

Exploring Contrasts in Food Choice Motives across Different Types of Consumers of Organic Food: A Pilot Study among Malaysian Adults

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Abstract

Interest in sustainability is on the rise worldwide, particularly within the food industry. This surge in interest has contributed to the growing popularity of organic food, as individuals perceive it to be advantageous for both environmental well-being and personal health. However, the consumption of organic food remains a niche practice, predominantly embraced by specific groups of people with personalized motives, particularly in developing nations. This study aims to address this issue by investigating the variations in food choice motives between regular organic food consumers and non-to-occasional organic food consumers among Malaysian adults. A total of 119 usable responses were collected through targeted online sampling, utilizing Facebook advertisements and a Google Form as the data collection tools for the study. The analysis yielded interesting findings, unveiling distinct prioritization of motives between the two consumer groups. Specifically, regular organic food consumers display greater concern for values such as risk and health factors, whereas non-to-occasional consumers prioritize practicality, placing emphasis on price and convenience. The findings of this preliminary study offer valuable insights for relevant stakeholders, enabling them to effectively support sustainability goals through food consumption. This involves a focus on the motivational factors that either encourage or hinder organic food consumption. Additionally, the study highlights the importance of understanding consumers' food choice motives in relation to their actual level of organic food consumption.

Keywords: Consumer behaviour, Developing countries, Food choice motives, Organic food consumption, Sustainability

Introduction

It is expected that rising global population, climate change, and natural resource depletion will put additional strain on global food systems and human health security in the future. To address these urgent and critical challenges, current food systems must be transformed to not only healthier but also safer and more sustainable (FAO, 2021). Similarly, Malaysia, as a developing country, wrestles with the significant challenge of striking a balance between economic development and environmental sustainability. Following this, there has been continuous commitment by Malaysia's government to enhancing sustainable food production and consumption through initiatives like the National Agrofood Policy 2011-2020 that emphasized on the development of a competitive and sustainable agro-food industry, RM50 million from Budget 2021 initiative under the Food Security Fund allocated to the Ministry of Agriculture and Food Industry (MAFI) as well as inclusion of sustainable development goals related to food security, sustainable agriculture, consumption, production, and natural resource use in the National Agrofood Policy 2.0 (2021-2030).

Despite these initiatives, organic food consumption remains scarce among Malaysian consumers. Consistent with global trends, a local study by Saleki et al. (2019) highlights a disparity between intention and actual behaviour in organic food consumption (Akbar et al., 2019; Canova et al., 2020; Sultan et al., 2020). This discrepancy may be attributed to the motivational factors influencing consumers' food choices, which steer their preferences for one food product over another. While consumers across different nations commonly place importance on the values and benefits associated with food, such as safety and freshness, individuals in developing countries tend to place a higher priority on price (Yang et al., 2021). Likewise, the higher cost of organic food in Malaysia, mainly due to imports and limited local supply (Somasundram et al., 2016), hinders sustainable food consumption. Moreover, the ambiguity of the benefits and authenticity of organic food products deters Malaysians from transitioning from conventional to organic food in their dietary preferences (Voon et al., 2011).

Transitioning consumers' dietary habits towards more environmentally friendly and healthier choices holds significant importance in attaining the goal of sustainable food consumption. This is due to the crucial role consumers play in shaping demand and facilitating policy interventions aimed at improving the overall supply of local organic food (He, 2013). Furthermore, such a shift would reduce dependence on imported products and offer consumers a diverse range of affordable organic food options. However, it is important to acknowledge that different consumer types prioritize specific motives in food choices. Regarding organic food, studies reveal that motives vary across regions and cultures. For instance, Polish adults emphasize health and food safety aspects (Żakowska-Biemans, 2011), while Italians prioritize identity and ethics (Rana & Paul, 2017). Danish consumers view organic food as healthy and pure (Ditlevsen et al., 2019), and in Thailand, local origin, animal welfare, and environmental attributes drive organic food consumption intentions (Ueasangkomsate and Santiteerakul, 2016).

Notably, the Covid-19 pandemic is anticipated to reshape global food consumption preferences, leading to a change in food choice motives. People are becoming more inclined to choose local food products due to heightened concerns about food safety and a growing embrace of sustainable food choices (Latip et al., 2021; Marty et al., 2021; Qi & Ploeger, 2021). Additionally, lockdowns imposed by the pandemic have brought about changes in food choice motives among consumers in France, with an emphasis on mood, health, ethics, and natural content. (Marty et al., 2021). Consumers have become more health-focused, paying greater

attention to food labels and ingredients. Although price remains a significant factor, safety has gained even greater importance (Śmiglak-Krajewska & Wojciechowska-Solis, 2021).

Existing research has primarily focused on factors related to organic food consumption among both organic and non-organic food consumers. However, it is worth understanding that these two groups might differ due to their prioritization of certain motives for food choices. Exploring these differences is critical for understanding the trade-offs that consumers make when choosing food. Furthermore, there is little research on food choices in Malaysia, particularly organic food consumption. Therefore, the primary objective of this study was to examine food choice motives across different types of consumers, classified by their frequency of consuming various types of organic food.

Methodology

Data collection

This cross-sectional study utilized online sampling, recruiting respondents through a dedicated Facebook advertisement containing a questionnaire link in the form of a Google Form. Targeted sampling was chosen due to the relatively low prevalence of organic food consumption in Malaysia, and the absence of a defined sample framework that is challenging to assess (Schneider & Harknett, 2019; Zhang et al., 2020). Specifically, the Facebook ads were designed to target Malaysian users aged 18 and above, who either had knowledge about organic food or demonstrated interest in seeking organic food.

Respondents were screened using inclusion and exclusion criteria questions within the Google Form. The criteria included being a Malaysian citizen residing in any state, possessing fluency in either Malay or English, and having the autonomy to make food consumption decisions based on their personal needs, preferences, and beliefs. Only those who met all inclusion criteria were allowed to complete the entire questionnaire, while others who did not were directed to the end of the survey and subsequently excluded from the dataset.

A total of 119 usable responses were collected, meeting the minimum required sample size of 102, as calculated using an online calculator available on www.danielsoper.com. This calculation considered an anticipated effect size of Cohen's $d = 0.5$, a desired statistical power level of 0.8, and a significance level (alpha) of 0.05 for independent t-test analysis. This pilot survey was conducted in August 2020 after obtaining ethical approval from the Ethics Committee for Research Involving Human Subjects (JKEUPM) at Universiti Putra Malaysia.

Study instrument

The instrument was designed to collect data on actual organic food consumption, motivation factors for food choice, and sociodemographic characteristics. Data on actual consumption were obtained through self-reporting against twelve groups of organic food within a year, using a 5-point Likert frequency scale: 1="never; no intake," 2="rarely; once or twice a year," 3="sometimes; once or twice a month," 4="often; once a week," and 5="always; more than once a week." Respondents were asked, "How often do you buy the following organic food for your own consumption?" The scale was adapted from previous studies (Kesse-Guyot et al., 2013; Nuttavuthisit & Thøgersen, 2017), with modifications to suit the current study setting based on organic food categories at Jaya Grocer (the fastest-growing local chain) (USDA, 2016), with a Cronbach's alpha of 0.95, as shown in Table 1.

Table 1

Organic food group products

Product
1. Organic fruits or vegetables
2. Organic dairy & beverages (e.g., juice, milk, soy, oat, tea, coffee, puree or cordial)
3. Organic chicken or meat products
4. Organic rice, grains or dried goods (e.g., dried almond, cashew nuts, quinoa or chia seeds)
5. Organic noodles or pasta
6. Organic sauces, condiments or oil (e.g., soy sauce, apple cider coconut oil or olive oil)
7. Organic herbs or spices (e.g., chilli flakes, black pepper or cinnamon powder)
8. Organic cereal
9. Organic biscuits or snacks
10. Organic spreads or honey
11. Organic sugar or salt
12. Other organic product(s)

Cronbach alpha = .95

Meanwhile, questions regarding the motivations behind food choice were derived from the Food Choice Questionnaire (FCQ) developed by Steptoe et al. (1995), with additional items related to the natural content factor (Lockie et al., 2002), as well as supplementary factors including a 3-item risk perception factor (Abdul Rahman et al., 2013) and a 2-item religion factor, the latter being particularly significant in food choice among the Malaysian community (Asma et al., 2010). As a result, the modified food choice motives section of the questionnaire encompassed a total of 11 factors with 44 items. All factors demonstrated a Cronbach's alpha greater than 0.70, indicating a strong internal consistency of the instrument, as displayed in Table 2. For each statement, respondents were asked to indicate their level of agreement on a 5-point Likert scale, where 1=Not at all important and 5=extremely important.

Table 2
Food Choice Questionnaire (FCQ)

It is important to me that the food I eat on a typical day		Cronbach Alpha
Health (6 items)	Is high in fibre Is Nutritious Contains a lot of vitamins and minerals Is high in protein Keeps me healthy Is good for my skin/teeth/hair/nails/etc.	.89
Mood (5 items)	Cheer me up Helps me cope with life Keeps me awake Helps me relax Makes me feel good	.91
Convenience (5 items)	Is easy to prepare Is easily available in shops/supermarkets Can be cooked very simply Takes no time to prepare Can be bought in shops close to where I live/work	.90
Sensory appeal (4 items)	Taste good Smells nice Has a pleasant structure Looks nice	.88
Natural content + (6 items)	Contains no additives Contains natural ingredients Contains no artificial ingredients Certified free of chemical and hormone residues Is as unprocessed as possible Is prepared in a way that preserves its natural goodness	.93
Price (3 items)	Is not expensive Is cheap Is good value for money	.87
Weight control (3 items)	Is low in calories Is low in fat Helps me control my weight	.95
Familiarity (3 items)	Is familiar Is like the food I ate when I was child Is what I usually eat	.90
Ethical concern (3 items)	Is prepared in an environmentally friendly way Comes from the country I approve officially Has the country origin clearly marked	.86
Religion+ (2 items)	Has halal certification from the government Is permissible by religion	.96
Risk perception+ (4 items)	Is free from genetically modified products Is made from ingredient that I know Is free from "food scare" Has a food label	.85

Overall Cronbach alpha = .96

+ added items

Source: Adapted from Abdul Rahman et al., 2013; Asma et al., 2010; Lockie et al., 2002; Steptoe et al., 1995

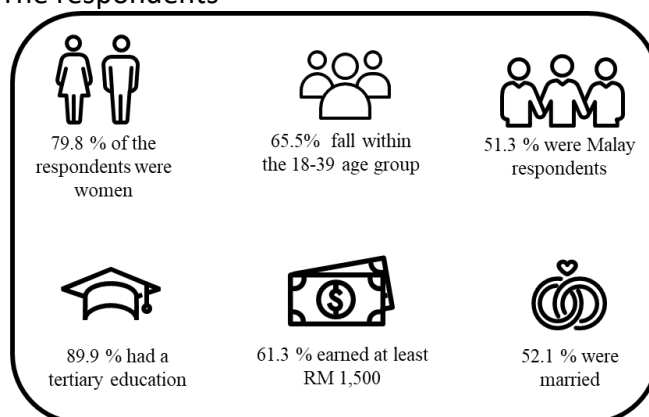
Statistical analysis

Descriptive analysis encompassing frequency, percentage, and mean scores was employed to illustrate the sociodemographic attributes of the respondents and to describe the studied variables. An independent t-test was utilized to assess the differences in food choice motives between non-to-occasional and regular organic food consumers. The Statistical Package for the Social Sciences (SPSS version 20.0, SPSS Inc., Chicago, IL, 2011) was employed for the aforementioned statistical analyses. Statistical significance was confirmed when the p-value was less than 0.05.

Results and Discussions

Based on Figure 1, this pilot study involved a higher proportion of women (79.8%) than men (20.2%), which is commonly observed as women often show a greater interest in sustainability (García-González et al., 2020). The sample primarily consisted of younger adults within the age group of 18-39 years (65.5%), possibly due to their higher engagement with social media compared to older adults. In terms of racial distribution, it closely mirrored the national demographic, with 51.3% Malay, followed by Chinese (39.5%), Indian (5.9%), and other ethnicities (3.4%).

Figure 1
The respondents



The sample criteria included individuals with a monthly income of RM 1,500 or more, which aligns with previous research on organic food consumption. Prior studies found that individuals with higher education and income tend to exhibit a more positive attitude toward organic food consumption (Chen et al., 2014; von Meyer-Höfer et al., 2015). In terms of marital status, the sample was well-balanced, with 52.1% being single and the remainder being married.

The frequency of actual consumption of organic food among Malaysian adults

Table 3 displays the proportion distribution of the frequency of organic Food Consumption across twelve (12) types of organic food products. Organic cereal was found to be the least favoured option, with the highest percentage (20.2%) indicating that more respondents never consume this particular organic food product. This is followed by "other organic products", where the highest percentage of 26.9% suggests that these items are consumed relatively infrequently, with only one or two occurrences per year.

On the other hand, several other organic food products demonstrate more favourable consumption patterns. For instance, organic fruits or vegetables are consumed sometimes (once or twice a month) by the highest percentage (39.5%) of respondents, indicating a

relatively common choice among consumers. Moreover, the highest percentage corresponds to organic chicken or meat products, indicating that this type of organic food is consumed about once a week (26.9%), suggesting consumers' preference for a protein source in their diet. More importantly, organic fruits or vegetables again show the highest percentage for organic food products that are consumed more than once a week (25.2%), underscoring their regular inclusion in consumers' food intake for a safer and more sustainable food option.

Table 3

Frequency of Organic Food Consumption by Product Category

Product	Percentage (%)				
	1	2	3	4	5
1. Organic fruits or vegetables	3.4	9.2	39.5	22.7	25.2
2. Organic dairy & beverages (e.g., juice, milk, soy, oat, tea, coffee, puree or cordial)	11.8	15.1	33.6	21.8	17.6
3. Organic chicken or meat products	9.2	21.8	27.7	26.9	14.3
4. Organic rice, grains or dried goods (e.g., dried almond, cashew nuts, quinoa or chia seeds)	7.6	17.6	37.0	19.3	18.5
5. Organic noodles or pasta	13.4	21.0	36.1	15.1	14.3
6. Organic sauces, condiments or oil (e.g., soy sauce, apple cider coconut oil or olive oil)	16	24.4	31.1	16.8	11.8
7. Organic herbs or spices (e.g., chilli flakes, black pepper or cinnamon powder)	16	20.2	28.6	19.3	16
8. Organic cereal	20.2	21.0	29.4	16.8	12.6
9. Organic biscuits or snacks	17.6	25.2	27.7	17.6	11.8
10. Organic spreads or honey	16.0	21.8	30.3	15.1	16.8
11. Organic sugar or salt	17.6	21.8	25.2	21.8	13.4
12. Other organic product(s)	18.5	26.9	25.2	20.2	9.2

Note: 1=Never (no intake); 2=Rarely (one or twice a year); 3=Sometimes (once or twice a month); 4=Often (once a week); 5=Always (more than once a week)

Bold numbers refer to the highest percentage for the frequency of organic food consumption across the various types of organic food products

However, as illustrated in Figure 2, only 42% of the respondents were categorized as regular organic food consumers, while the majority fell into the non-to-occasional group (58%). The non-to-occasional segment comprises individuals who reported never purchasing organic food or doing so only once or twice a month, with a mean score of less than or equal to 3.00. Conversely, "regular consumers" are those who reported buying organic food "often" (once a week) or "always" (more than once a week), with a mean score exceeding 3.00. This midpoint cut-off is determined through a categorization method involving the calculation of mean scores for the frequency of twelve different organic food groups consumed within a year. The categorization is based on an averaged midpoint of 3, which falls between the lowest possible score (1) and the highest possible score (5)(Badsar, 2011; Moon et al., 2017).

Figure 2

Distribution of consumers based on frequency of organic food consumption

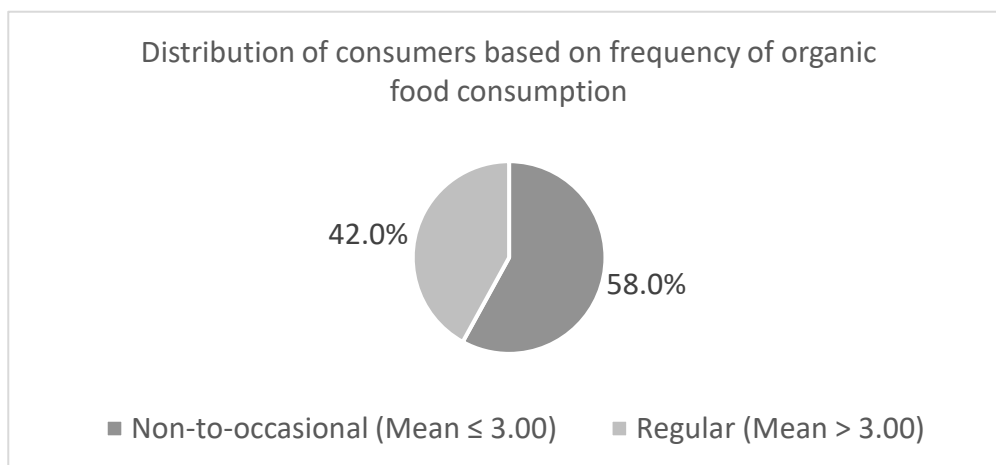


Table 4 presents the mean scores of each food choice motive among the respondents. Notably, the convenience factor received the highest mean score ($M = 4.34$, $S.D. = 0.72$), followed by price ($M = 4.32$, $S.D. = 0.73$), risk perception ($M = 4.31$, $S.D. = 0.77$), health ($M = 4.28$, $S.D. = 0.68$), and natural ($M = 4.10$, $S.D. = 0.83$). These five factors were rated higher compared to the other factors: weight control ($M = 4.08$, $S.D. = 0.97$), mood ($M = 4.03$, $S.D. = 0.86$), sensory appeal ($M = 3.86$, $S.D. = 0.88$), religion ($M = 3.72$, $S.D. = 1.49$), and familiarity ($M = 3.28$, $S.D. = 1.11$).

Table 4

Mean scores for each food choice motive

Food choice motives	Mean score \pm S.D.
Health	4.28 \pm 0.68
Mood	4.03 \pm 0.86
Convenience	4.34 \pm 0.72
Sensory appeal	3.86 \pm 0.88
Natural	4.10 \pm 0.83
Price	4.32 \pm 0.73
Weight control	4.08 \pm 0.97
Familiarity	3.28 \pm 1.11
Religion	3.72 \pm 1.49
Risk perception	4.31 \pm 0.77

The prioritization of these five factors can be attributed to the implementation of the movement control order (MCO) by the Malaysian government in response to the Covid-19 pandemic during the data collection period in August 2020. Moreover, the relatively low vaccination rate has heightened concerns about survival, prompting individuals to emphasize accessible, affordable, safer, and sustainable food consumption. Similar trends, wherein people demonstrate a greater inclination towards sustainability that impacts both human health and the environment, have been observed in studies conducted in other countries, including France (Marty et al., 2021), China (Qi & Ploeger, 2021), Poland (Śmiglak-Krajewska & Wojciechowska-Solis, 2021). Despite these insights, the subsequent findings reveal

differences in food choice motives between regular organic food consumers and non-to-occasional ones.

Food Choice Motives across Non-to-Occasional and Regular Organic Food Consumers

Mean scores of food choice motives across the two groups of consumers are presented in Table 5. Notably, there are significant differences in mean scores for all food choice motives between non-to-occasional and regular organic food consumers, except for sensory appeal and price. Particularly, regular organic food consumers in Malaysia are considerably more motivated than non-to-occasional consumers, as they place significantly higher concern on health, natural, risk perception, ethical concerns, weight control, and other motives including convenience, mood, familiarity, and religion when making food choices ($p < 0.05$).

Table 5

Differences in Food Choice Motives between Non-to-Occasional and Regular Organic Food Consumers

Factors	Mean score \pm S.D.		t-value	p-value
	Non-to-occasional organic food consumer	Regular organic food consumer		
Health	4.09 \pm 0.77	4.56 \pm 0.40	-4.32	.000
Mood	3.82 \pm 0.92	4.31 \pm 0.66	-3.35	.001
Convenience	4.21 \pm 0.82	4.52 \pm 0.52	-2.49	.014
Sensory appeal	3.73 \pm 0.90	4.03 \pm 0.83	-1.87	.063
Natural	3.90 \pm 0.87	4.36 \pm 0.68	-3.11	.002
Price	4.32 \pm 0.76	4.31 \pm 0.71	0.04	.968
Weight control	3.87 \pm 1.06	4.37 \pm 0.75	-2.86	.005
Familiarity	3.09 \pm .1.09	3.55 \pm 1.10	-2.26	.025
Religion	3.41 \pm 1.57	4.15 \pm 1.27	-2.85	.005
Risk perception	4.10 \pm 0.81	4.60 \pm 0.62	-3.66	.000
Ethical concern	3.47 \pm 1.05	4.22 \pm 0.72	-4.62	.000

However, Table 5 also demonstrates that there are no significant differences between regular organic food consumers and non-to-occasional consumers in relation to price and sensory appeal. In other words, this suggests that, overall, price and sensory appeal factors are important considerations when making food choices for consumers, regardless of whether they are regular organic food consumers or not (Lockie et al., 2002; Russell et al., 2015). Moreover, these factors could be classified as marketing factors that may influence consumers' consumption of organic food. As such, organic food is generally sold at a higher price (Lee & Yun, 2015; Song & Liew, 2019) but is perceived to have a less appealing appearance compared to conventional ones, which are generally more attractive (Truong et al., 2021). Furthermore, an interesting trend emerges in the levels of importance of each food choice motive between the non-to-occasional and regular organic food consumers, as shown in Table 6.

Table 6

Food choice motives ranking between Non-to-Occasional and Regular Organic Food Consumers

Food choice motives ranking	Non-to-occasional organic food consumer	Regular organic food consumer
1	Price	Risk perception
2	Convenience	Health
3	Risk perception	Convenience
4	Health	Weight control
5	Natural	Natural
6	Weight control	Price
7	Mood	Mood
8	Sensory appeal	Ethical concern
9	Ethical concern	Religion
10	Religion	Sensory appeal
11	Familiarity	Familiarity

Based on Table 6, it is apparent that the highest mean score for non-to-occasional organic food consumers' motive for food choice is price ($M = 4.32$, $S.D. = 0.76$), followed by convenience factors ($M = 4.21$, $S.D. = 0.82$), compared to other factors. Meanwhile, for regular organic food consumers, the most important motives were risk perception ($M = 4.60$, $S.D. = 0.62$) and health factors ($M = 4.56$, $S.D. = 0.40$). These findings align with a study by Baudry et al. (2017) among 22,366 participants in France, which concluded that consumers characterized as "Unhealthy conventional food big eaters" (with high intake and very low consumption of organic food products) had the highest mean score for the "price" dimension, while "green organic food eaters" (with very high consumption of organic food products and high intake of plant-based foods) prioritized health factors more.

Nonetheless, both groups prioritize the convenience factor, indirectly highlighting the significance of food product accessibility. Similarly, both sets of consumers emphasize the importance of the natural factor, indicating a shared value in avoiding synthetic food ingredients. Furthermore, weight control ranks among the top five motives for regular organic food consumers. This could be due to higher health consciousness among this group of consumers (Aziz et al., 2020; Wang, 2020) where they are concerned about body weight and maintain a healthier lifestyle apart from engaging in physical activity and smoking behaviour (Eisinger-Watzl et al., 2015). Lastly, both groups of consumers similarly ranked the least five important factors, including mood, sensory appeal, ethical concerns, religion, and familiarity factors. This suggests that both sets of consumers assigned similar importance to the least five factors such as mood, sensory appeal experience, ethical concerns, religion, and familiarity, implying that organic consumers, despite popular stereotypes, share common values with broader society.

Recommendation and Conclusion

This study sheds light on significant insights regarding the preferences and priorities of regular and non-occasional organic food consumers in making food choices. Particularly, regular organic food consumers place a higher emphasis on risk perception and health-related factors, while occasional consumers are more likely to prioritize price and convenience. In essence, regular organic food consumers lean towards values, while non-occasional ones

prioritize practicality. Furthermore, the study provides insights into the preference for certain types of organic food. Organic fruits or vegetables and organic chicken or meat products are more popular choices, whereas organic cereal is less familiar among the surveyed Malaysian adults. The key findings of the study are summarized in the table below.

Key findings	
Priorities	
<i>Regular organic food consumers</i>	Risk perception and health (Values)
<i>Non-to-occasional organic food consumers</i>	Price and convenience (Practicality)
Type of organic food	
<i>Most preferred</i>	Organic fruits or vegetables Organic chicken or meat products
<i>Less familiar</i>	Organic cereal

Moreover, this research contributes to both theoretical and practical implications. The identification of specific food choice motives that significantly differentiate consumers based on their frequency of organic food consumption provides valuable theoretical evidence for understanding consumer food choice motives in the context of sustainable food consumption in a developing nation. Simultaneously, the study's insights hold practical significance for policymakers, stakeholders, and industry players, providing a foundation for informed decision-making and the formulation of effective strategies to promote sustainable practices within Malaysia's growing organic food industry.

Although the study's findings offer interesting insights that could aid relevant stakeholders in understanding the importance of motives related to organic food choices and encouraging greater consumer engagement, its limited generalizability is noteworthy due to the small-scale nature of the study. Future research employing a similar sampling technique but with a larger sample size would be beneficial to further substantiate the study's findings and provide a broader spectrum of potent food choice motives associated with organic food consumption.

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