



# Impact of Food Insecurity among Household with under 5 Children in Nigeria: A Systematic Review

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## Authors' contributions

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## ABSTRACT

**Background:** Food insecurity is a worldwide public health concern affecting millions, particularly young Nigerian children, who are at high risk of malnutrition and developmental issues. The aim of this study is to explore the dynamics and coping strategies of Nigerian families with children under age five in order to understand the impact of food insecurity on these families.

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**Methodology:** A comprehensive search of electronic databases such as PubMed, Scopus, Web of Science, CINAHL and African Journal Online was carried out for relevant articles published between 2014 and 2024, the search strategy used keywords such as "food insecurity" AND "under-five children" AND "Nigeria". This study included 10 papers with qualitative research that examined food insecurity in Nigerian households with children under five. The key challenges and tragedies of these families were identified by applying thematic analysis methods to the analysis of the selected studies data.

**Results:** Ten studies that satisfied the inclusion criteria were included in this study. The study reveal that food insecurity significantly impacts the nutritional status, growth, and development of children under five years old in Nigeria, leading to malnutrition, stunting, wasting, and underweight. Factors such as poverty, unemployment, big families, low maternal education, and low agricultural production dramatically raises the morbidity and mortality rates in this age group. The review highlighted the psychological stress faced by caregivers, which exacerbates the difficulties of managing food insecurity within the household.

**Conclusion:** Nigerian families with children under five are impacted by food insecurity, which has an impact on development and nutrition. The adverse effects on child nutrition and development highlight the need for targeted interventions aimed at improving food access and nutritional support for vulnerable families. Long-term effects can be reduced by addressing socioeconomic issues like unemployment and poverty, putting sustainable farming methods into place, and improving maternal education.

*Keywords: Food insecurity; malnutrition; under 5 children; hunger; household; families.*

## 1. INTRODUCTION

Food insecurity remains a serious global health concern, defined as not always having access to enough food for a healthy, active life [1]. Food insecurity and malnourishment are issues that impact both developed and developing nations, the majority of those experiencing food insecurity worldwide are in developing nations [2]. As noted by Beyene [3] the worst hunger is primarily found in South Asia, and the highest rate of undernourishment is found in sub-Saharan Africa. The ability to meet the world's food needs in the years to come is another issue that affects the worldwide community.

The occurrence of food insecurity is particularly concerning in Nigeria a nation home to more than 200 million people [4]. According to the 2022 state of food insecurity in Nigeria about 43 million people or over 21.4% of the population suffer acute food insecurity [5], thus vulnerable populations such as families with children under five are particularly affected by this problem. According to Nigeria Demographics Health Survey [6] food insecurity has a negative impact on children's health since 37% of children under five suffer from stunting, 22% are underweight, and 7% are wasting.

In Nigeria, food insecurity takes several forms which includes inadequate food supply, inadequate dietary diversity and inadequate

nutrition. Data from the World Food Programme (WFP) shows that more than 50% of Nigerian households find it difficult to afford a healthy diet, majority frequently survive on grains and tubers with little access to fruits, vegetables and foods that are high in protein [7]. The socioeconomic condition, cultural norms and political climate of Nigeria are intricately entwined with this situation which result in a complicated web of forces that support its continuance. Matemilola [8] argued that food insecurity is made worse by economic issues including high unemployment, inflation and poverty, more than 40% of the population lives below the poverty line especially in rural areas devastated by conflict.

The effects of food insecurity are especially harmful to children under five because of their higher nutritional needs for growth and development. A study by Militao et al. [9] claimed that food insecurity-related malnutrition can have various negative effects, such as stunted growth, lowered immunity, cognitive decline and in extreme situations death. According to UNICEF [10], nearly half of all deaths in Nigeria involving children under five are attributed to malnutrition, the effects go beyond these children' short-term health they also have an impact on their long-term growth and capacity to make significant contributions to society. Studies revealed that stunted children are more likely to have poorer educational attainment and economic capacity as

adults, which indicate the relationship between food insecurity and poverty [2].

The Nigerian government and Non-Governmental Organizations (NGOs) have over the years sought to counter on the insecurity through policies and projects. Nevertheless, the country continues to face food insecurity with the magnitude of the problem being worst in families with children below the age of five years.

Research done on the food insecurity affecting households with under five children show various potent perennial effects on child development as well as the economy of a given country. For instance, Oderinde et al. [11] claimed that these households are likely to suffer from some special challenges such as; nutritional requirements and or health complications. It is therefore paramount to tackle food insecurity knowing it can affect future economic of a nation. It is crucial to comprehend how food insecurity affects Nigerian families with under 5 children, considering the severity of the situation. In order to provide a thorough understanding of the variables causing food insecurity, its effects on children's health and family well-being, and potential intervention techniques, this systematic review seeks to consolidate the available data on the matter. The study aims to provide insights for policies and initiatives that can reduce food insecurity and enhance the health outcomes of Nigerian children by tackling this critical problem.

### 1.1 Aims

The primary aim of this study is to explore and understand the impact of food insecurity on families with children under five in Nigeria through a systematic review.

### 1.2 Main Research Question

To what extent is the impact of food insecurity on household with under-five children in Nigeria and how do socio-economic factors contribute to their vulnerability?

### 1.3 Research Objectives

- To identify the social, economic and cultural factors contributing to food insecurity among families with young children in Nigeria.
- To explore the lived experiences of families facing food insecurity in Nigeria.
- To assess the impact of food insecurity on the health and development of under five.

## 2. LITERATURE REVIEW

Nigeria is a country with great socio-economic inequalities and in terms of food insecure the aspects have different levels in different regions. Nigeria have precarious security conditions in their northern territories characterized by rebellions and high levels of poverty thus they register higher level of food insecurity than the southern regions [12]. According to the National Bureau Statistics (NBS) report, feeding adequacy insecurity in Nigeria is prevalent among more than 40percent of the houses in Nigeria with better proportions annexed in the rural areas [13]. Govender et al. [14] also noted that families with children under the age of five are more exposed to the effects of food insecurity because their dietary requirements increase during early age.

According to a study by Nnaji et al. [15] children in Northern Nigeria are highly affected by food insecurity status, the study blames this to low productivity of agriculture, lack of market and ongoing conflict. Nkwonta et al. [16] also noted that deforestation and planting of cash crops have led to the emergence of areas of high food insecure families especially in the urban poor areas.

Malnutrition or rather food insecurity comes with serious impacts to children under five years of their age as their growth, development and wellbeing is affected. John et al. [17] concluded that Nigerian food-insecure household are vulnerable to have stunted, underweight children and micronutrient depleted children. The WHO reports show that for every 10 children below the age of 5 in the country, 3 are stunted and this state is strongly associated with chronic hunger [18]. In addition, food insecurity has been connected to a host of detrimental outcomes for children's physical, mental, and emotional health.

Besides physical wellbeing, food insecurity affects the learners' cognitive and emotional wellbeing. Adamu et al. [19] observed that pupils from the food insecure homes also have delayed development and show some behavioural problems. Their study support Aurino et al. [20] who established that food insecurity during early childhood is related to a lower attainment of school as well as poorer performance in school in the later years. Ejiohuo et al. [21] also claimed that the emotional burden that food insecurity takes also has an effect on the mental health of the parents, influencing how they raise their

children and establishing the surroundings in which the child is raised.

Food insecurity brought about by poverty forms a major challenge for families in Nigeria and thus families adapt to the following coping mechanisms which have long term negative impacts. Consequently, Cohen et al. [22] identified that common strategies are to limit the number of meals that are eaten on a daily basis, prioritizing food for young children and using alternative and inferior food that is cheaper for body nutrition. Ayuba et al. [23] argued that sometimes families can end up practicing negative ways for instance children engage in poor labor, early marriage or in other cases families move to urban centers in search for better opportunities.

Mukhtar [24] pointed out that one of the main coping mechanisms to food insecurity in rural areas is to borrow food or money from the neighbours. Yet in the urban setting, which such social relations may be less developed, families require outside help from either governmental or nongovernmental organizations [25]. This is supported by McKune & Hood [26] who observed that the food aid programs are more by the urban families but such programs may not afford the populations of such communities.

Several measures have been taken over the years to mitigate food insecurity in Nigeria with different outcome. The concept popularly known as the Home-Grown School Feeding Program (HGSFP) is a program that was launched by the Nigerian government where school children are provided with meals on a daily basis so as to decrease the problems which children face when it comes to feeding while at school But as Okafor et al. (2021) highlighted the program has low coverage in the targeted communities especially in the areas most affected by conflict and most stated targeted did not cover the most vulnerable families with children below five years. The other players that have shown their participation in food insecurity control include Non-Governmental Organizations (NGOs) and international agencies. For instance, the Action Against Hunger works in the northern part of Nigeria offering food assistance and feeding support to families who have been displaced by conflict. However, as mentioned by Ibrahim & Musa (2020) such interventions are usually in the short-term and do not solve factors that lead to food insecurity such as poverty, illiteracy and diseases.

### 3. METHODOLOGY

#### 3.1 Search Strategy

In this study, the search was conducted using a wide and systematic approach in order to identify studies that can enlighten on the effects of food insecurity on families with children under 5 years in Nigeria. The database searched were PubMed, Scopus, Web of Science, CINAHL and African Journal Online. These databases were selected because they offer health, social sciences and regional indexing which would capture a lot of the needed articles and papers.

The keywords which were derived from the research question included Food insecurity, under 5 children and Families. To enhance the robustness of the search, Boolean operators was used in compounding of these terms included "AND", "OR". For instance search strings included search for "food insecurity" OR "hunger" AND "under 5 children" OR "Young children" AND "Families" AND "Nigeria". The search was made between 2014 and 2024 to being sure the search engines addressed the latest and the most relevant articles. No date restrictions were placed to include all the information available on the subject into the analysis. Matching studies reference lists were also hand searched in the attempt to find other potential studies which could have been overlooked in initial database search.

#### 3.2 Inclusion and Exclusion Criteria

To ensure that the studies included in the review were relevant to the research question, specific inclusion and exclusion criteria were developed

##### Inclusion Criteria:

- Studies that focus on food insecurity within families with under 5 children in Nigeria
- Studies that employed qualitative and quantitative research methods
- Studies published in journals with peer review
- Studies published between the year 2014-2024
- Studies that are written in English

##### Exclusion Criteria:

- Studies that do not specifically address families with under 5 children
- Studies published before year 2014
- Studies conducted outside of Nigeria

### 3.3 Data Extraction

A data extraction form was created for this review, requesting details about the study, author, year, place, aims, objectives, participants, methods, findings, and authors' conclusions for easier and consistent review. In order to minimize errors and observer biases, the process of data extraction was performed by one personnel and checked by another. Both the reviewers synthesized data from the included studies independently and in case of any differences the issues were discussed. According to Chandler et al. [27] this approach of having two reviewers to extract data from the selected studies helped in having a well done reliable data

extraction process as a foundation for the rest of the systematic review process.

### 3.4 Data Analysis

In particular, to integrate the data that has been received in the process of the qualitative systematic review, thematic synthesis was employed because this approach is applicable to qualitative data. Dawadi [28] argued that thematic synthesis works on areas of themes and involves identification, coding and categorizing themes in synthesized studies. The first procedure under the analysis section was to read through every study included in the analysis again and then code some of the text segments

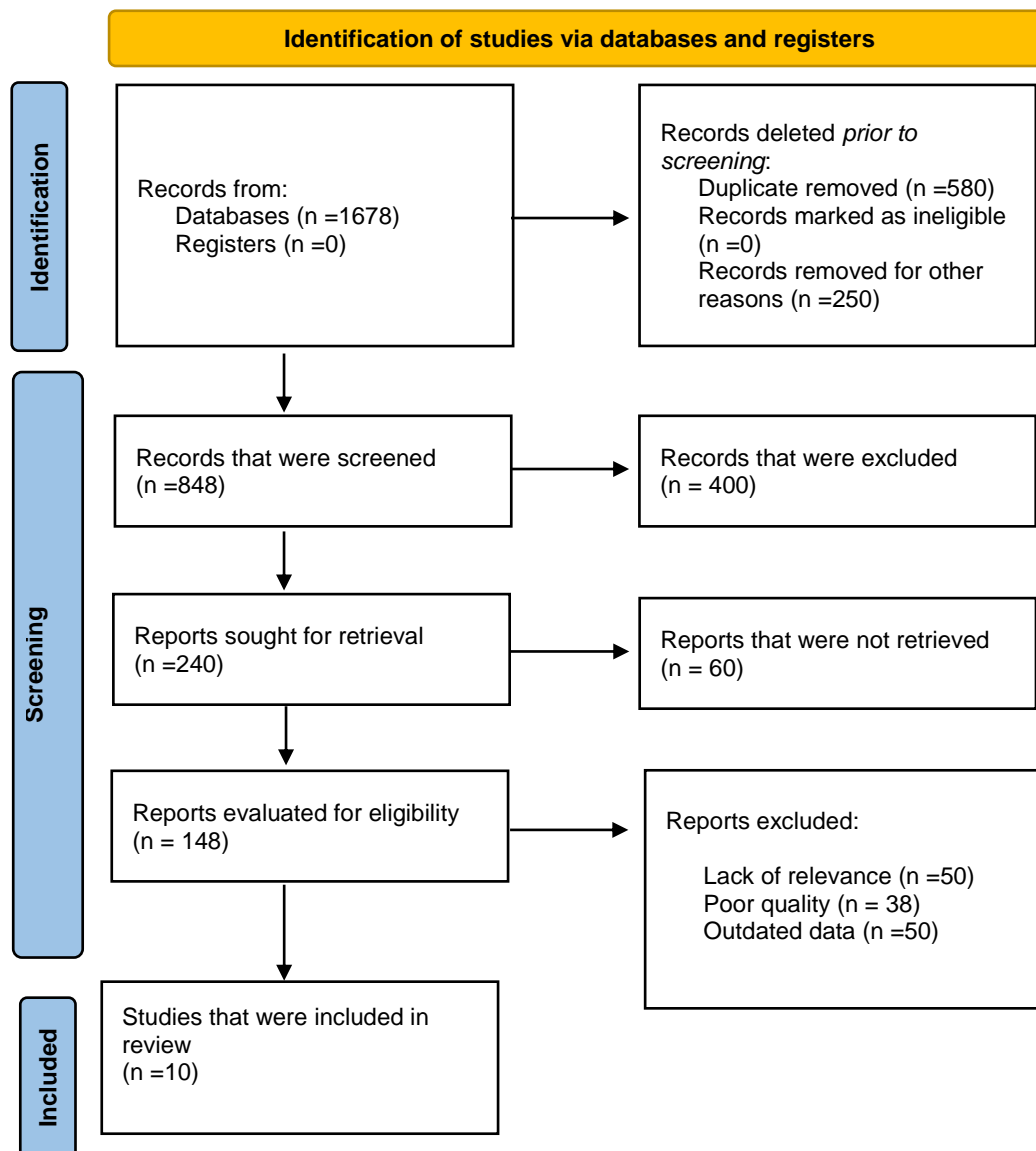


Fig. 1. The systematic reviews' PRISMA 2020 flow diagram included database and identification searches

**Table 1. Data extraction**

<b>Nos of articles</b>	<b>Author's Name</b>	<b>Aim</b>	<b>Method</b>	<b>Findings</b>
1	Ezeama et al. [30]	Examining the coping mechanisms used by mothers in Anambra State in the face of food and money limitations.	Qualitative method	Common themes that surfaced are female power dynamics, variations in intra-household food distribution, and strategies to address household food insecurity.
2	Agada & Igbokwe [31]	To evaluate how eating practices and culture affect the food security of households in the Tiv, Igala, and Eggon ethnic groups in North Central Nigeria.	Mixed Method	However, in the long run, children of polygamous mothers have poorer nutrition outcomes than children of monogamous mothers.
3	Bisi-Amosun [32]	to look into the sociocultural elements that affect food security in two Oyo State rural communities	Qualitative	The study's key conclusion is that food-related behaviors in farm households were impacted by discriminatory gender and generational norms, which disadvantaged women and children.
4	Laah (2020)	To examine the factors that affect food security and coping mechanisms in Nigeria's Kaduna State's rural households	Mixed Method	The study shows that in low-resource environments like Northern Nigeria, food insecurity is a major contributing factor to the high frequency of malnutrition and child mortality.
5	Anugua et al. [33]	To evaluate the livelihood tactics used by spouses in the same households in Southeast Nigeria to deal with food insecurity brought on by the climate.	Mixed Method	Gender-specific barriers usually hinder women's ability to deal with climate-related food insecurity, even though they play critical roles in resolving food insecurity within their households.
6	Sambo & Sule [34]	To explore the impacts of climate change on food security in Northern Nigeria	Mixed Method	The results show that the country's socioeconomic and political systems are impacted by the escalating food security problem in Northern Nigeria, which leads to violence, insurgency, forced migration, conflicts between ethnic and religious groups, starvation, illnesses, and malnourishment.

<b>Nos of articles</b>	<b>Author's Name</b>	<b>Aim</b>	<b>Method</b>	<b>Findings</b>
7	Igbokwe-Ibeto [35]	To investigate the problems of food security, climate change, and sustainable human development in Nigeria.	Descriptive research method	Food insecurity worsened because many families were dependent on subsistence farming, which saw a decline in crop production as a result of climate change.
8	Charles et al. [36]	to assess the level of food insecurity in South East Nigeria and the contributing causes to it in orphanages and vulnerable families	Mixed Method	Food insecurity levels and sociodemographic characteristics are highly connected, with demand outstripping supply even in the face of a meager food supply.
9	Amusan & Agunyai [37]	To investigate how the lockdown affected the amount of food that households had and their coping techniques.	Qualitative descriptive research method	The rural households in the study area showed varying degrees of food insecurity.
10	Eme et al. [38]	to investigate the reasons behind and difficulties with food insecurity in Nigeria	Thematic analysis	The study found that malnourished children had a higher susceptibility to illnesses such respiratory infections, diarrhea, and malaria, which are made worse by compromised immune systems.

as per couple of string variables that crosscut the identified themes concerning food insecurity and its impacts on families with under 5 children in Nigeria.

After coding had been completed, the codes that had been produced were then classified into the descriptive coding themes that was adopted to mirror the experiences as well as emotional states of the families that are food insecure. These were then sub categorized into more protective, integrating analytical themes of higher order that proffered more understandings of social economic and cultural factors of food insecurity in Nigeria. The conclusions made in the final synthesis offered the macrolevel vision of complex interconnected of food insecurity with the health, nutrition and wellbeing of families with young children in Nigeria. Because of the peculiarities of the thematic synthesis approach, the issues elaborated on in connection with food insecurity were analyzed comprehensively.

### 3.5 Quality Appraisal

In appraisal for quality of this review, the Critical Appraisal Skills Programme (CASP) checklist for qualitative studies was employed. In developing the CASP checklist, several aspects are considered in assessing the quality of the research they include the quality of the writing concerning the research objectives, the chosen study methodology, the collection and analysis of the research data, the ethical issues addressed in the study, the relevance and importance of study findings [29]. The JBI checklist provides trustworthy numerical support for qualitative research findings by evaluating sample validity, data collection tools, confounding factor management, and statistical analysis.

## 4. RESULTS AND FINDINGS

The results of the systematic review indicated that all ten of the papers that were taken into consideration met the inclusion requirements. These included papers were mainly qualitative and mixed method which used research tools like interviews, focus group discussion to reveal the experiences of food insecurity of families with under 5 children in Nigeria. This studies were conducted in different parts of Nigeria, both in developed and underdeveloped areas and these covered diverse population densities, economical statuses and cultures. Nevertheless, certain patterns of results were identified in the array of existing studies that concerned the Multi-

Problems families and their efforts to handle the issues of food insecurity.

### 4.1 Social, Economic and Cultural Factors Contributing to Food Insecurity

Based on the review, it is seen that these factors are interactive and operationally conditional and these interact in accordance with the specificities of the concerned families.

Poverty level was found to be one of the causes of food insecurity. Majority of the analysed studies, the distance families were reported to be poor and unemployed and their inability to feed sufficiently [36]. The participants obviously described how little wages, job insecurity and an increasing cost of food hampers them from affording balanced diets. According to Igbokwe-lbeto [35] due to climate change, many families relied on subsistence farming and as a result of climate change, productivity of farming dropped hence food shortages escalated. Coefficients of variations by headcount of households attributed to the reduction in crop yield, occasioned by drought or flood, further contributed to food insecurity, since such households had to sell the crops to cater for other uses, hence the little left for human consumption [34].

The other sub-factors that affected food security was social and cultural factors. Men were traditionally given the duty of providing for their families through the gendered division of labor, but our ability to fulfill this obligation was a condition of employment. Anugwa et al., [33], this resulted to shame, isolation and in extreme scenarios, desertion of the family. Besides patriarchal family structures created problems with the distribution of resources mainly because the large families were usually food insecure [31], these women claimed that since the system of the assigned hierarchy is patriarchal in nature favoring men as well as the first wives, they complained of being given less food and resources within these households.

### 4.2 Lived Experiences of Families Facing Food Insecurity

The nutritional status of children as well as their health were among the major concerns that needed to be established in this review with particular focus on the lives of families suffering from food insecurity in Nigeria. The studies included showed that food insecurity is a very



unpleasant emotion and a constant problem which influences the lives of families, mothers and those who take care of children.

Food insecurity has effects on the pregnant and lactating mothers which includes both maternal health standard and negative birth outcomes. According to Bisi-Amosun [32] pregnancy and breastfeeding make women more vulnerable to food scarcity because of traditional gender roles, these roles often restrict their access to resources and limit their say in household decisions. In many cultures, women take charge of cooking meals and looking after the family. However, they might have less control over how food is shared or how money is spent. This inequality can leave pregnant and nursing mothers without proper nutrition.

In various research that was conducted, it was established that mothers suffered both emotional and psychological problems due to lack of food security. A study by Ezeama et al. [30] reveals sadness and anxiety shown by the mothers when they were not in a position to feed their children well as a result of food insecurity. Families that want to make sure their children eat at least one meal a day frequently turn to desperate means, such as borrowing food or cash from neighbors or family. Sometimes parents would completely miss meals in order to give their children the attention they need (Laah, 2020).

According to a study by Amusan & Agunya [37] points out that Nigerian families struggling with food insecurity faced poor nutrition and had to use harmful coping methods during the COVID-19 lockdown. A lot of households cut back on food, skipped meals, or ate foods with little nutritional value because food costs went up and they had less money coming in. This often resulted in frustration, retreat as well as addition of pressure to families in the house. Based on these findings, it is possible to state that food insecurity influences physical health as well as poses negative impacts on mental health of the family members.

Besides emotional distress, food insecurity also generally resulted in substandard parenting well as conflicts within the family. Lack of food aggravated the conflicts between marital partners especially when financial stress influenced the disputed on the household resources [35]. Such effects as extreme poverty made some men to abandon their families due to the embarrassment of not being able to provide food for their families.

### **4.3 Impact of Food Insecurity on the Health and Development of Children Under Five**

While comparing the findings of the various reviewed studies it was realized that food insecurity not only impacted on the health, education as well as mental development of the young affected children in the short term but also in the long run.

A number of studies found that based on their own observations, parents, nurses, and medical professionals reported that children from households experiencing food insecurity had poor diets, which resulted in the children being underweight, stunted, and frequently ill [39]. A few mothers claimed that they get limited dietary nutrients since all they had was low energy density meals, for instance cassava or maize to meet the children's nutritional needs [40].

Effects of food insecurity were indicated to include high vulnerable diseases including diarrhea, malaria and respiratory diseases as well as being severe due to immune compromised system in a malnutrition affected children [38]. There was serious concern from the health workers that many families could not afford medical bills hence adding to the challenges faced by malnourished children [38].

Another area of concern which recorded some findings about the effect that food insecurity had on children was the cognitive and emotional development area. When teachers and other caregivers asked the children or their parents about their eating habits, children from food insecure households were found to have lower ability to pay attention, concentrate and better cognitive caliber than food secure children [40].

Igbokwe-Ibeto [35] also revealed that children in food insecurity homes would suffer from nervousness, anger and quick temper. According to Ukegbu [40] mothers reported how their children would weep unendingly owing to hunger, get table, exhibit symptoms of developmental arrest in interactions and play.

## **5. DISCUSSION**

From the systematic review poverty was cited as the main cause of food insecurity among families because of issues such as unemployment and low wages. This is supported by the study which established that poverty hinders individuals to

afford sufficient food and proper nutritious food as indicated by Igbokwe-Ibeto [35]. There has been evidence on the correlation between poverty and food insecurity in various studies done across various settings, basic to which is the fact that households with little income are always struggling to feed their families adequately.

Another factor mentioned was climate change which hampers food production especially in the subsistence farming households. Sambo & Sule [34] revealed that disasters which include droughts and flooding lead to poor food production and increase food insecurity. This is in support with the research done by Ingram et al. [41] who pointed that climate reduces food security through the alteration of food production, especially in low income countries that depend on agriculture. Other determinant factors included culture whereby polygamous families and shadows of patriarchal cultures were also influential in enhancing food insecurity. Sometimes women and children in polygamous families were deprived of compounds, food because distribution was done according to the order of the men or the first wives [31]. This correlated with the study done by Anugwa et al. [33], this study shows that in most cultures the distribution of labour and other resources end up favoring men and disadvantaging women and children especially where there is patriarchy. Many of such cultural practices further exposes women and children to high risks of food insecurity.

Among the key issues that have been highlighted in this review is the emotional toll that food insecurity causes to families and most especially women. According to Ezeama et al. [30], the pressure and stress that come along with inability to feed a child is one major reason why mothers develop sadness, guilt and anxiety. Contrary to this, this emotional distress is in agreement with other previous studies conducted by Southard & Randell [42] in Nepal where findings indicated that food insecurity leads to poor mental health especially amongst women, proximate stressors accumulate the stress. The guilt and deep feeling of incompetence in performing the maternal role due to constant uncertainty regarding the availability of food, building on this Agada & Igbokwe [31] further elaborates the effects of food insecurity in influencing social exclusion whereby mothers often time are rejected by their fellow community members because they cannot feed them. This result concurs with the Bernaschi

et al. [43] conducted in Italy who believes that in order to avoid the shame of being hungry the families isolate themselves and become socially excluded. Stress within families is aggravated by conflict between marital couples, Adebo & Falowo [19] agrees with this result hence states that men who are historically expected to provide for their families end up feeling shameful and frustrated hence deteriorating the relations to a certain degree of abandonment of the whole family. Similar conclusions were made by Steimle et al. [44] indicating the food insecurity which resulted into financial pressures ultimately contributed to rising tension within families.

Another area the review also conducted was that of food insecurity had a very negative effect not only on the health but also the learning ability of under five children. Nass et al. [39] opine that majority of children in food secure households were underweight and stunted showing signs of malnutrition. These findings are in concordance with John et al. [17] stating that food insecurity is a cause of malnutrition as it lowers the immunity, stunts growth and increases poor health in children. As suggested by the findings of this current review, other researchers have established that failure in early childhood feeding impairs health, learning and survival in later life Tafese et al. [45]. This is said to have resulted from persistent conditions of food insecurity and whereby the consequence also touched on the aspect of cognitive and emotional development. For instance, students in the food insecurity category were observed to be less alert and have poor memory than the food secure counterparts [40]. This goes with the study done by Jyoti et al. [46] which shows that food insecurity leads to poor concentration of a child resulting to poor performance in school. Besides, some children exhibited emotions including nervousness, anger and irritability due to food insecurity as pointed by Sambo et al. [47]. This is supported by a study conducted in Singapore by Chen & Yeung [48] which finds that children from homes where there is food hardship are more likely to have problems with behavior violations because of the stress that comes from food insecurity in the home. Thus, if children receive inadequate nutrition, they become more likely to suffer from health problems, perform badly at school and have low social standard in adulthood [49]. This is further corroborated from a research by Gassara & Chen [50] that found a strong relationship between household food insecurity and dietary variety and stunting in Sub-Saharan Africa.

## 6. CONCLUSION

Food insecurity among Nigerian households with under five children is examined in the study, and socioeconomic, cultural, and environmental factors are found to be risk factors. Gender-based hunger is sustained by patriarchal family structures, high unemployment, the effects of climate change, and polygamy. Food insecurity has a detrimental effect on the mental and physical health of families, resulting in social stress, emotional outbursts, relationship breakdowns, and social isolation among young moms with children.

Food insecurity raises the risk of acute infections, malnutrition, stunting, and developmental delays, especially in children under five. It is indicated by factors including sensitivity to diseases and underweight status.

This study emphasizes how important it is to address food insecurity, a complicated problem with psychological and psycho-social repercussions for children and caregivers as well as sociocultural factors that define homes.

Future research should examine the long-term consequences and effectiveness of interventions. Governments should prioritize the mental health of caregivers, offer nutrition programs for children, and address the underlying causes of food insecurity, such as poverty and inequality.

## 7. LIMITATION OF THE STUDY

Limitations of this study include the use of secondary retrospective data which are not likely to all be methodologically consistent and, across them, the sample size included and where they were from differ. This variability may impact comparability and generalization of results. Furthermore, the high prevalence of food insecurity in a complicated system and likely missing such attribute completely in other study sets regarding under-5 children validated that many studies might not truly evaluate this outcome among these people. In addition, the existing literature could be skewed toward urban settings, which might not adequately reflect food insecurity realities in rural areas. These limitations may constrain the generalizability of findings from a systematic review.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Ahmad N, Shahnawaz SK, Alam Z. Food insecurity: Concept, causes, Effects and Possible Solutions. *IAR Journal of Humanities and Social Science*. 2021; 2(1):105-113.
2. Sassi M, Sassi, Acocella. *Understanding food insecurity*. Cham: Springer; 2018.
3. Beyene SD. The impact of food insecurity on health outcomes: Empirical evidence from sub-Saharan African countries. *BMC Public Health*. 2023;23(1):338. DOI: doi.org/10.1186/s12889-023-15244-3
4. Ogunniyi AI, Omotayo AO, Olagunju KO, Rufai MA, Salman KK, Omotayo OP, et al. Evaluating the role of households' food security status and socioeconomic determinants on Child Mortality in Nigeria. *Child Indicators Research*. 2024;1-28. Available:https://doi.org/10.1007/s12187-024-10134-5
5. World Health Organization. *The state of food security and nutrition in the world 2022: Repurposing food and agricultural policies to make healthy diets more affordable*. Food & Agriculture Org. 2022; 2022.
6. Nigeria Population Commission. *Nigeria demographic and health survey 2018*. NPC, ICF; 2019.
7. O'Connor D, Boyle P, Ilcan S, Oliver M. Living with insecurity: Food security, resilience, and the World Food Programme (WFP). *Global Social Policy*. 2017;17(1):3-20. DOI: doi.org/10.1177/14680181166587
8. Matemilola S. The challenges of food security in Nigeria. *Open Access Library Journal*. 2017;4(12):1.
9. Militao EM, Salvador EM, Uthman OA, Vinberg S, Macassa G. Food insecurity and health outcomes other than malnutrition in Southern Africa: A

- descriptive systematic review. *International Journal of Environmental Research and Public Health*. 2022;19(9):5082.  
DOI: doi.org/10.3390/ijerph19095082
10. UNICEF. Malnutrition; 2020.  
Available:https://data.unicef.org/topic/nutrition/malnutrition/  
Accessed 31 October 2020.
  11. Oderinde TM, Ilesanmi OS, Afolabi AA. Food insecurity and associated factors among households with under-5 children in slum communities in Ibadan, Nigeria. *BMC Public Health*. 2023;23(1):2144.  
Available:https://doi.org/10.1186/s12889-023-17051-2
  12. Ogbu CE, Oparanma CO, Ogbu SC, Ujah OI, Chinenye NS, Ogbu CP, Kirby RS. Neighborhood Unsafety, Discrimination, and Food Insecurity among Nigerians Aged 15–49. *International Journal of Environmental Research and Public Health*. 2023;20(17):p.6624.  
Available:https://doi.org/10.3390/ijerph20176624
  13. National Bureau of Statistics: Nigeria Poverty Profile 2022; 2022.  
Available:http://www.nigerianstat.gov.ng
  14. Govender I, Rangiah S, Kaswa R, Nzaumvila D. Malnutrition in children under the age of 5 years in a primary health care setting. *South African Family Practice*. 2021;63(1).  
DOI: 10.4102/safp.v63i1.5337
  15. Nnaji A, Ma W, Ratna N, Renwick A. Farmer-herder conflicts and food insecurity: Evidence from rural Nigeria. *Agricultural and Resource Economics Review*. 2022;51(2):391- 421.
  16. Nkwonta CG, Auma CI, Gong Y. Underutilised food crops for improving food security and nutrition health in Nigeria and Uganda—a review. *Frontiers in Sustainable Food Systems*. 2023;7: 1126020.  
DOI: doi.org/10.3389/fsufs.2023.1126020
  17. John C, Poh BK, Jalaludin MY, Michael G, Adedeji I, Oyenusi EE, et al. Exploring disparities in malnutrition among under-five children in Nigeria and potential solutions: A scoping review. *Frontiers in Nutrition*. 2024;10:1279130.  
DOI: doi.org/10.3389/fnut.2023.1279130
  18. World Health Organization. The double burden of malnutrition: policy brief (No. WHO/NMH/NHD/17.3). World Health Organization; 2016.
  19. Adebo GM, Falowo OO. Rural household food security and coping strategies in southwest, Nigeria: A gender differentials perspective. *Food Science and Quality Management*. 2015;14:44-49.
  20. Aurino E, Wolf S, Tsinigo E. Household food insecurity and early childhood development: Longitudinal evidence from Ghana. *PLoS One*. 2020;15(4):e0230965.  
DOI: doi.org/10.1371/journal.pone.0230965
  21. Ejiohuo O, Onyeaka H, Unegbu KC, Chikezie OG, Odeyemi OA, Lawal A, Odeyemi OA. Nourishing the Mind: How Food Security Influences Mental Wellbeing. *Nutrients*. 2024;16(4): 501.  
DOI: doi.org/10.3390/nu16040501
  22. Cohen JFW, Hecht AA, Hager ER, Turner L, Burkholder K, Schwartz MB. Strategies to improve school meal consumption: A systematic review. *Nutrients*. 2021;13: 3520.  
DOI: doi.org/10.3390/nu13103520
  23. Ayuba D, Akinga AY, Okeh DU, Ogaya JB, Precious FK, Lucero-Prisno III, DE. Migration and food security in urban Nigeria: The dilemma of the urban poor; 2023.  
DOI: doi.org/10.1016/bs.af2s.2023.08.003 C
  24. Mukhtar M. Food insecurity and coping strategies among rural households in Niger state, Nigeria. *Lapai Journal of Economics*. 2019;3(1):92-107.
  25. Biadgilign S. Coping strategies to mitigate food insecurity at household level: Evidence from Urban Setting in Addis Ababa, Ethiopia. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*. 2023;60:00469580231206263.  
DOI: doi.org/10.1177/00469580231206263
  26. McKune S, Hood N. Impact of food aid on two communities in Niger. *Field Exchange*. 2015;51.
  27. Chandler J, Cumpston M, Li T, Page MJ, Welch VJHW. *Cochrane handbook for systematic reviews of interventions*. Hoboken: Wiley; 2019.
  28. Dawadi S. Thematic analysis approach: A step by step guide for ELT research practitioners. *Journal of NELTA*. 2020; 25(1-2):62-71.
  29. Casp UK. *CASP checklists. Critical Appraisal Skills Programme (CASP)*. Oxford. 2018;33(1):121-131.

30. Ezeama NN, Ibeh C, Adinma E, Emelumadu O, Adogun P. Coping with household food insecurity: Perspectives of mothers in Anambra State, Nigeria. *Journal of Food Security*. 2015;3(6):145-154.  
DOI: 10.12691/jfs-3-6-2
31. Agada M, Igbokwe E. Influence of food culture and practices on household food security in north central Nigeria. *Journal of Food Security*. 2016;4(2):36-41.  
DOI: 10.12691/jfs-4-2-2
32. Bisi-Amosun OO. The Sociocultural Dynamics of Food (In) security Among Farming Households in Oyo State, Nigeria (Doctoral dissertation, Purdue University); 2019.
33. Anugwa IQ, Agwu AE, Suvedi M, Babu S. Gender-specific livelihood strategies for coping with climate change-induced food insecurity in Southeast Nigeria. *Food Security*. 2020;12:1065-1084.  
DOI: doi.org/10.1007/s12571-020-01042-x
34. Sambo U, Sule B. Impact of climate change on food security in Northern Nigeria. *Green and Low-Carbon Economy*. 2024;2(1):49-61.  
Available:https://doi.org/10.47852/bonview GLCE3202560
35. Igbokwe-Ibeto CJ. Climate change, food security and sustainable human development in Nigeria: A critical reflection. *Africa's Public Service Delivery and Performance Review*. 2019;7(1): 1-9.
36. Charles U, Josephine O, Ngozi O, Chidimma O, Charles I. Factors that Enable Food Insecurity among Orphan and Vulnerable Households in South-East Nigeria. *J. Food Secur*. 2017;5:223-231.  
DOI: 10.12691/jfs-5-6-3.
37. Amusan L, Agunyai SC. The COVID-19 pandemic and the crisis of lockdowns in Nigeria: The household food security perspective. *Africa's Public Service Delivery & Performance Review*. 2021; 9(1):10.
38. Eme OI, Onyishi AO, Uche OA, Uche IB. Food insecurity in Nigeria: A thematic exposition. *Amman Arab Journal of Business Review*. 2014;34(2361):1-14.
39. Nass SS, Nass NS, Iliyasu Z, Suleiman B, Yahaya S, Habibu B, et al. Determinants of mortality among severely malnourished children in northern Nigeria. *Health Services Research and Managerial Epidemiology*. 2021;8:23333928 211064089.  
DOI: doi.org/10.1177/2333392821106408
40. Ukegbu PO. Food security status and coping strategies of rural households with under-5 children in Ahiazu Mbaise LGA of Imo State. *Nigerian Journal of Nutritional Sciences*. 2015;36(1):95-104.
41. Ingram J, Ericksen P, Liverman D. *Food security and global environmental change*. Routledge; 2012.
42. Southard EM, Randell H. Food insecurity and women's mental health in the Chitwan Valley of Nepal. *SSM-Mental Health*. 2024;6:100337.  
Available:https://doi.org/10.1016/j.ssmmh.2024.100337
43. Bernaschi D, Marino D, Cimini A, Mazzocchi G. The Social Exclusion Perspective of Food Insecurity: The Case of Blacked-Out Food Areas. *Sustainability*. 2023;15(4):2974.  
DOI: doi.org/10.3390/su15042974
44. Steimle S, Gassman-Pines A, Johnson AD, Hines CT, Ryan RM. Understanding patterns of food insecurity and family well-being amid the COVID-19 pandemic using daily surveys. *Child Development*. 2021;92(5):e781-e797.  
Available:https://doi.org/10.1111/cdev.13659
45. Tafese Z, Alemayehu FR, Anato A, Berhan Y, Stoecker BJ. Child feeding practice and primary health care as major correlates of stunting and underweight among 6-to 23-month-old infants and young children in food-insecure households in Ethiopia. *Current Developments in Nutrition*. 2020; 4(9):nzaa137.  
Available:https://doi.org/10.1093/cdn/nzaa137
46. Jyoti DF, Frongillo EA, Jones SJ. Food insecurity affects school children's academic performance, Weight Gain, and Social Skills-. *The Journal of Nutrition*. 2005;135(12):2831-2839.  
DOI: doi.org/10.1093/jn/135.12.2831
47. Sambo AS, Mustapha A, Suleiman A. Analysis of Rural-Urban Migration on Food Security Status of Farming Households in Kaduna State, Nigeria; 2020.
48. Chen X, Yeung WJJ. How food insecurity affects children's behavior problems in early childhood: The nutrition and family stress pathways. *Plos One*. 2024;19(1): e0294109.

- DOI.org/10.1371/journal.pone.0294109
49. Grantham-McGregor S, Cheung YB, Cueto S, Glewwe P, Richter L, Strupp B. Developmental potential in the first 5 years for children in developing countries. *The lancet*. 2007;369(9555):60-70.
50. Gassara G, Chen J. Household food insecurity, dietary diversity, and stunting in sub-Saharan Africa: A systematic review. *Nutrients*. 2021;13(12):4401.  
DOI: doi.org/10.3390/nu13124401

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