

Food Security Sustainability among Urban Low-Income Households in Malaysia: A Systematic Literature Review

Norfaiezah Binti Alias¹, Nor Hafizah Binti Mohamed Harith^{2*}
Thenmolli Vadeveloo³

¹Faculty of Administrative Science and Policy Studies, Universiti Teknologi MARA (UiTM), Kampus Shah Alam, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia.

Email: 2021461196@student.uitm.edu.my

²Faculty of Administrative Science and Policy Studies, Universiti Teknologi MARA (UiTM), Kampus Shah Alam, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia.

Email: norha561@uitm.edu.my

³Faculty of Administrative Science and Policy Studies, Universiti Teknologi MARA (UiTM), Kampus Shah Alam, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia.

Email: thenm020@uitm.edu.my

ABSTRACT

CORRESPONDING

AUTHOR (*):

Nor Hafizah Binti Mohamed Harith
(norha561@uitm.edu.my)

KEYWORDS:

Food Security
Sustainability
Urban Low-Income Households

CITATION:

Norfaiezah Alias, Nor Hafizah Mohamed Harith, & Thenmolli Vadeveloo. (2024). Food Security Sustainability among Urban Low-Income Households in Malaysia: A Systematic Literature Review. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 9(9), e002989. <https://doi.org/10.47405/mjssh.v9i9.2989>

Food security is a major concern for governments and international organisations around the world. Every country is working to ensure a steady supply of affordable, high-quality meals to meet the needs of all its citizens. This is especially challenging for low-income households. While many studies have been conducted on food security, there has been limited analysis of the sustainability of food security for urban low-income households in Malaysia. The major purpose of this systematic literature review is to look at how urban population increase affects food supply and demand, as well as the consequences of food accessibility, quality, and price inflation on low-income urban families. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were followed by the review. Twenty-eight (28) papers published between 2012 and 2023 were selected from databases like Google Scholar, ResearchGate, and ScienceDirect. Thematic analysis was used to analyse the review. The Systematic Literature Review (SLR) identified three main themes: availability, accessibility, and quality of food. In conclusion, the review highlighted a few gaps in the sustainability of household food security among low-income urban residents in Malaysia. Thus, it is important to explore and investigate the underlying causes of food availability, accessibility, and quality in urban poor households in Malaysia.

Contribution/Originality: This study is to investigate the underlying causes of food security on urban low-income households in Malaysia and has indicated that low-income families, particularly those residing in urban regions, experience challenges with food insecurity.

1. Introduction

Urbanization is a phenomenon that is spreading throughout the world. The [United Nations \(2022\)](#) projects that by 2050, the percentage of people on Earth who live in cities would rise from 55% to 70%. The rate of urbanization in Malaysia rose from 1.76% in 2021 to 1.76% in 2022 ([Department of Statistics Malaysia, 2022](#)). By 2050, there will be 9.8 billion people on the planet ([United Nations, 2022](#)), and at least 60% more food will be consumed globally than there is currently ([World Economic Forum, 2022](#)). The Sustainable Development Goals (SDG) of the United Nations emphasize how important it is to solve global food security. By 2030, SDG2 seeks to end hunger, provide food security, improve nutrition, and advance sustainable agriculture ([United Nations, 2022](#)). No one nation can solve these grave global concerns on its own ([Food and Agricultural Organization, 2020](#)). According to the [Global Food Security Index \(2022\)](#), Malaysia ranked 39th out of 113 nations and 7th out of 23 in Asia Pacific. However, Malaysia is rated 41st in 2022, down seven places from the previous year, and fared decently with a score of 69.9. Malaysia's overall score decreased by 1.6 points over the previous year ([Global Food Security Index, 2024](#)). Despite this number, Malaysia's overall rating suggests that the country is grappling with concerns of sustainability and food security.

The relationship between food insecurity and urban low-income households has been well-established ([Tarasuk, Fafard St-Germain, & Mitchell, 2019](#)). Despite a significant reduction in the poverty rate in Malaysia, many Malaysian households continue to face challenges in meeting their basic nutritional needs, as reported by the [Department of Statistics Malaysia \(2020\)](#). Food insecurity within households can manifest regardless of an individual's demographic characteristics, such as gender, age, income, family composition, property ownership, marital status, immigration status, or ancestral background. According to the [Department of Statistics Malaysia \(2022\)](#), Malaysian households allocate an average of 17.3% of their total income in food expenses. Despite the low income earned by the urban population, barriers to purchasing due to high food expenses are evident. Data from the [Department of Statistics Malaysia \(2024\)](#) shows a 6.7% increase in food prices in Malaysia during January 2024 compared to January 2023. The weightage of food prices in the CPI, as reported by the [Department of Statistics Malaysia \(2023\)](#), is 130.0%, indicating their significant role in driving the inflation rate. This trend is common in emerging economies due to comparatively elevated food prices in those regions. Individuals tend to allocate a smaller proportion of their disposable income towards food expenditures as their overall disposable income increases. Despite an increase in their food budget, individuals facing food insecurity and financial constraints have limited options as they deal with the impact of rising prices in the fast-food industry. The high cost of living in urban areas means that even minor increases in food prices significantly affect the income of impoverished individuals. According to the [Department of Statistics Malaysia \(2023\)](#), nearly 30% of households categorized as M40 have transitioned into the B40 category due to inflation and the high cost of living.

Additionally, urbanization means a growth in population density, which can have unexpected repercussions including limiting food supply and making it harder for some metropolitan regions to purchase fresh food, especially fruits and vegetables, due to rising prices ([Drechsler & Rasheed, 2019](#)). In the contemporary landscape, a substantial number of individuals globally confront food shortages, exacerbated by exorbitant prices when food is available. Urban dwellers are reliant on rural areas for their food supply, and the resultant high prices significantly impact urban populations. Although urban areas are conventionally perceived to experience fewer food security issues than rural areas,

equitable access to the food supply is not guaranteed despite the abundance of food. The urban poor continue to grapple with the enduring challenges of attaining food security stability. Despite the relatively higher incomes in urban areas, numerous impoverished urban households contend with low incomes. Although statistics on undernourishment are presently unavailable in Malaysia, the inadequate food supply among low-income individuals remains a pertinent issue. In Malaysia, the percentage increase in food security from 2022 to 2023 is approximately 0.2%.

Studying the effects of population growth in urban areas on the availability and demand for food is, therefore, the main objective of this thorough literature review. It will also look into how food access, quality, and price inflation affect low-income urban households. Although there is acknowledgment of concerns regarding the long-term viability of food security among low-income urban households, the systematic study must fill important gaps. The following are the primary research questions for the review:

- i. How well-prepared is Malaysia to manage the potential mismatch between food supply and demand caused by the swift expansion of urban areas?
- ii. How does the inflation of food prices impact the accessibility and quality of food for low-income households in urban areas?

2. Research Methodology

The literature review adopted a SLR methodology. The research employed a qualitative methodology through a comprehensive assessment of the literature, structured into three stages: eligibility, screening, and identification, as delineated below:

2.1. Identification

In the first step, the researchers utilised an identification technique to retrieve a significant number of documents. A comprehensive search of accessible and relevant publications in databases such as Google Scholar, ResearchGate, ScienceDirect, and related articles in specialised studies and domains is necessary for the identification method. Google Scholar is a well-known citation indexing service ([Samsuddin & Ali, 2020](#)). It involves filtering through all publications relevant to the investigation. This review employs a search strategy based on a list of keywords related to urban food security and low-income households to locate relevant, transparent, and reputable articles. The phrases terms "low-income households" or "food security" were inserted and each search phrase query was retrieved in various document forms formats as articles, conference papers, and reviews.

2.2. Screening

During the identification procedure, the articles obtained went through a second step that involved screening techniques like double counting and screening criteria. A sample list was omitted in order to avoid include articles that were identical since they used the same keywords ([Bolivar & Meijer, 2016](#)). Screening criteria refer to the process of including or excluding articles based on criteria set by the database's search tool ([Samsuddin & Ali, 2020](#)). [Table 1](#) outlines the inclusion and exclusion criteria used to select and examine relevant research articles in the systematic review process.

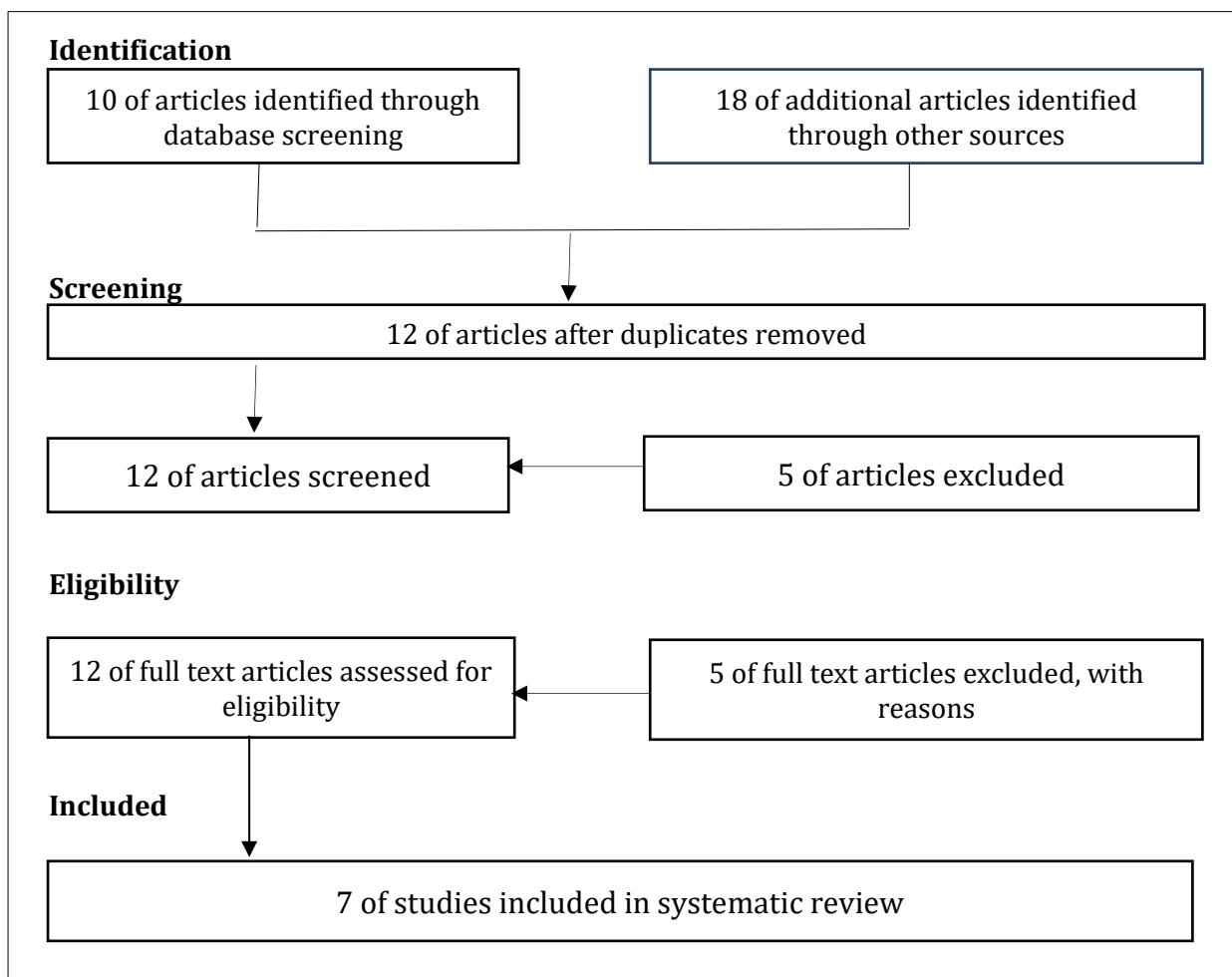
Table 1: The inclusion and exclusion criteria

Criterion	Inclusion	Exclusion
Timeline	Between 2012 and 2023	< 2012
Document types	Open access article (research article)	Non-open access article
Language	English	Non-English

Sources from [Mohd Salleh et al. \(2020\)](#)

2.3. Eligibility

In the third step, only publications relevant to the review's purpose were chosen. This required a careful manual examination of the relevant keywords based on the abstract. The work's general structure, introduction, and abstract were carefully examined. Papers that did not explore any of the domains from the sample were excluded. Given that this study delves into a detailed explanation of the connection between urban low-income families and food security, only social sciences papers were evaluated for eligibility. [Figure 1](#) illustrates the article selection process.

Figure 1: Article selection processes using PRISMA ([Page et al., 2021](#))

2.4. Research Limitations

The extensive examination of literature regarding urban low-income families in Malaysia has been carried out by considering the overall comprehension and practices derived from rural food security perspectives. The term "urban low-income families" in this assessment refers to the populace's capacity to successfully adopt and attain sustainable food security as a substitute approach to resolving urban food security concerns (Leng, Samsurijan, Gopal, Malek, & Hamat, 2018). The research highlights the importance of directing food security efforts towards guaranteeing an ample variety of available and accessible food practices in order to attain sustainability among populations, with a lesser emphasis on food quality, which is vital for achieving self-sufficiency in terms of food.

3. Findings and Discussion

Twelve (12) articles were assessed and analysed. Seven (7) of the articles were included in the review and categorised into three emerging main themes of sustainability of food security such as, (i) food availability and food supply and demand, (ii) food accessibility and food inflation, and (iii) food quality's impact on food security. The main themes are shown in Table 2.

Table 2: The Main Themes of the Sustainability of Food Security among Low Income Households in Malaysia

No.	Author	Method	Themes			
			Level of Analysis	Food Availability	Food Accessibility	Food Quality
1	Tay et al. (2023)	Qualitative	Urban			/
2	Savary et al. (2021)	Qualitative	National	/		
3	Azizan et al. (2020)	Qualitative	Urban	/		
4	Rozhan Abu Dardak (2020)	Qualitative	National	/		
5	Fazle Rabbi et al. (2021)	Qualitative	Urban	/		
6	Zakari, Ying, and Song (2014)	Qualitative	Households		/	
7	Mkhawani et al. (2016)	Qualitative	Households		/	
8	Grace, Brown, & McNally (2014)	Qualitative	Households		/	
9	Frona, Szenderák, & Harangi-Rákos (2019)	Qualitative	Households		/	
10	Huffaker, Canavari, & Muñoz-Carpena (2018)	Qualitative	National		/	
11	Novickýte (2019)	Qualitative	National		/	
12	Alie et al. (2019)	Qualitative	Households			/
Frequency				4	6	2

3.1. Food Availability and Food Supply & Demand

Food availability, supply, and demand were recognized as one of the themes that arose from the data. Rapid urbanization and the growing number of megacities suggest that more food will need to be made available to people living in areas that were previously considered unsuitable for cultivation. Most urban inhabitants are net food consumers, as are urban poverty families, who are frequently the poorest of the poor since they do not generate enough to feed their family and are unable to continue their livelihoods (Putra, Tong, & Pribadi, 2020). The SLR demonstrates that the discrepancy between food production and consumption is the result of urban population increase. Nearly 3.9 billion people, or more than half of the world's population, live in cities, according to the World Bank (2022). By 2050, the percentage is expected to increase to 66%. According to the Department of Statistics Malaysia (2023), the projected urban population of Malaysia will increase to 30.22 million by 2023. A significant proportion of the population experiences destitution. There may be a lack of resources and viable prospects to achieve sustainable growth in food production to meet the increasing demand (Savary et al, 2021). The rise in both the availability and demand for food, and the gap in purchasing power between affluent and low-income households, can be attributed to the growing urban population. Many studies have examined the disparity between food production and consumption, as noted by Rozhan Abu Dardak (2020). Malaysia is currently facing challenges as the country's agricultural output needs to be enhanced to meet the rising food demands. Typically, local food production only meets a fraction of the total consumer demand, ranging from 20% to 70%. According to the Department of Agriculture Malaysia (2022) report, Malaysia produced a significant portion of its agricultural products in 2019. Domestically produced foods included 70% grains, 74% vegetables, 78% fruits, 86% fish, 32% meat, 23% mutton, and 18% milk. To meet the demand, Malaysia engages in the importation of food products from various nations. Reviews attribute the issue at hand to the high reliance on imported foods, which results in a disproportionately high production cost (Department of Agriculture Malaysia, 2022). Despite these challenges, what is Malaysia's level of preparedness to address the escalating demand for food from the expanding urban populace in the twenty-first century?

The discoveries also reveal that the high population density in urban areas is continuously increasing the challenge of meeting the rapid growth of food demand. With limited resources available for agriculture, cities' dependence on external food production centres becomes more pronounced. Therefore, policymakers working in urban areas need to better understand the obstacles associated with food production and demonstrate a greater reliance on imported food sources (Drechsler & Rasheed, 2019). The current academic discourse has witnessed a rise in scholarly literature that explores correlation between food insecurity and urbanisation. There is an urgent need for more comprehensive analyses of the approach's strategies to address the incongruity mismatch supply and demand, which is a crucial key factor driving the rise in costs (Rozhan Abu Dardak, 2020). The rise in food costs can be linked to the high cost of living, especially in rapidly growing urban areas. To address this issue, the government should establish a unique framework for food production instead of solely depending on food imports. Calculating the total food supply involves adding up domestically produced and imported food, subtracting exported and wasted food, and adjusting for food storage fluctuations (Sundaram, Rawal, & Clark, 2020). The total food supply available for human consumption in a country is known as the nation's food supply. Delays or disruptions in transportation routes to markets have affected food availability and increased the prices of certain

specialty items. Around 30% of the global food supply is wasted annually (Stewart et al., 2020).

However, less expensive imported goods may enhance economic accessibility and affordability. According to Sundaram, Tan and Khalidi (2019), research can calculate the expected population by dividing the entire annual food supply, as given in the Ministry of Agriculture and Food Security (2022), by Malaysia's yearly supply per capita. Despite the insufficiency of domestic production to meet the demand, Malaysia maintains a consistent and abundant food supply throughout the year. According to the Global Food Security Index (2022) study, there was a 3-percentage point increase in food sufficiency, resulting in a score of 63.8, higher than the global average of 62.9 (Global Food Security Index, 2022). Most food supplies in Malaysia are imported. There has been a consistent observation of the trend of increasing food imports over the past few decades. Since 2013, Malaysia has consistently experienced a negative food trade balance. According to the data for 2022, Malaysia experienced a negative food trade balance of RM18.60 billion (equivalent to US\$4.43 billion).

The volatility of worldwide food prices has a disproportionately adverse effect on developing countries, particularly on the impoverished urban population. Academics and experts share a common concern regarding the challenge of ensuring food security to meet the needs of the world's expanding population. Studies have suggested various treatment modalities and theoretical frameworks in scholarly literature that might address the disparity between food supply and demand over the next five decades (Nosratabadi, Mosavi, & Lakner, 2020). The concept of food security has gained significant traction in shaping national food policies aimed at regulating the overall food supply. Studies have implemented several legislative measures and policy initiatives to increase food production in Malaysia. However, these efforts alone may not effectively eradicate hunger in the country. Additional variables require consideration, including but not limited to accessibility, provision, dissemination, and market needs. Despite an increase in both the demand and production of biofuels (Rosegrant, Tokgoz, & Bhandary, 2013), the prevalence of undernourishment on a global scale remains significant at 15% (Jat et al., 2016), with this issue concentrated in developing nations. The pandemic crisis significantly negatively impacted manufacturing, capital expenditures, and consumer spending. Developing and newly industrialised nations face distinct challenges in meeting these requirements, posing a threat to food security and sustainability (Fazle Rabbi et al., 2021).

As a result, it is possible that despite having fewer financial resources, some Malaysians may consume a higher quantity of rice than their counterparts do because of the physically demanding nature of their work. The present situation in Malaysia shows that there has been an increase in the availability of food compared to the year 1961. Studies can attribute this to the combined efforts of domestic production and imports, as reported by the Food and Agriculture Organization (2019) in 2019. To meet the food requirements of the nation, there has been a notable increase in imports and domestic production of various commodities. Thus, there is no scarcity of food in Malaysia. However, food monopolies and oligopolies in both domestic production and food imports are a matter of apprehension, given that their market dominance curtails supply, escalates prices, and secures rentier market control for a select few. It is noteworthy that the accessibility of affordable food is not universal among Malaysians. Hence, investigating the availability of food security assumes a crucial role in addressing the predicaments of food supply and

demand, particularly in burgeoning urban centres where most of the populace belongs to the low-income strata.

3.2. Food Accessibility and Food Price Inflation

The studies revealed two major themes: food accessibility and food price inflation. The fact that low-income households spend a larger amount of their income on food indicates their limited financial means. This reduces the quality and quantity of food consumed, as well as the diversity of diets. Simultaneously, there is a decrease in non-food expenditures such as healthcare, and an increase in working hours (Popkin & Unsal, 2020). The rift concerns the discrepancy between low-income urban Malaysian households' ability to purchase food and the rising costs of food. According to Zakari, Ying, and Song (2014) elevated food costs can be just as influential in contributing to food insecurity within households as a food shortage. The cost of food is a crucial determinant of an individual's capacity to purchase food. The escalation of worldwide food prices has led to many households' difficulties in providing sustenance for themselves (Mkhawani et al., 2016). Food price inflation occurs when there is a persistent increase in the general food cost. The escalation of food prices has a detrimental impact on the expendable income of households, making it difficult for many families to maintain a consistent and nutritious dietary pattern (Popkin & Unsal, 2020). Individuals with lower incomes are more severely impacted by the effects of food price increases due to their disproportionate allocation of income towards food expenditures. Zakariah Abdul Khalid (2020) asserts that food inflation in Malaysia is attributed to similar challenges in food accessibility and escalating food commodity expenses. The food inflation rate in Malaysia has exhibited a consistent upward trend, rising from 6.31% in 2022 (Trading Economics, n.d.) to 14.11% in December 2023 (Trading Economics, n.d.). The present empirical investigation suggests that the escalation of food inflation will challenge food security in metropolitan regions, particularly for urban households with limited financial resources. The rise in food prices disproportionately impacts households with lower incomes. However, the entire economy experiences adverse consequences due to this phenomenon. Given Malaysia's classification as a developing country, the increase in food prices is likely to result in adverse outcomes such as poverty, starvation, malnutrition, and other related issues (Almeida et al., 2020). The escalation of food inflation in the nation has contributed to the growth of the impoverished urban population. The rise in food prices has a noticeable effect on people's quality of life. Those who are more vulnerable to the impacts of price increases are at a greater risk of facing food insecurity. People who are already struggling financially, especially those residing in urban areas, are greatly affected by the increasing food expenses.

According to Grace, Brown, and McNally (2014) the rise in grain prices was advantageous to certain households. Food security has been the subject of extensive investigation for a long time. There is a considerable body of literature on food insecurity. Food expenditures have a significant influence on an individual's capacity to obtain and maintain a healthful diet (Frona, Szenderák, & Harangi-Rákos, 2019). Therefore, governments must develop more explicit policies to effectively manage agricultural risks to achieve sustainable development. The ability to mitigate the risk of individuals experiencing food insecurity depends on having the expertise and proficiency to recognize and distinguish the factors contributing to food security. Governments must conduct preliminary research to establish a food security metric. The findings of the study could help identify national indicators, prompting governments to concentrate on the identified keywords to create a predictive model for a global food security index. To reduce the incidence of food

insecurity among individuals, it is crucial to have a comprehensive understanding and discernment of the factors and components that determine food security status. [Huffaker, Canavari, and Muñoz-Carpena, \(2018\)](#) suggests that the correlation between price, food supply, and real income variables could explain security. According to [Novickýte \(2019\)](#) food insecurity is exacerbated by the variability of food prices, as demonstrated through mathematical analysis. Food inflation disproportionately impacts low-wage individuals as they allocate more of their earnings to essential goods. Individuals facing financial hardship encounter significant challenges when there is a sudden increase in food costs. Inflationary pressures on food often coincide with significant issues, such as food fraud. Food fraud can endanger consumers' well-being through various deceptive practices. When a substance is adulterated, it is falsely presented as being of higher quality.

The [Department of Statistics Malaysia \(2022\)](#) has addressed the issue of food inflation in Malaysia, which has escalated due to the high cost of living. Various factors hinder the achievement of the second Sustainable Development Goal, including the persistent economic recession that constrains the government's ability to protect vulnerable individuals from income loss and price increases, adverse environmental conditions that impact food availability and prices, and prolonged armed conflicts. This information is supported by [Sundaram, Rawal and Clark \(2020\)](#). Low-income households devote a greater part of their income to food, emphasizing their limited financial means. This also highlights the fact that costs vary greatly between cities and types of retailers. However, most research on food price rises for low-income households is not directly related to food security, but rather to specific elements of urban poverty. As a result, the examination of food availability is intimately related to the high cost of food access for urban families.

3.3. Food Quality on Food Security

The research indicates that food security among the impoverished is significantly influenced by food quality. A focus on vulnerable populations living below the poverty line is brought about by the connection between food insecurity and poverty ([Zezza & Tasciotti \(2010\)](#)). The number of people experiencing food insecurity rises as incomes fall. More than one in ten children received fewer than three meals a day and were malnourished, according to a United Nations Children's Fund (UNICEF) Malaysia research on urban poverty and deprivation in low-income apartments ([UNICEF, 2018](#)). In contrast, Kuala Lumpur's teenage population reported 5.7% of them becoming hungry in the preceding month, according to the [Institute for Public Health \(2017\)](#), which is higher than the 3.9% national average. These results indicate that food insecurity is common among young Malaysians who live in urban areas. Teenagers from food-insecure homes have been linked to worse diet quality and health outcomes ([Kirkpatrick, McIntyre, & Potestio, 2012](#)) than adolescents from food-secure homes. Additionally, when food insecurity increases, so does the risk of chronic illnesses and malnutrition, all of which are associated with poor dietary habits ([Moradi et al, 2019](#)). This is especially important for the urban poor, as their meals might become less varied and of a different composition due to a lack of food sources. Those who are food insecure are more prone to buy fewer nutrient-dense foods that are heavy in fat, sugar, and salt ([Maitra, 2018](#)). According to a previous research, compared to their food-secure counterparts, children and adolescents who experience food insecurity between the ages of 5 and 18 have nutritional deficits, notably in the areas of protein, fat, calcium, phosphorus, and potassium ([Kim & Oh, 2015](#)). There has not been much study done in Malaysia on the relationship between diet quality and food security, particularly among the urban poor. Previous studies on food security have

largely focused on rural regions ([Alie et al., 2019](#); [Ahmad et al., 2020](#), [Pei et al., 2018](#)). However, low-income urban households especially those residing in underprivileged metropolitan areas are often overlooked in spite of their evident vulnerability. Moreover, food security and malnutrition are identified by the UN's Sustainable Development Goals as high-priority goals for many countries in terms of sustainable development. Therefore, the purpose of this study was to examine the long-term food security status of the urban poor and how it related to food quality. To address the issues of food security faced by low-income households and the urban poor, a deeper comprehension of the relationship between food security and food quality may prove beneficial in the development of successful intervention programs.

Malaysia's urban poor encountered household food insecurity in 81.4% of cases, according to [Tay et al. \(2023\)](#). This result was consistent with earlier study ([Chang, 2020](#)), which shown that food insecurity was much higher among urban low-income families in Kuala Lumpur than it was throughout other categories. The higher frequency of food insecurity among urban poor people seen in the current study may be attributed to these families' limited financial resources for food distribution, which forces them to make trade-offs between food quality and quantity. A UNICEF survey conducted in Malaysia supports this claim, finding that 97% of urban poor households in Kuala Lumpur cited high food prices as the biggest obstacle to preparing wholesome meals for their kids ([UNICEF, 2018](#)). In addition, the urban poor are particularly susceptible to issues like food security due to the growing expense of living in cities and the frequent occurrence of unforeseen expenses. This result is in line with a study of low-income adults in the US that found that, even after taking into consideration sociodemographic traits and total energy intake, households with extremely low food security scored lower overall on diet quality than households with full food security ([Leung et al, 2014](#)).

Comparable findings were discovered in another Taiwanese study, suggesting a favorable correlation between dietary quality and food insecurity among urban poor households from low-income backgrounds. The quality of diets may have suffered as a result of households experiencing food insecurity due to a decline in the availability of healthy food options due to rising food prices. A diet low in essential nutrients and of poor quality is more common in those experiencing food insecurity ([Food and Agriculture Organization, 2022](#)). This is especially noticeable among urban poor people ([Vilar-Compte et al., 2021](#)). Furthermore, food-insecure households favor low-cost, high-calorie diets ([Ihab et al, 2012](#)). Food poverty has a substantial influence on adolescent health and is linked to several elements of diet quality, as evidenced by the increasing data. Thus, the SLR findings revealed that the sustainability of food security was influenced by food quality parameters.

According to [Alie et al. \(2019\)](#), the food crisis in Malaysia can be attributed to elevated food prices and substandard food supply and demand. These issues have an impact on households with low socioeconomic status within the nation and are a contributing factor to the escalation of hunger and malnourishment rates. The nutritional status of the population is influenced by the quality of food, which also contributes to the increasing number of malnourished individuals. Rising food costs constrain the purchasing power of low-income individuals. To improve the overall standard of living for the entire population of Malaysia, the government must address these critical components of the matter. This thorough analysis of the literature looked into the link between the elements of food security availability, accessibility, and food quality and the long-term food security of low-income urban households. The study specifically focused on the experiences of

these households during the recent crises of food prices and the cost of living. The researchers used a mix of findings from multiple studies to contribute to a critical conversation about food security among low-income urban households. Consequently, reviewers selected twenty-eight (28) papers from 2012 to 2023 that reported on food security among urban populations from scientific databases such as Google Scholar, ResearchGate, ScienceDirect, and related articles in expert studies and areas. The challenges and opportunities in this field may thus be clarified by doing an SLR on the sustainability of food security among low-income urban families in Malaysia. However, studies on food quality among urban low-income households are less common. Thus, an investigation could be conducted into the nutritional value, quality, availability, accessibility, and cost of food for these families.

It is imperative to establish a symbiotic relationship between our societal and economic establishments while also addressing food insecurity in the future. According to the [Food and Agriculture Organization's \(2006\)](#) definition of food security in 2006, the stability component of the concept tries to handle sudden disruptions such as market volatility, natural disasters, and wars that pose a danger to food security. However, this component cannot capture the broader, long-term food security perspective. This perspective takes a long-term view and acknowledges the potential of interdependent natural resource bases, livelihoods, and societies to maintain systems that ensure sustainable access to food for future generations. The existing literature shows research gaps about these themes. To achieve food sustainability, it is imperative to enhance the management of the three fundamental components of food security: availability, accessibility, and quality. Analysing factors associated with the pillars of food security and assessing their influence on the sustained food security of low-income households has facilitated advancements in these domains.

4. Conclusions

In conclusion, this SLR identifies the key components underpinning food security sustainability among urban poor households, which are based on three characteristics: food availability, food accessibility, and food quality. Research on the root reasons of food availability, accessibility, and quality within this Malaysian population has been scant in the past. When evaluating the level of food security among low-income households in large cities, the SLR has found a sizable discrepancy. This gap is critical because it impedes the creation of effective policies and interventions for the urban poor, who suffer disproportionately from food insecurity. Future research on food security should address the issue in the face of complex global environmental concerns that endanger human lives. Hence, the systematic literature review aims to fill the knowledge gap regarding the distinct challenges that urban low-income households face in accessing food. Without focused policies and interventions, many urban poor households would continue to face food insecurity, undermining overall efforts to achieve food security sustainability. Therefore, the SLR addresses the gaps by emphasizing the importance of exploring and investigating the underlying causes of food availability, accessibility, and quality in urban poor households in Malaysia.

Acknowledgement

Special thanks to the Faculty of Administrative Science and Policy Studies, Universiti Teknologi MARA, Malaysia.

Funding

This study received no funding.

Conflict of Interest

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

References

- Ahmad, M. H., Selamat, R., Salleh, R., Majid, N. L., Zainuddin, A. A., Bakar, W. A., & Aris, T. (2020). Food insecurity situation in Malaysia: Findings from the Malaysian Adult Nutrition Survey (MANS) 2014. *Malaysian Journal of Public Health Medicine*, 20, 167-174.
- Alie, S., Sulaiman, N., Nor, F. M., & Mesbah, S. F. (2019). Demographic factors, food security, health-related quality of life, and body weight status of adolescents in a rural area in Mentakab, Pahang, Malaysia. *Mal J Nutr.*, 25(2), 297-307.
- Almeida, J. A., Silva Santos, A., Oliveira Nascimento, M. A., Costa Oliveira, J. V., Silva, D. G., & Mendes-Netto, R. S. (2020). Factors associated with food insecurity risk and nutrition in rural settlements of families. *Ciencia Saude Coletiva*, 22, 479-488
- Azizan, N. A., Thangiah, N., Su, T. T., & Majid, H. A. (2018). Does a low-income urban population practice healthy dietary habits? *International Health*, 10, 108-115.
- Bolivar, M. P. R., & Meijer, A. J. (2016). Smart governance: Using a literature review and empirical analysis to build a research model. *Social Science Computer Review*, 34(6), 673-692.
- Chang, A. P. (2020). Does household food insecurity reflect diet quality of children? A study among the B40 families in Pendang, Kedah. *UMT Journal of Undergraduate Research*, 2, 47-54.
- Department of Agriculture Malaysia. (2022). *Paddy statistics of Malaysia, 2021*. Putrajaya: Department of Agriculture Malaysia.
- Department of Statistics Malaysia. (2020). *Household Income & Basic Amenities Survey Report 2019*. Department of Statistics Malaysia. https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=120&bul_id=TU00TmRhQ1N5TUxHVWN0T2VjbXJYZz09&menu_id=amVoWU54UTl0a21NWmdhMjFMMWcyZz09
- Department of Statistics Malaysia. (2022). *Data asas Malaysia*. Department of Statistics Malaysia. Retrieved September 30, 2022, from <http://www.worldbank.org/en/country/malaysia/publication/malaysia-economimonitor-december-2021-towards-a-middle-class-society>
- Department of Statistics Malaysia. (2023). *2022 urban population survey report*. Putrajaya: Department of Statistics Malaysia.
- Department of Statistics Malaysia. (2024). *Inflation report 2024*. Department of Statistics Malaysia. Retrieved January, 2024, from https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=120&bul_id=TU00TmRhQ1N5TUxHVWN0T2VjbXJYZz09&menu_id=amVoWU54UTl0a21NWmdhMjFMMWcyZz09

- Drechsler, M., & Rasheed, S. (2019). Economic inequality and food security: A systematic review of the evidence. *Food Security*, 11(1), 17–31.
- Fazle Rabbi, M., Oláh, J., Popp, J., Máté, D., & Kovács, S. (2021). Food security and the COVID-19 crisis from a consumer buying behaviour perspective: The case of Bangladesh. *Foods*, 10(12), 3073. <https://doi.org/10.3390/foods10123073> PMID: 34945624.
- Food and Agricultural Organization. (2006). *Food security: Policy brief* (Vol. 2, pp. 1–4). FAO.
- Food and Agricultural Organization. (2019). *FAO framework for the urban food agenda: Leveraging sub-national and local government action to ensure sustainable food systems and improved nutrition*. FAO, Rome, Italy.
- Food and Agriculture Organization. (2020). *The state of food security and nutrition in the world 2020: Transforming food systems for affordable healthy diets*. FAO, Rome, Italy. Retrieved December 6, 2020, from <http://www.fao.org/publications/card/en/c/CA9692EN>
- Food and Agriculture Organization. (2022). *The state of food insecurity in the world 2001*. FAO, Rome.
- Frona, D., Szenderák, J., & Harangi-Rákos, M. (2019). The challenge of feeding the world. *Sustainability*, 11(21), 5816. <https://doi.org/10.3390/su11215816>
- Global Food Security Index. (2022). *Global Food Security Index 2022*. Retrieved October, 2022, from <https://impacts.economic.com/sustainability/projects/food-security-index/>
- Global Food Security Index. (2024). *Global Food Security Index 2024*. Retrieved January, 2024, from <https://impacts.economic.com/sustainability/projects/food-security-index/explore-countries/malaysia>
- Grace, K., Brown, M., & McNally, A. (2014). Examining the link between food prices and food insecurity: A multi-level analysis of maize price and birthweight in Kenya. *Food Policy*, 47, 92–103. <https://doi.org/10.1016/j.foodpol.2014.05.005>
- Huffaker, R., Canavari, M., & Muñoz-Carpena, R. (2018). Distinguishing between endogenous and exogenous price volatility in food security assessment: An empirical nonlinear dynamic approach. *Agricultural Systems*, 160, 98–109. <https://doi.org/10.1016/j.agsy.2017.10.001>
- Ihab, A. N., Rohana, A. J., Manan, W. W., Suriati, W. W., Zalilah, M. S., & Rusli, A. M. (2012). Food expenditure and diet diversity score are predictors of household food insecurity among low-income households in rural districts of Kelantan, Malaysia. *Pakistan Journal of Nutrition*, 11(10), 869–875. <https://doi.org/10.3923/pjn.2012.869.875>
- Institute for Public Health. (2017). *National health and morbidity survey (NHMS) 2017: Adolescent nutrition survey*. Ministry of Health, Putrajaya.
- Jat, M. L., et al. (2016). Climate change and agriculture: Adaptation strategies and mitigation opportunities for food security in South Asia and Latin America. *Advances in agronomy*, 137, 127–235.
- Kim, H. J., & Oh, K. (2015). Household food insecurity and dietary intake in Korea: Results from the 2012 Korea National Health and Nutrition Examination Survey. *Public Health Nutrition*, 18(18), 3317–3325. <https://doi.org/10.1017/S1368980015001761>
- Kirkpatrick, S. I., McIntyre, L., & Potestio, M. L. (2012). Child hunger and long-term adverse consequences for health. *Archives of Pediatrics & Adolescent Medicine*, 164(8), 754–762. <https://doi.org/10.1001/archpediatrics.2012.244>

- Leng, K. S., Samsurijan, M. S., Gopal, P. S., Malek, N. M., & Hamat, Z. (2018). Urban poverty alleviation strategies from multidimensional and multi-ethnic perspectives: Evidences from Malaysia. *Kajian Malaysia*, 36(2), 43–68.
- Leung, C. W., Epel, E. S., Ritchie, L. D., Crawford, P. B., & Laraia, B. A. (2014). Food insecurity is inversely associated with diet quality of lower-income adults. *Journal of the Academy of Nutrition and Dietetics*, 114(12), 1943–1953.e2. <https://doi.org/10.1016/j.jand.2014.07.003>
- Maitra, C. (2018). *A review of studies examining the link between food insecurity and malnutrition* (Technical Paper). Food and Agriculture Organization (FAO), Rome.
- Ministry of Agriculture and Food Security. (2022). *Agrofood statistics report 2022*. Ministry of Agriculture and Food Security. <https://www.kpkkm.gov.my>
- Mkhawani, K., Motadi, S. A., Mabapa, N. S., Mbhenyane, X. G., & Blaauw, R. (2016). Effects of rising food prices on household food security of female-headed households in Runnymede village, Mopani District, South Africa. *South African Journal of Clinical Nutrition*, 29(2), 69–74. <https://doi.org/10.1080/16070658.2016.1180727>
- Moradi, S., Mirzababaei, A., Mohammadi, H., Moosavian, S. P., Arab, A., Jannat, B., & Mirzaei, K. (2019). Food insecurity and the risk of undernutrition complications among children and adolescents: A systematic review and meta-analysis. *Nutrition*, 62, 52–60. <https://doi.org/10.1016/j.nut.2018.10.015>
- Mohd Salleh, A., et al. (2020). Urban food insecurity: The relationship between community resilience and urban agriculture. *Asian Journal of Quality of Life (AjQoL)*, 5(18), 57–73
- Nosratabadi, S., Mosavi, A., & Lakner, Z. (2020). Food supply chain and business model innovation. *Foods*, 9(2), 132. <https://doi.org/10.3390/foods9020132>
- Novickýte, L. (2019). Risk in agriculture: An overview of the theoretical insights and recent development trends during the last decade—a review. *Agricultural Economics*, 65(5), 435–444. <https://doi.org/10.17221/243/2018-AGRICECON>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., & et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *PLoS Medicine*, 18(3), e1003583. <https://doi.org/10.1371/journal.pmed.1003583>
- Pei, C. S., Appannah, G., & Sulaiman, N. (2018). Household food insecurity, diet quality, and weight status among indigenous women (Mah Meri) in Peninsular Malaysia. *Nutrition Research and Practice*, 12(2), 135–142. <https://doi.org/10.4162/nrp.2018.12.2.135>
- Popkin, B. M., & Unsal, S. J. (2020). The sweetening of the world's diet. *Obesity Research*, 11(6), 1325–1332. <https://doi.org/10.1038/oby.2020.179>
- Putra, A. S., Tong, G., & Pribadi, D. O. (2020). Food security challenges in rapidly urbanizing developing countries: Insight from Indonesia. *Sustainability*, 12(22), 9550. <https://doi.org/10.3390/su12229550>
- Rosegrant, M. W., Tokgoz, S., & Bhandary, P. (2013). The new normal? A tighter global agricultural supply and demand relation and its implications for food security. *American Journal of Agricultural Economics*, 95(2), 303–309. <https://doi.org/10.1093/ajae/aas041>
- Rozhan Abu Dardak. (2020). *Transformation of agricultural sector in Malaysia through agricultural policy*. Serdang: Food and Fertilizer Technology Center Agricultural Policy, UPM.
- Samsuddin, S. F., & Ali, Z. (2020). Guidance for conducting systematic scoping reviews. *Production*, 232, 104–117. <https://doi.org/10.1016/j.prod.2020.104117>
- Savary, S., Waddington, S., Akter, S., Almekinders, C. J. M., Harris, J., Korsten, L., Rötter, R. P., Van den Broeck, G. (2022). Revisiting food security in 2021: An overview of the

- past year. *Food Security. Springer Science and Business Media*, 14(1). Available:<https://doi.org/10.1007/s12571-022-01266-z>
- Stewart, R., Korth, M., & Langer, L. (2020). What are the impacts of urban agriculture programs on food security in low and middle-income countries? *Environmental Evidence*, 2(1), 1–13. <https://doi.org/10.1186/s13750-020-00208-5>
- Sundaram, J. K., Rawal, V., & Clark, M. T. (2020). *Food supply: From commitment to action*. New Delhi: Tulika Books for Food and Agriculture Organization of the United Nations, Rome.
- Sundaram, J. K., Tan, Z. G., & Khalidi, J. R. (2019). *Achieving food security for all Malaysians*. Khazanah Research Institute.
- Tarasuk, V., Fafard St-Germain, A. A., & Mitchell, A. (2019). Geographic and socio-demographic predictors of household food insecurity in Canada, 2011–2012. *BMC Public Health*, 19, 630. <https://doi.org/10.1186/s12889-019-6987-2>
- Tay, J. E. F., Kaur, S., Tham, W. W., Gan, W. Y., Ya, N. N. C., Tan, C. H., & Tung, S. E. H. (2023). Food security and diet quality among urban poor adolescents in Kuala Lumpur, Malaysia. *Nutrition Research and Practice*, 17(2), 269–283. <https://doi.org/10.4162/nrp.2023.17.2.269>
- Trading Economics. (n.d.). *Malaysia food inflation*. Retrieved March 18, 2024, from <https://tradingeconomics.com/malaysia-food-inflation/2022-2024>
- United Nations Children's Fund (UNICEF). (2018). *Children without: A study of urban child poverty and deprivation in low-cost flats in Kuala Lumpur*. Putrajaya: UNICEF.
- United Nations. (2022). *World urbanization prospects: The 2022 revision, online edition*. United Nations. Retrieved October 3, 2022, from <https://population.un.org/wup/Country-Profiles/>
- Vilar-Compte, M., Burrola-Méndez, S., Lozano-Marrufo, A., Ferré-Eguiluz, I., Flores, D., Gaitán-Rossi, P., Teruel, G., & Pérez-Escamilla, R. (2021). Urban poverty and nutrition challenges associated with accessibility to a healthy diet: A global systematic literature review. *International Journal for Equity in Health*, 20, 40. <https://doi.org/10.1186/s12939-021-01332-8>
- World Bank. (2022). *The rise of metropolitan regions: Towards inclusive and sustainable regional development*. World Bank. Retrieved October 23, 2022, from <http://documents.worldbank.org/curated/en/520931468269430645/Indonesia-The-rise-of-metropolitan-regions-towards-inclusive-and-sustainable-regional-development>
- World Economic Forum. (2022). *The state of food security*. Retrieved April 19, 2024, from <https://www.bing.com/WORLD+ECONOMIC+FORUM+2023+FOOD+SECURITYZ>
- Zakari, S., Ying, L., & Song, B. (2014). Factors influencing household food security in West Africa: The case of Southern Niger. *Sustainability*, 6(2), 1191–1202. <https://doi.org/10.3390/su6021191>
- Zakariah Abdul Khalid. (2020). *Kos sara hidup beban ekonomi utama sepanjang 2020*. Retrieved September 30, 2020, from <file:///C:/Users/Thunder%20Match/Downloads/Document/DrZakariah%2029022020.pdf>
- Zeza, A., & Tasciotti, L. (2010). Urban agriculture, poverty, and food security: Empirical evidence from a sample of developing countries. *Food Policy*, 35(4), 265–273. <https://doi.org/10.1016/j.foodpol.2010.04.007>