

Connection of Food Insecurity with Financial Literacy, Time Constraints, and Food Behavior on Human Health: Review of University Student

Nur Asyurra Zulkarnine¹, Devika Krishnan^{2*}

¹Faculty of Administrative Science and Policy Studies (FSPPP), Universiti Teknologi Mara (UITM) Shah Alam, Seremban Campus, 40450 Shah Alam, Selangor Darul Ehsan, Malaysia.

²Faculty of Administrative Science and Policy Studies (FSPPP), Universiti Teknologi Mara (UITM) Negeri Sembilan, Seremban Campus, 70300 Negeri Sembilan Darul Khusus, Malaysia Email Address

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.8100044>

Received: 13 September 2024; Revised: 27 September 2024; Accepted: 03 October 2024; Published: 30 October 2024

ABSTRACT

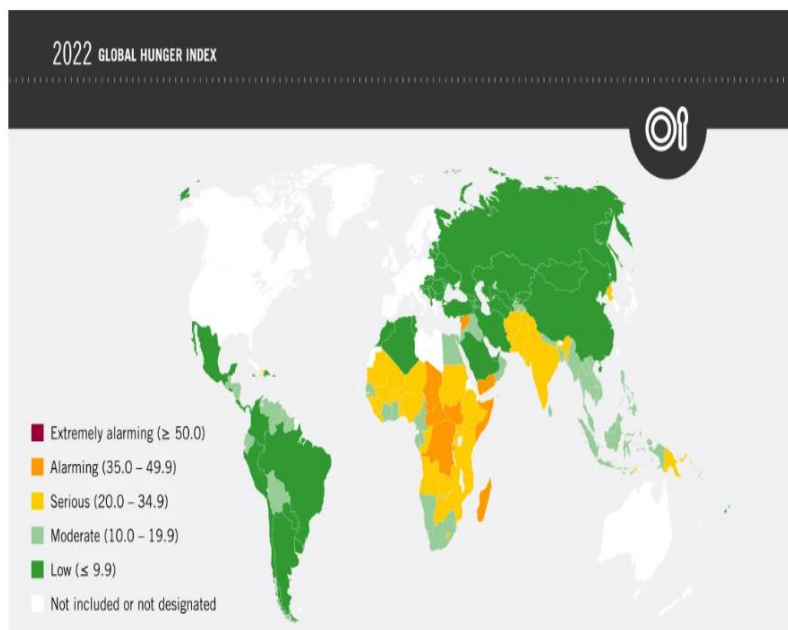
Global food insecurity remains a critical issue, affecting millions worldwide, particularly in low- and middle-income countries. Food insecurity, the lack of consistent access to nutritious food, poses a significant challenge to human health, particularly among vulnerable populations. This issue is shaped by various factors, including financial literacy, time constraints, and food behaviors. Low financial literacy can lead to poor budgeting, making it difficult for individuals and families to allocate resources for healthy food choices. Additionally, time constraints, such as long work hours or caregiving responsibilities, often push people toward quick, less nutritious options, exacerbating poor dietary habits. Food behaviors, including preferences for processed or unhealthy food, further compound the problem by contributing to chronic health issues such as obesity, diabetes, and heart disease. Addressing food insecurity requires a multifaceted approach that improves financial education, encourages healthier food behaviors, and promotes policies that enable access to nutritious food, even for those facing significant time and financial pressures. This study reviews the connection of food insecurity with financial literacy, time constraint and food behavior with rising human health issues among university students.

Keywords: Food Insecurity, Financial literacy, Time Constraint, Human Health, Food Behaviour

INTRODUCTION

Global food insecurity remains to be a prevalent issue for debate among experts due to the rising number of people affected. Food insecurity has emerged as a prominent global issue due to food scarcity and difficulties in securing sufficient nutrition. This conceptual paper discusses insecurity and identifies the probable factors that can contribute to this issue. Food insecurity issue also affected students' performance or specifically towards their health status (Mohd Abu Bakar et al., 2019, Mohd Jamil et al., 2020, Ahmad et al., 2021). Study by Nur & Norfarizan-Hanoon (2024) examined thw strategies to raise awareness and address food insecurity from multiple levels and viewpoints, including students, schools, universities, ministries, and other organisations. It aimed to investigate the correlation between socioeconomic factors, such as family income, primary source of income, and semester allowance and food insecurity among students. Moreover, food insecurity issues have been discussed by Hunger Hotspots Report, the Integrated Food Security Phase Classification (IPC) due to the scarcity of food and the accessibility in getting sufficient food. Healthy diets is a growing concern, especially for low-income households in peri-urban and rural areas, who would need to significantly increase their food expenditure to access nutritious meals. This can be portrayed as the failure from the government and surrounding in examining the food insecurity wisely (The State of Food Security and Nutrition in the World Report, 2023). Map 1 depicts a worsening worldwide food crisis, caused by violence, climate change, and the COVID-19 pandemic, as reported by the 2022 Worldwide Hunger Index (GHI).

Ahmad et al. (2021) highlight the growing prevalence of food insecurity among university students, particularly in Malaysia, where the rate of food insecurity among this population surpasses the national average. Key factors contributing to this issue include low household income, male gender, living independently from parents, and reliance on financial aid. The rising costs of living and tuition have made it increasingly difficult for many students to afford nutritious meals, negatively impacting their academic performance. Students experiencing food insecurity often struggle with concentration, leading to lower academic achievement. Additionally, food insecurity heightens the risk of stress and depression, further deteriorating their physical and mental well-being. This issue is frequently linked to financial constraints, where students with insufficient funds for both food and essential supplies. Despite this growing awareness on food insecurity, this study aimed reviews the connection of food insecurity with financial literacy, time constraint and food behavior with rising human health issues.



Map 1: Global Hunger Index, 2022

Evolution of Food Insecurity from International View

Food insecurity has evolved significantly over the past century, influenced by global economic changes, conflicts, climate conditions, and policy shifts. In the early 20th century, food insecurity was often localized, tied to natural disasters and agricultural limitations. However, the Great Depression (1930s) and World Wars (1914–1918 and 1939–1945) triggered widespread food shortages, leading to international efforts like the establishment of the Food and Agriculture Organization (FAO) in 1945. Post-World War II, many nations, particularly in the Global South, faced chronic food insecurity due to colonial legacies, poverty, and population growth. The Green Revolution (1960s-1970s), with its agricultural innovations, temporarily alleviated food shortages in countries like India and Mexico but created new challenges, such as environmental degradation and inequality in food distribution. In recent decades, food insecurity has been exacerbated by climate change, economic crises (e.g., 2008 global recession), and conflicts (e.g., Syria, Yemen). The COVID-19 pandemic further worsened the situation, disrupting global food supply chains and pushing millions into hunger. Currently, food insecurity is intertwined with global issues like economic inequality, gender disparities, and unsustainable food systems, leading to ongoing challenges in achieving global food security.

Factors That Influence Food Insecurity

A complex array of interrelated factors contributes to food insecurity. Economic constraints, including insufficient financial resources and limited employment opportunities, impede individuals' ability to obtain adequate food. Environmental factors, particularly the effects of climate change on agriculture—such as shifts

in growing seasons and the occurrence of extreme weather events—further exacerbate food scarcity. Social issues, including inefficient food distribution systems and inadequate social safety nets, disproportionately impact vulnerable populations, intensifying food insecurity. Additionally, political instability and conflict disrupt food production, distribution, and access, frequently leading to large-scale food crises. Cultural factors, such as dietary habits and food preferences, also play a critical role in shaping food consumption patterns and nutritional outcomes. To properly tackle these complex and interrelated concerns, comprehensive plans must include social fairness, environmental sustainability, economic development, and governmental changes.

Banks et al. (2021) reported that over half of survey respondents in low-access urban areas experienced food insecurity, with this prevalence being particularly pronounced among individuals with chronic health conditions. These findings underscore the need for timely assessments in healthcare settings to better identify at-risk populations. Despite the provision of Supplemental Nutrition Assistance Program (SNAP) benefits, food insecurity continues to persist, driven by shifts in household structures and income patterns. SNAP, a federal program designed to mitigate food insecurity through monthly financial assistance, helps individuals acquire food and essential goods. However, SNAP alone is insufficient to address the scope of the issue. Integrating community-based initiatives, such as local food pantries and the Double Up Food Bucks program, into SNAP policy could provide more comprehensive support. Access to affordable, nutritious food is also influenced by perceptions of healthy eating and transportation limitations, both of which can hinder access to essential food sources. To address this, incorporating food insecurity screening in primary care settings can help identify broader socioeconomic barriers, including severe health issues and financial instability. This approach could lead to coordinated interventions that link healthcare with community-based support services, ultimately promoting overall well-being beyond mere nutritional concerns.

The following elucidates the common variables contributing to food insecurity typically experienced by students.

Financial Literacy

Food insecurity is often closely linked to financial literacy, as individuals with a limited understanding of budgeting, financial planning, and resource allocation may struggle to make informed decisions about food purchases and overall household management. Enhanced financial literacy can empower individuals to optimize their income and allocate resources more effectively, thereby reducing the likelihood of food insecurity (Zhang et al., 2020). Financial literacy encompasses the skills and knowledge needed to make informed and effective financial decisions, including budgeting, saving, and understanding credit. When individuals lack these skills, they may struggle to prioritize their spending, leading to insufficient funds for purchasing nutritious food. Studies indicate that individuals with higher financial literacy levels tend to experience lower rates of food insecurity. For instance, a study by Miao et al. (2021) found that increased financial literacy is associated with improved food purchasing decisions, resulting in healthier dietary choices and reduced food insecurity rates. Furthermore, financial literacy can enhance individuals' ability to access and utilize government assistance programs, such as SNAP, effectively. This is crucial, as many eligible individuals do not fully benefit from these programs due to a lack of knowledge about how to apply or maximize their benefits (Zhang et al., 2020). Mohd Jamil et al. (2020) contend that financial literacy constitutes a fundamental competency for college students. This competency encompasses the understanding of key concepts such as goal setting, saving, investing, and expenditure management. Students who demonstrate proficiency in these areas tend to experience fewer financial challenges. Consequently, the ability to manage finances effectively may significantly impact an individual's capacity to maintain adequate nutrition. Insufficient financial management can impede individuals' ability to purchase food, thereby exacerbating financial strain as they may resort to loans or credit utilization to meet their nutritional needs. The inability to comprehend and navigate financial matters—including budgeting, saving, borrowing, and retirement planning—represents a considerable barrier within the demand side of the economy. Individuals lacking in financial literacy are more susceptible to making precarious financial choices and engaging in suboptimal decision-making. This underscores the critical importance of enhancing financial education and fostering a deeper understanding of financial issues among individuals. In this regard, improving financial literacy among vulnerable populations can play a significant role in alleviating food insecurity. By equipping

individuals with the tools to manage their finances better, we can foster healthier eating habits and enhance overall well-being.

Time Constraint

Food insecurity is a complex phenomenon intricately linked to time constraints and health issues. It refers to the lack of consistent access to sufficient food, which can be influenced by various socioeconomic factors, including income, employment, and education (United States Department of Agriculture [USDA], 2023). Time constraints significantly impact individuals' food choices and their ability to secure nutritious meals. Many individuals, particularly those working multiple jobs or long hours, find it challenging to allocate time for grocery shopping and meal preparation, often resorting to convenience foods that are quick to prepare but low in nutritional value (Garrone et al., 2020). This reliance on fast food and processed options can lead to poor dietary habits, contributing to a higher prevalence of chronic diseases such as obesity, diabetes, and cardiovascular conditions (Berkowitz et al., 2018). Moreover, the stress associated with food insecurity can exacerbate mental health issues, including anxiety and depression, which further complicates individuals' ability to manage their time and resources effectively (Hager et al., 2017). As a result, the interplay between food insecurity, time constraints, and health creates a vicious cycle, wherein inadequate nutrition contributes to health problems that can impede individuals' capacity to work or manage their daily responsibilities. Addressing these interconnected issues requires comprehensive solutions, including policies that promote access to affordable, healthy food, education on meal planning, and community support programs aimed at alleviating the burdens of food insecurity (Kirkpatrick et al., 2020).

Food Behaviour

Food insecurity is closely linked to food behavior and various health issues, creating a complex interplay that impacts individuals and communities. Food behavior encompasses the choices individuals make regarding food selection, preparation, and consumption, which are often influenced by the availability and accessibility of resources. When individuals experience food insecurity, they may resort to purchasing cheaper, calorie-dense foods that are often low in nutritional value, as these options are more affordable and readily available (Drewnowski & Almiron-Roig, 2010). This shift in food behavior can lead to inadequate nutrient intake and contribute to a range of health problems, including obesity, diabetes, and cardiovascular diseases (Gundersen & Ziliak, 2015). Moreover, individuals facing food insecurity may engage in maladaptive eating behaviors, such as binge eating or restrictive dieting, as they struggle to manage their limited food resources (Larson et al., 2008). The stress and anxiety associated with food insecurity can further exacerbate these unhealthy behaviors, leading to mental health issues such as depression and anxiety disorders (Weinreb et al., 2002). This creates a cyclical relationship where poor dietary choices stemming from food insecurity lead to negative health outcomes, which can, in turn, perpetuate food insecurity. Addressing these interconnections requires comprehensive interventions that promote food access, nutritional education, and support for individuals struggling with food insecurity (Seligman et al., 2010).

The Effect of Food Insecurity on Human Health Status

Food insecurity is a pressing issue among university students, profoundly affecting their health status and overall well-being. Many students face financial constraints due to tuition costs, housing expenses, and limited income from part-time jobs, which can significantly impact their ability to access sufficient, nutritious food (Goldrick-Rab et al., 2018). This lack of reliable food access often leads to inadequate nutrient intake, resulting in nutritional deficiencies that can impair cognitive function, concentration, and academic performance (Maroto et al., 2015). For instance, students experiencing food insecurity may be more likely to consume calorie-dense, nutrient-poor foods, leading to weight gain and increasing the risk of obesity and related chronic diseases such as diabetes and hypertension (Hagedorn et al., 2020). Additionally, the stress and anxiety associated with food insecurity can contribute to mental health issues, including depression and anxiety, which are already prevalent among university students (Hammons & Mattfeldt-Beman, 2013). These mental health challenges can further exacerbate the cycle of food insecurity, as they may hinder students' motivation to seek help or engage in healthy eating behaviors. Furthermore, food insecurity can have detrimental effects on social interactions and the overall college experience, leading to feelings of isolation and decreased participation in campus activities (Cady et al., 2021). Therefore, addressing food insecurity among university students is

essential not only for improving their health outcomes but also for enhancing their academic success and overall college experience.

CONCLUSION

The connection between food insecurity, financial literacy, time constraints, and food behavior significantly impacts the health status of university students. Food insecurity often stems from insufficient financial literacy, which limits students' ability to budget effectively and prioritize spending on nutritious foods. Many students, especially those managing tight budgets, may lack the skills to make informed financial decisions regarding food purchases, leading to reliance on cheaper, unhealthy options that can contribute to poor nutritional intake and subsequent health issues, such as obesity and chronic diseases. Additionally, time constraints—due to academic commitments and part-time work—often prevent students from engaging in meal planning and preparation, further pushing them towards convenient, nutrient-poor foods. These unhealthy eating behaviors, compounded by stress from financial instability and time pressures, can exacerbate mental health issues such as anxiety and depression, which are prevalent among students. Ultimately, the interplay of these factors highlights the importance of addressing food insecurity through enhanced financial literacy programs, time management strategies, and resources that promote healthy food behaviors, thereby improving the overall health and academic success of university students.

ACKNOWLEDGMENT

The authors would like to thank all the parties that provided information for this study.

REFERENCES

1. Ahmad, N. S. S., Sulaiman, N., & Sabri, M. F. (2021). Food Insecurity: Is It a Threat to University Students' Well-Being and Success? *International Journal of Environmental Research and Public Health*, 18(11), 5627.
2. Banks, J., Kaye, M., & Kim, S. (2021). Food insecurity and mental health: A systematic review. *International Journal of Environmental Research and Public Health*, 18(2), 521.
3. Berkowitz, S. A., Basu, S., & Meigs, J. B. (2018). Food insecurity and health outcomes: A systematic review. *American Journal of Preventive Medicine*, 55(3), 421-426.
4. Cady, M., Morrow, J. A., & White, C. S. (2021). Understanding college student food insecurity: A systematic review. *Journal of College Student Development*, 62(4), 490-507.
5. Drewnowski, A., & Almiron-Roig, E. (2010). Human perceptions and preferences for fat-rich foods. In *Fat Detection: Taste, Texture, and Post Ingestive Effects* (pp. 125-150). CRC Press.
6. Food and Agriculture Organization of the United Nations. (2021). *The State of Food Security and Nutrition in the World 2021*. FAO.
7. Garrone, M., Melacini, M., & Perego, A. (2020). Time constraints and the role of fast food in food insecurity. *Journal of Public Health*, 42(2), 349-356.
8. Gundersen, C., & Ziliak, J. P. (2015). Food insecurity and health outcomes. *Health Affairs*, 34(11), 1830-1839.
9. Goldrick-Rab, S., Napa, C., & Su, X. (2018). Still Hungry and Homeless in College: Findings from the Wisconsin HOPE Lab. Wisconsin HOPE Lab.
10. Hagedorn, R. L., & Williams, A. B. (2020). The relationship between food insecurity and health-related quality of life among university students. *Journal of American College Health*, 68(4), 404-410.
11. Hager, E. R., Quigg, A. M., & Black, M. M. (2017). Food insecurity and mental health in a nationally representative sample of adults. *American Journal of Preventive Medicine*, 52(3), 348-355.
12. Hammons, A. J., & Mattfeldt-Beman, M. (2013). Food insecurity and mental health in college students. *Journal of College Student Psychotherapy*, 27(4), 309-323.
13. Kirkpatrick, S. I., Tarasuk, V., & McIntyre, L. (2020). The role of food insecurity in the relationship between time constraints and health outcomes. *BMC Public Health*, 20(1), 1121.
14. Larson, N., Laska, M. N., & Neumark-Sztainer, D. (2020). Food Insecurity, Diet Quality, Home Food Availability, and Health Risk Behaviors Among Emerging Adults: Findings from the EAT 2010–2018 Study. *American Journal of Public Health*, 110(9), 1422–1428.

15. Maroto, M. E., Leung, M. M., & Norr, K. F. (2015). Food insecurity among community college students: The role of financial aid. *Community College Journal of Research and Practice*, 39(5), 411-417.
16. Seligman, H. K., Laraia, B. A., & Kushel, M. (2010). Food insecurity is associated with chronic disease among low-income NHANES participants. *Journal of Nutrition*, 140(2), 304-310.
17. Shemyakina, O. (2022). War, Conflict, and Food Insecurity. *Annual Review of Resource Economics*, 14(1).
18. United States Department of Agriculture (USDA). (2023). Key statistics & graphics. Retrieved from USDA Food Security
19. Weinreb, L., Wehler, C., & Kuhl, D. (2002). Hunger: The hidden health crisis. *American Journal of Public Health*, 92(8), 1364-1369.
20. Zhang, X., Biehl, A., & Regan, M. (2020). The Role of Financial Literacy in Food Security: Evidence from a Study of Low-Income Households. *Journal of Consumer Affairs*, 54(2), 388-407.