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FOOD NEOPHOBIA AND ACCEPTANCE OF TRADITIONAL FOODS AMONG CONSUMERS IN KENINGAU, SABAH, MALAYSIA

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Abstract:

This study examined the level of neophobia among local consumers in Keningau, Sabah, and its association with sociodemographic factors. Food neophobia, an aversion to eating or avoiding unusual foods, can affect consumer behaviour and openness to food diversity. A total of 423 respondents from Keningau participated in the study. Data was collected using structured questionnaires and analysed through descriptive statistics and correlation tests. The findings showed that the overall level of food neophobia among local consumers was neutral (score: 33-46), with 56% (n=237) of respondents falling into the middle range of the food neophobia scale, while the lowest was neophobia (score: 47-67) with 5.7% (n=24). Sociodemographic analysis revealed moderate levels of food neophobia (neutral) in the following age categories of 18-24 years (n=82), Muslim (n=189), female (n=151), SPM (n=83), and from Kadazan/Dusun ethnicity (n=168). This group showed a moderate or neutral tendency to unusual traditional foods compared to other demographic categories. Correlation results ($r^2 = 0.197$) have identified a weak but significant relationship between levels of food neophobia and the willingness to try traditional non-local food, indicating a relationship between levels of neophobia and willingness factor among consumers in the district. However, it is seen to be very weak. Overall, the study offers insights into consumer tendencies in the Keningau district, Sabah, regarding food neophobia. These findings can be served as basis for future research on aspects of food identity and the impact of accepting of traditional foods that do not originate from Sabah. Furthermore, it provides constructive guidance on food marketing strategies while assisting tourism policymakers in effectively incorporating local heritage food in Sabah.

Keywords:

Food Neophobia, Consumer Behaviour, Traditional Food, Food Acceptance

Introduction

Food neophobia, “the psychological reluctance to try unfamiliar foods”, is common in both children and adults, serving as an evolutionary precaution against potential contaminants (Rangka et al., 2023). Globally, prevalence varies approximately 49.6% of Saudi university students exhibit food neophobia (Alshahrani et al., 2025), while in Romania, 69.2% of adults are classified as “neutral” and 18.2% as neophobes (Bugi et al., 2024). This finding highlights that reluctance toward unfamiliar foods remains widespread and significantly influences dietary choices. Food neophobia also affects individuals’ willingness to try non-traditional foods, as highly neophobic consumers are more likely to reject new culinary experiences (Sahrin et al., 2023). The growing globalisation of food systems has introduced a wider variety of foreign and non-traditional foods into local markets, encouraging culinary exploration in many regions (Taylor & Gedfroy, 2023). While some consumers exhibit food neophilia, “an eagerness to try novel foods”, others remain resistant (Lee et al., 2019). This varying willingness to adopt non-traditional foods has implications for dietary diversity, nutrition, and cultural food identity. In Malaysia, particularly in Sabah, food plays an essential role in shaping cultural identity. Traditional ethnic foods are not only vital for daily consumption but also represent significant heritage, rituals, and long-standing culinary practices (Sapawi et al., 2019).

Literature Review

Food neophobia, first define as the “reluctance to eat or avoidance of novel foods,” is believed to have evolved as a biological defence mechanism to protect individuals from potentially toxic substances. Jaeger et al. (2021) conceptualise it as a personal trait that significantly influences food preferences and choices. In Malaysia, research on food neophobia is emerging. Amir et al. (2023) stated that among 399 Malaysian participants, food neophobia was more prevalent among Gen Z males, individuals with lower education and income levels, and those expressing scepticism about halal status and unusual food appearance. In the context of Sabah, Sapawi et al. (2019) examined domestic tourists from Peninsular Malaysia. They revealed that concerns about food safety and unfamiliar presentation contributed to moderate neophobia levels toward Sabah’s ethnic traditional foods. Sociodemographic factors such as region of origin, religion, and education significantly influenced tourists’ willingness to try these ethnic dishes. These findings indicate that food neophobia is shaped by cultural, religious, and educational backgrounds, influencing consumer behaviour toward novel or traditional foods.

Non-Local Traditional Food

Willingness to try non-local traditional foods is a complex consumer behaviour shaped by psychological, cultural and social influences. Non-local traditional foods or non-traditional foods refer to items that are foreign or unfamiliar within a specific cultural or geographical context and are generally excluded from a community’s routine diet or traditional culinary practices. In Sabah, where traditional food customs remain deeply embedded in local identity, openness toward non-traditional foods may be influenced by increased exposure to international cuisines through tourism, global trade, mass media, and digital platforms (Wuxiao et al, 2024). In this study, several examples of non-local traditional food are represented, including *Kerabu Beronok*, *Telur herba/ Telur pindang*, and *Belalang Goreng*. The study aims

to examine the level of food neophobia among Sabah consumers, and its relationship with sociodemographic characteristics and willingness to try non-local traditional foods.

Methodology

This employed a quantitative research approach to assess food neophobia and willingness to try non-local traditional food among local consumers in Keningau, Sabah. Data were collected both online and physically, targeting college students, public employees, and the general public. A non-probability convenience sampling method was used due to accessibility and voluntary participation. Based population size of 150,927, a minimum of 423 respondents were required. A structured questionnaire, adapted from Prescott et al, (2022) and Manohar et al. (2021), was used and comprised of 4 sections: Sociodemographic (5 items), Food Neophobia Scale (FNS) with 8 items on 7-point Likert scale and lastly Perception of non-traditional food using 3-point Likert scale. Data were analysed using SPSS software. Descriptive statistics (frequency and percentage) were used to summarise sociodemographic profiles and levels of food neophobia. The Food Neophobia Scale scores were categorised into three levels: Neophilia (10-32), Neutral (33-46) and Neophobia (47-70). Correlation analysis (Spearman's r) was conducted to determine the relationship between food neophobia levels and willingness to try non-traditional foods

Finding and Discussion

A total of 423 respondents participated in the study, with a majority being female (68.6%, $n=290$), Muslim (81.3%, $n=344$), and of Kadazan/Dusun ethnicity (72.1%, $n=305$). Most participants were young adults (18-34 years old), comprising 38.8% ($n=164$). and held a SPM (35%, $n=148$) or degree qualification (33.6%, $n=142$), as shown in Table 1. This demographic pattern aligns with previous Malaysian studies, where female respondents often dominate consumer behaviour research samples (Ismail et al., 2024). The prevalence of younger respondents reflects findings from Malaysian consumer studies, which report higher engagement among youth in surveys related to food choices and willingness to try new foods (Adzahar et al., 2024).

Table 1: Respondent Profile

	Category	Freq. (n=423)	(%)
Age	18-24	164	38.8
	25-34	116	27.4
	35-44	88	20.8
	45-54	23	5.4
	55-60	32	7.6
Religion	Islam	344	81.3
	Kristian	79	18.7
Gender	Male	133	31.4
	Female	290	68.6
Ethnicity	Kadazan/Dusun	305	72.1
	Murut	33	7.8
	Bajau	29	6.9
	Others	56	13.2
Education level	None	17	4
	SPM	148	35

STPM	72	17
Diploma	44	10.4
Degree	142	33.6

Level of Food Neophobia

The analysis of the Food Neophobia Scale (FNS) scores revealed that the majority of respondents (56%, n=237) exhibit a medium or neutral level of food neophobia (score:33-46), indicating a moderate openness to unfamiliar foods. Approximately 38.3% (n=162) demonstrated low food neophobia (neophilia) tendencies (score:10-32), suggesting a willingness to explore novel or non-traditional food. Only a small proportion (5.7%, n=24) were categorised as highly neophobia (score:47-70), reflecting strong avoidance of unfamiliar foods (Table 2). These results indicate that consumers in Keningau, Sabah generally hold a balanced attitude toward new foods, with a significant proportion being open to trying unfamiliar dishes. The presence of younger individuals is typically more receptive to novel food experiences (Adzahar et al., 2024). The predominance of neutral food neophobia levels among young adults that may be due to educational or successful food-related marketing, which reduces hesitation among respondents and fosters a broader acceptance of diverse cuisine found in Malaysia.

Table 2: Levels of Food Neophobia

Stages Of Food Neophobia	Freq. (n=423)	(%)
Low (Neophilia)	162	38.3
Medium (Neutral)	237	56
High (Neophobia)	24	5.7

*High (score:47-70); Medium (score:33-46); Low (score:10-32)

* Food Neophilia – openness/interest in novel foods; Food Neophobia – reluctance/avoidance of unfamiliar foods, Moderate/Neutral- neutral food attitude

Sociodemographic * Level of Food Neophobia

Figure 1 to 3 illustrates the distribution of food neophobia levels across different sociodemographic categories. The majority of respondents in all groups demonstrated neutral food attitudes, particularly among those aged 18-24 years (n=82) and 25-34 (n=73). Notably, younger respondents (18-24) had the highest number of highly neophobic individuals (n=15) compared to other age groups as shown in Figure 1. This finding suggests that while many younger consumers are open to trying new foods, a subset still exhibits avoidance of unfamiliar foods, consistent with prior research indicating developmental variability in food acceptance among young adults (Adzahar et al., 2024).

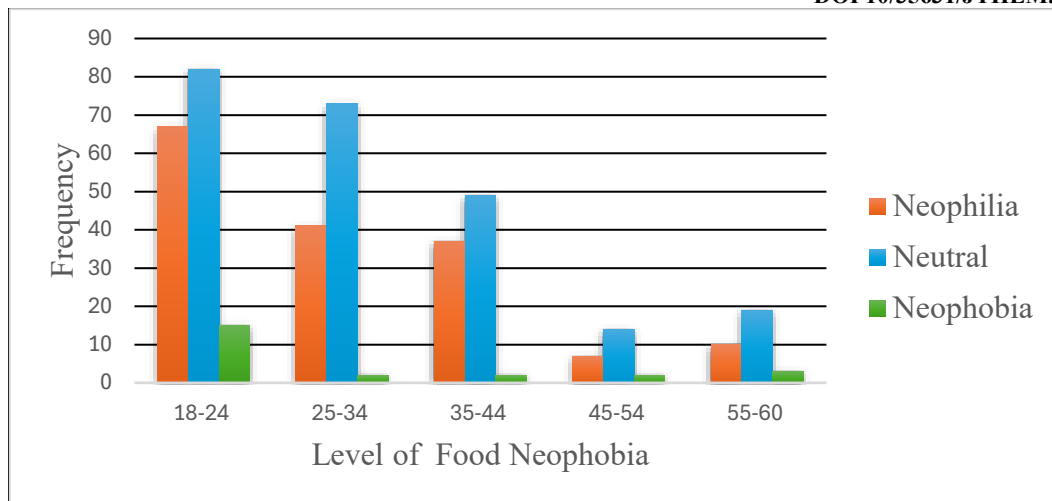


Figure 1: Age

In terms of religion, both Muslim (n=189) and Christian (n=48) respondents predominantly displayed Neutral attitudes, with few being highly Neophobia (n=18 and 6 respectively). Regarding gender (Figure 2), females accounted for a larger proportion of neutral responses (n=151) than males (n=86), aligning with findings that women often exhibit cautious yet moderate approaches to novel foods (Seo & Kim, 2023).

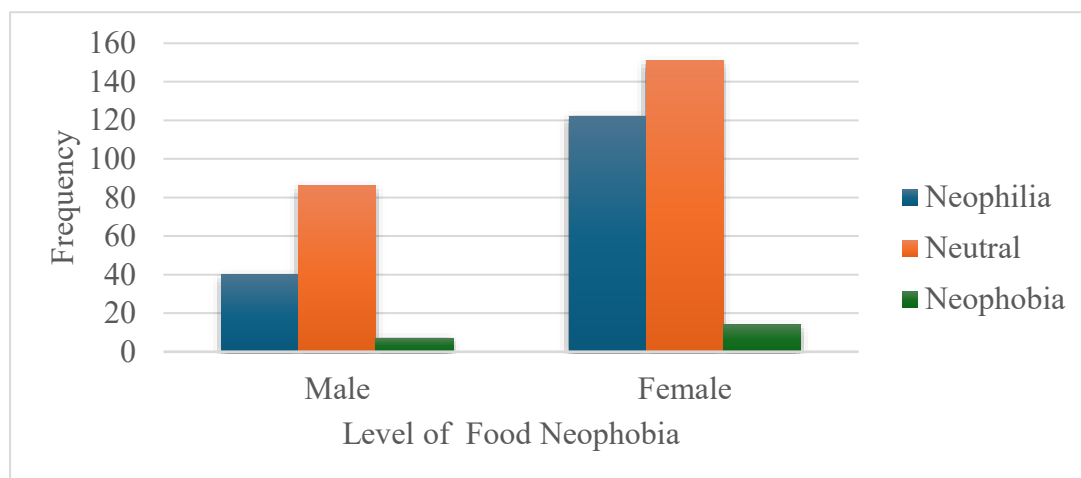


Figure 2: Gender

Across ethnic groups, the Kadazan/Dusun respondents dominated the sample, exhibiting the highest counts in both the neophilia (n=124) and neutral (n=168) categories, with relatively low counts of high neophobia (n=13). Similarly in Figure 3, the educational background revealed that respondents with a degree (n=68) and SPM (n=83) qualifications were mainly neutral, while highly neophobia individuals were few (n=14 and 8, respectively). Overall, these findings indicate that neutral food attitudes are prevalent across demographic groups in Keningau, Sabah. However, younger age groups and females showed slightly higher tendencies toward neophobia, aligning with previous studies in Malaysia (Adzahar et al., 2024).

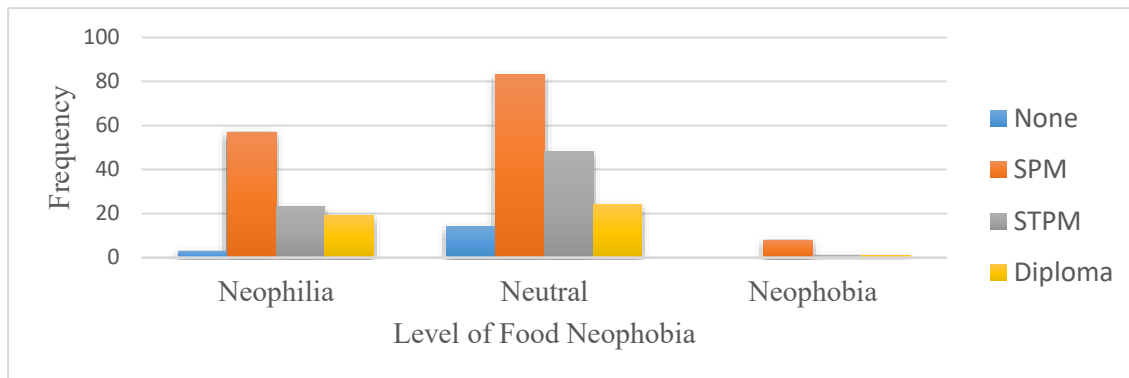


Figure 3: Education Background

Level of Food Neophobia*Willingness

The analysis revealed a weak relationship but significant relationship ($r^2=0.197$, $p<0.01$), suggesting that there is low levels of food neophobia are associated with willingness among consumers to try unfamiliar or non-traditional foods. In other words, most of respondents willing to experience the novel food experiences but at the same time they are cautious when engaging with the dishes outside their customary preferences. Examples of non-local traditional foods include *Kerabu Beronok*, *TelurHerba/Pindang* and *Belalang Goreng*. This finding highlights the is a positive acceptance when introducing novel or culturally diverse foods to neophobic consumers using culinary education to reduce resistance and enhance openness toward food diversity. Although the strength of the relationship is low, this finding aligns with previous research showing that higher food neophobia is consistently associated with rejection of novel foods, while individuals with lower neophobia (neophilia) are more curious and willing to engage in a new culinary experience (Seo & Kim, 2023).

Table 3: Level of Food Neophobia*Willingness

r^2	p-value
0.197	0.001*

* $p<0.01$

Conclusion and Recommendation

The study revealed that the majority of consumers in Keningau, Sabah exhibited moderate or neutral food neophobia levels (56%), with a substantial proportion being neophilia (38.3%) and only a small minority highly neophobic (5.7%). Analysis of sociodemographic factors (Table 3) showed that younger respondents, particularly those aged 18-34 years and individuals with higher levels of education, were more likely to display neophilia or neutral attitudes. At the same times, females and certain ethnic groups demonstrated slightly more cautious tendencies. Correlation results showed a weak but significant relationship ($p<0.01$) between food neophobia and willingness to try non-traditional foods, suggesting that as reluctance increases, acceptance of unfamiliar foods declines. The findings indicate the food neophobia in Keningau is generally balanced, with openness to novel foods influenced by age, education and cultural background.

The finding highlights critical implication for the preservation of local traditional foods and the safeguarding of Sabah's unique culinary identity. The moderate level of openness among consumers suggests that there are opportunities to leverage culinary tourism as a platform to

introduce non-local traditional foods while simultaneously fostering deeper appreciation of indigenous cuisines. This balance can enhance cultural exchange without diminishing local heritage. For policymakers and food heritage advocates, the results underscore the importance of implementing structured initiatives such as educational campaigns, gastronomic festivals, and sustainable food programs. These efforts are essential to promote Sabah's culinary heritage and to raise public awareness of its cultural and ecological value. In doing so, stakeholders can mitigate the risks posed by modernisation and globalisation, ensuring that local foods traditions and biodiversity are preserved for future generations.

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