ASSESSMENT OF SOCIO-CULTURAL FACTORS INFLUENCING FOOD SECURITY IN UROMI, ESAN-NORTH-EAST LOCAL GOVERNMENT OF EDO STATE

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Abstract

This study, titled "Assessment of Socio-Cultural Factors Influencing Food Security in Uromi, Esan-North-East Local Government of Edo State," aims to investigate the impact of socio-economic, environmental, and infrastructural factors on food security in Uromi, Esan-North-East Local Government of Edo State. The specific objectives include assessing the influence of socio-economic factors, examining environmental impacts on agricultural production, analyzing the role of infrastructure and government policies on food accessibility, and proposing strategies to enhance food security. Using a quantitative research approach, structured questionnaires were administered to 298 respondents selected through simple random sampling. The results indicate that while a significant proportion of households report stable income (Mean = 3.41) and strong social support (Mean = 3.60), considerable challenges remain in accessing nutritious food (Mean = 3.10) and viable employment opportunities (Mean = 2.85). Environmental analysis confirms that soil quality (Mean = 3.38) is a major concern, though water access (Mean = 2.67) is less critical. Critically, infrastructure and policy dimensions reveal severe deficits in storage facilities (Mean = 2.66) and ineffective government programs (Mean = 2.97). However, there is strong community support for sustainable practices (Mean = 3.47) and cooperative farming (Mean = 3.41) as viable solutions. The study concludes that enhancing food security in Uromi requires an integrated strategy combining investment in storage and transport infrastructure, effective policy implementation, promotion of sustainable agriculture, and strengthening of local cooperatives to build a resilient and self-sufficient food system.

Keywords: Assessment, socio-cultural factors, food security

Introduction

Food security has become a central concern worldwide, particularly in Sub-Saharan Africa, where economic, environmental, and social challenges significantly impact food production and access. Food security has emerged as a central concern worldwide, particularly in Sub-Saharan Africa, where complex economic, environmental, and social challenges significantly impact food production and access. The persistent struggle to ensure stable and nutritious food sources for all people is a defining issue of our time, placing the spotlight on regions that are disproportionately affected by these systemic challenges. The agricultural sector, which underpins the livelihoods of a large portion of the population in Sub-Saharan Africa, is highly susceptible to environmental fluctuations and socio-economic constraints. This situation highlights the critical need for targeted studies that can identify and address the specific factors influencing food security at a localized level, such as in Uromi, Esan-North-East Local Government of Edo State, Nigeria.

Food security is a multifaceted concept with an internationally recognized definition and set of core pillars Food security is defined by the Food and Agriculture Organization (FAO, 2025) as a condition where “all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (Amao, *et al*, 2023). The essential components of food security include availability, access, utilization, and stability. Each of these elements is crucial for a sustainable food system, yet Sub-Saharan Africa faces significant challenges in achieving these goals, with rural communities in Nigeria often experiencing some of the most severe impacts. This situation has led to a critical need for studies focused on

identifying and addressing specific factors affecting food security in localized contexts within these regions, such as in Uromi, Esan-North-East Local Government of Edo State**,** Nigeria. In Sub-Saharan Africa, food security is highly dependent on agriculture, which is often vulnerable to environmental fluctuations and limited by socio-economic constraints. Agriculture remains the primary source of income and sustenance for a large portion of the population in this region, directly impacting their ability to secure food. However, the region continues to face food security challenges, largely driven by factors such as climate change, soil degradation, water scarcity, and the prevalence of pests and diseases (United Nations, 2015). These environmental issues not only reduce the availability of food by affecting crop yields and livestock productivity but also influence food prices, making it harder for communities to afford adequate nutrition. For instance, the Intergovernmental Panel on Climate Change (IPCC) has reported that climate change poses a severe threat to food security in Africa, with changes in rainfall patterns, temperature, and extreme weather events directly affecting agricultural productivity (FAO, 2025).

Nigeria, the most populous country in Africa, is one of the nations grappling with the complexities of food insecurity, particularly in rural areas. Agriculture plays a significant role in Nigeria's economy and sustains the livelihoods of nearly 70% of its rural population. Despite this dependence on agriculture, many Nigerian communities continue to struggle with food security due to factors that affect both the production and distribution of food. Although Nigeria possesses significant agricultural potential, including fertile land and a diverse range of crops, issues such as inefficient farming practices, poor infrastructure, and limited access to markets hinder food availability and accessibility (Olaniyan, 2020). Furthermore, socio-economic factors such as poverty, limited education, and unemployment exacerbate food insecurity by restricting households' ability to purchase food, access quality diets, and ensure stable food sources.

Food availability, one of the primary dimensions of food security, relies on consistent and sufficient production, which is influenced by both environmental and socio-economic conditions. These factors reduce crop yields, affecting not only the farmers but also the entire community that depends on locally grown food. Access, another critical component of food security, is influenced by both socio-economic conditions and infrastructure. When food is available, economic barriers, such as low income and limited employment opportunities, further restrict people's purchasing power, exacerbating food insecurity in the region. Utilization, the third component of food security, emphasizes the importance of food quality, safety, and nutritional value. In many Nigerian communities, limited knowledge of nutrition and health practices affects food utilization, leading to malnutrition despite the availability of food. In addition, food safety is a concern due to the lack of proper storage facilities and knowledge about food handling, which may lead to food borne illnesses. These issues point to the broader need for education on nutrition and health, particularly in rural areas where misconceptions about food and nutrition often contribute to poor health outcomes (Nwosu *et al*., 2020). The stability of food supply over time is another major concern, particularly in rural and agriculturally dependent regions, where food production is highly seasonal. Seasonal fluctuations in food availability due to climatic conditions or the farming calendar make it challenging for communities to maintain a stable food supply throughout the year. Furthermore, many rural Nigerian communities, faces policy-related obstacles that limit the stability of food supplies. For example, the lack of government support for smallholder farmers, limited agricultural extension services, and inadequate investment in rural infrastructure contribute to the instability of food availability and access (Eze, 2021). In addition, policy inconsistencies and the absence of effective food security programs at the local level further aggravate the problem, making it difficult for the community to achieve long-term food security. Understanding the factors influencing food security in Uromi, Esan-North-East Local Government of Edo State, Nigeria is essential not only for addressing local food insecurity but also for contributing to broader strategies aimed at achieving sustainable development in Nigeria. Insights from this study can inform policymakers, community leaders, and development agencies on the necessary steps to improve food availability, access, utilization, and stability. Addressing these issues in Uromi, Esan-North-East Local

Government of Edo State, Nigeria can potentially serve as a model for similar rural communities in Nigeria and other Sub-Saharan African countries facing comparable challenges. The findings of this research could provide valuable knowledge to help develop targeted policies and initiatives that promote food security, enhance local agricultural productivity, and improve socio-economic conditions in in Uromi, Esan-North-East Local Government of Edo State,

Statement of the Problem

There are significant challenges faced by many Nigerian communities due to various local issues, impacting the community's access to stable and adequate food supplies. Low agricultural productivity is a major concern, often resulting from outdated farming methods, limited access to agricultural inputs, and insufficient support for smallholder farmers. In addition, climate change has led to unpredictable weather patterns, affecting crop yields and food availability. Poor infrastructure, especially in terms of road networks, makes transporting food difficult, increasing costs and reducing access to food markets. Socio-economic limitations, such as low household income, further hinder people's ability to afford adequate nutrition. These factors, coupled with limited government policies to support rural farmers, exacerbate food insecurity in Uromi, Esan-North-East Local Government of Edo State**.** Currently, there is limited research focused on the unique food security issues faced by Uromi, Esan-North-East Local Government of Edo State. Addressing this gap is critical for crafting interventions that not only address immediate needs but also contribute to long-term solutions for food security, supporting both local residents and policymakers in formulating effective strategies.

Research Questions

1. What is the impact of socio-economic factors on food security in Uromi, Esan-North-East Local Government of Edo State?
2. How do environmental factors affect agricultural production in Uromi, Esan-North-East Local Government of Edo State?
3. What is the influence of infrastructure and government policies on food accessibility and stability in Uromi, Esan-North-East Local Government of Edo State?
4. What strategies can be proposed to enhance food security in Uromi, Esan-North-East Local Government of Edo State?
5. What are the possible solutions to food security problems in Uromi, Esan-North- East Local Government of Edo State?

Methodology

The research method provides a systematic plan for data collection, analysis, and interpretation in order to achieve the stated objectives of the study. It also highlights the research design, the population and sample size, the instrument for data collection, the method of data analysis, as well as the research questions and hypotheses that guided the study. A cross sectional research design was used. The design is effective because it describes trends, estimates prevalence and explores relationships which are the focus of the study. The population comprised of estimated total number of 322 households in **Uromi, Esan-North-East Local Government of Edo State**. The Taro Yemen formula was used to calculate the sample size. A total of 298 respondents were sampled for the study. A systematic sampling procedure was used to select the villages in Uromi while simple random sampling was used to select the households. A well-structured questionnaire was used to obtain information required from the respondent on their food and nutrition security status. The questionnaire was validated by three lecturers in the Department of Human Nutrition and Dietetics, Ambrose Alli University Ekpoma, Edo State with the reliability index of .76 established using Cronbach Alpha before it was administered to the respondents. In analyzing the data collected, mean and standard deviation were used to answer the research questions and simple frequency and percentages used for present the socio-economic statues of the respondents. In decision making, items with mean scores of 3.00 and above were regarded as agree while items with below 3.00 mean scores were regarded as disagree.

Results

Research Question 1: What is the impact of socio-economic factors on food security in Uromi, Esan-North-East Local Government of Edo state

Table 1: Mean and standard deviation of the impact of socio-economic factors on food security in Uromi, Esan-North-East Local Government of Edo State.

S/N	Questionnaire Item	$\bar{X}$	SD	Remark
1	My household has a stable source of income to meet food needs.	3.41	1.30	Agreed
2	I can afford to buy sufficient and nutritious food for my family.	3.10	1.33	Agreed
3	My educational level has positively impacted my food choices and nutrition.	3.10	1.29	Agreed
4	I believe that employment opportunities in my community affect my food security.	2.85	1.33	Disagreed
5	Social support from family or community helps improve my household food security.	3.60	1.31	Agreed
	Grand Mean	**3.21**	**1.31**	

Table 1 above presents the mean responses and standard deviations on impact of socio-economic factors on food security in Uromi. The overall mean score of 3.21(SD = 1.31) which is greater than 3.00 cut-off point on a five –point scale revealed that the respondents generally agreed with most of the statements as it relates to impact of socio-economic factors on food security in Uromi, indicating a positive perception in items one, two, three and five. Only item four with a mean score of 2.85 (SD = 1.33) was disagreed by the respondents.

Research Question 2 : How does environmental factors affect agricultural production in Uromi, Esan-North-East Local Government of Edo State.

*Table 2: mean and standard deviation on how environmental factors affect agricultural production in Uromi, Esan-North-East Local Government of Edo State***.**

S/N	Questionnaire Item	$\bar{X}$	SD	Remark
1	Climate change negatively impacts my agricultural production.	3.03	1.41	Disagreed
2	Soil quality in my area affects my crop yields.	3.38	1.38	Agreed
3	Access to water resources is a major challenge for my agricultural activities.	2.67	1.32	Disagreed
4	I believe that biodiversity in agriculture enhances food security in my community.	2.96	1.33	Disagreed
5	Environmental degradation affects my ability to produce food sustainably.	3.08	1.32	Disagreed
	Grand Mean	**3.02**	**1.35**	

Table 3 above shows responses on how environmental factors affect agricultural production. The Grand Mean of 3.02 and standard deviation of 1.35 indicates an overall neutral to slightly negative perception of the presented environmental challenges, suggesting that while these issues are recognized, they are not unanimously experienced as the most pressing constraints. A clear primary concern emerges with soil quality (Mean = 3.38, SD = 1.38), which is the only factor that respondents agreed affects their crop yields. In direct contrast, respondents disagreed that access to water resources is a major challenge (Mean = 2.67, SD = 1.32), the lowest score in the table. This suggests

that for a majority, water availability for irrigation or rain-fed agriculture is not perceived as a critical limiting factor in their current context. The perceptions of the remaining three factors are ambivalent and clustered around the neutral point. Respondents marginally disagreed that biodiversity enhances food security (Mean = 2.96, SD = 1.33) and that environmental degradation affects sustainable production (Mean = 3.08, SD = 1.32). The most divisive issue is climate change (Mean = 3.03, SD = 1.41). While the mean suggests a neutral stance, the high standard deviation—the highest in the table—reveals a significant lack of consensus.

Research Question 3: What is the influence of infrastructure and government policies on food accessibility and stability in Uromi Esan-North-East Local government of Edo State.

Table 3: Mean and standard deviation of the influence of infrastructure and government policies on food accessibility and stability in Uromi Esan-North-East Local government of Edo State.

S/N	Questionnaire Item	$\bar{X}$	SD	Remark
1	The availability of roads and transport systems affects my access to markets.	2.95	1.33	Disagreed
2	Government policies on agriculture positively influence my food production.	2.87	1.32	Disagreed
3	I have access to adequate storage facilities for my agricultural produce.	2.66	1.30	Disagreed
4	Market prices for food items are stable and predictable in my community.	2.80	1.30	Disagreed
5	There are effective government support programs that enhance food security in my area.	2.97	1.32	Disagreed
	Grand Mean	**2.92**	**1.31**	

As shown in Table 3 the overall mean score of 2.92 (SD= 1.31) which is lower than 3.00 on a five-point Likkert scale revealed that the respondents are not in agreement with the items as what influences food accessibility and stability in Uromi, as all items raised in the instrument were disagreed with by respondents. Item three had the lowest mean score 2.66 and standard deviation of 1.30 meaning that majority of the respondents, if not all, don't have access to adequate storage facilities for their agricultural produce. The table equally revealed that there are no effective government support programs, no good policies on agriculture and predictable market prices and these affect food accessibility and stability in Uromi.

Research question 4: What strategies can be proposed to enhance food security in Uromi, Esan-North-east Local government of Edo State.

Table 4: Mean and standard deviation of strategies that can be proposed to enhance food security in Uromi, Esan-North-east Local government of Edo State.

S/N	Questionnaire Item	$\bar{X}$	SD	Remark
1	I believe that community education programs on agriculture can improve food security.	3.25	1.36	Agreed
2	Increased access to credit for farmers would enhance food production in my community.	3.16	1.35	Agreed
3	Implementing sustainable farming practices can significantly improve food security.	3.47	1.33	Agreed
4	I support the idea of forming cooperatives to enhance food distribution and access.	3.41	1.31	Agreed
5	Local government should prioritize infrastructure development to improve food security.	3.02	1.32	Agreed
	Grand Mean	**3.26**	**1.33**	

Table 4 above shifts the focus from identifying problems to gauging the community's receptiveness to potential solutions. The analysis reveals strong support for a multi-faceted approach to addressing food insecurity in Uromi, with the Grand Mean of 3.26 (SD = 1.33) indicating a positive leaning towards all proposed interventions. The solution that gained the strongest agreement is the implementation of sustainable farming practices (Mean = 3.47, SD=1.33). This demonstrates that farmers are not only aware of environmental challenges but are also positively disposed towards adopting methods that improve long-term soil health, productivity, and resilience. There is also very strong support for collective action through the formation of cooperatives (Mean = 3.41, SD= 1.31). This indicates that respondents see value in pooling resources, strengthening their market position, and improving distribution channels to enhance both their incomes and community access to food. Support for community education programs (Mean = 3.25, SD = 1.36) and increased access to credit (Mean = 3.16, SD =1.35) is also clear. This suggests a recognized need for both knowledge transfer (skills and techniques) and financial capital (loans for inputs, equipment, and expansion) as fundamental drivers for improving agricultural output and, consequently, food security. Notably, while the call for the local government to prioritize infrastructure received agreement in principle (Mean = 3.02), it is the least strongly endorsed going by the table.

Discussion

The results from Table 1 reveal that socio-economic factors are perceived as critically important, yet areas of significant vulnerability remain. The strong agreement on the role of social support (Mean = 3.60) underscores its function as a primary socio-cultural safety net. This finding powerfully aligns with Adebayo and Alabi (2020), who emphasized the importance of community networks and supportive structures in enhancing household resilience to food insecurity. It appears that in Uromi, social capital is a key buffer against other economic shocks.

Conversely, the perceived instability of employment opportunities, which was the only factor in this category to be "disagreed" with, points to a significant structural economic weakness. This validates the concern raised by your initial analysis and echoes Adeoye and Afolaranmi (2022), who identified inadequate economic opportunities as a key point of food insecurity. The middling scores for stable income and ability to afford nutritious food, both just barely in the "agreed" range, further illustrate this economic issue. The high standard deviations (~1.30) across these items confirm that these experiences are not uniform, indicating significant socio-economic stratification within the community.

The analysis of Table 2 provides a clearer picture of environmental factors and how they affect agricultural production. The community's primary environmental concern is unequivocally soil quality which was the only factor they agreed affects their production. This lends strong, specific support to the meta-analysis by Nwagbo and Ijeoma (2021), which identified land degradation as a paramount risk to food security. It suggests that interventions aimed at soil conservation and fertility management would be met with high levels of community recognition and engagement.

The data also clarifies the community's stance on other issues. The definite disagreement that water access is a major challenge refines the initial interpretation, suggesting it is not a primary constraint for most farmers in this specific locale. The neutral-to-negative scores for climate change and biodiversity coupled indicates a lack of consensus and awareness. This partially contrasts with Niles and Brown (2017), highlighting that while climate change is a global threat, its localized perception and impact are not yet universally acknowledged or understood at the community level like Uromi.

Table 3 reveals the most critical area of failure: infrastructure and government policy. The Grand Mean of 2.92 is the lowest of all categories, indicating a clear and consistent consensus on systemic inadequacies.The most severe deficit is in access to storage facilities identifying a direct cause of post-harvest losses and income instability for farmers. This finding strongly supports Adeoye and Afolaranmi (2022), who noted that a lack of infrastructure is a critical barrier to market access and

food preservation. The disagreement with the effectiveness of government policies and support programs confirms a significant implementation or communication gap, resonating with Adebayo and Alabi (2020) on the need for more effective and tangible policy execution.

The results from Table 4 are highly significant, showing strong community buy-in for a suite of proposed solutions. The strongest support is for sustainable farming practices demonstrating a clear understanding and willingness to adopt methods that address their primary environmental concern (soil health). This directly aligns with Otekunrin (2022), who advocated for such innovative and sustainable solutions.

The robust support for forming cooperatives indicates a desire for collective action to overcome market inefficiencies and improve bargaining power. This, coupled with support for education and credit access paints a picture of a community that is pragmatic and ready to engage in knowledge-based, collective, and financially-enabled interventions. This aligns with Nwaosu et al (2020) who opined that forming cooperatives as part of community-based intervention for farmers will actually help them in taking collective actions on their farm work for improved food security.

Conclusion

This study set out to assess the socio-cultural, economic, environmental, and infrastructural factors influencing food security in Uromi, Esan-North-East LGA, Edo State. The findings paint a complex picture of a community grappling with significant challenges but also possessing considerable resilience and a clear vision for solutions.

The analysis reveals that food security in Uromi is primarily constrained by structural and institutional deficiencies. The most critical issues identified are the perceived ineffectiveness of government policies and support programs, a severe lack of adequate storage infrastructure leading to post-harvest losses, and high volatility in market prices. These infrastructural and policy gaps exacerbate the community's socio-economic vulnerabilities, which include unstable employment opportunities and limited access to credit. Environmentally, while water access is not seen as a major constraint, the degradation of soil quality stands out as a paramount concern directly impacting agricultural yields.

However, the study also uncovers key sources of community strength. The robust role of social support networks acts as a vital buffer against food insecurity, highlighting the importance of socio-cultural capital. Furthermore, respondents demonstrated a strong understanding of the path forward, expressing clear support for community-driven solutions such as adopting sustainable farming practices, forming agricultural cooperatives, and enhancing knowledge through education programs.

Recommendation

Based on the findings of the study, the researchers recommend the following;

1. Government should improve on community-based interventions on sustainable agriculture practices and nutrition to empower households with the knowledge necessary for improved food security.
2. Government should invest in transportation and storage infrastructure to facilitate market access and help farmers reduce post-harvest losses.

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