredient appeal is no longer driven solely by tradition, but also by contemporary narratives of naturalness, authenticity, and ethical sourcing, influencing millennials' willingness to consume traditional Malay kuih muih.

2.3 Cooking Methods and Sensory–Symbolic Outcomes

Traditional methods, especially steaming, slow simmering, and woodfire baking—create distinctive textures (e.g., elasticity, crumb) and aromas that constitute the sensory identity of kuih. Method fidelity is also symbolic: adherence to inherited techniques communicates respect for ancestors and craft, enhancing perceived authenticity (Pilcher, 2024; Mahmud et al., 2023). Modern time-saving techniques (e.g., microwaving, instant mixes) reduce barriers to preparation but may attenuate sensory quality and cultural meaning, producing ambivalent evaluations among younger consumers (Sharif et al., 2023; Ghazali & Othman, 2024). Method knowledge therefore acts dually as a technical and cultural resource that supports confident preparation and favourable attitudes.

Beyond sensory and symbolic considerations, cooking methods also shape perceived product quality and trust, influencing long-term consumption behaviour. Studies show that consumers often associate traditional preparation methods with higher product integrity, craftsmanship, and cultural authenticity, which increases emotional attachment and heritage loyalty (Abd Aziz et al., 2023; Yaacob et al., 2024). In contrast, mass production techniques and industrial adaptations risk devaluing traditional kuih by standardising flavours and reducing artisanal characteristics (Hashim & Nor, 2023). In the context of hospitality and tourism, cooking demonstrations that showcase traditional methods have been shown to strengthen visitor engagement and cultural appreciation, providing experiential learning that reinforces heritage value (Lee & Ab Karim, 2024; Hassan et al., 2025). This indicates that traditional methods are not only culinary choices but cultural practices that can drive both preservation and market differentiation.

2.4 Equipment, Craft, and Embodied Skill

Equipment such as the lesung batu (mortar and pestle), batu giling (stone grinder), and kukur kelapa (coconut grater) materialise culinary craft. Embodied tool-use produces textures unattainable through generic blenders, while the tools themselves carry mnemonic value within family kitchens. The gradual replacement of artisanal tools with electric appliances has increased efficiency but can dilute craft identity and reduce opportunities for skill transmission (Raji et al., 2022; Muhammad, 2022; Mahmud et al., 2023). Exposure to traditional equipment through workshops and community kitchens reactivates tacit knowledge and strengthens perceived behavioural control, a key antecedent of intention within TPB (Hussein et al., 2023).

Beyond their functional value, traditional culinary tools also transmit cultural identity and craftsmanship through embodied learning. Scholars argue that tools carry “material memory,” meaning they preserve tacit techniques and sensory cues that cannot be codified in written recipes alone (Polanyi, 2022; Counihan, 2022). For example, mastering pressure control when using the lesung batu or gauging coconut texture with the kukur kelapa requires repeated practice and intergenerational coaching. Such embodied knowledge serves as a bridge between culinary heritage and emotional attachment, reinforcing affective bonds to tradition (Wahab et al., 2023; Yusoff et al., 2024). Furthermore, studies in heritage gastronomy indicate that when individuals engage with traditional tools, they report a heightened sense of

cultural belonging and pride, which increases their intention to preserve traditional practices (Haron et al., 2023; Muhammad, 2023). Consequently, access to and familiarity with heritage tools are essential for sustaining traditional kuih production and motivating continued consumption among younger generations.

2.5 Eating Decorum, Sociality, and Communal Norms

Eating decorum refers to the social scripts of serving, sharing, and gifting kuih across life-cycle rituals and festive calendars. Communal sharing fosters belonging and reciprocity, reinforcing descriptive and injunctive norms that legitimise consumption choices (Rahim et al., 2022; Sproesser et al., 2022; Shafiee et al., 2024). With rising individualised snacking and on-the-go eating, these scripts are less frequently enacted in urban millennial lifestyles, weakening social reinforcement for heritage foods. Curated communal occasions (e.g., kenduri simulations, campus heritage days) can reactivate norms and increase intention to consume by strengthening subjective norms within TPB.

Moreover, eating decorum plays a significant role in reinforcing cultural continuity through ritualised social participation. In the Malay context, kuih consumption is closely tied to values of togetherness, respect for tradition, and intergenerational bonding, as seen during Ramadan bazaar culture, Hari Raya celebrations, and communal feasts (Mahadi et al., 2023; Salleh & Abdullah, 2024). Research shows that when food is embedded in meaningful cultural occasions, individuals develop a stronger emotional connection to traditional foods, which strengthens their long-term consumption habits (Sproesser et al., 2022; Kim et al., 2024). However, shifts toward nuclear family living and individualised eating behaviours among millennials have reduced communal food-sharing experiences, weakening cultural reinforcement mechanisms (Othman et al., 2024; Rani et al., 2023). Therefore, the decline in communal eating traditions presents a cultural risk, making the preservation of eating decorum essential for sustaining traditional food heritage.

2.6 Perceived Knowledge and Perceived Skills as Mediators

Perceived knowledge (knowing ingredients, techniques, and cultural meanings) and perceived skills (ability to execute preparation tasks) are proximal enablers of heritage food engagement. Studies show that knowledge improves attribute comprehension and value signalling, while skills reduce effort expectancy and anxiety in preparation, both elevating attitudes and perceived behavioural control (Zainal & Cheong, 2021; Hassan & Ismail, 2019; Nawawi et al., 2020; Rahman et al., 2021). Among millennials, digital learning (tutorial videos, step-by-step reels) and experiential pedagogies (hands-on classes) effectively lift knowledge-skill profiles, translating into higher consumption frequency (Sharif et al., 2023; Musa et al., 2024). Positioning these as mediators recognises their role in converting cultural determinants (ingredients, methods, equipment, decorum) into enactable behaviour.

Beyond behavioural mechanisms, perceived knowledge and perceived skills also foster cultural confidence and identity continuity. Studies in food heritage education highlight that when individuals understand the historical origins, symbolic meanings, and regional variations of traditional foods, they develop stronger cultural attachment and motivation to practice and preserve them (Lee et al., 2023; Hashim & Ismail, 2024). Similarly, hands-on culinary engagement enhances not only technical ability but also emotional connection, reinforcing learning through sensory memory and cultural pride (Goh & Ariffin, 2024; Mahmud et al., 2023). In the Malaysian context, community-based heritage initiatives and university-led food heritage programmes have demonstrated that increasing knowledge and skills directly influences millennials' intention to consume and promote traditional foods (Muhammad, 2023; Hassan et al., 2025).

Thus, knowledge and skill acquisition serve as cultural empowerment tools that mediate the relationship between traditional foodways and sustained consumption behaviour.

2.7 Theory of Planned Behaviour in Heritage Food Contexts

TPB asserts that intention—and hence behaviour—is a function of attitude (evaluation of outcomes), subjective norms (perceived social pressure), and perceived behavioural control (self-efficacy plus controllability) (Ajzen, 2005). In heritage gastronomy, favourable attitudes derive from authenticity, taste, and identity congruence; subjective norms stem from family, peers, and community rituals; PBC reflects access to ingredients/tools and self-efficacy in preparation (Hussein et al., 2023; Vanany et al., 2024). Integrative studies increasingly incorporate capability constructs (knowledge, skills) to explain how cultural resources are operationalised into intention. Accordingly, this study positions perceived knowledge and perceived skills as mediators that strengthen the pathway from foodways to consumption, thereby enriching TPB with cultural–capability linkages relevant to hospitality and tourism heritage contexts (Omar et al., 2024; Karim et al., 2023).

Beyond its explanatory capacity, TPB has also been extended in contemporary heritage food studies to better capture cultural motives, memory, and identity-based influences on food choices. Scholars contend that traditional food consumption is not purely based on rational cost–benefit evaluation, but is shaped by emotional attachment, cultural obligation, and nostalgic continuity (Basak et al., 2023; Sproesser et al., 2022). These socio-cultural drivers strengthen subjective norms and deepen affective attitudes, dimensions that are not fully addressed by the original TPB model. Consequently, extended TPB frameworks often incorporate variables such as cultural identity, heritage value perception, and ethnogastronomic loyalty to enhance behavioural prediction accuracy in traditional food contexts (Jalis et al., 2022; Rani et al., 2023).

This demonstrates that while TPB is robust, it requires contextual enrichment when applied to heritage food consumption—justifying the integration of perceived knowledge and perceived skills in the present study to capture culturally embedded behavioural mechanisms.

2.8 Hypotheses Development and Conceptual Model

Synthesizing the above, ingredients, cooking methods, equipment, and eating decorum are expected to exert positive direct effects on kuih consumption among millennials due to their authenticity, sensory, craft, and normative influences. Perceived knowledge and perceived skills are theorised to mediate these relationships by (i) amplifying favourable attitudes, (ii) heightening perceived control via confidence in execution, and (iii) reinforcing normative alignment through cultural understanding. The model therefore advances six direct-effect hypotheses (H1–H4 for foodway determinants; H5–H6 for mediators) consistent with behavioural theory and heritage food scholarship, providing a testable framework for PLS-SEM evaluation in the Malaysian context (Henseler et al., 2021; Hair et al., 2022).

2.9 Consumption of Traditional Malay Kuih Muih

Consumption of traditional Malay kuih muih is influenced by a combination of cultural, psychological, and situational factors that shape food choice and eating habits. Although kuih muih remains visible in Malaysian markets, night bazaars, and festive occasions, studies indicate that actual consumption frequency among millennials is declining due to increasing exposure to globalised food options and shifting lifestyle patterns (Sharif et al., 2023; Tan et al., 2023). Consumption decisions are not based solely on sensory preferences but reflect deeper sociocultural meanings connected to nostalgia, identity, and tradition

(Sproesser et al., 2022; Kim et al., 2024). In the context of traditional food continuity, consumption behaviour represents the final behavioural outcome that reflects the success of cultural transmission across generations.

Moreover, consumer motivation to consume traditional Malay kuih muih is shaped by perceived cultural relevance, convenience, affordability, and product accessibility. Previous studies reveal that heritage food consumption increases when individuals perceive traditional foods as part of their cultural identity and daily lifestyle (Rahman et al., 2021; Omar et al., 2024). However, accessibility constraints such as limited availability of fresh, authentic kuih and declining household preparation skills reduce regular consumption (Ng & Jamaluddin, 2023; Musa et al., 2024). This scenario underscores the importance of strengthening cultural education, enhancing culinary skills, and increasing heritage food awareness to encourage sustained consumption among younger generations. Therefore, understanding kuih muih consumption behaviour is essential to inform cultural preservation strategies, hospitality curriculum development, and gastronomic tourism initiatives in Malaysia.

Proposed Conceptual Model Based on the literature review and theoretical foundations discussed, this study proposes a conceptual model that integrates Foodways Theory and the Theory of Planned Behaviour (TPB) to explain the consumption of traditional Malay kuih muih among Malaysian millennials. The model posits that traditional foodways—operationalised through four dimensions: ingredients, cooking methods, cooking equipment, and eating decorum—serve as cultural determinants that influence consumption behaviour. These relationships are hypothesised to be mediated by perceived knowledge and perceived skills, which enhance cultural understanding, confidence in preparation, and behavioural intention, ultimately leading to actual consumption of traditional kuih muih.

The proposed model assumes that cultural practices alone may not automatically translate into consumption behaviour unless individuals possess adequate knowledge of traditional food processes and the skills required to prepare or appreciate these foods. Therefore, perceived knowledge and perceived skills function as cultural capability mechanisms that convert heritage exposure into behavioural outcomes. This model extends TPB by incorporating cultural mediators while grounding the analysis within the sociocultural framework of Foodways Theory, offering a culturally responsive behavioural explanation relevant to heritage food contexts.

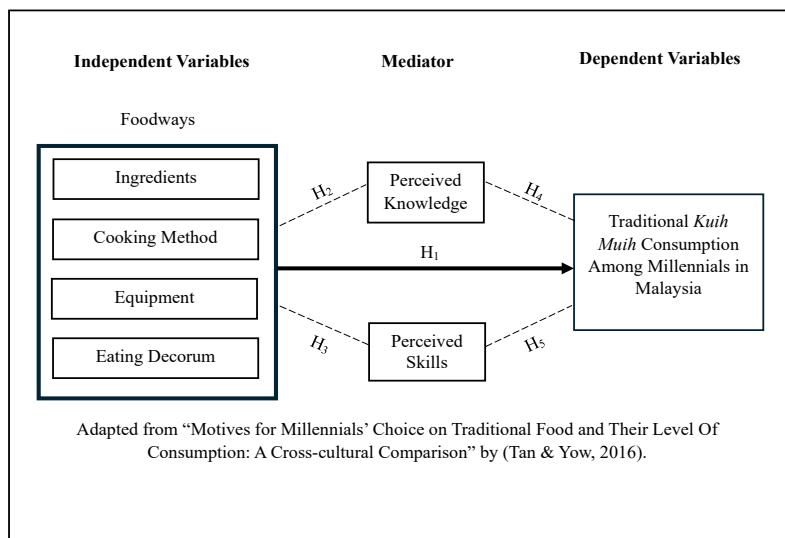


Fig. 1. Theoretical framework | Adapted from Motives for Millennials' Choice on Traditional Food and their Level of Consumption: A Cross-cultural Comparison (Tan & Yow, 2016)

3. METHODOLOGY

This study adopts a quantitative research design to examine the influence of traditional foodways (ingredients, cooking methods, cooking equipment, and eating decorum) on the consumption of traditional Malay kuih muih among millennials in Malaysia, with perceived knowledge and perceived skills as mediating variables. The quantitative approach is appropriate as it enables hypothesis testing and explains the causal relationships between independent and dependent variables while incorporating mediating effects in a structured behavioural model (Creswell & Creswell, 2018).

The target population comprises Malaysian millennials born between 1981 and 1996 who have prior exposure to and experience with traditional Malay kuih muih. Due to the absence of a comprehensive sampling frame, a non-probability purposive sampling technique will be employed to ensure that only respondents who meet the study criteria are selected. In line with Cochran's (1977) sample size estimation for large populations and Hair et al.'s (2022) recommendation for PLS-SEM analysis, a minimum of 385 respondents will be targeted to ensure sufficient statistical power.

Data will be collected using a structured online questionnaire distributed through digital platforms such as WhatsApp, Telegram, Instagram, and Facebook, enabling broad reach and convenience for respondents. The survey instrument consists of eight sections: demographic profile, ingredients, cooking methods, cooking equipment, eating decorum, perceived knowledge, perceived skills, and consumption of traditional Malay kuih muih. All items will be measured using a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The measurement items will be adapted from previous validated studies in traditional food behaviour and consumer research (Sharif et al., 2023; Kamaruzaman et al., 2022; Hussein et al., 2023).

A pilot study involving 30 participants will be conducted to assess the clarity, reliability, and content validity of the questionnaire. Feedback from the pilot test will be used to refine item wording and layout. Construct validity and reliability will be examined using Cronbach's alpha and composite reliability, where values above 0.70 will be considered acceptable (Nunnally & Bernstein, 1994).

Data analysis will be conducted using SmartPLS 4.0 to perform Partial Least Squares Structural Equation Modelling (PLS-SEM), which is suitable for complex models with mediating effects and non-normal data distribution. The analysis involves two stages: assessment of the measurement model (reliability, convergent validity, and discriminant validity) and evaluation of the structural model (path coefficients, effect sizes, and coefficient of determination). Mediation effects will be tested using the bootstrapping method with 5,000 resamples to assess the significance of indirect effects.

Ethical approval for this study has been obtained from the Universiti Teknologi MARA (UiTM) Research Ethics Committee. Participation in the study is voluntary, and informed consent will be obtained from all respondents. Confidentiality and anonymity of participant responses will be strictly maintained, and data collected will be used solely for academic research purposes.

4. CONCLUSION

As a conceptual paper, this study provides a theoretical foundation to understand the behavioural mechanisms underpinning the consumption of traditional Malay kuih muih among millennials in Malaysia. Guided by Foodways Theory and the Theory of Planned Behaviour (TPB), this work proposes that traditional foodway elements—ingredients, cooking methods, cooking equipment and eating decorum— influence consumption behaviour both directly and indirectly through perceived knowledge and perceived skills. By integrating cultural and behavioural perspectives, the proposed framework establishes a novel theoretical linkage that explains how cultural continuity in traditional food practices can be sustained among younger generations.

The paper makes three key contributions. First, it advances the literature on traditional food heritage by positioning consumption of kuih muih within a behavioural framework, extending beyond descriptive cultural studies. Second, it introduces perceived knowledge and perceived skills as mediating constructs, offering a more holistic explanation of how cultural practices translate into behavioural intention and actual consumption. Third, this study contributes to the hospitality and tourism domain by linking traditional foods to experiential gastronomy, cultural tourism, and heritage entrepreneurship, thereby highlighting their potential for socio-economic development.

In practical terms, the proposed model offers implications for policy makers, heritage conservation agencies, educational institutions and local food entrepreneurs. Strengthening traditional food education through community workshops, culinary curriculum integration and intergenerational knowledge programmes may help enhance heritage awareness and skill transmission. The model also provides a basis for empirical testing in future studies to validate and refine the proposed relationships using quantitative data. Overall, this conceptual framework supports Malaysia's food heritage preservation agenda and contributes to the sustainability of traditional Malay kuih muih in contemporary society.

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6. CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest regarding the publication of this paper.

7. AUTHORS' CONTRIBUTIONS

Asma Binti Zaihan: Conceptualisation, methodology, formal analysis, investigation, data curation, visualization, writing—original draft, and project administration; **Rosmaliza Muhammad:** Supervision, validation, writing—review and editing, and funding acquisition; **Mohd Noor Azmin Akbarruddin:** Supervision, validation, and writing—review and editing.

8. DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

The authors used generative artificial intelligence (AI) tools (ChatGPT) to assist in improving language clarity, grammar, and sentence structure during manuscript preparation. AI was not used to generate research data, perform statistical analyses, interpret findings, or formulate the study's conclusions. All content was critically reviewed, revised, and approved by the authors, who take full responsibility for the accuracy and integrity of the manuscript.

9. DATA AVAILABILITY/SUPPLEMENTARY MATERIALS

The datasets generated and analysed during the current study are not publicly available because they contain information provided by research participants but are available from the corresponding author upon reasonable request.

10. ETHICS STATEMENT

This study involved human participants who voluntarily completed a structured questionnaire. Participation was voluntary, informed consent was obtained from all respondents before data collection, and respondents' anonymity and confidentiality were maintained throughout the research process. The study was conducted in accordance with the research ethics guidelines of Universiti Teknologi MARA (UiTM). The Ethics Approval Number is REC/10/2025 (PG/MR/567).

11. ABOUT THE AUTHORS

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