



# Food Enhancers Usage in Home Food Preparation among the Young Working Women in Malaysia: A Qualitative Study

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This paper explores the usage of food enhancers in food preparation among young working women in Malaysia. The study informants were drafted using the purposive snowball strategy to participate in a semi-structured interview in this qualitative study. The interview data were recorded and analysed according to the research aims. The majority of the informants claimed that they used food enhancers to enhance the flavour and taste while reducing cooking time and minimising preparation processes. In addition, as they understood the adverse effect of food enhancers, the informants avoid using them and will only opt for them whenever their cooking time is scarce. The study findings contribute to a growing literature on the consumption of food enhancers among young women, a critical aspect of the modern Asian family structures. Its findings reinforce the need for public awareness to promote controlled consumption of food enhancers and additives, especially among modern households.

## 1. Introduction

In today's era, family life is complicated and more demanding than before. As the cost of living in urban and rural areas is drastically increasing (Handbury, 2019), family expenditure is also affected, whereby family expenses have skyrocketed compared to before (Esposito et al., 2017). These changes indicate that a single income or man as a family's breadwinner is no longer appropriate (Keller et al., 2019). The women's involvement in the workforce is apparent to lessen the changes in family structures and the household composition (Minz & Munda, 2020). Over the last half-century, the percentage of working women has increased enormously and is currently becoming

an important support system for household income (Halim et al., 2016; Yavorsky et al., 2019). Their specific involvement in supporting the household's socio-economic influences their house chores, especially in food preparation behaviours (Méjean et al., 2017).

The working women's role as the primary provider of family food, a critical aspect of the Asian family structures, has changed in Malaysia, a newly industrialised nation known for its highly successful economic-development policies (Jamil et al., 2019). As a consequence, the amount of time spent on home food preparation have also been declining. Due to time

constraints and ready prepared or convenient food, most opt to use instant foods and food enhancers for home food preparations (Lakshmi et al., 2019; Méjean et al., 2017; Taillie, 2018). One supposition is that working women are more interested in time-saving food products, leading to increased consumption of food enhancers.

According to Abdulmumeen et al. (2012), food enhancers are categorised under the food additive group. Food enhancers include natural sources and synthetic compounds, where the natural food enhancer has been commonly used for many years (Deshpande & Deshpande, 2017; Mirza et al., 2017). The International Food Information Council (IFIC) stated that food enhancers improve the nutritional value of foods and make them more appealing to the consumer by increasing the texture, taste, colour and consistency of the foods (Cody et al., 2012). Food enhancers help increase the shelf life of the foods and build flavour (Inetianbor et al., 2015; Neelam & Mishra, 2018) due to the synergistic effect on food preparation (Carocho et al., 2014). The most popular food enhancer used worldwide is monosodium glutamate (MSG) which introduced the taste of umami to the food industry (Meadows, 2003). Another food enhancer typical for food preparation is bouillon cube such as chicken, beef, or bacon stocks (Swarts, 2012).

In Malaysia, food enhancers are undoubtedly attractive and a popular option that aid in food preparation and production, specifically for marinating, seasoning, and flavouring. Many local and international food manufacturers successfully penetrated the world market, including Malaysia, by producing various food enhancers (Akora, 2019). These food enhancers are readily available in multiple marketplaces, including small grocery shops in rural areas. Although food enhancers are proven to enrich the food products' flavour and lessen the cooking time processes, many researchers argue the adverse effect on the human body system (Niaz et al., 2018). Based on the works of literature, many published studies focus on scientific approaches such as the effect of food enhancers on the human body (Abdul-Hamid et al., 2017; Husarova & Ostatnikova, 2013; Mustafa et al., 2017; Obayashi & Nagamura, 2016) however, with less attention on the user perspectives.

Therefore, qualitative research into the usage of food

enhancers in food preparation is likely to be insightful by exploring the nuances of young working women's perceptions and behaviour. This study's main objective is to understand whether food enhancers are becoming a norm in food preparation among young working women in Malaysia. Further, this study aims to understand the phenomena and fill the study gaps by identifying the underlying reasons for food enhancer use. This study also explores the types of food enhancers commonly used and how their usage becomes a norm among young working women in Malaysia.

### 1.1 Women, food preparation and food enhancers

Previously, women were the central figure in caring for and preparing food for their families (Allen & Sachs, 2012; Sharif et al., 2014; Tilly & Scott, 2016). However, women's participation in the job market changed how home food preparation was handled. Furthermore, the younger generation enjoys a socialised environment, easy-going behaviour and is much more educated than other generations (Black, 2010; Jerome et al., 2014; Miller et al., 2013; Sharif et al., 2021). Nonetheless, despite women's active involvement in the workforce, they still play a significant role in managing the household (Ishak et al., 2019; Sharif et al., 2014). Similarly, many researchers argued that the increase of women in the workforce had not resulted in a considerable shift in household responsibilities (Cerrato & Cifre, 2018; Plickert & Sterling, 2017; Schaner & Das, 2016). As reported, on average, working women still hold primary responsibility for their home, family life, and childcare than men, despite some duties, if any, are delegated to the house servant. Kuhns and Saksena (2017) noted that a single young woman spends less time preparing food than married women as they prefer home cooking (Lam & Adams, 2017). However, it is challenging to prepare food from scratch due to time restrictions; therefore, convenience food products and materials are preferred.

Based on previous research, food enhancers are identified as the most prominent food additives (Badora et al., 2019). They can substitute the need for salt, spices, and herbs in-home food preparation and mass food production preparations (Muhammad et al., 2011). Food enhancers add taste quality to the food, which improves palatability with minimal alteration towards the food ingredients' intensity. Eventually, the synthet-

ic food enhancer, which is low in manufacturing cost, was vastly introduced to enhance the modern world's food flavour (Badora et al., 2019). Since then, food enhancers have been increasingly accepted as kitchen aids to simplify cooking (Abdulmumeen et al., 2012).

With advances in food technology, food enhancers are gaining wide use around the world. However, there were only a few studies done on the usage of food enhancers in food preparation. Chen and Oldewage-Theron (2004) revealed that most residents in Vaal Triangle, South Africa, used food enhancers in their food preparation. Similarly, Kim et al. (2017) did a study among South Koreans. They found that the demand for liquid seasoning of food enhancers grew more than 50 per cent every year, leading to an increased supply of condiments in the food market. One of the popular food enhancers used worldwide in food preparation is Monosodium Glutamate (MSG) (Meadows, 2003). MSG had been cited as one of the most used food enhancers globally, and in the early twenty-first century, the acceptance of this new flavour enhancer increased and continued to do so (Sand, 2005; Tracy, 2016; Regnier-Davies, 2014; Zhu et al., 2020).

Even though food enhancers are becoming a common choice in food preparation, specific guidelines on the amount of food enhancers used by consumers are lacking (Wang & Adhikari, 2018). A recent study even claimed that most consumers were unaware of food enhancers' functions and advantages (Al-Azawi et al., 2020; Bawaskar et al., 2017). Besides, the vast majority of the younger generation claims they eat or intend to eat healthy foods. However, their food choices would suggest otherwise, since they generally go for sausages, bacon, burgers and chips, rather than salads, sandwiches and fruit – the type of foods that use many food enhancers and additives (Bawaskar et al., 2017).

## 2. Methods

### 2.1. Sample and population

A qualitative interview approach was deemed more suited to the study aim and thus was applied for information gathering. Based on the grounded theory, the study population are the young working women in Malaysia who used food enhancers in their food

preparation. Eligibility for the interview study required that the respondents were full-time Malaysian working women, aged between 26 to 40 years old, with at least one child living in the household and residing in the Klang Valley. The age range used was based on the definition of Malaysian young women employees as reported by Jamil et al. (2019). The purposive sampling strategy was used during the interview stage, and theoretical saturation was used as a procedure to ensure data collected from the sample were sufficient. The potential informants were identified through personal contact and with the help of friends. To reflect the characteristics of a Klang valley population, a sample of five respondents from Kuala Lumpur, Shah Alam, Petaling Jaya, Subang Jaya, Cheras, Kajang, Selayang Baru area was identified. As there are seven locations in Klang Valley, a sample of 35 informants were predetermined and subsequently contacted via telephone, obtaining permission to be interviewed. The interview dates and times were then arranged based on the working women's convenience and wishes, which required unlimited flexibility on the researcher's part.

### 2.2. Interview questions

Semi-structured interview questions were utilised to obtain in-depth data and to understand the research phenomenon. These open-ended questions were used to avoid any potentially biased responses and to discover rather than prescribed. The development of the research guide was based on the study specification and relevant literature search. Table I shows a list of primary questions from the research guide.

The interview questions range from informants' demographic profiles, reasons for using the food enhancer, types of food enhancer commonly used, and the frequency of food enhancers in home food preparation. Owing to different educational levels among the informants, the Malay language version of the semi-structured questions was used after translating from the language expert's English version.

### 2.3. Procedure for information gathering

At the initial stage, face-to-face interviews were planned to be undertaken. However, due to the Movement Control Order (MCO) in line with the pandemic of Covid-19 in February 2020, only 15 informants



**Table 1.** Primary questions from the research guide.

Topic	Primary Questions
Cooking behaviour	Do you cook for your family during the weekdays?
Choice of menus	What type of menu do you cook for your family during weekdays?
Knowledge about food enhancers	Have you heard about food enhancers?
Usage of food enhancers in food preparation	Do you use food enhancers for cooking for your family?
Types of food enhancers commonly used.	What type/brand of food enhancers do you usually use?
Reasons using food enhancers	Any reason for using food enhancers during food preparation?
Food enhancers as a norm in food preparation	Do you think that using food enhancers in cooking preparation is a norm among Malaysians?

agreed to be interviewed. The rest of the informants were unable to join as most of them were overwhelmed with home office working conditions and managing their families during the Covid-19 movement control order. The interview sessions were done via video calls using the Google Meet platform. Despite some issues on the willingness to participate due to Covid-19, the video call interview sessions were successfully undertaken, and the responses met the saturation point. It is worth mentioning that, before the interview sessions, informants were explained that their participation was voluntary, and all the information provided is strictly confidential and that their names will not be revealed. Written consent was acquired from the informants. All of the interviews were tape-recorded, and on average, each interview lasted between thirty minutes and one hour. As each interview ended, transcription was done instantly.

The recorded data were transcribed immediately after the in-depth interviews were conducted, in line with Bryman (2010) findings on the importance of transcribing as soon as discussions are done. On top of the informants' exact words, other significant data such as hesitation, noise, language, and others were also recorded to avoid data outliers, bias judgment, and other factors that might impact the findings. The coding process was manually done and followed by qualitative data analysis using ATLAS.ti version 8. The themes and sub-themes in the research were identified through inductive and deductive approaches. Codes were categorised, and the subthemes, themes and main domains were identified. To assure content

validity, inter-rater reliability tests were assessed and found acceptable with a Kappa score of 0.78.

### 3. Results

Due to the flexibility in understanding how people represent themselves, express and share their experiences. The name of the informants are not disclosed to preserve confidentiality, thus throughout the analysis, they are known as "informant."

#### 3.1. Informant profiles

During the interview session, information such as workplace location, occupation, age, distance to the workplace, and the number of children was noted. All interviewees were working women age between 26 and 40 years old. The youngest informants age was 29 years old with one child, and the eldest informant was 40 years old with five children. Most informants work in the Klang Valley and commute to their workplace between 5km and 20km.

#### 3.2. In-depth interview responses

##### 3.2.1. Cooking behaviour

In response to the first question, most informants stressed that although they reached home slightly late and tired, they still intended to cook dinner for their family. Most of them managed to allocate time to cook after arriving home. They believed that cooking and meal time would help strengthen the bond between



family members. Below are the few responses given by the informants.

*“Undeniably, I am a bit tired and exhausted after finished work, but as my husband preferred to be with the children, especially during dinner time thus, I make a point to cook although with simpler dishes. My family is not fussy with the simple cooking as they understand my situation. I could say, we don’t eat out during the working days, however, during the weekend, in particular, we did go out for dinner”* INFORMANT 3

*“As I am staying close to the working place, I have no problem cooking for my families. Not to say I am good at it, but I enjoy cooking for my family. I feel happy when my husband and kids enjoy my cooking. Simple food is sufficient for them. With four children, I have to feed them with my own cooking”* INFORMANT 12

*“Yes, I cook for my family..... Although I have limited time but comfortable doing that rather than buying at the restaurant. It is my responsibility as a wife and mother”* INFORMANT 6

### 3.2.2. Choice of menus

Most informants cook simple food and choose easy or quick dishes as frequent menus for their family dinners. The menu selections are also subject to time constraints. Fried chicken, fish, beef, anchovy, sardine and vegetables are the main courses frequently cooked. Besides that, fried rice and rice vermicelli are also alternatives considered by them. Some informants stressed that western menus such as the french-fries, frozen breaded chicken, breaded fish, and bolognese spaghetti are also the options. Below are some of the verbatim answers.

*“Working as an assistant restaurant manager, my shift is not fixed. If my working shift is from 9.00 am to 6.00 pm, I will cook for my husband and kids. Fried chicken and stir-fried vegetables are the dishes. For the afternoon shift, I normally prepare food in the morning and chill it in the fridge. My husband and kids only preheat them”* INFORMANT 2

*“... A simple menu, of course, is my option, which requires less time. My favourite family menus are Sambal Ikan Bilis (anchovies), stir-fried vegetables, fried eggs,*

*or omelette. I sometimes cook fried rice, fried mee or mee hoon”* INFORMANT 5

*“Due to the short distance from my house to the working place, I have no issue preparing food for my family dinner. I do not have a specific menu to cook, but it depends on my mood and my husband and kids. Stir-fried vegetables, fried chicken, and fish soup are some examples. Sometimes, I prepare french fries, frozen breaded chicken, breaded fish, spaghetti are the options”* INFORMANT 3

### 3.2.3. Knowledge about food enhancers

Most informants revealed that food enhancers increase and enhance the flavour and taste of the food they cook. They also claimed that food enhancers reduce cooking time, cut down numbers of ingredients and spices used, and facilitate the preparation processes and time needed in the kitchen. They claimed that food enhancers were also used for marinating food items – making them flavourful and tenderised. Informants knew that most of the food enhancers come as powder, liquid, or spices. Below are the comments quoted by the informants.

*“Yeah..... food enhancers increase the flavour and taste of the cooked food. Fried vegetables will taste better with the food enhancer”* INFORMANT 5

*“Food enhancers are the kitchen aid that helps to reduce the time of preparing food. We don’t need to add fresh ingredients, which require more time to peel, chop, and cook. Enhancers will give a quick flavour and make food tastier”* INFORMANT 9

*“Hmm..... What I understand about food enhancers is that they are used to enhance the flavour of the foods. At the same time, it helps to make food tastier. Older generation like my mother and grandmother, in particular, do not like to use food enhancers in their cooking compared to my generation”* INFORMANT 13

### 3.2.4. usage of food enhancers in food preparation

The majority of the informants claimed that food enhancers are part of their food preparation process. Some of them use them for soup and stir vegetables. The most common answer for use was to increase the

flavour and taste of the cooked food. Many agreed that foods without enhancers would taste different and bland or tasteless, even after salt and sugar are used as a seasoning. Some said the perfect food taste could not be obtained without the usage of food enhancers. On the other hand, the advertisements on the television, media, and friends' recommendations influence them to use the food enhancers. Also, the price most of the food enhancers are affordable. Below are the verbatim answers by the informants.

*"In my food preparation, I felt much more confident about the taste and favour of food enhancer. That's the reason why I like to use food enhancers in soup making. It tastes like the real flavour of anchovies. Moreover, the price of it is not high and much more convenient for using it"* INFORMANT 6

*"It depends on what menu I need to cook. If I don't have time to prepare from scratch, a food enhancer is my additional flavour. Undoubtedly, food enhancers are a good choice in food preparation as it helps prepare food faster, quicker and tastier. I don't say that I use food enhancers too often. Sometimes advertisement in the media influences us"* INFORMANT 15

*"Honestly..... I am not so much into food enhancers; salt, pepper and sugar are enough for my family and me. However, sometimes, it is difficult for me to get the flavour and taste without using the food enhancers. Thus, sometimes I use a little bit of it in cooking"*  
INFORMANT 11

### 3.2.5. Types of food enhancers commonly used

Powder, liquid, cubes, seasoning and spices are food enhancers available in the market. In response to the types of food enhancers used in the food preparation, most working women admitted that the powder and cube form is their preferred choice than the liquid and spices form. The powder and cube form of food enhancers, according to them, are convenient and easy to use. The powder form is easily added to the food prepared like stir-fried vegetables, curry, and fried noodles. The cubed chicken is usually diluted and used to create a stock to enhance chicken soups or other soups. The informants' response is as below.

*"Honestly.... out of five common types of food enhanc-*

*ers: powder, cubes, liquid, seasoning and spices, the first two are my choices. I used powder and cubes form in enhancing the taste and flavour of my food prepared. The cubed chicken, cube anchovy is my option in preparing soup while powder is used in fried rice and fried vegetables"* INFORMANT 1

*"For me, powder and cubes are much convenient. Just sprinkle it on fried vegetables and mix them well. I need not use salt or pepper because powder enhancers are kind of tasty already. When making a soup, the chicken cubes are becoming based. Just mix with hot water. Easy, you know"* INFORMANT 9

*"At home, I have different types of food enhancers that I use for cooking, either powder, cube, liquid and seasoning. I used all of them, but it depends on the types of food prepared"* INFORMANT 13

### 3.2.6. Brands preferences of food enhancers

Although the brand names cannot be mentioned here, most informants share the same idea about it, whereby they are mostly choosing the most popular brand of food enhancers. Some informants stated that the taste is slightly different, although the appearance of the food enhancers is almost identical in powder, cubes, liquid, or seasoning. Some brands with less fat taste good, while some contain a lot of fat, and the taste is fair. They claimed that the fat does not appear while the food is still hot, but it is solidified when cold. It is worth mentioning that the media and friends' experience influenced their inclination toward a particular brand. Below are the verbatim quotations.

*"For me,..... brands of food enhancers play an important element. Some brands contain a lot of fat, some brands a lot of MSG. Although some of the best brands are slightly expensive due to the flavour and taste..... The price does not matter. Honestly, after getting advice from friends and advertisements, I only use those from a good and acceptable brand,"* INFORMANT 14

*"I am very picky; thus, I only opt for popular brand food enhancers. How do I come to know about a good food enhancer? In fact, before sticking to one that I have been using now, I tried a few brands. Different brands carry different tastes and flavours. We make a comparison when we use it and tasted them...."* INFORMANT 13



### 3.2.7. Reasons using food enhancers in food preparation

Information gathered from the interview revealed that most informants did not use food enhancers for every cooking preparation, especially during the weekend, as they have more time to plan for cooking. Many of them manifestly stressed that food enhancer usage depends on the types of food they prepare. In other words, food enhancers will only be used if time is scarce. Again, it is interesting to note that most informants understood that using excessive food enhancers in the long term may increase and trigger allergic reactions and possibly lead to unhealthy eating habits. The informants' responses are attached:

*"Not in every cooking, you know.... only in certain menus. Of course, I will use tom yam paste or tom yam cube if I am making tom yam, similarly, for chicken soup. I don't think food enhancers are suitable to be added in Asam Pedas or Masak Lemak".* INFORMANT 10

*"Could say once a week... really depends on the types of food cooked. I normally use food enhancers in fried products like fried rice, fried noodles and vegetables. Mind you..... I used a little bit only, too much of food enhancer in the long may cause unhealthy eating habits"* INFORMANT 7

*"I use food enhancers to cut down any step that requires time for cooking processes. But only a small amount of food enhancers are used - only during the working day, not at the weekend. My cooking is much more elaborate on the weekend"* INFORMANT 3

### 3.2.8. Food enhancers as a norm in food preparation

Almost all the informants believed that food enhancer use is still not a norm among young working women in Malaysia. Most of them stressed that food enhancer usage depends on the types of food they prepare. Despite that, as working women and due to time constraints, they admitted their intention to use food enhancers is slightly higher than older generations. Furthermore, they revealed that many types of food enhancers are available in the market and promoted in many media-influence channels. Notably, they also admitted that food enhancers are increasingly popu-

lar, but it has not reached the extent of becoming the norm. Below are some of the informant's verbatim comments.

*"Looking at the whole scenario, I don't think the usage of food enhancers in the food preparation among our generation is becoming a norm or something that is always used. To me personally, I use them once a while in a soup and other products"* INFORMANT 4

*"Compared to my mother's generation, the usage of food enhancers is more prevalent in my generation. Busy and hectic life cause us to use them in certain food preparation but not excessive or every day. I don't want it to become a habit of using them in every dish..... I use them whenever necessary. I think other women of my generation might share the same thought"* INFORMANT 12

*"Although food enhancers are gaining popularity with many products in the market.... the usage of it is still under control or something that is not considered a must-use item in every household food preparation. I think women use it based on the suitability of the food prepared. However, I must admit that the usage of it is in the increasing trend"* INFORMANT 14

## 4. Discussion

The study results indicate that young, working women consumers possessed high awareness of food enhancers with relatively little insights into the origins and food enhancers' effect. They mainly took to mass media as a primary source of information about food enhancer usage. Their risk perception about food enhancers played a more important role in their concern about the ingredients, caused by the influence of information they obtained from the mass media. The present study also addressed food preparation behaviours among young working women. Our findings seem to reflect two key behaviours: greater attention paid in planning and organising healthy food and the high value placed on meal purchasing, preparation, and eating. It includes the importance of eating together as a family and preferring homemade foods. Quite a fascinating fact is that the results point towards changing attitudes and motives regarding food preparation among young working women (Zhong et al., 2018). Based on the study findings, these young working women are undoubtedly committed to their



duties as wives and mothers, a result noted in other similar studies (Cerrato & Cifre, 2018; Tilly & Scott, 2016).

Over the last decade, consumers have become increasingly concerned about health risks posed by food consumption. However, with time limitations, food enhancers were utilised as an option to minimise the process of food preparation, such as chopping, peeling and sautéing and others (Kuhns & Saksena, 2017).

This finding corroborated sufficiently with Koyratty et al. (2014) that food enhancers enhance and improve the flavour and, at the same time, helps to give colour to food products. Besides, Zhong et al. (2018) noted that affordable price is why women use food enhancers. The significant sources of information received on food enhancers are through radio, television, friends, and relations that help influence consumers' use of food enhancers in food preparation.

Al-Azawi et al. (2020) proposed that food enhancers act as kitchen aids and enhance their flavour and taste. Due to the ability to absorb and quickly dilute, powder and cube forms of food enhancers are preferred. Another promising finding from this study is that the informants manifestly realise the long-term consequences of excessively using food enhancers in food preparation (Mustafa et al., 2017). Besides, the informants indicate that food enhancer usage is still not becoming a norm or culture despite a much higher consumption than the older generation.

## 5. Conclusion

The social and economic developments have changed the human way of life. Likewise, food preparation has adjusted accordingly to modern lifestyles. There is increasing usage of food enhancers, a shred of evidence why food enhancers products are receiving great demand. Young working women prefer home cooking, and food enhancers are just complementary in their home food preparation. They will only be used when necessary as they are aware of the adverse effect of such usage. Thus, a robust awareness and educational drive towards proper food enhancer use may help encourage quality and safe home food preparation. Knowledge of the meal preparation, cooking and consumption behaviours may inform practical health

promotion strategies. Therefore, the increasingly diverse community needs to explore other potential behavioural differences based on demographic and psychographic factors.

Although this research produced interesting findings, there are some research limitations; thus, the results warrant further exploration. The first limitation is related to the data collection method. Owing to the Covid-19 pandemic and movement control order (MCO), a video call interview was done; hence, the number of participants is limited, and the discussion depth is distorted. Next, only fifteen informants were able to be telephone interviewed as many were reluctant to be involved. Besides, due to time constraints, only selected questions were used in the interview sessions. As a result, limited findings and information were obtained from informants. Moreover, the results obtained could not be generalised. Hence, it suggested that replication be done using a focus group discussion setting with broader sample size.

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## Conflict of interest

The authors declare no conflict of interest.

## References

- Abdul-Hamid, M., Galaly, S. R., Ahmed, R. R., & Hamdalla, H. M. (2017). Monosodium Glutamate as a Food Additive: Toxic Implications and the Protective Role of Quercetin. *Merit Research Journal of Medicine and Medical Sciences*, 5(8), 384-402.
- Abdumumeen, H. A., Risikat, A. N., & Sururah, A. R. (2012). Food: Its preservatives, additives and applications. *International Journal of Chemical and Biochemical Sciences*, 1(2012), 36-47.
- Akora, A. K. (2019). The Effects of Denial Messages on Consumers Behavioral Intention toward a Rumored Product: An Experimental Study of Ajinomoto Um-



- ami Seasoning, in Abidjan Cote d'Ivoire. PhD Thesis. Ritsumeikan Asia Pacific University,
- Al-Azawi, M., Altattan, D., Ali, S. K., & AbuKhader, M. M. (2020). Examining the Use of Taste Enhancers in Instant Noodles and Public Perception of Monosodium Glutamate in Muscat, Oman. *Current Nutrition & Food Science*, 16(2), 198-206. <https://doi.org/10.2174/1573401314666180820153837>
- Allen, P., & Sachs, C. (2012). Women and food chains: The gendered politics of food. *Taking food public: Redefining Foodways In A Changing World*, 23-40.
- Badora, A., Bawolska, K., Kozłowska-Strawska, J., & Domańska, J. (2019). Food Additives in Food Products: A Case Study. In *Nutrition in Health and Disease-Our Challenges Now and Forthcoming Time: IntechOpen*. <https://doi.org/10.5772/intechopen.85723>
- Bawaskar, H. S., Bawaskar, P. H., & Bawaskar, P. H. (2017). Chinese restaurant syndrome. *Indian Journal of Critical Care Medicine: Peer-reviewed, Official Publication of Indian Society of Critical Care Medicine*, 21(1), 49. <https://doi.org/10.4103/0972-5229.198327>
- Black, A. (2010). Gen Y: Who they are and how they learn. *Educational Horizons*, 88(2), 92-101.
- Carocho, M., Barreiro, M. F., Morales, P., & Ferreira, I. C. (2014). Adding molecules to food, pros and cons: A review on synthetic and natural food additives. *Comprehensive Reviews in Food Science and Food Safety*, 13(4), 377-399. <https://doi.org/10.1111/1541-4337.12065>
- Cerrato, J., & Cifre, E. (2018). Gender inequality in household chores and work-family conflict. *Frontiers in Psychology*, 9, 1330. <https://doi.org/10.3389/fpsyg.2018.01330>
- Zhengxing, C., & Wilna, O. T. (2004). Household consumption of stock cubes and stock powder in the Vaal Triangle of SA. *Nutrition & Food Science*, 34(4), 174-178. <https://doi.org/10.1108/00346650410544873>
- Cody, M. M., Gravani, R., Edge, M. S., Doohar, C., & White, C. (2012). International Food Information Council Foundation Food and Health Survey, 2006–2010, food safety: a web-enabled survey. *Food Protection Trends*, 32(6), 309-326.
- Deshpande, A., & Deshpande, B. (2017). Food additives and preservation: A review. *Indian Journal of Sciences and Research*, 13, 219-225.
- Esposito, T., Delaye, A., Chabot, M., Trocmé, N., Rothwell, D., Hélie, S., & Robichaud, M.-J. (2017). The effects of socio-economic vulnerability, psychosocial services, and social service spending on family reunification: A multilevel longitudinal analysis. *International Journal of Environmental Research and Public Health*, 14(9), 1040. <https://doi.org/10.3390/ijerph14091040>
- Halim, R. A., Aziz, N. N. A., & Samsudin, M. A. (2016). Malaysian female graduates: Marriage, motherhood and labour force participation. *Engineer*, 10, 36.
- Handbury, J. (2019). Are poor cities cheap for everyone? non-homotheticity and the cost of living across us cities (0898-2937). Retrieved from Bureau of Economic Research, Inc. <https://doi.org/10.3386/w26574>
- Husarova, V., & Ostatnikova, D. (2013). Monosodium glutamate toxic effects and their implications for human intake: a review. *JMED Research*, 2013(2013), 1-12. <https://doi.org/10.5171/2013.608765>
- Inetianbor, J., Yakubu, J., & Ezeonu, S. (2015). Effects of food additives and preservatives on man-a review. *Asian Journal of Science and Technology*, 6(2), 1118-1135.
- Ishak, N., Zahari, M. S. M., Talib, S. A., & Hanafiah, H. M. (2019). The influence of biculturalism/integration attributes on ethnic food identity formation. *Journal of Ethnic Foods*, 6(1), 1-13.
- Jamil, H., Shabudin, A. F. A., Raman, S. R., & Ling, O. P. (2019). Changing landscape of the Malaysian higher education: an overview of women's glass ceiling. *Gender and the Changing Face of Higher Education in Asia Pacific*, 145-165. [https://doi.org/10.1007/978-3-030-02795-7\\_10](https://doi.org/10.1007/978-3-030-02795-7_10)
- Jerome, A., Scales, M., Whithem, C., & Quain, B.



- (2014). Millennials in the workforce: Gen Y workplace strategies for the next century. *E-Journal of Social & Behavioural Research in Business*, 5(1), 1-12.
- Keller, V., Dernóczy-Polyák, A., & Alasgarova, R. (2019). Eating styles of young females in Azerbaijan. *International Review on Public and Nonprofit Marketing*, 16(1), 43-60. <https://doi.org/10.1007/s12208-019-00218-2>
- Kim, H., Lee, J., & Kim, B. (2017). Development of an initial lexicon for and impact of forms (cube, liquid, powder) on chicken stock and comparison to consumer acceptance. *Journal of Sensory Studies*, 32(2), e12251. <https://doi.org/10.1111/joss.12251>
- Kuhns, A., & Saksena, M. (2017). Food Purchase Decisions of Millennial Households Compared to Other Generations (No. 291931). United States Department of Agriculture, Economic Research Service.
- Koyratty, B. N. S., Aumjaud, B., & Neeliah, S. A. (2014). Food additive control: a survey among selected consumers and manufacturers. *British Food Journal*, 116(2), 353. <https://doi.org/10.1108/BFJ-05-2012-0125>
- Lakshmi, S., Gayathri, R., & Priya, V. V. (2019). Awareness about monosodium glutamate among Indian women-A survey. *Drug Invention Today*, 11(3), 22.
- Lam, M. C. L., & Adams, J. (2017). Association between home food preparation skills and behaviour, and consumption of ultra-processed foods: Cross-sectional analysis of the UK National Diet and nutrition survey (2008–2009). *International Journal Of Behavioral Nutrition and Physical Activity*, 14(1), 68. <https://doi.org/10.1186/s12966-017-0524-9>
- Meadows, M. (2003). MSG: A Common Flavor Enhancer. *FDA Consumer*, 37(1), 34-35. <https://doi.org/10.1037/e542742006-007>
- Méjean, C., Hassen, W.S., Gojard, S., Ducrot, P., Lampuré, A., Brug, H., Lien, N., Nicolaou, M., Holdsworth, M., Terragni, L. and Herberg, S. (2017). Social disparities in food preparation behaviours: a DEDI-PAC study. *Nutrition Journal*, 16(1), 62. <https://doi.org/10.1186/s12937-017-0281-2>
- Miller, M. B., Hodge, K. H., Brandt, A., & Schneider, E. A. (2013). The Young and the Restless: Gen Y'ers in the Workplace! Are You Prepared? *FDCC Quarterly*, 63(3), 226.
- Minz, S., & Munda, P. (2020). Reality of Work-life Balance and challenges of a working woman. *Journal of Critical Reviews*, 7(11), 1920-1924.
- Mirza, S. K., Asema, U., & Kasim, S. S. (2017). To study the harmful effects of food preservatives on human health. *J Medicinal Chemist Drug Discovery*, 2(2), 610-616.
- Muhammad, H., Kabir, A., & Adeleke, K. (2011). Mineral elements and heavy metals in selected food seasonings consumed in Minna Metropolis. *International Journal of Applied Biological Research*, 3(1), 108-113.
- Mustafa, Z., Ashraf, S., Tauheed, S. F., & Ali, S. (2017). Monosodium glutamate, commercial production, positive and negative effects on human body and remedies-a review. *International Journal of Scientific Research in Science and Technology*, 3, 425-435.
- Neelam, M., & Mishra, S. (2018). Effects of food additives and preservatives and shelf life of the processed foods. *Asian Journal of Science and Technology*, 9(10), 8910-8912.
- Niaz, K., Zaplatic, E., & Spoor, J. (2018). Extensive use of monosodium glutamate: A threat to public health? *EXCLI Journal*, 17, 273.
- Obayashi, Y., & Nagamura, Y. (2016). Does monosodium glutamate really cause headache?: a systematic review of human studies. *The Journal of Headache and Pain*, 17(1), 54. <https://doi.org/10.1186/s10194-016-0639-4>
- Plickert, G., & Sterling, J. (2017). Gender Still matters: effects of workplace discrimination on employment schedules of young professionals. *Laws*, 6(4), 28. <https://doi.org/10.3390/laws6040028>
- Regnier-Davies, J. (2014). Understanding Monosodium Glutamate: Exploring Food Discourse and Its Social Implications. *Revue YOUR Review (York Online Undergraduate Research)*, 1, 85-91.

- Sand, J. (2005). A short history of MSG: Good science, bad science, and taste cultures. *Gastronomica*, 5(4), 38-49. <https://doi.org/10.1525/gfc.2005.5.4.38>
- Schaner, S., & Das, S. (2016). Female labor force participation in Asia: Indonesia country study. *Asian Development Bank Economics Working Paper Series* (474). <https://doi.org/10.2139/ssrn.2737842>
- Shariff, S. M., Zahari, M. S. M., Hanafiah, M. H., & Ishak, N. (2021). Traditional gastronomy knowledge transfers among Malay women: an exploratory study. *Journal of Foodservice Business Research*, 1-25.
- Sharif, M. M., Zahari, M. M., Nor, N. M., & Salleh, H. M. (2014). The adaptations of Malay food knowledge among Malay generations in Kuala Lumpur, Malaysia. *Hospitality and Tourism: Synergizing Creativity and Innovation in Research*. <https://doi.org/10.1201/b16064-78>
- Swarts, K. M. (2012). Development of a stock cube with functional food characteristics. Cape Peninsula University of Technology,
- Taillie, L. S. (2018). Who's cooking? Trends in US home food preparation by gender, education, and race/ethnicity from 2003 to 2016. *Nutrition Journal*, 17(1), 41. <https://doi.org/10.1186/s12937-018-0347-9>
- Tilly, L. A., & Scott, J. W. (2016). *Women, work and family*: Routledge. <https://doi.org/10.4324/9780203819395>
- Tracy, S. E. (2016). *Delicious: A History of Monosodium Glutamate and Umami, the Fifth Taste Sensation* (Doctoral dissertation) University of Toronto (Canada).
- Wang, S., & Adhikari, K. (2018). Consumer perceptions and other influencing factors about monosodium glutamate in the United States. *Journal of Sensory Studies*, 33(4), e12437. <https://doi.org/10.1111/joss.12437>
- Yavorsky, J. E., Keister, L. A., Qian, Y., & Nau, M. (2019). Women in the one percent: Gender dynamics in top income positions. *American Sociological Review*, 84(1), 54-81. <https://doi.org/10.1177/0003122418820702>
- Zhong, Y., Wu, L., Chen, X., Huang, Z., & Hu, W. (2018). Effects of food-additive-information on consumers' willingness to accept food with additives. *International Journal of Environmental Research and Public Health*, 15(11), 2394. <https://doi.org/10.3390/ijerph15112394>
- Zhu, Y., Chen, Y. P., Ayed, C., Li, B., & Liu, Y. (2020). An online study about consumers' perception and purchasing behavior toward umami seasonings in China. *Food Control*, 110, 107037. <https://doi.org/10.1016/j.foodcont.2019.107037>



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