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# Exposing the nuances of traditional Malay *Kuih* in Mersing district, Johor, Malaysia

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## Abstract

Traditional food has long been recognised as an integral aspect of community across the globe. It varies from one community to another and is treasured as an image representation. Traditional Malay *kuih* in Malaysia, however, lacks its definition. The word *kuih* itself is loosely used to group a collection of either sweet desserts or savoury snacks. Acknowledging that the district of Mersing in Johor is an underexposed heritage site in Malaysia, this study disinters the traditional Malay *kuih* nuances as a regional ethnic food. Qualitative method was employed involving 14 *kuih* experts in Mersing to answer the research question “What is the meaning of traditional Malay *kuih* in Mersing?” in which semi-structured, in-depth, and face-to-face interviews were conducted. The interviews were audio-recorded and transcribed verbatim to ensure accurate results. Thematic analysis was used to identify the codes, categories, and themes as the nuances of traditional Malay *kuih* in Mersing. The themes enlist (i) the use of native crops, (ii) the practice of conventional Malay cooking methods, (iii) the enculturation of Malaysia’s east coast traditions, and (iv) the enrichment of sub-ethnic traditions among the Malays. It was found that the analysed nuances of traditional Malay *kuih* reinstated the individuality and uniqueness of the Malay ethnic’s gastronomy in Malaysia. In short, this paper provides an in-depth exploration of the Malay’s unique culture and heritage in Malaysia, thus benefitting the scholars, local tourism board, entrepreneurs, consumers, among others.

**Keywords:** Traditional Malay *kuih*, Traditional food nuances, Traditional food, Heritage food, Mersing, Malaysia’s heritage food

## Introduction

Traditional food has long been the medium of expressing a community’s identity. It merits the representation metaphor enriched through times with memories, traditions and cultural successive between generations [1]. Unfortunately, negligence on its existence is reportedly escalating, leading to its untimely demise [2, 3] in which modernisation brought by the globalisation has always been coined to be the cause. Nevertheless, some regions

are less affected by such a change, for example the underexposed nature of the district of Mersing, Johor, Malaysia. It is where the traditional Malay *kuih* has survived until the present day. Therefore, this study was set to expose the nuances or its characteristics therein.

In general, scholarly articles are still lacking in clarifying what is traditional Malay *kuih*. Most would only include brief sections as sub-parts of the Malay heritage in Malaysia’s food gastronomy. Apparently, “*kuih*” is regarded as the Malay traditional version of desserts [4–9]. While desserts are generally a composition of different components within a serving, *kuih* on the other hand may be served as an item by itself or subjected to the cultural practices. Given that the traditional Malay *kuih* range in multiple interpretations, how can they be

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best defined from a mutual and deeper perspective? The sterility of Mersing from the severe impact of globalisation is anticipated to still practice the Malay traditions in the community's culture and diet. Accordingly, this study was set to undermine the underlying essence of the traditional Malay *kuih* in Mersing, as the persistent existence indicates determination in individuality.

In the context of individuality and the image of the Malays, there are colourful nuances in their ethnicity. The Malay culture in Malaysia has evolved throughout history starting from the discovery of Melaka [10]. It is fair to say that the Sultanate of Melaka, a renowned empire in the Malay Archipelago in the fifteenth century and the multi ethnic status of Malaysia was initiated from the conquer of the Portuguese as early as the fifteenth century, followed by the Dutch in the sixteenth century and the British in the eighteenth century [11]. In the era, Samsudin et al. [12] remarked Mersing as an important setting for important historical events.

Looking back to the twelfth century however, Mersing has already fostered its civilisation. Samsudin et al. [12] posited that the pathways for seafarers from Vietnam, China and Champa denoted Mersing as a more developing area compared to other areas. The citizenship of Mersing, reported by Majlis Daerah Mersing [13], Saad and Radzi [14], and Thukiman [15] as mostly consists of people migrating from other states of the Peninsular Malaysia, namely, Terengganu and Kelantan for marine activities in the district's adjacent sea. Mersing was undoubtedly fond of the sea harvest that imparts a significant source to the local diet. Naturally, the tradition of Malays in Mersing also includes the Terengganu and Kelantan diet in its heritage. Figure 1 shows the map and location of Mersing in Peninsular Malaysia.

### Traditional food as an intangible heritage

Traditional food is perceived as an intangible heritage. Although it is tangibly apparent and serves sensory attributes, the knowledge behind its production includes ideas, recipes, tips, and tricks which sum up an intangible and meaningful process. These stay as abstracts that only through practice can the food be materialised. Nostalgia and culture are embedded within the beforementioned abstracts, connoting the traditions of certain groups of communities [16]. In a nutshell, traditional food will have nuances that are mutual to the community it belongs [17, 18].

The Malay ethnic in Malaysia is known for its collective unity of vast sub-ethnicities. Thus, the Malay traditional food is blessed with unique, special, complex, and dynamic flavours. Since the olden days, the influence and foreign ingredient trade imparted such nuances to the Malay's heritage gastronomy [19, 20]. Azizi and Pawi [21]

connoted that these nuances exist in the local culture and custom where foods are creatively inculcated in the local events such as tossing yellow-tinted rice to the newlywed couples and offering guests handcrafted flowers bearing boiled eggs.

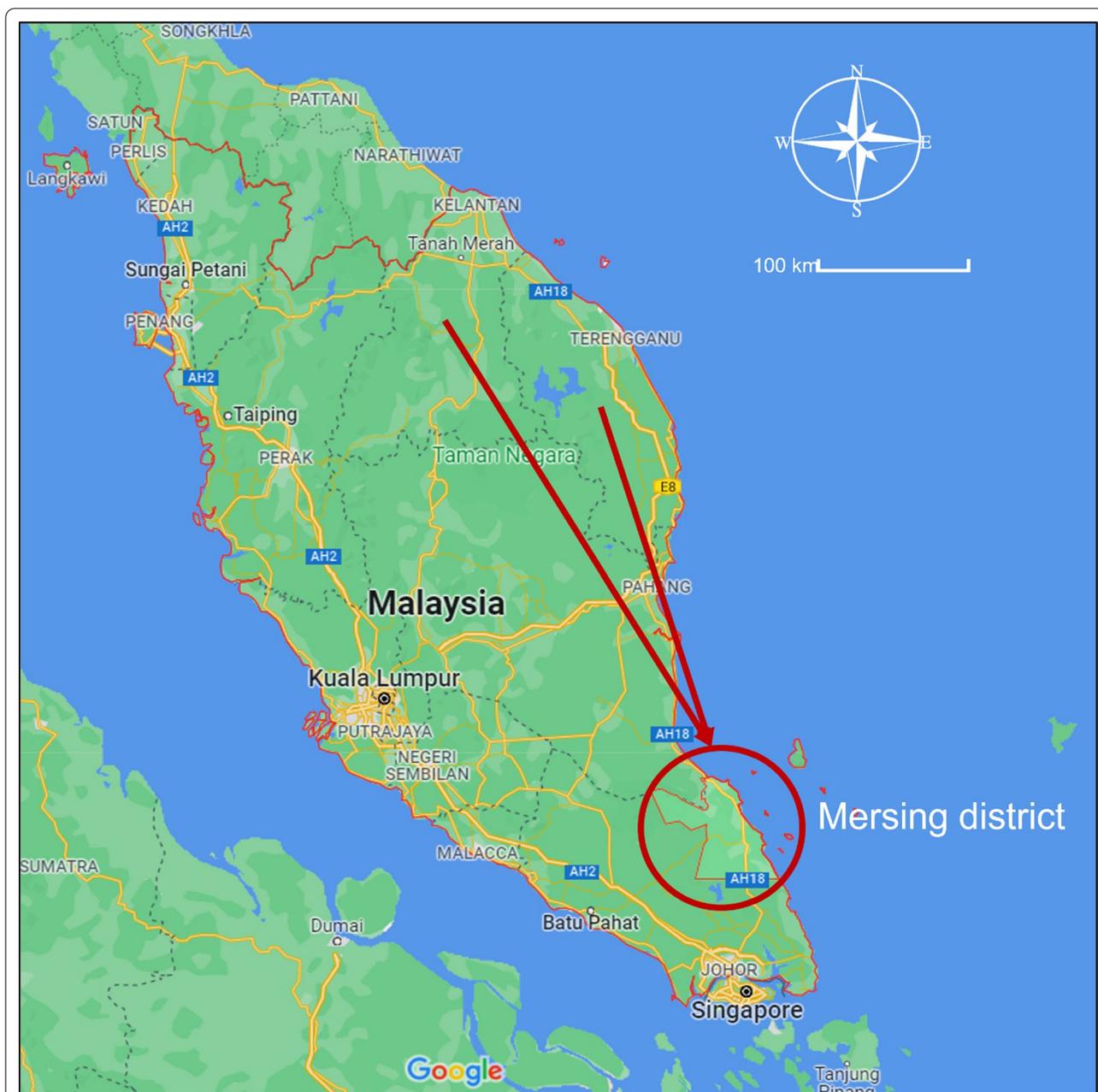
### Traditional Malay *Kuih*

*Kuih* has always been regarded as "the traditional Malay dessert" [22] and can be argued to be at par with the world-renowned French pastries or other European classic desserts. Raji et al. [20] and Hamzah et al. [22] pointed out that the traditional Malay *kuih* is even flexible in its consumption which can be served at any time of the day. This makes *kuih* also known as "Malaysian snack" denoted by its impulsive, versatile consumption throughout the day. Omar and Omar [23] added that there is a multitude of varieties of *kuih* available across Malaysia day in and day out, along the streets to fancy restaurants and hotels. Due to the geography and historical events, other neighbouring countries like Brunei, Singapore and Indonesia may have similarities of the same *kuih* offerings [19].

These usually small-portioned delicacies are believed to be invented by the Malays from the olden days of Malaya (now Malaysia). It can be either soft, semi-solid, solid textured, moist or dry, and sweet or savoury flavours [20, 24]. Despite its Malay ethnic origin, it is also known as a common food to be served at many different occasions across Malaysia, especially during Islamic events like Hari Raya and wedding [25]. This owes to the fact that more than half of Malaysians are of Malay Muslims. Traditional Malay *kuih* is also usually associated with its production in rural domestics, noting its intricacy and tradition-laden aspects in the making. Muhammad et al. [16] and Zahari et al. [26] added that rural area is where the *kuih* ingredients are vastly cultivated.

Furthermore, making the traditional Malay *kuih* includes conventional methods of dry and moist-heat cooking methods. Steaming and boiling are the most common moist-heat methods used in the making of *kuih* apart from frying, baking and grilling [27]. Some *kuih* are even named based on their production methods and some would have lyrical names, as the Malays are known for their proficiency or aptitude in poetry. Besides, the shape of certain *kuih* is also taken from its name [28, 29]. In short, Ahmad [30] regarded traditional Malay *kuih* as a brand of heritage encapsulating the Malays' art and culture.

Speaking of art and culture, the Malays are known for their relationship with nature. In the ingredient list, the Malays have developed distinct ingredient selection for the traditional Malay *kuih* [31]. Karim and Halim [32] noted that the local agricultural products construe the



**Fig. 1** Map of Peninsular Malaysia and the migration of Kelantanese and Terengganuans into Mersing district, Johor

existence of *kuih* since the olden days. Starch is the oldest ingredient used as the main component in *kuih* for example through the use of various types of rice and its products [7], glutinous rice and its products [16], tubers, like tapioca [33] and many more. Meanwhile, other ingredients are used to provide natural aroma and colours. Pandan leaf (*Pandanus amaryllifolius*) for instance is famous for its green hue and sweet fragrance in many Malay sweet and savoury dishes including *kuih*

[34–37]. Kamaruzaman et al. [38] noted another locally known pandan leaf which is used to attain a deeper green hue in the traditional Malay *kuih* called pandan *serani* (*dracaena angustifolia*). Although it is not botanically the same plant species as the regular pandan, the use of natural green food colouring is of the Malays’ expertise. Alongside pandan, the use of coconut completes the overall flavour of traditional Malay *kuih*. The creaminess and fragrant flavour of coconut imparts the



appropriate data from the actual phenomenon. Hence, the eligibility of the informants for this study was based on (1) experience in producing traditional Malay *kuih* of at least 10 years, (2) acknowledgement of the locals to be the region's expert in traditional Malay *kuih*, and (3) in good health and willing to verbally share personal experience.

In the study, semi-structured face-to-face interviews were conducted to excerpt data from the informants aided by an interview protocol developed from the literature review and traditional food product concept (TFPC) by Guerrero et al. [43]. Interviews were audio-recorded and transcribed verbatim for further analysis. Thematic analysis was conducted to identify codes in the narratives of all informants, which were then grouped into categories and ultimately into themes to answer to the research question. Four themes were found in this study, namely, (1) the use of native crops, (2) the practice of conventional Malay cooking methods, (3) the enculturation of the east coast traditions, and (4) tradition enrichment of the Malay's sub-ethnicities.

### Analysis and findings

A total of 14 informants were involved in this study and each with different levels of experience in a variety of the traditional Malay *kuih*. Table 1 enlists the informants for this study. Eight of the informants are of 10 to 20 years of experience range, two within 21 to 30 years of experience range, two within 31 to 40 years of experience range, one within 41 to 50 years of experience range, and one within 51 to 60 years of experience range. The informants' current jobs also range from full-time *kuih* producers to part-time *kuih* producers. In further reports,

the informants are given pseudonyms to protect their anonymity.

There are four themes identified from the analysis and these themes are mutual to Mersing as they represent the nuances of the traditional Malay *kuih*. Table 2 presents the discussions of each theme:

#### The use of native crops

The utilisation of local resources is one of the nuances of traditional Malay *kuih* in Mersing. The ease to grow some ingredients domestically for instance pandan leaf leads to its inclusion in the ingredient list of traditional Malay *kuih* in Mersing. Two informants deduced:

*...I do have pandan leaves... pandan leaves, banana leaves, I have both at the back of the house... easy! Everything's readily available! It's just that certain ingredients I might run into some troubles to obtain like the roti jala. You know the flour, eggs, the colouring and whatnot... [Expert 9]*

*... (fresh ingredients) they are there. We can just buy them... usually there are banana plants at home. If the supply isn't enough, we just buy... pandan leaves and banana leaves are there at home. If both are not enough (for the kuih making), we just buy. [Expert 1]*

Besides pandan, banana plant, specifically its leaf, is also one of the most used ingredients in *kuih*. Expert 5 admitted that she always has ready stock of banana leaves as she plants banana trees around her house:

*...my banana trees are here (back of the house) ... here! This might look like nothing, but I do use them almost every day... it's like if you have to buy elsewhere then you just have to... and if you have them*

**Table 1** Informant profile according to criteria set

| Pseudonyms | Notes                                    | Years of Experience | Current Occupation                 |
|------------|--|---------------------|------------------------------------|
| Expert 1   | Expert of <i>kuih pepudak</i>            | 11                  | Restaurant Waitress                |
| Expert 2   | Expert of various <i>kuih</i>            | 30                  | Full time <i>kuih</i> entrepreneur |
| Expert 3   | Expert of various <i>kuih</i>            | 40                  | Restaurateur                       |
| Expert 4   | Expert of <i>kuih jemput pisang</i>      | 21                  | Cleaner                            |
| Expert 5   | Expert of <i>kuih pulut panggang</i>     | 52                  | Housewife/Retiree                  |
| Expert 6   | Expert of <i>kuih Melayu pulau</i>       | 12                  | Full time <i>kuih</i> entrepreneur |
| Expert 7   | Expert of <i>kuih asam gumpal</i>        | 15                  | Full time <i>kuih</i> entrepreneur |
| Expert 8   | Expert of various <i>kuih talam</i>      | 34                  | Caterer                            |
| Expert 9   | Expert of <i>kuih roti jala</i>          | 44                  | Housewife/Retiree                  |
| Expert 10  | Expert of various <i>kuih</i>            | 14                  | Full time <i>kuih</i> entrepreneur |
| Expert 11  | Expert of <i>satar</i>                   | 15                  | School teacher                     |
| Expert 12  | Expert of various <i>kuih</i>            | 14                  | Full time <i>kuih</i> entrepreneur |
| Expert 13  | Expert of <i>kuih bahulu bakar sabut</i> | 14                  | Full time <i>kuih</i> entrepreneur |
| Expert 14  | Expert of <i>kuih bakar pandan</i>       | 12                  | Full time <i>kuih</i> entrepreneur |

**Table 2** Themes and respective categories

| Themes   | Categories  |
|--|---|
| The use of native crops                          | i. <i>Pandan</i> leaves from domestic landscape<br>ii. Maximum utilization of banana plants<br>iii. Maximum utilization of coconut trees<br>iv. Fish from adjacent sea  |
| Practice of conventional Malay cooking methods   | i. Common dry-heat cooking methods<br>ii. Common moist-heat cooking methods<br>iii. Unique techniques in preparations   |
| Enculturation of east coast traditions           | i. Terengganu descent traditions<br>ii. Kelantan descent traditions   |
| Tradition enrichments of Malay's sub-ethnicities | i. Unique range of <i>Melayu pulau</i> traditional <i>kuih</i><br>ii. Descents of Banjarese lineage and traditions<br>iii Descents of Javanese lineage and traditions<br>iv Buginese diversity of traditional <i>kuih</i> |

*at home, just harvest as needed. One plot here and then to the other plot. They continue to grow. The first plot previously harvested may sprout out new leaves while the latest one is ready to be harvested. [Expert 5]*

While banana leaves are used for the packaging in example, as a mould or wrapper for traditional Malay *kuih*, the banana fruit can also be used as an ingredient. Most informants agreed on this, for instance Expert 7 highlighted:

*...that kuih... it's like lepat ubi, lepat pisang... no! It's nagasari... there is a piece of banana inside... a whole piece of it inside covered with the flour batter, in banana leaf parcel. [Expert 7]*

Full utilisation of a crop is synonymous with the Malays, as evidenced by the usage of coconut trees in the making of traditional Malay *kuih*. The use of coconut cream and milk, as well as its grated flesh for certain variety of *kuih* are common as ingredients in the *kuih* mixture. Furthermore, the husks of the coconut fruits were also used as heating components to cook *kuih*. Two informants explained:

*...it's like this... the kuih here mostly use coconut. For example, asam gumpal. The gravy is from coconut milk... that is coconut! Here, we use coconut in the mixture, if for kaswi, we coat it with grated coconut, apam beras coated also... apam bakar coated also. Others... like the apam kuah, the gravy would still be using coconut milk. Most uses coconut milk... yes! Main ingredient. Should we run out of coconut, nothing could be made! True! This (asam gumpal) could be served without its gravy! I do have my own coconut trees at the back of this house. If there are not enough coconuts, I will purchase elsewhere. I grate my own coconuts so that they are fresh prior*

*of using. The one we bought in the market... even the smell is off! The machine itself doubtfully ever cleaned! That's why I said earlier that if I make massive batches, the quality is at stake! [Expert 12]*  
*...but when we talk about baking (kuih bakar) I have to find coconut husk... I need to find coconut from those who have coconut trees. I'll ask around if they would sell or supply for later. [Expert 6]*

The position of Mersing being a coastal region is resourceful of the marine harvests. As one of the main marine harvest areas in the Peninsular Malaysia, the main jetty at Endau, Mersing has been the centre where the marine harvests have been loaded for the locals. It is possible to say that the diets of the locals are based on the marine resources too. Some traditional Malay *kuih* in Mersing use fish as ingredients for the savoury varieties. Two informants said:

*...Endau is actually the centre of seafood, like fish for example. Even keropok losong in Terengganu, should you have an opportunity to ask there, mostly they get their fish supply from Endau. Yes! Mostly from Endau's deep sea! I personally asked about this once (in Terengganu) and they replied they got the fish from Endau, the same story when I asked the fish resources in Johor Bahru. They may have their own waters but mostly people would go to the deep sea situated at Endau. [Expert 11]*  
*(Fish for the kuih paung filling) ... fish here is easy! I mean, for those in the market, there could be some mark up in price...but if we know somebody whose husbands go fishing in the sea, we could get the fish supply for cheaper price. For example, if selayang fish worth four ringgits per kilogram, it could have cost for nine ringgits per kilogram in the market... it could be up to 11 to 12 ringgits. Now that I sourced from friends, I got it cheaper... but if in any case*

*they don't have it, I might need to get the fish from the market either way. But when there are plenty of catches, one kilogram could fall for only seven to eight ringgits. [Expert 4]*

As with other communities' traditional food, nature has always been acknowledged to be the first source of sustenance. Similarly to the Malays, the inclusion of native crops in their diet is prevalent [44]. For example, pandan and coconut, both are synonymous in the traditional Malay *kuih* ingredient arsenal [38]. Interestingly, fish, in general, will not usually be associated with *kuih* but is certainly a distinctive feature for Mersing. Concerning the migration history of people from Terengganu and Kelantan to Mersing for the sea activities, the enculturation of both states' traditions amalgamated within Mersing. On top of that, Saad and Radzi [14] also indicated that Mersing had always been a resourceful fishing area in history. These define the character of the traditional Malay *kuih* available in Mersing.

#### The practice of common Malay cooking methods

It is found that most *kuih* in Mersing are cooked conventionally. Dry-heat cooking methods are practised including deep-frying and baking. Expert 4 for instance, indicated that deep-frying is the easiest method in making traditional Malay *kuih*, for instance, *kuih* *gegetas*.

*...the easiest (cooking method)? Of course, the method for gegetas... the easiest would be gegetas. It is deep fried, of course it is easy! Once the dough mixed... shaped, deep-fry... and then sugar coating! [Expert 4]*

Next, fried pau is also a deep-fried dish. Figure 3 shows how the pau is deep fried until golden brown in palm oil. The use of palm oil depicts the local resource consumption from the palm trees, although it is a norm to purchase commercially sold frying oil, instead of preparing it domestically.



**Fig. 3** The process of deep-frying *kuih* pau goreng as a final step before serving

Another example of cooking method is baking, as stated by Expert 14, who baked her *kuih bakar* pandan.

*...the cooking method that I use (for kuih bakar pandan) is baking... using these coconut husks... we burn them as the source for fire cooking. Kuih deram, we deep fried... I deep fry kuih deram in the house, I don't do it here (coconut husk coal cooking set up). I can't because of the smokes... the ashes... [Expert 14]*

From participant observation, it is evident that the traditional cooking method is practised for *kuih bahulu bakar* which is also baked. However, the method is slightly different from the usual Western style baking process. The word “*bakar*” is literally translated as “bake”. As illustrated in Fig. 4, the mould and the lid are heated using fire generated by coconut husk and the batter of *kuih bahulu* is poured into the mould before being covered and cooked through.

Apart from the dry-heat cooking methods, the moist-heat cooking method is also practiced in the making of traditional Malay *kuih* in Mersing. In fact, Expert 1 mentioned that boiling and steaming are among the options of cooking methods for a certain variety of *kuih*:

*I make pepudak with coconut milk, sugar, salt... but few people make it in different way... they mix the mixture (on heat source) until it thickened. Then only they wrap it in banana leaf. Yeah! There are two ways, as far as I know... not that I know if there are any other ways. The liquid batter is the traditional way though (and it should be) boiled. Some people would steam but that is the thickened-batter way! After wrapping, then they'll steam. [Expert 1]*



**Fig. 4** The process of baking *kuih bahulu* using the traditional method in Mersing

Similarly, Expert 12 highlighted another *kuih* cooked through steaming or boiling:

*...I boil my kuih. Like this (kuih asam gumpal), it is boiled. There are two methods; it can be steamed, it can be boiled. If it is steamed it will get flattened and not round... when the steam rises, the kuih flattens. If it is boiled, when the water is running boil, I put the kuih in. It'll be suspended and keeps its round shape. Meaning that the roundness form isn't changing... [Expert 12]*

The cooking process of *kuih asam gumpal* can be interchangeable between boiling and steaming, however, the boiling method is more favoured. Figure 5 is a visual taken from the participants' observation which took place in an informant's *kuih* workshop in Endau, Mersing. The *kuih asam gumpal* is spherically shaped of gelatinised sago pearls enrobing a portion of mung bean paste. The bubbles within the running boil water keep the spheres suspended in the water to ensure a spherical shape throughout the cooking process.

The preparation of traditional Malay *kuih* involves a special procedure. For example, Expert 1 stated that before *kuih pepudak* is made, the mould made using banana leaves must be cut in a standardised size:

*...not everybody is able to make it... it's... it's... the problem with pepudak is actually on the leaves (mould). Try to do it, you'll fail... Yes! The ingredient is rice flour, but the batter is runny... so when the leaves are wrongly formed, it'll leak... we pour it in, and it'll leak out. Because a lot have asked for the recipe. I gave them but I even showed them the method... forming the consistent size of the leaves but still... they can't make it... lots have tried it. [Expert 1]*

Another method of making traditional Malay *kuih* may even take a step back to the pre-preparation of the



**Fig. 5** Cooking process of *kuih asam gumpal* in gentle boiling water

ingredients to be used. Expert 2 highlighted the process of preconditioning of ingredients to make *kuih apam beras*:

*...we make it (kuih apam beras) using exactly the ragi (a type of local produced yeast) and also rice, which have rice that is cooked with ragi... it is different! Actually, that is the way for delicious (kuih apam beras)! The fragrant! The old way! And apam beras nowadays are not made through the old way because they say it's tedious! Got to wait for the rice to ferment, it can take two days! [Expert 2]*

The common cooking methods of the Malays are mostly simple but there are specific prerequisites that may take place. These unique and intricate steps are the precursor of old customs, culture, traditions and values [22, 45] within the making of traditional Malay *kuih* in Mersing.

#### The enculturation of east coast traditions

Enculturation of varying traditions happened in Mersing through history. The *kuih* experts in Mersing are mostly of Terengganu descents. Expert 12 elucidated her family lineage by saying:

*...we are now a lot of mix-race... more of the Terengganu... even the kuih, a lot are originated from the Terengganu. Talking about Endau, lots of the Terengganu people migrated here... so the generations that we are now... you know, my father is Terengganuan, my mother is Terengganuan... migrated here. So, we, now... we became the citizens of Johor. Around the cape (of Mersing) there are lots of Terengganuan, Tenglu, there are Banjarese, Buginese also... [Expert 12]*

Suggestively, Expert 1 also mentioned that the migrants from Terengganu might have settled in specific areas in Mersing:

*...at the cape area there is the place of Terengganuans... at the cape, nearing to the bridge. It is definitely the place where former Terengganuans migrated. Here (Mersing city), we have the (Mersing) Malays, we have the Terengganuans. [Expert 1]*

As Terengganu state is the adjacent of Kelantan in the east coast of Peninsular Malaysia, it is evident that there are the settlements of Kelantanese descents in Mersing. Expert 3 mentioned:

*...it's like this... the kuih of Mersing's, Endau's especially... the people are mostly from Kuala Terengganu and Kelantan, mostly from Pahang. So, they brought the culture with their kuih here. If we look*

at the variety of kuih in Mersing, they are similar to the Terengganu, similar to Pahang, similar to Kelantan... it's just that they (Mersing locals) do not eat, can't accept those (kuih) that is too sweet (referencing to east coast taste palate). They changed it... like the pulut serunding (glutinous rice with meat floss), pulut ikan (fish), they changed it so not as sweet but still tasty. [Expert 3]

The statement above was supported by Expert 9, indicating that there are Kelantanese traditional *kuih* available around Mersing:

Okay! Mersing... since I have been living in Mersing long enough... I came here when I was 23 and now I'm 62 years old, being the child of Mersing to say the least. Okay! Firstly, when I came here... there were a lot of kuih originated from Kelantan, Terengganu. Have you tried asam gumpal? It's very delicious, people from Endau make it... so if I were to order, I'd order from Endau. Here, there are youngsters that make it, so I ordered it online. It was not the same (quality wise). When it's not the same, no more ordering but (the best) is from people of Endau! [Expert 9]

The fact that these informants are descendants of Terengganu and Kelantan immigrants has resulted in significant enculturation of their customs in Mersing. It is possible to say that the existence of Mersing's traditional Malay *kuih*, which is remotely comparable to the ranges offered in Terengganu and Kelantan is highly supported by historical events. Thukiman [15] confirmed the event and consequences which are also deemed to be one of the reasons the author notes Johor (including Mersing) as a gateway to Malay culture.

#### The tradition enrichments of Malay's sub-ethnicities

Aside from interstate enculturation, the extent of nuances to traditional Malay *kuih* of Mersing encapsulate Malay's sub-ethnicity traditions. Expert 6 admitted that she is a descendent from the Melayu Pulau (the Malays residing in islands) lineage:

...based on the origin of family, it was from the island. My parents are from there... it has been so long (leaving pulau). It was of course so long ago, because my father worked in Johor Bahru, so ever since his transfer there. It was long ago... even my childhood was not spent on the island. [Expert 6]

As geographical differences confined diets of its communities, Expert 3 conferred that the people from the islands of Mersing have been preserving their customary of traditional *kuih* in the offerings:

Moreover, there are kuih of... you know, there are people from the islands, right? So, there are traditional kuih that originated from the islands. They are unique especially the one that is baked. Manually kneaded and all... and baked with the coconut husk... they call it roti naik... it's hard to get a hold of those... only true Melayu Pulau can make it. [Expert 3]

Another sub-ethnic within the Malay group, Banjarese traditions are apparent in Mersing as Expert 9 mentioned the availability of Banjarese traditional *kuih*, ... there are many more types of kuih (in Mersing) like *kuih pepudak*. That is Banjarese *kuih*.

Accordingly, Expert 1 highlighted that there are settlements of various sub-ethnicities with Banjarese concentration of the Banjarese in Tenglu, Mersing:

...here (Mersing), there are a lot of Banjarese, Malays, and Terengganuans. There in Tenglu, lots of Banjarese there. For me, kuih can be specific to different states... to each their own kuih. like Johor for example, say *kuih pepudak*. Banjarese would know this *kuih* considering as their own *kuih*. [Expert 9]

Expert 6 also mentioned that there are Javanese descents in Mersing. Being one of the descendants, she received exposure of Javanese traditional *kuih* from her mother who migrated from Indonesia to Mersing:

Yes! I am Malay but my mother is a Javanese. My mother came from Indonesia... Jemaja island. I've learned a lot from her. *Kuih* is one of them. [Expert 6]

In a similar scenario, Expert 9 also revealed that she is of Javanese descent:

I'm Malay! But I am also a Javanese descent! A mix of Malay and Javanese. Javanese is from my mother's side because my grandfather was also coming from there... from Indonesia... yes! Across... but my mother was really good at making those Javanese *kuih*... [Expert 9]

Apart from that, Buginese traditional *kuih* is also evident in Mersing. Expert 10 shared the similarity of ingredient usage between the main Malay and the Buginese traditions:

...Buginese *kuih*, traditional *kuih*... is like, *kuih jongkong*. Using rice flour and then there'll be coconut milk, inside (of the *kuih*) there'll be jaggery powder. That is the *kuih* of the Buginese... *kuih jongkong*. [Expert 10]

Another example of Buginese traditional *kuih* was highlighted by Expert 12. It is rather unique in its attributes to be a side dish for heavier meals:

*...traditional kuih, it is subjective to the ethnicities... Banjarese, Malay, Javanese... there are lots of Buginese kuih, like the popular one, burasak. It's called burasak... it is eaten with asam pedas cooked in bamboo. That is a Buginese tradition! [Expert 12]*

Malaysia is well-known for its multi-ethnicity status, housing many ethnicities under its nation. While differing ethnics confer differing gastronomy experiences, the Malays themselves are vast and varied with sub-ethnicities [46]. The Melayu Pulau of Mersing are generally of Malay descents, their settlement on those islands off the coast of Mersing has considerably influenced the diet of mostly marine catches, which impact the traditional Malay *kuih* ingredients. This is again supported by Miele and Murdoch [41] that the settlement of people in civilisation closely linked to their sustenance sources. This is similar to the rest of the Malay sub-ethnicities where each diet is based on natural resources.

### Discussion, implications, and conclusion

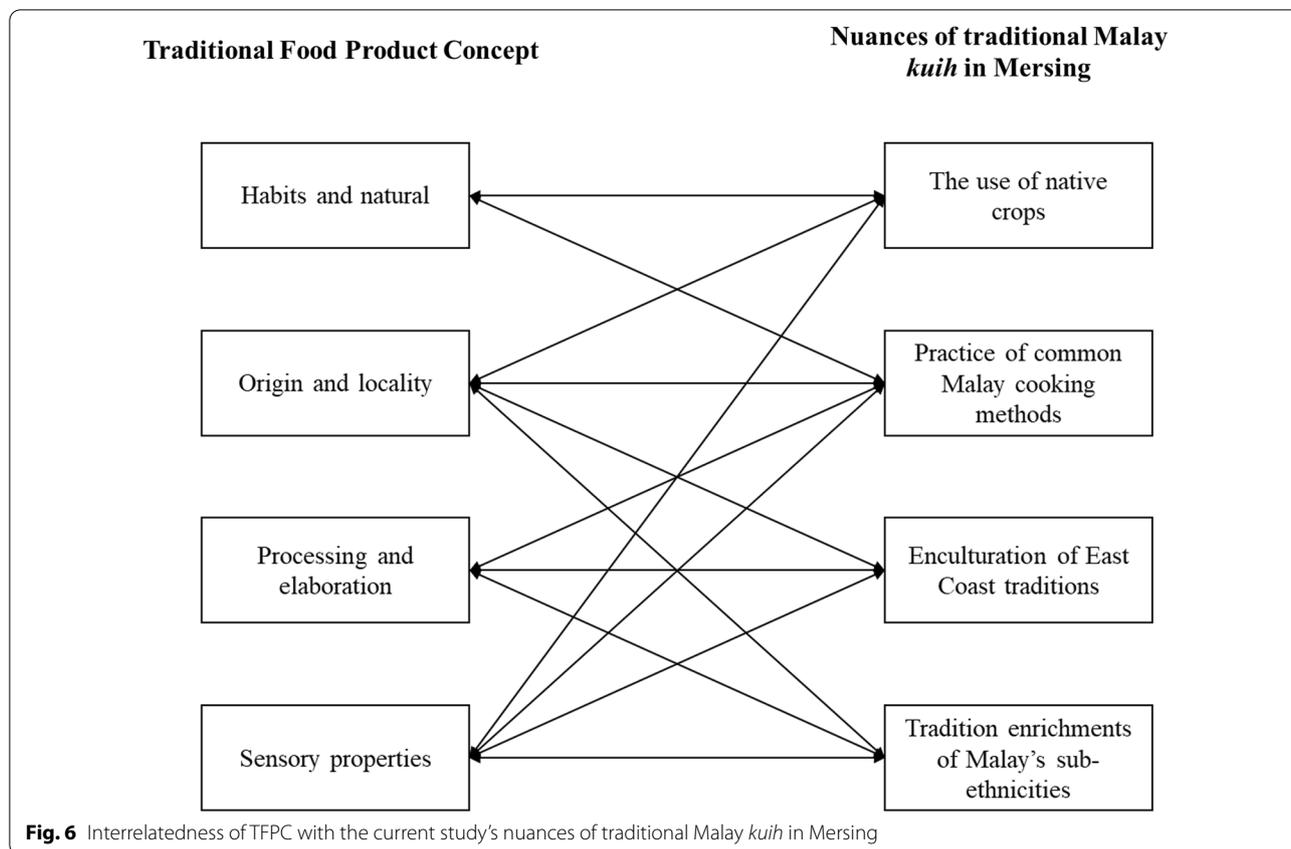
This recent study revealed the nuances embedded in the traditional Malay *kuih* in the Mersing district, Johor. The findings clearly explain the Malay's profound connection to nature and serves as the foundation for the traditional Malay *kuih*. Aside from the local ingredients, the method of cooking is still the traditional and customary Malay cooking method. The historic event of a migration of people from Terengganu and Kelantan enculturated Mersing with various offerings of traditional Malay *kuih* reminiscent of most of the same delicacies from both states, in terms of diversity and product breadth. Furthermore, the Malay's sub-ethnicity variance in Mersing expanded the traditional Malay *kuih* that exists in Mersing.

It is believed that this study would contribute to the academia by providing an in-depth view of traditional Malay *kuih* through the traditional food product concept. As studies in traditional Malay *kuih* are relatively lacking in the scholarly depository, this study added another documentation to the collection. According to the traditional food product concept by Guerrero et al. (43), there are four dimensions including (i) habits and natural, (ii) origin and locality, (iii) processing and elaboration and (iv) sensory properties. Although the themes extracted from this recent study are not complying with the traditional food product concept mentioned, they are interrelated between the dimensions as depicted in Fig. 6.

The dimension of habit and nature is the close resemblance of the theme of the use of native crops and the practice of conventional Malay cooking methods. The

production of the traditional Malay *kuih* incorporated mostly natural and native ingredients from the domestic or region which implies what is natural to the informants. The easy access and availability of fresh ingredients within the house compound avoid the utilisation of highly processed ingredients which confer. The common Malay cooking method also implies the habitual practices that the traditional Malay *kuih* being made. Given that the traditional Malay *kuih* itself is consumed as a normal diet by the Mersing citizens, the production was found to normalise the common cooking methods. The second dimension, origin and locality reflect similarities across all of the study's themes. This can be seen as evident as this recent study explored the meanings of traditional Malay *kuih* in Mersing. The specific scope of the study setting entails the mutual origin of the delicacies that belong to the Mersing. The third dimension is processing and elaboration, which can be directly related to the practice of common Malay cooking methods. The simple and traditional methods of cooking that the informants have been practising characterised the traditional aspect of the Malay *kuih* in Mersing. This is further enriched by the enculturation of Kelantanese and Terangganuan Malays and the sub-ethnicities which inculcate a mix of different techniques across the Malay sub-ethnicities. The last dimension is the sensory attributes reflected in all themes of the recent study. The distinct traditional tastes and flavours of *kuih* Mersing are well defined by the nuances of ingredients selection, methods of cooking, and the mix of cultures of the Malays and its sub-ethnicities.

Practically, the findings of this study are significant to stakeholders of the Malay heritage including the state government, experts, and consumers, in their initial effort of getting to know the heritage better. The documentation from this study is hoped to restore the acknowledgement and respect of the traditions thus, maintaining their existence in the contemporary diet. This is a valuable finding for the experts or any entrepreneurs to secure their product knowledge basis with regards to the traditional Malay *kuih*. Ideally, the empirical definition of the Mersing's traditional Malay *kuih* can further define the production of such delicacies within the nuances that also mutually define Mersing. Following that, the state government may use the definition to promote tourism activities by putting the limelight on Mersing's traditional gastronomy and its traditional values. According to *kuih* experts and producers, the determination within product definition could help further enhance the strategy in production and brand identity regarding Mersing's identity to traditional Malay *kuih*. Suggestively, the consumers may benefit from distinct Mersing's product offerings that do not delineate from its



identity, thus fostering a continuation of the traditional Malay *kuih* demand and reproduction.

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**Author contributions**

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**Availability of data and materials**

All data and materials are used in accordance with the guideline of the Journal of Ethnic Foods as listed in the reference section. Images are personally contributed by the authors.

**Declarations**

**Ethics approval and consent to participate**

The ethical clearance for this research has been approved by the Ethic Committee for Research Involving Human Subject (JKEUPM) on 4 September 2020 with the reference number: UPM/TNCPI/RMC/JKEUPM/1.4.18.2 (JKEUPM).

**Consent for publication**

Not applicable.

**Competing interests**

The authors declare that there are no conflicts of interest.

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