

Food Preferences, Cultural Beliefs and Socioeconomic Status Influencing Food Insecurity

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Abstract

Food insecurity is a significant problem that affects health, academic performance, and overall well-being, particularly among university students from low- and middle-income households. This study investigates the relationship between food preferences, cultural beliefs, and socioeconomic status towards food insecurity among students at Universiti Teknologi MARA (UiTM) Terengganu Branch. A quantitative research design was employed using a structured questionnaire administered to 372 respondents. Section A collected demographic data using nominal and ordinal scales, while Sections B to D assessed the independent and dependant variables on a five-point Likert scale. Data were analysed using descriptive statistics and multiple regression analysis. Results revealed that all three factors significantly predicted

food insecurity, with socioeconomic status emerging as the strongest predictor. The results confirmed that the model explained a substantial proportion of the variance in food insecurity. The findings underscore the multifactorial nature of food insecurity and highlight the need for targeted interventions that integrate financial assistance, culturally inclusive dietary strategies, and nutrition education. This study contributes empirical evidence to the limited body of research on Malaysian university students, highlighting the role of food insecurity in shaping health, academic performance, and overall well-being.

Keywords:

Food insecurity, food preferences, culture beliefs, socioeconomic, university student

1 Introduction

Food insecurity means that there is insufficient safe, healthy food available or that food is hard to find. This is a big problem for health and well-being (USDA, 2024; British Red Cross, 2023), leading to a loss of appetite, nutrient deficiencies, and long-term health problems. Households with limited financial means, particularly those facing low income or unemployment, are disproportionately impacted (Paik et al., 2024). The effects are widespread, leading to a compromised immune system, stunted growth, and increased vulnerability to sickness. To solve the problem of food insecurity, access to healthy meals must be widespread, and the social and economic factors that affect health must be discussed (USDA, 2024). Food insecurity remains an issue in Malaysia, and as the population is expected to climb 40–42 million by 2050, fulfilling the food demands in Malaysia must be addressed immediately (Twentytwo13, 2024). In the realm of higher education, nearly 60% of students in Malaysian public institutions experience food poverty, affecting their health, academic achievement, and overall well-being. This work enhances the sparse body of research by emphasising food insecurity as a significant issue necessitating governmental and institutional support (Jamil et al., 2020; Faidi et al., 2023).

Socioeconomic level, food preference, and cultural beliefs are important factors linked to food insecurity. Socioeconomic status (SES) influences students' access to nutritious and diverse foods, and limited financial resources may restrict their dietary choices (Kazemian et al., 2022). Food preferences reflect individual priorities such as taste, price, and convenience, guiding students' eating patterns and can shape their diet quality (Melanson, 2022). Cultural beliefs also play a significant role, as personal customs and traditional practices often determine food choices. For example, students from collectivist backgrounds may continue family-style eating habits or cultural food practices even when living abroad (De-Jongh González et al., 2022). Together, SES, food preferences, and cultural beliefs intersect to determine students' access, choice, and their coping styles concerning food resources, and thus, shape food insecurity outcomes in higher-education contexts (Loofbourrow & Scherr, 2023).

In Malaysia, financial challenges in higher education have amplified food insecurity among students, particularly those from low- and middle-income families (Gider, 2019; Farisya et al., 2023). One study reported that 69% of their participants experienced some level of food insecurity, driven by high living costs and insufficient financial aid

(Latib et al., 2021). Poor eating habits are prevalent, including frequent meal avoidance, particularly breakfast, the high consumption of fast food, and the low intake of fruits and vegetables (Chen Yun et al., 2018; Haris et al., 2022). These behaviours can result in nutrient deficiencies, impaired cognitive function, and reduced academic performance (Banik, 2023). Furthermore, some cultural practices in Malaysia emphasise carbohydrate-rich foods with poor micronutrient balance, and certain food taboos may discourage consumption of nutrient-dense foods (Sharif Ishak et al., 2020; Mohamad Guntur Nangi et al., 2024). Although research has investigated food insecurity and eating behaviours, there is a paucity of studies addressing their interrelation within the context of Malaysian higher education, especially on regional campuses. This gap constrains comprehension of the interplay of socioeconomic, cultural, and behavioural elements that affect university students' nutrition and well-being.

Therefore, this study was conducted to determine the relationship between food preference, cultural beliefs, and socioeconomic level with food insecurity among UiTM Terengganu university students. Next, the most significant factor influencing food insecurity status will be identified here. The findings will provide institutions and student support programs with evidence-based insights to guide the development of policies and initiatives. Furthermore, they will contribute to the academic literature on food insecurity in higher education, serving as a foundation for future interventions aimed at improving students' academic performance and nutritional well-being.

2 Literature Review

2.1 Food Insecurity among Students

Food insecurity is a multifaceted issue that impacts individuals and communities globally. Defined by the United States Department of Agriculture (USDA) as “a household-level economic and social condition of limited or uncertain access to adequate food,” it transcends mere hunger to include factors related to food availability and access (Altman et al., 2020; United States Department of Agriculture, 2024). Contributing factors such as income disparity, unemployment, and racial or ethnic disparities and these factors can significantly affect food security levels (Hales & Coleman-Jensen, 2024). For example, households below 185% of the poverty line experience food insecurity at significantly higher rates (28.6%) compared to the national average (10.5%) (Hales & Coleman-Jensen, 2024).

In Malaysia, food insecurity is exacerbated by structural issues in the agriculture sector, such as low productivity, reliance on imports, and land ownership uncertainties (Yap, 2022). Despite abundant natural resources, Malaysia ranked 41st on the Global Food Security Index, with 6.2% of households below the absolute poverty line in 2022 (Sulaiman et al., 2021). Research highlights that food insecurity disproportionately affects low-income households, particularly in urban areas where food costs are higher (Altman et al., 2020; Mohamadpour et al., 2012).

Among university students, food insecurity is a prevalent issue, driven by financial constraints and high living costs. A study reveals that 22% of undergraduate students in Malaysian public universities experience food insecurity, with 14% categorised as having low food security and 8% as having very low food security (Ramlee et al., 2019). Similar observations have been found globally, with 21% of students at the University of Hawaii and 17% at Icelandic universities facing food insecurity (Chaparro et al., 2009; Repella et al., 2024). Food insecurity often leads to inadequate nutrient intake, associated with poor academic performance, chronic health issues, and mental health problems (Gaines et al., 2014; Lemp et al., 2023).

2.2 Student Food Preference and Food Insecurity Status

Food preferences are a key factor in shaping students' dietary intake and overall nutritional status, as they reflect individual food type preferences and common dietary practices. Preferences are often guided by taste, price, convenience, and cultural familiarity, which in turn influence dietary quality and health outcomes (Melanson, 2022). These choices are more critical among university students because limited time and financial resources can constrain access to healthier food options (Bruening et al., 2017). Recent studies among university students indicate that food insecurity significantly influences their eating habits, such as lowering frequency of healthy food group consumption (fruits, vegetables, protein sources) and increasing reliance on cheaper, less nutritious items. For example, a study at a large U.S. Midwestern university found that food-insecure undergraduates had 9% lower fruit intake, 9% lower vegetable intake, and higher added sugar consumption compared to food-secure peers (Mei et al., 2020).

Evidence shows that students who prefer inexpensive, energy-dense foods such as fried snacks or sugar-sweetened beverages are at greater risk of food insecurity, as these preferences are highly influenced by affordability and availability, especially in rural settings where limited access to diverse and nutritious foods (Ramlee et al., 2019). In Malaysia, studies have found that food-insecure students report lower intake of fruits, vegetables, and protein-rich foods, reflecting preferences shaped by both economic pressures and accessibility (Sulaiman et al., 2021). Similar findings were observed in rural colleges in the United States, where students' preference for convenience foods was associated with higher levels of food insecurity and poorer dietary quality (Soldavini & Berner, 2020).

Thus, food preferences not only guide eating behaviour but also act as a pathway through which socioeconomic and environmental constraints translate into food insecurity among higher-education students, particularly those in rural areas where food variety and affordability are limited. Based on the literature, H1 is stated as:

H1: There is a significant relationship between food preferences and food insecurity

2.3 Cultural Beliefs and Food Insecurity Status

Cultural and religious convictions significantly shape preferences, rules, and customs related to food selection, influencing eating behaviours and dietary patterns (Dwyer, 2021). Differences in food choices are often attributed to cultural and religious beliefs, as they establish what is considered acceptable or forbidden for consumption (Almutawaa, 2023). For example, numerous faiths prescribe dietary laws, prohibitions, and customs surrounding food intake, such as abstaining from certain meats, observing fasting rituals, and following specific preparation techniques. A prominent example can be seen in halal requirements in Islam and kosher practices in Judaism (BBC, 2024).

In Malaysia, where Islam is the official religion, adherence to halal dietary guidelines strongly shapes food choices, as pork and swine-derived products are strictly prohibited (Rahman et al., 2019). Halal food is generally accessible, but factors such as price, labeling, and availability still influence student purchasing decisions. A recent study among Malaysian undergraduates highlighted that price and place significantly affect willingness to purchase halal products (Sulaiman et al., 2021). To address affordability, initiatives such as *Menu Siswa Rahmah* at Universiti Kebangsaan Malaysia provide balanced halal meals at lower prices, reducing food-related financial stress (UKM, 2024). Although halal options are widespread, students from low-income backgrounds may still experience limited dietary diversity by relying on cheaper halal foods, linking cultural and religious practices with socioeconomic challenges (Rahman et al., 2019; Sulaiman et al., 2021; UKM, 2024).

Thus, cultural beliefs, in particular adherence to halal practices in the Muslim community, play a critical role in shaping food accessibility, affordability, and consumption, all of which directly influence food insecurity status among higher-education students in Malaysia. Based on the literature, H2 is stated as:

H2: There is a significant relationship between cultural beliefs and food insecurity

2.4 Student Socioeconomic and Food Insecurity Status

Socioeconomic status (SES) has a significant influence on dietary patterns and eating habits. Individuals from lower SES backgrounds generally consume less healthy diets compared to those from higher SES groups (Chen Abang Brian et al., 2023). In Malaysia, the socioeconomic effects of the post-COVID-19 pandemic disproportionately affected vulnerable groups such as women, youth, and migrant workers, exacerbating food access inequalities (Lim, 2020). Evidence from low- and middle-income countries also shows the strong link between SES and food insecurity. For example, research in Indonesia reported that women, individuals with lower levels of education, and those from poorer socioeconomic backgrounds were more likely to experience food insecurity, which negatively impacted their health (Isaura et al., 2022).

Among university students, SES is a crucial determinant of food insecurity. Limited financial capacity restricts students' ability to access consistent, nutritious, and culturally appropriate foods. One study at Universiti Putra Malaysia found that 62.8% of undergraduates were food insecure, with significant associations to low- and middle-

income households and reliance on financial aid (Ahmad et al., 2021). In rural university settings, SES may play an even greater role. One study conducted at two public universities in Terengganu revealed that 22% of students were food insecure. Although no statistically significant association was made regarding how food insecurity was affected by SES, rising living costs were identified as a major contributory factor (Ramlee et al., 2019).

Research highlights the coping strategies students employ during financial hardship. During the COVID-19 pandemic, Malaysian undergraduates reported that financial difficulties, rising living expenses, and inadequate scholarships or financial aid were key drivers of food insecurity (Ahmad et al., 2021). These findings indicate that socioeconomic status, encompassing income, financial aid, living costs, and parental education, is a key determinant of food insecurity among Malaysian university students. Rural students may be particularly vulnerable due to structural barriers that limit their ability to secure consistent and adequate food supplies. Thus, H3 is stated as:

H3: There is a significant relationship between socioeconomic status and food insecurity

2.5 Conceptual framework

Figure 1 shows the conceptual framework of the study. Three independent variables are involved in the study: food preferences, cultural beliefs, and socioeconomic status, while the dependent variable is the food insecurity of the students.

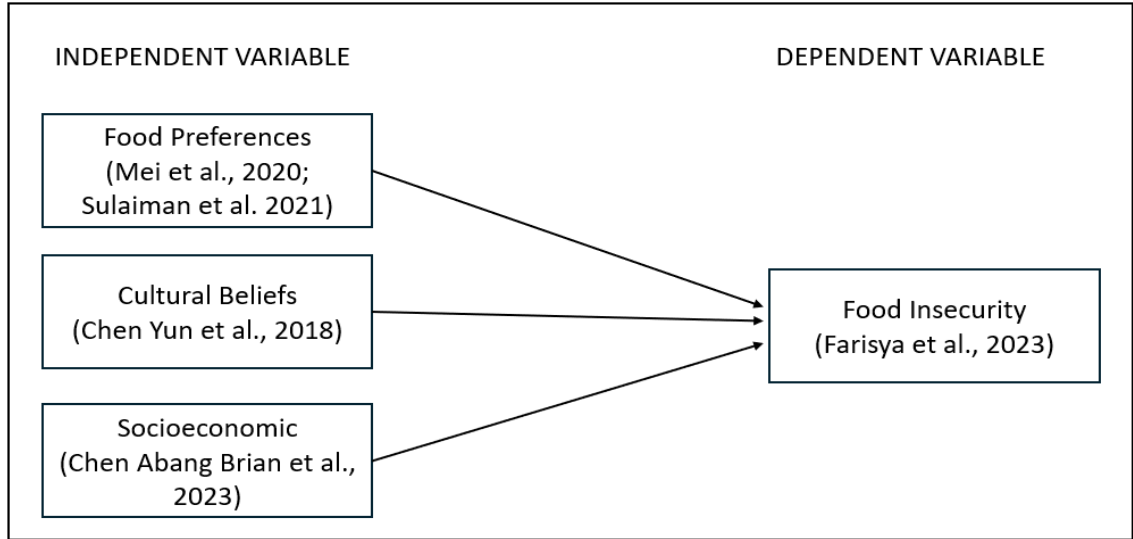


Figure 1: Conceptual Framework

3 Methodology

3.1 Research design

This study employed quantitative research and adopted correlational types of investigation. A correlational relationship indicates that at least two concepts or variables move simultaneously. This study has minimal interference from the researcher in a non-contrived setting since it is conducted in a normal environment and without any significant changes. The unit of analysis in this study is the individuals, identified as students from three campuses of UiTM Terengganu Branch: Dungun campus, Kuala Terengganu campus, and Bukit Besi campus.

3.2 Sampling Technique

Stratified random sampling was chosen in this study, and respondents were collected from students from the Dungun, Kuala Terengganu, and Bukit Besi campuses of UiTM Terengganu Branch. The respondents were divided into two strata: those studying a bachelor's degree and those studying a diploma from these three campuses. The total population across the three campuses is 7,921 students (UiTMCT, 2024). Thus, a minimum of 367 measurements or surveys is required to achieve a 95% confidence level, and the margin of error is $\pm 5\%$ of the measured (Sample Size Calculator, 2025). The required number of replies was set to 367 respondents. However, the responses were generated from 372 respondents.

3.3 Questionnaire Development

The questionnaire has five parts, as outlined in Table 1, and was distributed to the selected population using electronic methods, such as Google Forms. The data collection process from respondents took two months, from November to December 2024. Part A of the questionnaire collects respondents' demographic information, including gender, ethnicity, race, marital status, place of residence, campus, year of study, and financial sponsor. Items in this part employ nominal scales and ordinal scales to categorise participants. Meanwhile, Parts B, C, and D employ a five-point Likert scale, where 1 represents strongly disagree, and 5 represents strongly agree. A subset of 30 students who did not participate in the main study participated in the pilot test.

Table 1: Questionnaire sections and number of questions

Part	Variable	Questions	Sources
A	Socio-demographic profile	8	
B	Food Preferences	7	Al Sabbah et al. (2024); Teves & Narciso (2017); Dumlao (2017)
C	Cultural beliefs	5	Centers for Disease Control and Prevention (2024); Burt (2022)
D	Socioeconomic	7	Facina et al. (2023); Isaura et al. (2022)
E	Food Insecurity	8	Farisya et al. (2023)

3.4 Data Analysis

The study was conducted following ethical guidelines, with approval obtained from the State Research Committee of UiTMCT, Meeting No. 6/2025, with approval reference number 100-UiTMCTKD(PJI.23/4)JPN. The analysis consisted of reliability analysis, frequency distribution of the demographic profiles, and multiple regression analysis. Data analysis was performed using the Statistical Package for the Social Sciences Version 26. The steps involved in preparing for the study include data transformation, coding, and cleaning. The relationship between eating habits and food insecurity was examined using inferential statistical techniques, specifically multiple regression analysis.

4 Findings

4.1 Pilot test

Table 2 shows Cronbach's alpha value for independent and dependent variables. Reliability analysis assesses the internal consistency of the variable. Although some suggest a minimum of 0.65 to 0.8 for optimal dependability, a Cronbach's alpha coefficient of 0.6 is typically acceptable (Goforth, 2015). Based on the table, it can be concluded that all the variables involved in the study have good internal consistency.

Table 2: Cronbach's Alpha Value

Section	Variable	Cronbach's Alpha
B	Food Preferences	0.779
C	Cultural beliefs	0.776
D	Socioeconomic	0.691
E	Food Insecurity	0.919

4.2 Demographic Profile

Table 3 presents the socio-demographic characteristics of the respondents. The participants are predominantly male, comprising 52.2% of the total participants. The predominant religion is Islam at 99.7%, followed by others at 0.3%. In terms of ethnicity, it was mainly Malay at 99.5%. The predominant marital status is single at 99.7% and married constitutes, with the remaining 0.3% being single. The majority of respondents were present on campus (97.3%). Among the three campuses, the Dungun campus recorded the highest proportion of respondents at 71.0%, while the Kuala Terengganu campus followed with 16.1%. The Bukit Besi campus has the lowest rate at 12.9%. The predominant group of respondents (17.5%) comprises students from Semester 4, whereas the least represented group (9.1%) consists of students from Semester 7. Most of the respondents who answered yes (71.8%), showing that they were financial sponsor recipients.

Table 3: Socio-demographic profile

Variable	Category	Frequency	Percentage (%)
Gender	Female	178	47.8
	Male	194	52.2
Ethnicity	Malay	370	99.5
	Others	2	0.5
Race	Islam	371	99.7
	Others	1	0.3
Marital Status	Single	371	99.7
	Married	1	0.3
Place of Residence	On Campus	362	97.3
	Off Campus	9	2.4
Campus	Dungun campus	264	71.0
	Bukit Besi campus	48	12.9
	Kuala Terengganu campus	60	16.1
Semester	1	38	10.2
	2	39	10.5
	3	54	14.5
	4	65	17.5
	5	53	14.2
	6	48	12.9
	7	34	9.1
	8	41	11.0
Financial Sponsor Receiver	Yes	267	71.8
	No	105	28.2

N=372

4.3 Regression Analysis

The objective of regression analysis is to elucidate the relationship between variables. This study aims to investigate the correlation between food preferences, cultural beliefs, and socioeconomic status in connection with food insecurity. Table 4 presents the model summary, which includes an R-squared value. The finding indicated that 93% of the variance in food insecurity is attributable to food preferences, cultural attitudes, and socioeconomic factors, whereas the remaining seven percent is impacted by factors not examined in this study.

Table 4: Model Summary of Regression Analysis

Model	R	R Square	Model Summary	
			Adjusted R Square	Std. Error of the Estimate
1	0.965 ^a	0.930	0.930	0.327

Predictors: (Constant), cultural beliefs, socioeconomic, food preferences

The overall regression model was statistically significant, explaining a large proportion of variance in the dependent variable (Table 5). The ANOVA indicates that the regression sum of squares = 524.622, residual sum of squares = 39.274, and total sum of squares = 563.896, with degrees of freedom for the model df = 3 and residual df

= 368. The mean square for the regression is 174.874 and the residual mean square is 0.107, producing an F-statistic of $F(3, 368) = 1638.59$, $p < .001$. The significance level of $p < 0.001$ indicates a highly robust relationship, providing stronger evidence than the conventional threshold of $p < 0.05$.

Table 5: Analysis of Variance (ANOVA)

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	524.622	3	174.874	1638.59	0.000 ^b
	Residual	39.274	368	0.107	1	
	Total	563.896	371			

Dependent variable: Food Insecurity

Predictors: (Constant), cultural beliefs, socioeconomic status, food preferences

Multiple linear regression analysis was conducted to examine the influence of food preferences, cultural beliefs, and socioeconomic status on food insecurity among students. The results, as shown in Table 6, indicated that all three predictors were statistically significant ($p < 0.001$). Food preferences had a negative and significant effect on food insecurity ($B = -0.406$, $\beta = -0.379$, $t = -9.571$, $p < 0.001$), suggesting that more positive food preferences were associated with lower levels of food insecurity. Conversely, cultural beliefs showed a positive and significant relationship with food insecurity ($B = 0.191$, $\beta = 0.168$, $t = 3.761$, $p < 0.001$), indicating that cultural and belief-related factors may contribute to increased food insecurity.

Table 6: Coefficients of the Variable

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.473	0.174		8.477	0.000
	Food Preferences	-0.406	0.042	-0.379	-9.571	0.000
	Cultural beliefs	0.191	0.051	0.168	3.761	0.000
	Socioeconomic	0.750	0.027	0.782	27.489	0.000

Dependent variable: Food Insecurity

The correlation analysis (Table 7) revealed a significant negative association between socioeconomic status (SES) and food insecurity ($r = -.876$, $p < .001$), indicating that students with lower SES were more likely to experience higher levels of food insecurity. In the regression model, SES emerged as the strongest predictor ($B = 0.750$, $\beta = 0.782$, $t = 27.489$, $p < .001$). The direction of the relationship reflects the coding of SES, where higher numerical scores represented lower socioeconomic standing. Thus, the positive standardized beta is consistent with the negative correlation, both confirming that food insecurity increases as SES decreases.

Table 7: Correlation of the Variable

		Food Insecurity	Food Preferences	Culture and Beliefs	Socio-economic
Food Insecurity	Pearson Correlation	1	-0.876**	-0.871**	0.952**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	372	372	372	372
Food Preferences	Pearson Correlation	-0.876**	1	-0.836**	-0.874**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	372	372	372	372
Culture and Beliefs	Pearson Correlation	-0.871**	-0.836**	1	0.937**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	372	372	372	372
Socio-economic	Pearson Correlation	0.952**	-0.874**	0.937**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	372	372	372	372

**Correlation is significant at the 0.001 level (2-tailed)

5 Discussion

According to the regression analysis, food insecurity is most strongly influenced by socioeconomic factors ($\beta = 0.782$), followed by food preferences ($\beta = -0.379$) and cultural beliefs ($\beta = 0.168$). Due to increased dietary diversity and easier access to their favourite foods, those with more robust food preferences are less likely to face food insecurity, according to the negative coefficient for food preferences. The work of Phillips (2024), in contrast to this finding, contends that a preference for foods high in energy but low in nutrients can worsen food insecurity by increasing reliance on inexpensive, unhealthy options.

The analysis on resilience is highlighted by the high R-square value (0.930), which shows that the model accounts for 93% of the variation in food insecurity. The overall validity of the model is confirmed by the data (Table 5). Facina et al. (2023) emphasised the multifaceted nature of food insecurity and the significance of taking economic, cultural, and dietary aspects into account in intervention measures that are aligned with these findings.

The findings reveal that food preferences, cultural beliefs, and socioeconomic status significantly influence food insecurity among university students. Thus, hypotheses H1, H2, and H3 were accepted (see Table 8). The negative association between food preferences and food insecurity aligns with previous research indicating that individuals with broader or more adaptable food preferences can access available food options and maintain dietary adequacy (Melanson, 2022). Students with limited or restrictive food preferences may face greater challenges in meeting nutritional needs, especially when availability or affordability is constrained.

The positive relationship between cultural beliefs and food insecurity suggests that certain cultural norms, traditions, or food taboos could limit dietary diversity,

exacerbating food insecurity risks. This finding is consistent with Sharif Ishak et al. (2020) and Mohamad Guntur Nangi et al. (2024), who noted that cultural practices may prioritise carbohydrate-rich foods over nutrient-dense alternatives or restrict the consumption of certain beneficial foods.

Food insecurity is significantly linked to a lower socioeconomic level, as emphasised in other research. For instance, Joulaei et al. (2023) discovered that low SES was the primary factor causing food insecurity in 87.2% of slum households in southwest Iran ($p < 0.001$). Even after controlling for the rest of the demographic characteristics, household income and education level predicted food insecurity in elderly Tehranians (Pourebrahim et al., 2024). García-Iruretagoyena et al. (2025) found that food insecurity was linked to negative health outcomes among Spanish university students during the COVID-19 pandemic. Lower SES was substantially associated with greater rates of food insecurity. These findings match observations that showed that students from lower-income households face multiple barriers, including higher food prices, limited availability of healthy food in nearby outlets, and competing financial priorities, all of which contribute to higher food insecurity levels.

These results highlight the importance of addressing food insecurity through multifaceted interventions that consider both financial support and cultural sensitivity, and nutrition education. Targeted university-based initiatives such as subsidised healthy meals, culturally diverse food offerings, and nutrition counselling may help reduce food insecurity among students.

Table 8: Hypotheses and Decision

Hypotheses	Decision
H1: There is a significant relationship between food preferences and food insecurity.	Accepted
H2: There is a significant relationship between cultural beliefs and food insecurity.	Accepted
H3: There is a significant relationship between socioeconomic and food insecurity.	Accepted

6 Conclusion

This study revealed that food preference, cultural beliefs, and socioeconomic status are significant determinants of food insecurity among students at UiTM Terengganu Branch, with socioeconomic status emerging as the most influential predictor. These findings highlight the multifaceted nature of food insecurity and the call for holistic interventions that address financial barriers, support culturally inclusive and diverse dietary practices, and promote healthier food choices among university students. Specific policy recommendations should be aligned with global and national agendas. At the international level, the findings support efforts toward Sustainable Development Goal (SDG) 2: Zero Hunger and SDG 12: Responsible Consumption and Production, by encouraging sustainable access to affordable and nutritious food. Key national organisations like the Ministry of Agriculture and Food Security (MAFS), the Ministry of

Higher Education (MOHE), and the Federal Agricultural Marketing Authority (FAMA) can work together to improve supply chains, strengthen institutional food programs, and grow programs like the Food Bank Siswa to help vulnerable students. Putting these kinds of safeguards in place at the institutional level could improve students' health, academic success, and quality of life, while also lowering the number of students who are food insecure.

This study offers valuable information, yet still grounded by some limitations. The research was carried at one university branch, which may limit its applicability to other Malaysian universities. Self-reported questionnaires may potentially induce answer bias since students may underreport or overreport food insecurity. Also, the cross-sectional methodology makes it difficult to demonstrate causal links between the variables and food insecurity. Future studies should examine sampling various colleges in different regions, using longitudinal designs to track changes, and using qualitative methods to capture students' food insecurity experiences better.

7 About the authors

Nur Salwati Mat Rapi is a graduate of Universiti Teknologi MARA Terengganu Branch, where she earned her Bachelor of Science (Hons) in Food Service Management. Her research on the relationship between eating habits and food insecurity reflects her commitment to addressing key issues in the food service sector and improving community well-being. Currently, she is applying her skills and knowledge as part of the kitchen department at Peridot by-The-Sea, Redang Island, Malaysia.

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