Culture Bites: A reality of food truck in Klang Valley Malaysia

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Abstract

Cleanliness is an important element towards customer’s satisfaction. This study aims to investigate the relationship between cleanliness attributes (product quality, food premise & food handlers’ cleanliness) towards customers hygiene satisfaction. An online survey being conducted among 116 customers in Klang Valley. The data were analysed using SPSS Software version 26. Food premise, food handlers’ cleanliness and product quality associated to customers’ hygiene satisfaction. Of all, food product quality was the most significant predictor. The results obtained may contribute to the cleanliness practices among food truck food handlers and as a basis for cleanliness practice for Malaysia Food Truck Association.

Keywords: Food truck; Cleanliness Attributes; Hygiene satisfaction

1.0 Introduction

Food Truck or Mobile Foodservice is now a trending food centre development that attracts people to visit for food. This crowd may become a tourist spot to explore the local food and experience how local people are enjoying day and night life eating on the street. Apart from the availability of delicious dishes, cheap, and food variety, a clean and comfortable ambience may satisfy the hungry customers and tourists.

It is being reported global food trucks market size was valued at USD 3.93 billion in 2020 and is expected to expand at a compound annual growth rate (CAGR) of 6.8% from 2021 to 2028 globally (Market Analysis, 2020). This is due to the simple, yet profitable type of business. Food trucks have given restaurants and chefs the opportunity to go mobile and serve their creations on the street, at festivals as well as in any events. Having food truck in any events and carnival will indirectly attract audience, in fact people tend to travel to any food truck valley for food. Hence food truck also can be categorised as local and foreign tourist attraction.
As others, food truck cannot neglect the need of Food Hygiene code of Practice 1974, The Codex General Principles of Food Hygiene, Regulation (EC) No. 852/2004 (hygiene of foodstuffs) compliant. They to ensure the premises or appliances always meet the specifications set since their business will be issued to closure if fails to comply with the regulations.

Malaysia, compared to other countries in the world, has shown reporting a low rate of poisoning incident of 48 cases for every 100,000 residents (KKM, 2014). Despite among the lowest in the world, food poisoning cases have increased by 23.69% in 2019 compared to the previous year in Malaysia. With diarrhoea as one of food poisoning symptoms, it has accounted for 3% of deaths worldwide (WHO, 2015), hence this disease is one of fatal diseases. Failure to implement good is the factor for this increment. Even though the foodborne illness cases associated with food truck are rarely discussed in literature, if proper hygiene is not in place, the possibility of foodborne disease to occur will be high. Hence, the study on customer’s hygiene satisfaction on food truck is valuable to be conducted. In conjunction to that, this study was initiated to investigate the relationship between cleanliness attributes and customers’ hygiene experience which consist of 1. To identify the association between food product cleanliness and customers’ hygiene experience; 2. to determine the relationship between food handlers’ cleanliness and customers’ hygiene experience and to determine if there is any significant relationship between food product quality and customers’ hygiene satisfaction. The most significant contributor towards customers’ hygiene satisfaction was also investigated.

2.0 Literature Review

2.1 Theory of Planned Behavior (TPB)

TPB was developed in 1975 by Fishbein and Ajzen. According to TPB, people believe that they can perform the behaviour whenever they choose to do so. Gradually, the TPB was used more often to study behaviours where control was variable. To accomplish this, the TPB was complemented by a component called perceived behavioural control. Conceptually, this represents the extent to which people believe they can perform a behaviour because they have adequate capabilities and/or opportunities as well as environmental responsibility. High environmental responsibility reported to be further bridge between intention and behavior in deciding to dine in (Hua & Dong, 2022). The usage of TPB in predicting the food handler and consumer behaviour is common in literature. The increase in foodborne outbreaks is reflected the food handler behaviour. Some even suggest that that food safety knowledge does not always translate into behaviours improvement (Wambui et al., 2017). Food handlers regardless which ever food service type is, is responsible to perform food safety behaviours to reduce the food illness cases globally. However, accomplishing the food safety training somehow did not promise the improvement intentions or on-the-job behaviours will follow.

2.1 Relationship between Food Premise Cleanliness and Satisfaction

Satisfaction refers to the emotion, response, and reaction of consumers to products or services. Customer satisfaction is an evaluation of the customers’ experience upon receiving a product or service. When a product or service meets or exceeds a customer’s expectations, the customer is satisfied, and satisfied customers remained loyal. Customers grew unsatisfied with the product if it did not fulfil their expectations, whereas satisfied customers remained loyal to a product or service if the product met their expectations. This also confirmed that customer satisfaction is one of the elements that contribute to customer revisit intention (Polas et al., 2020). The food flavour, service, price, environment, and hygiene are just a few of the variables that have been found to affect customer satisfaction while visiting food establishments. According to a survey done by Fatimah et al. (2011) on Malaysian consumers, while choosing a restaurant, cleanliness was the most important factor, followed by food variety and the location of the establishment. This statement suggested that customers are extremely concerned about the possibility of contracting food-borne illnesses. Under the Food Act of 1983, all food establishments in Malaysia, including catering services, restaurants, stalls, canteens, and food trucks, must adhere to the regulations set forth in the Food Hygiene Regulations of 2009. Studies in the United States (US) found that personal hygiene of food handlers was a significant factor contributing to customer satisfaction and their intention to revisit despite some areas required improvements, such as table hygiene, food temperature, and handwashing lavatory (Liu and Lee, 2018). The Ministry of Health and local government must also conduct regular inspections of these facilities to ensure that they are kept clean and maintained. In conclusion, it was discovered that the cleanliness of the premises ensured customer satisfaction. “Studies in the United States (US) found that personal hygiene of food handlers was a significant factor contributing to customer satisfaction and their intention to revisit despite some areas required improvements, such as table hygiene, food temperature, and handwashing lavatory (Liu and Lee, 2018). Conversely, studies regarding the satisfaction of Malaysian were only focused on ambience, food, and service quality provided by the food premises” (Chahal and Kamil, 2017), hence the effect of food premise cleanliness to customer’s hygiene satisfaction is really in need.

2.2 Relationship between Food Handler Cleanliness and Satisfaction

Food handlers play a crucial role in the food truck business because they do all work from the preparations to selling processes, but food handlers with poor hygiene practices at the same time often associate with a potential to spread the food-borne diseases. Besides, their food handling techniques, the food storage and temperature concern, personal protective equipment (PPE) such as apron, suitable shoes and utensils may cause cross contamination issues. The scholars also identified that inadequate hygiene training, poor infrastructure, and weak regulatory inspections can expose the food to unsafe resources. Based on recent customer online reviews in the United States of America, food practices on cleanliness were found statistically significant inverse with the satisfaction of customers (Hodges et al., 2022). Cleanliness was also found to be the influence of safety indicators for the international tourists’ choice in small restaurants in Thailand (Mehri et al., 2022). These studies proved that cleanliness has been an important quality attribute on tourists’ satisfaction. Hence, it implies
the sustainable management of a food handler practices and therefore, this study would like to posit that food handler cleanliness contribute to customer's hygiene satisfaction.

2.3 Relationship between Product Quality and Satisfaction
Another factors that may affect hygiene satisfaction is food quality. Food quality had numerous aspects, they not only considered one variable, but includes all food features which also contributed to customer’s satisfaction (Gok, et al., 2019; Ruo et al., 2020). In fact, in other study by Mooradian et al. (2014) claimed that there is interrelated between product quality and price whereby consumers want to pay more for higher quality goods and services (better quality). The elements of product quality in food truck also something need to be considered, in fact with the number of food truck operations has increased due of urbanization, which has an impact on the social, economic, and cultural benefits connected with food truck operations (Hanafi et al., 2021). IBIS World estimates that over the last five years, the global food truck industry has grown at an average annual pace of 9.3 percent (Bandaru and Venkateshwarlu, 2017). Due to its recent emergence in urban culture, food trucks have the potential to transform underutilized areas into interactive gastronomic experiences. The market for food trucks has grown to be a worldwide phenomenon, garnering popularity on an international level. The social, cultural, and economic possibilities accessible to both vendors and customers in the United States are impacted by food trucks (Corvo, 2014). Due to the expansion of culinary tourism in New Zealand, food trucks now hold a significant amount of importance (Idicula Thomas, 2016). Pop-up restaurants with well-known names enter the food truck industry in cities in North America, Australia, and Europe, for instance Mokhtar et al. (2017). Young entrepreneurs and chefs in developed nations are drawn to food truck businesses because of their low start-up costs.

3.0 Material & Methods
This study applied a quantitative research approach by implementing a correlational research design that involves a cross-sectional study in which the data were only gathered at once or a certain period only. The survey was conducted in May until 30th June 2022. An online survey was used to collect data with screening questions provided to ensure only eligible respondents were involved in this study. The respondent was selected based on specific requirement whereby only Food Truck customers in Klang Valley are recruited. Food trucks contributed 37% of the $1.4 billion in road income in Malaysia, as of the year 2011 (Jane 2013). In the Klang Valley alone, it is estimated that 5 additional food trucks open every month, adding onto the growing market demand (Gobinath, 2020). Hence 4 zones of Food Truck Valley in Klang Valley area is a reasonable study location to be chosen which include Puchong, Shah Alam, and Klang (1st), Bangi, Kajang, and Serdang (2nd) Putrajaya (3rd) & Kuala Lumpur (4th).

A self-administered online survey questionnaire adapted from Gopi & Samat, (2020) and Nur Afif Nabilah et al. (2021) and segmented into five (5) sections: demographic profile, food premise cleanliness, food handler’s cleanliness, product quality and customers’ hygiene satisfaction (Nur Afif Nabilah et al., 2021) were distributed among individuals aged 18 years old with experiences in purchasing food from food truck. Altogether 116 respondents were involved. The data collected were analysed using SPSS Software version 26 for descriptive, correlational and regression.

Figure 1 represents the diagram for process involved in this study.

4.0 Results & Discussion

4.1 Respondents’ Demographic Profile
A response rate of 100% gathered for this study. Majority of the respondents were from the Klang Valley area and females contributed 79.3%. About 31.9% of the respondents were recorded to stay or come from the outside of the Klang Valley. In term of food truck’s location respond rate, 1st zone (Puchong, Shah Alam, and Klang) has recorded the highest percentage of the respondents (45.7%) then Kuala

Figure 1: Steps involve in data collection process
Abdullah, N., et al., 96th ABRA International Conference on Quality of Life, Double Tree by Hilton Putrajaya Lakeside, Putrajaya, Malaysia 21-22 Nov 2022, E-BPJ, 7(21), Dec 2022 (pp.47-53)

Lumpur (35.3%), follow by 2nd zone (12.1%) and lastly Putrajaya (6.9 %). Majority of respondent spent 1 to 5 times per month and beverages is the most frequent type of food purchased.

4.2 Descriptive Analysis
Table 1 describe the descriptive results for food premise cleanliness. Most respondents agreed (91.3%) that the food truck kitchen area is clean and food is kept away from flies. Then, about 89.7% of the respondents agreed that the food truck has a good ventilation system as depicted in Table 1 below. This is important to keep the air surrounding from being polluted by smoke produced when preparing food and to make food handlers feel comfortable in the hot kitchen. Moreover, good ventilation system applied but found to be less acceptable for waste management when 20% rated that dustbin is not properly closed. The flies might be the carrier of the transmission of the bacteria towards foods and contaminate it and unwanted odors will affect the mood of the customers who dine in at the food truck area. In short, the hygiene of food premise was revealed to be an important factor for customer satisfaction (Lim et al., 2021).

<table>
<thead>
<tr>
<th>Statements</th>
<th>(%)</th>
<th>(%)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The premise has a good ventilation system</td>
<td>89.7</td>
<td>10.3</td>
<td>3.22</td>
<td>0.67</td>
</tr>
<tr>
<td>The dining table is always in a clean condition.</td>
<td>81.9</td>
<td>18.1</td>
<td>3.19</td>
<td>0.77</td>
</tr>
<tr>
<td>The kitchen area is always in clean condition.</td>
<td>91.3</td>
<td>8.7</td>
<td>3.29</td>
<td>0.62</td>
</tr>
<tr>
<td>Food vendors had the initiative to keep food away from flies.</td>
<td>90.5</td>
<td>9.5</td>
<td>3.27</td>
<td>0.65</td>
</tr>
<tr>
<td>The food vendor uses clean water supplies to operate a business.</td>
<td>90.5</td>
<td>9.5</td>
<td>3.33</td>
<td>0.67</td>
</tr>
<tr>
<td>Dustbins were always closed to prevent flies.</td>
<td>80.2</td>
<td>19.8</td>
<td>3.16</td>
<td>0.78</td>
</tr>
<tr>
<td>Food truck has a good grade for the hygiene certificate.</td>
<td>82.8</td>
<td>17.2</td>
<td>3.16</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Most of the respondents agreed that food handlers applied proper hygiene practice during handling food whereby clean utensils, clean apron and hat/cab being used to prevent hair fall. This is one of the appropriate ways in avoiding cross contamination in food. However, some of the food handlers were not wearing glove and there are wearing jewellery while serving or cooking food. This means that there are still food handlers that did not really concern themselves with the importance of using gloves while preparing foods. In term of food product quality, overall food being served tasty, good quality and acceptable serving temperature of food using a proper and suitable container. Moreover, variability of food choices with affordable price were offered (see Table 3).

<table>
<thead>
<tr>
<th>Statements</th>
<th>A (%)</th>
<th>D (%)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The appearance of the staff looks neat and clean.</td>
<td>93.1</td>
<td>16.9</td>
<td>3.35</td>
<td>0.63</td>
</tr>
<tr>
<td>The staff is wearing a clean apron with a covered head and shoes.</td>
<td>80.2</td>
<td>19.8</td>
<td>3.16</td>
<td>0.77</td>
</tr>
<tr>
<td>I observe that the staff are not wearing</td>
<td>60.3</td>
<td>39.7</td>
<td>2.81</td>
<td>0.86</td>
</tr>
<tr>
<td>The food handlers are always wearing gloves to touch the food.</td>
<td>70.7</td>
<td>29.3</td>
<td>2.97</td>
<td>0.81</td>
</tr>
<tr>
<td>The food handler used a clean and right utensil to serve food.</td>
<td>92.3</td>
<td>7.7</td>
<td>3.29</td>
<td>0.60</td>
</tr>
</tbody>
</table>

50
The highest percentage score was of using a proper and suitable container to serve food (94.9%) followed by the statement of the food served complimentary with a clean and right utensil (94.0%). Besides, in terms of the quality and taste of the food, most of the respondents provide an agreed response on the statement of good quality food (93.1%), tasty food (92.2%), and acceptable food temperature during serving (91.3%). In line with the above statement, it can be said that most of the respondents knew the improper holding of food at the right temperature could lead to foodborne illness (Bakar & Abdullah, 2020). All these elements (see Table 3) were important in managing the food business and gaining a loyal customer.

Table 4 shows customer’s hygiene satisfaction results.

<table>
<thead>
<tr>
<th>Statements</th>
<th>A (%)</th>
<th>D (%)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The food vendor assures cleanliness and hygiene for the services offered.</td>
<td>96.5</td>
<td>3.5</td>
<td>3.36</td>
<td>0.581</td>
</tr>
<tr>
<td>I am satisfied with the food truck cleanliness</td>
<td>91.1</td>
<td>8.9</td>
<td>3.28</td>
<td>0.643</td>
</tr>
<tr>
<td>I am satisfied with the overall food product quality and hygiene.</td>
<td>92.1</td>
<td>7.9</td>
<td>3.33</td>
<td>0.601</td>
</tr>
<tr>
<td>I am satisfied with the food truck and willing to patronize.</td>
<td>94.8</td>
<td>5.2</td>
<td>3.37</td>
<td>0.583</td>
</tr>
</tbody>
</table>

About 96.5% of the respondents agree on the statement of cleanliness and hygiene assurance by food vendors while providing service. According to Loh and Hassan (2022), perceived benefit, food safety, attitude, and subjective norm are the factors influencing food truck product’s repurchase intention among food truck consumers. This means that the right food safety practice applied by food vendors may increase the repurchase intention among food truck consumers. Next, about 91.1% of the respondents were satisfied with the cleanliness of the food truck area while 92.1% of the respondents were satisfied with the overall food product quality and hygiene. Furthermore, most of the respondents (94.8%) were satisfied with the mobile foodservice and willing to re-patronage.

4.3 The relationship between independent variables and dependent variable
A Pearson’s correlation coefficient was computed to assess the relationship between variables. The correlational results obtained are shown in Table 5.

<table>
<thead>
<tr>
<th>r-value</th>
<th>Relationship</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPC-Satisfaction 0.751</td>
<td>Strong Positive Correlation</td>
<td>Accepted</td>
</tr>
<tr>
<td>FHC-Satisfaction 0.682</td>
<td>Strong Positive Correlation</td>
<td>Accepted</td>
</tr>
<tr>
<td>FPQ-Satisfaction 0.758</td>
<td>Strong Positive Correlation</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Note: FPC - Food premise cleanliness, FHC - food handlers’ cleanliness, FPQ - food product quality

There is a strong positive correlation between food premise cleanliness and customer’s hygiene satisfaction. Besides, a strong positive correlation was also observed between food handler cleanliness and customer’s hygiene satisfaction (r= 0.682). Therefore, it can be said that the greater cleanliness practiced among food handlers would strongly correlate with the better satisfaction received by customers. Food product quality also shows correlated to the hygiene satisfaction (r= 0.758).

4.4 Regression Analysis
Table 6 shows the results of the regression indicated that food premise cleanliness explained about 56.4% of the variance in customer's hygiene satisfaction. The results obtained indicated that food premise cleanliness significantly predicted customers' hygiene satisfaction ($\beta = 0.751$, $p = 0.000$).

<table>
<thead>
<tr>
<th>Relationship</th>
<th>$R^2$</th>
<th>Sig</th>
<th>t-value</th>
<th>Standardized coefficient ($\beta$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPC- Satisfaction</td>
<td>0.564</td>
<td>0.000</td>
<td>12.134</td>
<td>0.751</td>
</tr>
<tr>
<td>FHC- Satisfaction</td>
<td>0.465</td>
<td>0.000</td>
<td>9.962</td>
<td>0.682</td>
</tr>
<tr>
<td>FPQ- Satisfaction</td>
<td>0.575</td>
<td>0.000</td>
<td>12.427</td>
<td>0.758</td>
</tr>
</tbody>
</table>

Note: FPC - Food premise cleanliness, FHC - food handlers cleanliness, FPQ - food product quality

Furthermore, of variance in customer's hygiene satisfaction can be predicted food handler cleanliness and food product quality by 46.5% and 57.5% respectively. Therefore, it can be concluded that food quality is the most influencing factor towards customers' hygiene satisfaction.

5.0 Conclusion
The culture of eating out, or specifically eating the food sold by the mobile food trucks in Klang Valley demonstrates the current trends of Malaysian eating style. This new eating culture could attract international tourists to experience local food and the contemporary eating style. Hence, the hygiene quality experience is very crucial as we are developing a new identity. There is significant relationship between all variables tested and food product quality found to be the best predictor. Cleanliness of food trucks related factors draws not only the locals, but also the travellers' purchase decisions to spend their time and money. However, this study was conducted only in Klang Valley, hence the results obtained cannot be used to generalize the whole populations of Malaysia. Hence broad research setting area as well as other factors that might contribute to the hygiene satisfaction is recommended to gain more accurate data and results. But the samples represent the eating out style and possibility of being approached by international tourists. As theorized by TPB, the behaviour of food handlers may support tourism through food truck culture. Even so, this study expected to facilitate food trucks' managers and operators to understand the stronger and as well as the weaker aspects of quality and permit them to investigate the factors which contribute toward customers' hygiene satisfaction to build good reputation and retain in foodservice industry.

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