

## Organic Foods in Selangor: The Relationship between Health Consciousness, Food Safety Concern, Environmental Concern, and Consumers' Attitude

Hasiful Fata Talhah<sup>1</sup>, Arnienyanti Abdul Hadi<sup>2</sup>, Nur Afifah Mohammed Rodzi<sup>3</sup>, Norfezah Md Nor<sup>4</sup>,  
Mohd Faisal Abdul Wahab<sup>5</sup>, Nadia Liana Mohd Karim<sup>6</sup>

<sup>1, 2, 3, 4, 5, 6</sup> Faculty of Hotel and Tourism Management  
Universiti Teknologi MARA Cawangan Pulau Pinang, Malaysia

**Abstract:** The demand for organic foods is generally expected among health-conscious consumers. Nonetheless, it is essential to comprehend other aspects, particularly in the Malaysian context. This study sought to identify the association between certain factors and customer attitudes toward organic food in Selangor. This study examined the relationship between three variables—health consciousness, food safety concern, and environmental concern—and consumers' attitudes toward organic food. A total of 473 valid questionnaires were gathered from food consumers in Selangor, and the data were statistically analyzed using SPSS version 21 based on the research questions. The results indicated that significant correlations exist between variables. It is indicated that health consciousness, food safety, and environmental concerns correlate to consumer attitudes toward organic foods. The study suggests that today's food consumers are health-conscious and increasingly concerned about food safety and the environment. Thus, the three independent variables determine customers' attitudes toward organic food, which food marketers must consider. The findings expand the possibilities for food marketers and the hospitality and food service industries to build and promote more organic food menus.

**Keywords:** organic food, consumer attitude, health consciousness, food safety, environmental concern

**Suggested Citation:** Talhah, H. F., Hadi, A. A., Rodzi, N. A. M., Nor, N. M., Wahab, M. F. A., Karim, N. L. M (2023). Organic Foods in Selangor: The Relationship between Health Consciousness, Food Safety Concern, Environmental Concern, and Consumers' Attitude. *TEAM Journal of Hospitality and Tourism*, 20(1), 71-78

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### Introduction

The country's substantial rise in organic food sales can be attributed to a rise in demand for organic foods among Malaysian consumers (Saleki, Quoquab & Mohammad, 2019). It is reported that food service consumers are becoming increasingly health conscious (Mohamad, Rusdi & Hashim, 2014) and more concerned about the health values associated with consuming organic foods, which are more nutritious and ecologically friendly (Tiraieyari, Hamzah & Samah, 2014). It is also conveyed that people are inclined to spend more for better-quality, healthy, and safe food products (Sang-Hyeop Lee *et al.*, 2016). In addition, severe environmental issues such as air pollution, climate change, and natural resource depletion caused by human activities have also led to consumer consciousness about better food choices (Lee, 2014).

Health consciousness has been widely conceived as a factor in a positive attitude among consumers toward organic foods (Mohamad *et al.*, 2014; Tiraieyari *et al.*, 2014). Nevertheless, besides health consciousness, it is essential to comprehend the influence of other factors, such as food safety and environmental concerns, on consumer attitudes toward organic food (Pham *et al.*, 2019). Thus, the results are still unclear regarding understanding the situation, specifically in the Malaysian context. In accordance with the gap, this study aimed to accomplish three research goals: (a) to assess the relationship between health consciousness and attitude towards organic food; (b) to measure the relationship between food safety concern and attitude towards organic food; and (c) to evaluate the relationship between environmental concern and attitude towards organic food. This study is significant in expanding the body of knowledge on the factors influencing consumer attitudes about organic food, especially in the Malaysian context. From the industrial point of view, this study could aid food marketers in developing more effective marketing programs for organic foods by providing them with a deeper understanding of consumers' attitudes.

## Literature Review

### *Organic Food*

Organic food can be defined as natural products free from artificial chemical substances like fertilizers, herbicides, pesticides, antibiotics, and genetically modified organisms (GMOs) (Rana & Paul, 2017). Organic food is more eco-friendly than conventional, healthier, contains fewer harmful ingredients, and is of higher quality (Suciu, Ferrari & Trevisan, 2019). While it is widely conceived that organic is a product without artificial chemicals included during production (Singh & Verma, 2017), the cultivation of organic produce also excludes the application of genetic modification and sewage sludge (Das, Chatterjee & Pal, 2020). It is a type of farming that employs sustainable natural resources and techniques, such as bio-fertilizers, biological insect control, and crop rotation (Duran-Lara, Valderrama & Marican, 2020). For organic livestock farming, animals are fed without antibiotics or growth hormones (Das *et al.*, 2020). Due to this, there was a significant increase in the preference towards organic food that was caused by the changes in people's educational grasp and attitudes toward life in late 2000 (Rana & Paul, 2017). Organic food consumption has to symbolize the ethical value system (Grosplik, 2017).

### *Health Consciousness*

People nowadays have scarce time for physical activities but are highly exposed to diseases as life has become increasingly competitive and demanding. Therefore, consumers are becoming more conscious about their health and food choices to preserve their health. Health consciousness can be described as the degree of awareness of one's health concerns, such as when selecting daily foods (Hsu, Chang & Lin, 2016). Health consciousness is a consumption motive that positively shapes consumers' attitudes toward organic products (Teng & Lu, 2016). Study shows that consumers who purchase organic foods are apprehensive about their health, as they believe that organic food is primarily superior in quality and healthier than conventional food (Zámková *et al.*, 2021). Organic food is believed to be more nutritious, contains fewer hazardous ingredients, and is superior to conventional food (Suciu *et al.*, 2019). Thus, organic foods are viewed as healthful products that should be consumed. In relation to organic foods, health consciousness has been found to predict consumer purchase intent (Xie *et al.*, 2015).

### *Food Safety Concern*

Consumers' positive attitude towards organic food is based on the quality, safety, taste, and health factors related to the consumption of organic products. Food safety concern refers to consumers' level of concern and consciousness of the food quality, artificial additives, adulteration, and pesticide residues that might directly impact their physical health (Teng & Lu, 2016). Numerous food safety incidents have raised consumer awareness of food safety issues (Hsu & Chen, 2014). For example, consumers are concerned about mad cow and foot and mouth diseases caused by pesticide residues in their food that have now become food scares (Pham *et al.*, 2019). Therefore, food safety is becoming an emerging important, especially in developing nations, where consumer knowledge of food safety information and food demand analysis are strongly related (Obayelu, 2014).

### ***Environmental Concern***

Consumers' attitudes have evolved owing to ethical concerns about the environment. Environmental concern is the degree to which consumers are aware of environmental issues and are willing to support or contribute to implementing solutions. (Kushwah, Dhir & Sagar, 2019). It is believed that environmental awareness shapes and predicts an individual's attitude. (Paul, Modi & Patel, 2016). Organic food production has been considered safer than conventional agriculture solely due to fewer expected agrochemical residues and a lower nitrate level in the produce (Doni *et al.*, 2019). Understandably, the usage of synthetic fertilizers and pesticides can increase productivity in a short time and play a vital role in acquiring more products (Şener, Türemiş, & Tanır, 2020). Nevertheless, researchers argue that the excessive use of chemicals has resulted in some significant drawbacks: environmental and natural resources are contaminated quantitatively and qualitatively, and nature's ability to renew itself is incapable of removing this pollution. In a short period, agrochemicals and intensive farming techniques often lucrative in annual crop systems and conventional agriculture have a great effect on soil biological activity and the provision of soil-based ecosystem services, thus posing a risk to agro-ecosystems long-term sustainability (Lavelle *et al.*, 2014). Due to this, agricultural production, the main source of life nowadays, has encountered a vital problem: ecological effects.

### ***Attitude Towards Organic Food***

Three independent variables affect consumer attitudes toward organic food (Rana & Paul, 2017). They are health consciousness, food safety, and environmental concern. Pham *et al.* (2019) proposed a framework showing three relationships depicted in Figure 1. Based on the framework, three hypotheses were tested:

H<sub>1</sub>: Health consciousness has a significant relationship with attitude towards organic food.

H<sub>2</sub>: Food safety concern has a significant relationship with attitude toward organic food.

H<sub>3</sub>: Environmental has a significant relationship with attitude toward organic food.

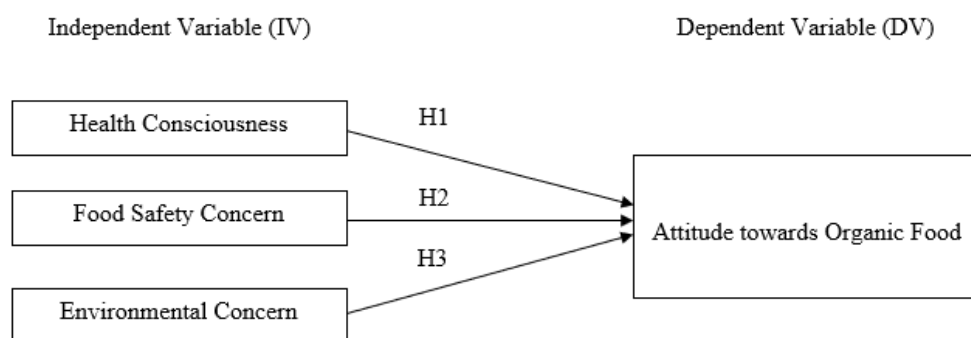


Figure 1: Study Framework

## **Methodology**

### ***Research Design***

This study investigated the determinants influencing consumer attitudes toward organic food. As such, this research was a causal study. The study was cross-sectional and adopted a quantitative method to analyze the data.

## ***Population and Sampling***

This study was conducted in the state of Selangor, one of the biggest economic centers in the country. The study employed purposive sampling in which only consumers residing in Selangor were selected as the respondents and the unit of analysis. Selangor recorded a population of 6.57 million, representing more than 1/5 of Malaysia's total population and one of Malaysia's biggest economic centers and urbanized states (World Population Review, 2021). The initial sample size was 384 based on Krejcie and Morgan (1970), but the adjusted sample size was 530 questionnaires. A total of 473 questionnaires were collected and valid for analysis.

## ***Instrumentation and Data Collection***

The self-administered questionnaires were adopted from Pham et al. (2019). The questionnaire used a seven-point Likert scale ranging from 1 for 'strongly disagree' to 7 for 'strongly agree.' Five main sections are (a) demographic information, (b) health consciousness, (c) food safety concern, (d) environmental concern, and (e) attitude towards organic food. Before the questionnaire was distributed, a pilot test was conducted, and the results showed to be valid and reliable. The self-administered questionnaires were distributed and collected using Google Forms via social media platforms like Twitter, WhatsApp, Instagram, and Facebook.

## **Data Analysis and Results**

### ***Demographic Profile***

A total of 375 female respondents (79.3%) and 98 male respondents (20.7%) participated in this study. Respondents aged 21-30 have 127 respondents (61.1%). For the district of residence, most of the respondents were from Petaling, which consists of 156 respondents (33%), followed by Hulu Langat (23.9%), Gombak (14%), Klang (11.8%), Sepang (6.3%). Kuala Langat, Hulu Selangor, Kuala Selangor, and Sabak Bernam all recorded below 4 percent.

### ***Correlation Analysis***

Table 4.7: Correlation Coefficient

Variable		Health concious	Food safety concern	Environmental concern	Attitude towards organic food
Health concious	Pearson correlation	1	0.415**	0.290**	0.309**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	473	473	473	473
Food safety concern	Pearson correlation	0.415**	1	0.364**	0.440**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	473	473	473	473
Environmental concern	Pearson correlation	0.290**	0.364**	1	0.322**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	473	473	473	473
Attitude towards organic food	Pearson correlation	0.309**	0.440**	0.322**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	473	473	473	473

\*\*Correlation is significant at the 0.01 level (2-tailed).

A Pearson correlation coefficient analysis was used to measure the relationship between variables based on the study's hypotheses. Hypothesis one outlined that health consciousness has a significant relationship with attitude towards organic food. Hypothesis two stated that there is a significant relationship between food safety concerns and attitudes towards organic food. Hypothesis three of the study, suggested that environmental concern has a significant relationship with attitude towards organic food. Table 4.7 shows the results of the analysis.

Objective one of the study assessed the relationship between health consciousness and attitude toward organic food. Correlation analysis assessed the relationship between health consciousness and attitude toward organic food. showed the value of  $r = 0.309$  with the significant value of  $p > 0.005$ . Thus, it indicates that health consciousness was positively correlated at a moderate level ( $r = 0.309, p < 0.05$ ). Therefore, hypothesis one was accepted. This result is consistent with previous research by Nagaraj (2021), which found that health consciousness has a favorable attitude toward organic food, indicating that consumers care about their health. This is also supported by Pham *et al.* (2019), who outlined that egoistic motives like health awareness influence consumer attitudes toward organic food. Apaolaza *et al.* (2018) also discovered a significant correlation between consumer health consciousness and organic food consumption. Similarly, Ghazali *et al.* (2017) also found that purchasers' attitudes toward organic food were primarily influenced by health concerns for themselves and their families.

Next, objective two of the study was to measure the relationship between food safety concerns and attitudes toward organic food. The Pearson correlation between food safety concern and attitude towards organic food showed a moderate positive linear relationship between these two variables ( $r = 0.440, p < 0.05$ ). Since the variables are significantly correlated, thus hypothesis two was accepted. This finding was consistent with Wang, Gao, and Shen (2018), who concluded that demands for safe food supplies, particularly organic food, increased due to ongoing concerns with food safety incidents and food-related diseases. Consumers are certain that eating organic food is safer and less harmful for their health than conventional food. (Boobalan & Nachimutu, 2020). Moreover, research by Iqbal *et al.* (2021) shows a positive influence of food safety concerns toward attitudes on customers' willingness to purchase organically grown foods. This indicates that respondents are critically aware of food safety, specifically over residues from chemical fertilizers and artificial additives, thus giving a positive attitude towards organic food. In short, organic food is generally considered completely safe for consumers to consume.

Objective three of this study was to evaluate the relationship between environmental concerns and attitudes toward organic food. Correlation analysis was used to evaluate the relationship between these two variables. The result of the Pearson correlation in Table 4.8 showed the value  $r = 0.322$  with a significant value of  $p > 0.05$ . This indicates that environmental concern was positively correlated at a moderate level ( $r = 0.322, p < 0.05$ ). Hence, hypothesis three was accepted. This finding corresponds with previous research by Yadav & Pathak (2016), who found a positive influence between environmental concern and attitude toward organic food. It demonstrates that consumers tend to believe that organic food is safer than conventional agriculture due to minimal agrochemical residues and lower levels of nitrate production (Doni *et al.*, 2019). According to prior studies, most respondents feel that environmental deterioration is a severe concern and believe eating organic foods may help preserve the environment (Krishna & Balasubramanian, 2018). Environmental concern is the degree to which individuals are aware of environmental problems and demonstrate a propensity to contribute to solve the problem (Paul *et al.*, 2016). They are convinced that excessive usage of artificial substances like chemical fertilizers can affect the nature's condition.

## Conclusion

Organic food is a natural product that is believed to contain minimal chemical waste and free from artificial substances like fertilizers and antibiotics. This study aimed to measure the factors affecting consumer attitudes toward organic food in Selangor, one of Malaysia's largest economic centers. The determinants that affect the

consumer attitude were illustrated by three factors: health consciousness, food safety concern, and environmental concern. Three objectives are: (a) to assess the relationship between health consciousness and attitude towards organic food, (b) to measure the relationship between food safety concern and attitude towards organic food, and (c) to evaluate the relationship between environmental concern and attitude towards organic food was achieved. The study found that there is a significant relationship between all variables. The study suggested that the awareness of organic food products among food consumers in Selangor is high, and their attitude toward organic food is positive. It revealed consumers are concerned about health issues, food safety, and the country's environment when consuming conventional produce. This can be overcome by inclining towards organic food that is nutritious, healthier, cleaner, and safer to consume than conventional food products.

Due to the growth of knowledge related to environmental deterioration and related issues, consumer behavior is shifting towards buying and consuming eco-friendly and organic products. Apart from being beneficial in enhancing body knowledge, particularly on the determinants that influence consumer attitude toward organic food, specifically in the Malaysian context, the study provides food marketers with deeper insights on consumers in assisting them to develop more effective marketing programs related to organic food. It could also provide valuable information, especially for the hospitality and food service industry, in promoting and developing organic-based food menus for consumers. Therefore, this is beneficial for the hospitality and food service industry to grab the opportunity by developing and promoting an organic food menu. The marketing effort should be implemented to attract this food consumer's attention. It will be profitable for the hospitality and food service industries and help preserve consumers' health and environment due to fewer artificial substances and additives. Thus, consumer attitude towards organic food plays an important role in shaping the food and beverage industry's future. Future researchers could consider examining consumers in other states in Malaysia for more meaningful insights.

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