

**FACTORS INFLUENCING MALNUTRITION AMONG CAREGIVERS OF CHILDREN
UNDER FIVE YEARS ATTENDING GENERAL HOSPITAL GBOKO.**

BY

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DECLARATION

I Terngu Richard Iorkyaa, hereby declare that, this research project is a product of my personal research apart from the cited intellectual works which have all been referenced and with support contained in the acknowledgements. This work has neither been published nor presented in any institution for the award of similar or higher degree.

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CERTIFICATION

This project has been read and approved by the under listed as meeting one of the requirements of the Department of Nursing Science, Faculty of Basic Medical Science, College of Health Science, Benue State University, Makurdi for the award of Bachelor of Nursing Science Degree (BN.Sc Nursing)

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DEDICATION

This research work is dedicated to Almighty God and to my mother, Mrs. Tabitha Agbanyi

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Abstract

Malnutrition among children under five years remains a significant public health challenge globally, particularly in developing countries such as Nigeria. Inadequate nutrient intake leads to increased morbidity, stunted growth, and impaired cognitive development, disproportionately affecting vulnerable populations. This study focused on assessing factors influencing malnutrition among caregivers of under-five children attending General Hospital Gboko, Benue State, Nigeria. The Health Belief Model (HBM) was employed as the theoretical framework to explore caregivers' perceptions regarding malnutrition and related health behaviors. A cross-sectional survey design was adopted, targeting caregivers attending the hospital. Using Taro Yamane's formula, a sample size of 187 participants was determined from a population of 352 through purposive sampling. Data collection was conducted via structured questionnaires distributed over a one-week period, with all questionnaires retrieved and analyzed using descriptive and inferential statistical methods. Findings of the study from 187 respondents (96.2% female) revealed that socio-economic determinants significantly contribute to malnutrition. Notably, 66.8% of caregivers had tertiary education, yet low income and reliance on seasonal farming impacted consistent access to balanced meals. Key socio-economic factors — such as limited knowledge due to lack of formal education (mean=4.30), high expenditure on rent (mean=4.25), and large family sizes (mean=4.22) — were strongly perceived to affect child nutrition. Cultural influences were marked by reliance on herbal treatment (mean=3.50), delayed introduction of solid foods due to illness fears (mean=3.52), and dominance of elders' advice over medical professionals (mean=3.66). Environmental factors including inadequate water, sanitation, and healthcare infrastructure also contributed to malnutrition risk. Overall, these findings underscore the multifaceted interplay of economic, cultural, and environmental factors in sustaining under-five malnutrition in Gboko. The study concluded that malnutrition among under-five children in Gboko is predominantly influenced by socio-economic constraints, entrenched cultural practices and adverse environmental conditions. Thus, without addressing these multidimensional challenges, efforts to improve child nutrition will continue to yield suboptimal results. Recommendations include multi-sectoral collaboration involving government agencies, healthcare providers, and community leaders to implement nutrition education, enhance economic empowerment through skill acquisition, and improve access to healthcare services. Targeted policies to address food security and poverty are vital. Strengthening health facilities like General Hospital Gboko is also essential to curb malnutrition and its adverse effects on under-five children.

Key words: *Perceived factors, Malnutrition, Caregivers, Under-five Children, Socio-economic factors, Cultural factors, Environmental factors.*

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Malnutrition is described as the inadequate intake or overconsumption of vital nutrients and the deficiency of the body to use or absorb these nutrients (World Health Organization [WHO], 2020). Poor nutrition in children under five years of age inhibits their ability to attain full physical and mental potential. The insufficient or deficient intake of the Nutrients as required by the body is called under-nutrition, while the excessive consumption of nutrients is called over-nutrition (Kor et al., 2022a). When children consistently fail to consume the required quantity and types of food that supplies important nutrients to their body, it culminates in malnutrition.

The long- and short-term effects of malnutrition among children under five years is one of the major public health issues globally (Amoah et al., 2024). poor cognitive development, stunted growth, and high susceptibility to infectious diseases certainly influencing a child's productivity and lifelong health at this imperative age are because of inadequate nutrition or consequential effect of malnutrition especially in developing countries where socioeconomic and healthcare limitations are a matter of concern (Kalu & Etim, 2018a).

Malnutrition poses significant implications for growth, development, and overall health with about 45% of deaths among children under 5 years are attributed to malnutrition, and these occur mostly in developing and low-income countries (Amoah et al., 2024).

According to a UNICEF, (2022) there are 151 million stunted children under the age of five, 51 million wasted children, 16 million severely wasted children, and 38 million overweight children. Available evidence has shown that malnutrition contributes to nearly half of all forms of child mortality in the world with almost 33% of all malnourished children worldwide, South Asia and Africa have been estimated to have the highest rates of child malnutrition worldwide. About 9.4% of children under the age of five in Africa are estimated to be undernourished as a result of waste (UNICEF, 2022). Hunger and poverty remain widespread in Africa despite the appreciable economic growth recorded, and families are in difficulties providing nutritious food and possibly exposing children to malnourishment (International Bank for Reconstruction and Development/World Bank, 2020)

Notwithstanding all the challenges faced by malnutrition, caregivers are shadowed with the responsibility of caring for children under five, hence understanding caregivers' perceived knowledge on nutrition is central to addressing issues of malnutrition, as they make daily decisions about children's diets and healthcare. These perceptions can be influenced by a combination of their level of knowledge about nutrition, socio-cultural, economic, and environmental **factors**, all of which ultimately impact child nutrition. Caregiver's beliefs and understanding can abet or hinder effective malnutrition prevention, as they are not only primary providers of food but also gatekeepers of health information(Patali, 2018). Increasing malnutrition among children in Nigeria is associated to poverty, absence of exclusive breastfeeding, and household, child, maternal, and socioeconomic factors (Kalu & Etim, 2018).

Benue State, located in the north central region of Nigeria and known as the "food basket of the nation," paradoxically battle with high rates of malnutrition among children under five, the situation is aggravated by the ongoing socio-economic and security crises, including communal conflicts and herdsmen attacks (Benue State Government, 2024). The state's healthcare system is strained due to these conflicts that have displaced thousands of families and disrupted agricultural activities. The displacement has led to overcrowded internally displaced persons (IDP) camps, where caregivers find it difficult to provide adequate nutrition for their children due to poor living conditions and limited resources (Adaashi, 2021).

1.2 Statement of the problem

About 45% child morbidity and mortality rates are associated with malnutrition which remains a global health concern (Elejo et al., 2019). Despite the overwhelming intervention strategies by the government, non-governmental organisations (NGO), religious societies and many other keen stakeholders to curb the problem of malnutrition, especially among children of under five years, the effects of malnutrition such as increase morbidity, limited cognitive development, stunted growth and increase susceptibility to infectious diseases are high especially in low-income countries. Morbidity and mortality rate is high in Sub-Saharan Africa where millions of under five children are affected by malnutrition and Nigeria is not immune to this (Byamukama & Negesa, 2024).

In Nigeria, the number of cases of malnutrition seems to be escalating day by day. According to Bells et al., (2021), the Nigeria Demographic and Health Survey shows that

37 % of children under age five are stunted (too short for their age) and 17% are severely stunted. Seven percent (7%) are wasted (too thin for their height), with 2% being severely wasted. The prevalence of stunting, wasting, and underweight is almost twice as high among children in rural areas (45%, 8%, and 27%, respectively) as among those in urban areas (27%, 5%, and 15%, respectively).

The symptoms of malnutrition are observable among under-five children attending General Hospital Gboko (GHG). The researcher observed that there is partly of research report about malnutrition among under five children at General Hospital Gboko. GHB a facility that is attended by vulnerable residents of Gboko currently as a result of the crisis and herdsmen attack in the state. Therefore, the research is prompted to carry out a study on the factors responsible for malnutrition among caregivers of under five children attending General Hospital Gboko.

1.3 Aim and Objectives of the study

The overall aim of the study is to determine factors influencing malnutrition among caregivers of children of under- five years attending general hospital Gboko, Benue State.

Specific objectives are to:

1. Assess socio-economic factors that influence malnutrition as perceived by caregivers of under five children attending General Hospital Gboko.
2. Assess cultural factors that influence malnutrition as perceived by caregivers of under five children attending General Hospital Gboko.

3. Assess environmental factors that influence malnutrition as perceived by caregivers of under five children attending General Hospital Gboko.

1.4 Research Questions

1. What are the socio-economic factors that influence malnutrition of under five children as perceived by caregivers attending General Hospital Gboko?
2. What are the cultural factors that influence malnutrition of under five children as perceived by caregivers attending General Hospital Gboko?
3. What are the environmental factors that influence malnutrition of under five children as perceived by caregivers attending General Hospital Gboko?

1.5 Significance of the study

This study findings might generate useful data on the perceived factors influencing malnutrition among caregivers of under five children in Nigeria with reference to General Hospital Gboko. Therefore, Nurses and Midwives may use the study findings to find out ways of preventing malnutrition among under five children through health education with available local clubs to improve nutrition hereby preventing morbidity and mortality in under five children.

The findings of the study might be used by government and non-government organisation (NGOs) in collaboration with keen stakeholders to put in modalities such as economic empowerment through soft laws and skill acquisition to residents of Gboko town. The findings may encourage support with food items to resident affected with crisis and herdsmen attack to improve their nutritional status.

Also, the findings from this study might be used by stakeholders including State Ministry of Health to tailor its targeted interventions to General Hospital Gboko, especially recruitment and training of staff.

Finally, these study findings will add to the available literature that will be used for further studies by interested researchers.

1.6 Scope of the study

The scope of the study is to assess factors influencing malnutrition of under-five children as perceived by caregivers attending General Hospital Gboko within Gboko town.

1.7 Operational Definition of Terms

In this the following terms were defined as:

1. **Malnutrition:** In this research, refers to insufficient intake of food in under-five children.
2. **Under five Children:** In this research, refers to individuals between the ages of 0 to 5 years who attend General Hospital Gboko.
3. **Caregiver:** In this research, refers to parents or persons who take care of under-five children and attend general hospital Gboko with the under five children.
4. **Factor:** In this research, refers to circumstances, situations that lead to malnutrition of under-five children such as socioeconomic, cultural and environmental factors as perceived by caregivers of under-five children attending General Hospital Gboko.
5. **Socio-economic factors:** In this research refer to situation such as family size, social class or status, lack of formal education etc. that lead to malnutrition of under five children.

6. **Cultural Factors:** In this research refer to cultural practices or circumstances such as preference of traditional medicine to orthodox medicine, prohibition of certain foods like eggs, rejection of exclusive breastfeeding etc. that lead to malnutrition of under five children.
7. **Environmental Factors:** In this research refer to situations such as communal war or conflict, climate change, air pollution etc. that lead to malnutrition of under five children.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents conceptual review, empirical review and theoretical framework, summary of literature review.

2.1 Concept of Under-5 Malnutrition

According to the World Health Organization (2020), malnutrition is the deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients. And the consequence of consuming dietary nutrients either insufficiently or exclusively especially in under-five children result in waste. Some form of malnutrition emerges, usually among the most vulnerable group like children under five years, when nutritional needs of a population or population subgroup are not completely met.

Under-five malnutrition refers to the condition where children under the age of five do not receive adequate nutrition necessary for healthy growth and development (Patel & Gandhi, 2016). It encompasses various forms, including stunting (low height-for-age), wasting (low weight-for-height), and underweight (low weight-for-age), which are often caused by insufficient dietary intake, repeated infections, or a combination of both (Ademuyiwa et al., 2020). These conditions can result in long-term consequences such as impaired cognitive development, increased susceptibility to disease, and even death. According to the World Health Organization (WHO, 2021), malnutrition is one of the leading causes of morbidity and mortality in children under five, especially in low- and middle-income countries where access to nutritious food, clean water, and healthcare is limited.

Elejo et al., (2019), malnutrition is the lack of proper nutrition, caused by not having enough to eat, not eating enough of the right things, or being unable to use the food that one does eat, leads to serious health consequences, particularly in children under five. This form of malnutrition can result in stunted growth, weakened immunity, developmental delays, and increased vulnerability to infections and diseases. In many cases, the underlying causes are linked to poverty, poor maternal health, inadequate breastfeeding practices, and limited access to clean water and sanitation (Premraj, 2017). Moreover, environmental factors such as food insecurity, conflict, and climate change further exacerbate the problem, making it difficult for affected populations to access or afford nutritious food (Kalu & Etim, 2018)

2.1.1 Prevalence of Malnutrition in Under five Children

The worldwide prevalence of malnutrition indicates that approximately 150 million (21.9%) children under five are stunted (James, 2022). Stunting, which reflects chronic undernutrition, is a leading cause of developmental issues and impaired growth (Kor et al., 2022b). Additionally, about 49.5 million children (7.3%) under five years old are wasted, indicating acute undernutrition. Overweight and obesity are also rising concerns, with 9.7 million under-five children affected globally, showing a troubling increase over the past two decades (Amusa et al., 2023).

Malnutrition in under-five children is a major public health concern globally, affecting 149 million stunted and 45 million wasted children (Adesuyi et al., 2021a). Causes include inadequate diets, poor sanitation, and poverty. Low- and middle-income countries (LMICs) bear the highest burden, with South Asia and Sub-Saharan Africa most affected. Global efforts like the Sustainable Development Goals (SDGs) aim to eradicate

malnutrition by 2030 through improved nutrition programs and healthcare access (UNICEF, 2022). Africa accounts for 30% of the world's stunted children, with Nigeria, Ethiopia, and the DRC most affected (AU, 2023). Poor maternal nutrition, food insecurity, and infectious diseases drive malnutrition. Despite interventions like the African Union's Nutrition Strategy, progress remains slow due to conflict, climate change, and weak health systems (Imo et al., 2017).

In Sub-Saharan Africa, the prevalence of malnutrition is particularly high, with many countries in the region facing severe challenges. Approximately 29% of children under five are stunted, significantly above the global average. Wasting also remains a critical issue, affecting about 7% of children in the region (Msugther, 2021)

In Nigeria, malnutrition in under five children causes micronutrient deficiencies, and overweight. Stunting, wasting, and underweight, is prevalent due to inadequate dietary intake, recurrent infections, and poor maternal health (UNICEF, 2023). Nigeria has the second-highest burden of stunted children globally, with 37% of under-fives affected, while 7% suffer from wasting (NDHS, 2018; WHO, 2022).

The prevalence of malnutrition in Nigeria is alarmingly high, with the country ranking among the worst globally in terms of child malnutrition (Kor et al., 2022). According to the Nigeria Demographic and Health Survey (NDHS, 2018), 37% of children under five are stunted, with 17% experiencing severe stunting. The same survey indicates that 29% of children are underweight or severely underweight, while 9% are wasted or severely wasted. Nigeria also has the second-highest number of stunted children globally, with an estimated 11.7 million affected by stunting (Bells University of Technology et al., 2021). The high burden of malnutrition in Nigeria is influenced by factors such as poverty,

limited access to quality healthcare, and insufficient maternal nutrition, all of which contribute to poor nutrition during the critical early years of a child's life (Kalu & Etim, 2018). Addressing these issues is crucial for improving child health and development in the country and the region.

Benue State faces significant challenges in child health and malnutrition, about 22% of children in the state suffer from stunting, and 13% are underweight, indicating widespread malnutrition. Anemia is also a major concern, affecting 69.8% of children, (Kor et al., 2022a). The under-5 mortality rate is high, with 148 deaths per 1,000 live births highlighting the urgent need for improved healthcare and nutritional interventions to address these critical issues (BSG, 2023).

2.1.2 Types of Malnutrition in Under-Five Children

Malnutrition in under-five children manifests in various forms, including;

Undernutrition

Undernutrition occurs when children do not receive sufficient energy or essential nutrients, leading to conditions such as wasting, stunting, and underweight. It is a leading cause of child mortality, contributing to nearly 45% of deaths in children under five (Elejo et al., 2019). This includes;

Acute Malnutrition: Is characterized by low weight-for-height, indicating recent and severe weight loss, often caused by acute food shortages or illness (Amoah et al., 2024).

Acute malnutrition is classified by the World Health Organization (WHO, 2022) as:

- Moderate Acute Malnutrition (MAM): Weight-for-height between -3 and -2 standard deviations (SD) below the median (Patel & Gandhi, 2016).

- Severe Acute Malnutrition (SAM): Weight-for-height below -3 SD or visible severe wasting. SAM is life-threatening and significantly increases the risk of death from infections like diarrhea and pneumonia (WHO, 2022).

Chronic Malnutrition: Refers to impaired growth and development due to prolonged undernutrition, recurrent infections, and poor psychosocial stimulation. It is measured as low height-for-age (below -2 SD from the median). Stunting affects cognitive development, school performance, and future economic productivity (Masters Program of Public Health, Universitas Sebelas Maret et al., 2019). As of 2022, 149 million children under five were stunted, with Sub-Saharan Africa and South Asia accounting for the highest burden (UNICEF, 2022).

Underweight: Underweight is a composite indicator that reflects both acute and chronic malnutrition, measured as low weight-for-age. It is a marker of both wasting and stunting (Musa et al., 2021). In low-income countries, approximately 16% of children under five are underweight, with severe cases linked to increased mortality (Frumence et al., 2023).

Micronutrient Deficiencies

Micronutrient deficiencies, also known as "hidden hunger," occur when children lack essential vitamins and minerals. These deficiencies impair immune function, growth, and cognitive development (Premraj, 2017). Deficiencies include:

Vitamin A Deficiency (VAD): Vitamin A is essential for vision, immune function, and cell growth. Its deficiency leads to night blindness, increased infections, and higher mortality. Globally, 33% of preschool children suffer from vitamin A deficiency, with particularly high rates in Africa and Southeast Asia (Smith, 2023).

Iron Deficiency Anemia: Iron deficiency is the most common nutritional disorder, affecting 40% of children under five globally (WHO, 2022). It can lead to fatigue, poor cognitive development, and weakened immunity. In Africa, 60% of children under five are anemic, primarily due to poor dietary intake and parasitic infections (Kalu & Etim, 2018b).

Iodine Deficiency: Iodine is vital for brain development, and its deficiency can cause cretinism (mental retardation) and goiter. Although salt iodization programs have reduced deficiency rates, sub-Saharan Africa still faces high prevalence (Amoah et al., 2024).

Zinc Deficiency: Zinc plays a crucial role in immune function and growth. Zinc deficiency increases the risk of diarrhea and pneumonia, which are major contributors to child mortality. Approximately 17% of the global population is at risk of zinc deficiency, with higher rates in low-income countries (Gabriel et al., 2020).

Overweight and Obesity

While malnutrition is often associated with undernutrition, there is also a rising concern over overweight and obesity in children. This is primarily due to poor diets high in sugars and fats, combined with low physical activity levels (Ekholuenetale et al., 2020). Globally, 5.6% of under-five children are overweight, with increasing rates in urban areas of developing countries (Thabathi et al., 2022). Obesity in early childhood raises the risk of chronic diseases such as diabetes, hypertension, and cardiovascular disease later in life.

2.1.3 Causes and Risk Factors of Malnutrition in Under Five children

Under-five malnutrition is a complex problem that is mostly caused by poor feeding habits, insufficient food intake, and restricted access to nutrition instruction (BSG, 2023).

Some important risk factors exacerbate these issues:

Inadequate Dietary Intake: Poor feeding practices, including insufficient frequency of meals, lack of diversity in food, and improper weaning practices, lead to a lack of essential nutrients required for growth and development (World Bank, 2022).

Low Birth Weight: Children born with low birth weight are more vulnerable to malnutrition, as they start life with less nutritional reserves and have higher rates of morbidity(John et al., 2024).

Lack of Breastfeeding: Exclusive breastfeeding for the first six months is critical for providing optimal nutrition and immunity. Its absence exposes infants to malnutrition and related health issues (UNICEF, 2015).

Frequent Infections: Illnesses such as diarrhea, often linked to poor sanitation, reduce nutrient absorption, increase nutrient loss, and escalate the risk of malnutrition (Kpurkpur et al., 2017).

Socio-Economic Challenges: Poverty and food insecurity are major contributors, limiting access to nutritious foods and proper healthcare. Families with low incomes are often unable to afford a balanced diet or healthcare services, exacerbating malnutrition risks (Zreik & Iqbal, 2024).

Environmental Factors: Poor sanitation and inadequate access to healthcare services further elevate the risk of infections, leading to a cycle of poor nutritional status and

illness. Poor access to clean water and sanitation facilities as well as living in a developing country is a critical environmental risk factor (Frumence et al., 2023).

2.1.4 Signs and Symptoms of Malnutrition in Children Under Five

Signs and symptoms manifest through a variety of physical, behavioral, and developmental processes.

Stunted Growth and Wasting One of the most significant signs of malnutrition in children under five is **stunted growth**—where a child’s height is significantly below the average for their age, reflecting chronic undernutrition (Frumence et al., 2023). Another important sign is **wasting**, or extreme thinness, where a child’s weight is lower than expected for their height. Wasting is often a result of acute malnutrition, which can be caused by inadequate nutrient intake combined with illnesses such as infections (UNICEF, 2022).

Edema (Swelling) Edema, or swelling, is often seen in severely malnourished children, particularly those with **protein deficiency**. This occurs when the body’s protein levels drop to the point that it cannot maintain proper fluid balance, causing fluids to accumulate in the tissues (Jebakumar & Manoj, 2022). Edema commonly affects the feet, ankles, and face, and is often a sign of severe malnutrition, such as in **kwashiorkor**.

Poor Appetite and Lethargy Children who are malnourished may exhibit a **poor appetite** or a reluctance to eat, which worsens the cycle of malnutrition by further depriving the body of necessary nutrients. Additionally, **lethargy** or excessive tiredness is common, as malnourished children lack the energy and stamina needed to engage in normal daily activities (UNICEF, 2019).

Recurrent Infections Malnourished children often have **weakened immune systems**, making them more susceptible to infections. Common illnesses like respiratory infections or diarrhea can exacerbate malnutrition by further depleting nutrients and energy, creating a vicious cycle (Premraj, 2017). Diarrheal diseases are particularly concerning, as they increase the risk of dehydration and nutrient loss.

Developmental Delays Malnutrition can cause significant delays in physical, cognitive, and motor development. Children may show developmental delays in areas such as walking, speaking, or problem-solving, as malnutrition impairs brain development and overall growth (Premraj, 2017). This can lead to long-term cognitive and social challenges if not addressed.

Skin Issues Skin conditions such as dryness, rashes, and sores are common in malnourished children (Kpurpur et al., 2017). These skin issues often result from deficiencies in **vitamins**, such as vitamin A and essential fatty acids, which are necessary for healthy skin

Irritability Children who are malnourished often exhibit signs of **irritability** or fussiness. This can be attributed to the physical discomfort caused by malnutrition, as well as the energy deficits and nutrient imbalances that affect the brain's functioning (UNICEF, 2019).

2.1.5 Diagnosis of Malnutrition in Under Five Children

Physical Examination: A detailed physical examination is essential to assess the presence of specific clinical signs of malnutrition. These signs provide insight into the

severity of malnutrition and help to classify the condition, guiding appropriate interventions.

- **Bilateral Edema:** The presence of bilateral edema (swelling in both feet, legs, or hands) is often seen in kwashiorkor, a type of severe protein-energy malnutrition. It results from insufficient protein intake, which leads to fluid retention and swelling due to decreased albumin levels in the blood (Pfumvuti, 2022). Edema is a hallmark sign of severe malnutrition and requires urgent medical attention.
- **Visible Wasting:** Visible wasting refers to the noticeable loss of body fat and muscle mass, especially in the face, arms, and legs. It is indicative of acute malnutrition and is often associated with extreme undernutrition or illness. In severe cases, wasting can impair organ function and hinder the body's ability to recover from infections (Olabimpe, 2023).
- **Skin and Hair Changes:** Malnutrition can cause noticeable changes in the skin and hair. Dry, flaky skin, rashes, and poor wound healing can be seen in children lacking essential vitamins such as vitamin A, B-complex vitamins, and essential fatty acids. Hair loss or the presence of light-colored hair (flag sign) can indicate deficiencies in protein and other micronutrients (WHO, 2022).
- **Muscle Wasting and Weakness:** Malnourished children often exhibit muscle wasting, which can be assessed through a physical exam by feeling for the absence of muscle tone and strength. In severe cases, the child may appear weak and unable to move with ease (Premraj, 2017).

Dietary Assessment: Healthcare providers may ask about the child's typical diet, frequency of meals, and the types of foods consumed. Specific attention should be given to:

- **Exclusive Breastfeeding:** For infants under six months, the absence of exclusive breastfeeding is a significant risk factor for malnutrition, as breast milk provides essential nutrients and immunity during the first months of life (UNICEF, 2019).
- **Complementary Feeding:** In children aged 6-24 months, the quality and quantity of complementary foods are key factors. A lack of nutrient-rich foods such as fruits, vegetables, meats, and dairy products can lead to micronutrient deficiencies, particularly in iron, vitamin A, and zinc, which are essential for growth and development (John et al., 2024).
- **Feeding Frequency:** Inadequate feeding frequency, especially during times of illness, can lead to undernutrition. Children who are not fed enough or whose feeding is interrupted due to illness may not receive the calories and nutrients necessary for proper growth (Adesanmi, 2022).

Growth Parameters: These parameters provide important insight into a child's nutritional status and are essential in identifying both acute and chronic malnutrition, key anthropometric indicators;

weights

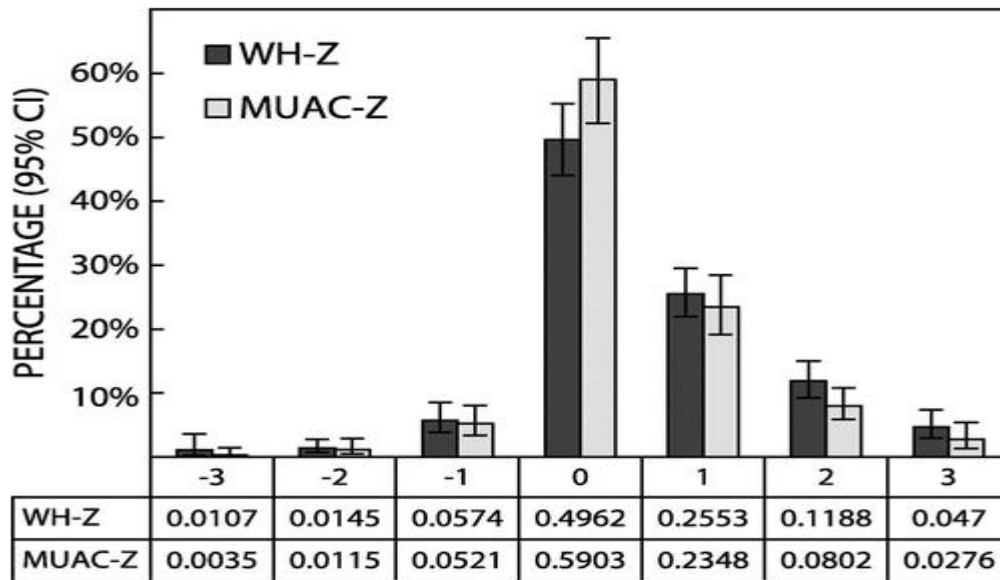


Fig 1.

- Weight-for-Height (WFH): This is a critical indicator of acute malnutrition or wasting. It compares the child's current weight to the expected weight for a specific height, and children with a WFH below the standard reference are classified as wasted (Ademuyiwa et al., 2020). Wasting indicates that the child has lost weight due to a recent nutrient deficiency or illness and requires immediate nutritional intervention.
- Weight-for-Age (WFA): This measurement is used to assess both acute and chronic malnutrition, as it reflects the child's overall growth compared to their peers. A low WFA score can indicate either stunted growth or recent weight loss due to malnutrition (Elejo et al., 2019).
- Mid-Upper Arm Circumference (MUAC): MUAC is an effective and simple tool for identifying severe acute malnutrition (SAM), particularly in children aged 6 months to 5 years. A MUAC measurement below 11.5 cm is often used as a

criterion for severe malnutrition (Byamukama & Negesa, 2024 and UNICEF, 2019). This measurement reflects muscle mass and subcutaneous fat, both of which are affected by nutrient deficiencies.

2.1.6 Management of Malnutrition in Under Five Children

The management of malnutrition in children under five is a multifaceted approach focusing on improving nutrition, healthcare, and social conditions. According to UNICEF, (2019) and the World Health Organization (WHO, 2020), it involves:

- Nutritional Support: Ensuring that children receive calorie-dense, nutrient-rich foods, including exclusive breastfeeding for infants up to six months and timely introduction of complementary foods for older children (Omotesho et.al., 2023). Both organizations emphasize the importance of micronutrient supplementation (e.g., iron, vitamin A, zinc) to address deficiencies.
- Health Interventions: Treating underlying health issues such as infections and malabsorption, with vaccination and deworming programs to prevent and manage common childhood illnesses that exacerbate malnutrition.
- Nutritional Education: Providing caregivers with education on proper feeding practices, the importance of breastfeeding, and how to prepare nutritious, locally available foods. This is critical to ensure sustainable and informed feeding practices.
- Addressing Food Insecurity: Both UNICEF and WHO stress the importance of improving food security through community-based interventions, access to affordable food, and supporting agricultural practices to ensure that families have consistent access to nutritious food.

- **SDG Alignment:** The Sustainable Development Goals (SDG), particularly SDG 2 (Zero Hunger), focus on ending malnutrition in all its forms by 2030. This includes improving food systems, addressing inequalities, and ensuring that all children receive the nutrition they need for healthy growth and development.

2.1.7 Prevention of Malnutrition in Under Five Children

According Benue State Government, (2023) Preventing malnutrition in children under five is critical for their growth and development. Effective prevention strategies include:

Promoting Breastfeeding: Exclusive breastfeeding for the first six months provides essential nutrients and antibodies that support optimal growth and immune protection.

Providing Nutrient-Rich Foods: After six months, introducing a variety of nutrient-dense, calorie-rich foods, such as proteins, fruits, vegetables, and fortified cereals, is essential to support healthy growth.

Nutritional Education: Educating caregivers on proper feeding practices, hygiene, and the importance of a balanced diet helps prevent malnutrition. Community programs can empower families with the knowledge to make healthier food choices.

Regular Growth Monitoring: Routine monitoring of children's growth using indicators like weight-for-height and MUAC helps detect malnutrition early for timely intervention.

Integrated Health and Nutrition Programs: Combining health and nutrition interventions, such as deworming, vaccination, and improving food security, can effectively combat malnutrition, particularly in low-income settings.

Community Awareness Campaigns: Raising awareness on proper nutrition and health practices ensures that the whole community is engaged in preventing malnutrition.

2.2 Theoretical Framework: Health Belief Model

According to LaMorte, (2019) This model was initiated by a group of socio-psychologists, in 1950 namely; Hochbaum, Rosenstock, with others in United States Public Health Service. The HBM was developed to depict people's negligence for partaking in programs that help early detection and prevention of diseases. The HBM consists of primary concessions, which include; perceived susceptibility, perceived severity, perceived benefits, perceived barrier and perceived self-efficacy. And the application of this model overtime is studied people's behavioural pattern to health-related issues with its relevance evolving to address collective public health concerns.

Within the purview of health belief model, people cannot have an opened minded reconstructive behaviour if they do not believe they are at risk. Thus, its components armed it the most valuable model in health education, health promotion and prevention of diseases. The HBM is a useful conceptual architecture on its own and can also be combined with other models in interventional initiatives (LaMorte, 2019).

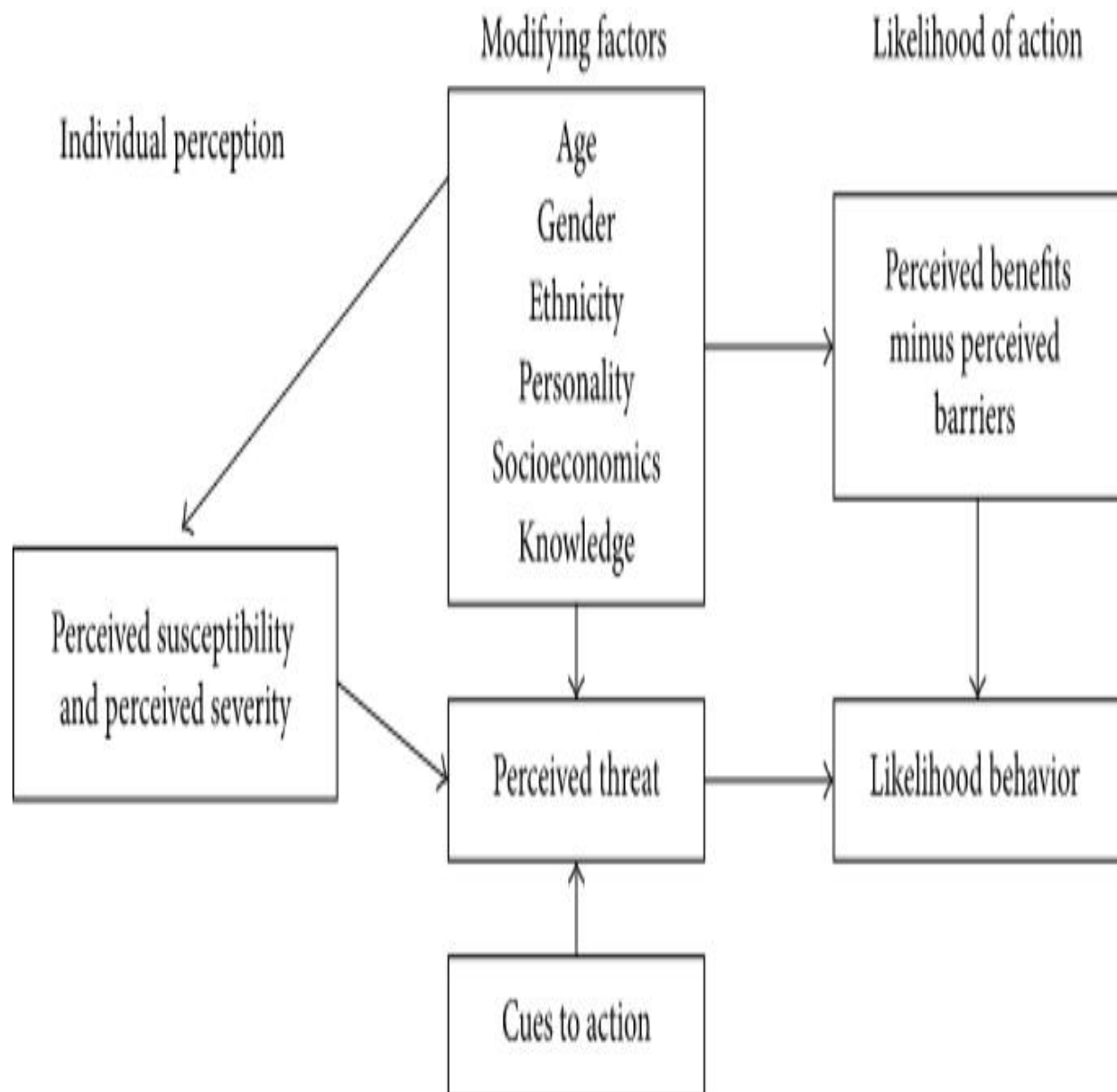


Fig 2. PICTORIAL PRESENTATION OF HEALTH BELIEF MODEL

Components of the Health Belief Model

Perceived Susceptibility: This component refers to an individual's belief about the likelihood of experiencing a health problem or illness. If a person perceives themselves to be at risk of a health issue, they are more likely to take preventive or corrective action. For instance, individuals who perceive themselves at high risk for a disease (e.g., heart disease, diabetes) are more likely to engage in behaviors to mitigate that risk (Razi et al., 2015).

- *Example:* If an individual believes that they are at high risk for developing cancer due to a family history of the disease, they may take steps to reduce their exposure to risk factors (e.g., smoking cessation, regular screenings).

Perceived Severity: This component involves an individual's belief about the seriousness of a health problem and its potential consequences. If a person believes that the consequences of a health problem are severe, they are more likely to take action to prevent or address it. The perceived severity may relate to physical, social, or emotional consequences (Pfumvuti, 2022).

- *Example:* Someone who perceives a heart attack as a life-threatening event may be more likely to adopt heart-healthy behaviors, such as exercising or maintaining a balanced diet.

Perceived Benefits: This component refers to an individual's belief in the effectiveness of the recommended health behavior to reduce the threat of the health problem. If a person believes that taking action will reduce their susceptibility to or severity of the

problem, they are more likely to take action. Perceived benefits are often influenced by information on how effective a behavior can be (Alamer, 2024).

- *Example:* If an individual believes that getting a flu vaccine will effectively reduce their chances of contracting the flu, they may be more likely to get vaccinated.

Perceived Barriers: This component refers to the factors that individuals perceive as obstacles to taking health-related action. These barriers could include concerns about cost, time, side effects, or inconvenience. Even if the perceived benefits are high, individuals may be deterred by perceived barriers, making this a critical component in health behavior change (LaMorte, 2019b).

- *Example:* A person may perceive the flu vaccine as beneficial but may avoid getting vaccinated because they believe it is expensive or causes mild side effects like soreness or fatigue.

Cues to Action: Cues to action are the triggers or events that prompt individuals to take health-related action. These cues can be external (e.g., a reminder from a healthcare provider, public health campaigns) or internal (e.g., experiencing symptoms, having a health scare). These cues serve as motivators for individuals to act on their health concerns (James, 2022).

- *Example:* A reminder from a doctor to get a routine mammogram or seeing a public health advertisement about the risks of smoking might prompt an individual to quit smoking or schedule the screening.

Self-Efficacy: Self-efficacy refers to an individual's belief in their ability to successfully perform the behavior required to address a health issue. The stronger a person's self-efficacy, the more likely they are to take action. This component was added later to the Health Belief Model to emphasize the importance of confidence in one's ability to succeed in behavior change (Pfumvutl, 2022).

- *Example:* An individual who believes they can successfully follow a diet and exercise regimen is more likely to engage in and sustain these behaviors to prevent obesity or heart disease.

2.2.2 Application of HBM to malnutrition in Under Five Children

According to Thabathi et al., (2022), the HBM helps understand caregivers' actions toward preventing and addressing malnutrition in children under five. The model's components—perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy a significant role in shaping caregivers' behavior.

- **Perceived Susceptibility:** Caregivers must first recognize that their child is at risk of malnutrition. Awareness of risk factors, such as inadequate diet or illness, is essential for motivating action. However, cultural perceptions and a lack of awareness can prevent caregivers from acknowledging this risk (Chege & Kuria, 2017).
- **Perceived Severity:** The belief in the seriousness of malnutrition's effects is crucial. If caregivers understand that malnutrition can lead to long-term developmental delays or death, they are more likely to intervene early (Olabimpe, 2023).

- Perceived Benefits: Caregivers need to believe that actions such as breastfeeding, improved diet, and healthcare visits can prevent or treat malnutrition. The perceived effectiveness of these actions is influenced by knowledge and education (Mahmudiono et al., 2019).
- Perceived Barriers: Caregivers may face barriers like financial constraints, limited access to nutritious food, or lack of healthcare. These barriers must be addressed for effective intervention (Chege & Kuria, 2017).
- Cues to Action: External cues, like healthcare advice or visible signs of malnutrition, prompt caregivers to take action. Public health campaigns or reminders from healthcare providers can act as effective triggers (Elejo et al., 2019).
- Self-Efficacy: Caregivers' belief in their ability to successfully manage their child's nutrition is key. Confidence in their ability to access resources and implement healthy practices will increase the likelihood of behavior change (Green et al., 2020).

The Health Belief Model effectively explains how caregivers' perceptions of malnutrition risks and the benefits of prevention influence their actions. By addressing the components of the model especially perceived barriers and self-efficacy health interventions can better support caregivers in preventing malnutrition in young children (Aigbokhaode et al., 2023).

2.2 Empirical Review

Joseph et al., (2023), in a study titled: Parent Socioeconomic Status and Child Malnutrition in Nasarawa State, Nigeria. To examined the link between parents'

socioeconomic status and child malnutrition, focusing on how parental socioeconomic factors influence child nutrition and overall wellbeing. The research was conducted in Lafia metropolis, where 480 women with children aged 0 to 5 were randomly selected. Data were collected using a structured questionnaire administered to the women in the study area. The data were analyzed using descriptive statistics, chi-square tests, and mediation analysis. The results revealed that the mother's educational level is the key factor influencing child nutrition in Nasarawa State. Additionally, the mediation analysis indicated that the relationship between the mother's education, toilet facilities, and child malnutrition was perfectly mediated. Based on these findings, the study recommended that the government promote awareness about the importance of girl child education, particularly in rural areas. Educating girls would enhance their socioeconomic status by improving their education and income levels, ultimately benefiting their future roles as mothers.

Adesuyi et al., (2021), conducted a study titled: Socio-Economic Factors in Under-Five Child Malnutrition in Nigeria. Analysis was done using data from the General Household Survey (GHS) and Living Standards Measurement Study (LSMS) conducted in Nigeria in 2015–2016. Malnutrition was assessed using the three anthropometric measures—underweight: weight-for-age (WAZ), stunting: height-for-age (HAZ), and wasting: weight-for-height (WHZ)—all of which are represented in terms of Z-scores. Socioeconomic differences in malnutrition were examined in Nigeria by gender, domicile, and geopolitical zone. While the concentration index and curves were employed to assess the extent of socioeconomic status-related nutritional inequity. The findings revealed that Stunted children accounted for 37.8% of the total, followed by underweight children

(20.25%) and wasted children (9.63%). Male children had a significantly higher percentage of stunting, wasting, and underweight than female children. Underweight and stunting were correlated with the socioeconomic position of the household. In Nigeria, the proportion of stunted, wasted, and underweight children under five who resided in rural areas was higher than that of children in urban areas. The North West had the highest stunting rate (52.91 percent), followed by the North East (43 percent), and the South-South (20.67 percent). Also, the examination of concentration indices showed that among the children from low-income households, stunting, wasting, and underweight all had negative indicators of concentration. Finally, a notable decline in the rate of stunting is observed as one climbs the socioeconomic status ladder. Therefore, the study recommended that a good way to reduce the high rates of stunting in the socioeconomically deprived areas of the nation is to raise the income of the poorest members of the population.

Ekholuenetale et al., (2020), conducted a study on Socioeconomic situations in hidden hunger, undernutrition, and overweight among under-five children in 35 sub-Saharan Africa countries. The study utilized secondary data from birth histories across 35 Sub-Saharan African (SSA) countries. Data from the Demographic and Health Survey (DHS) of 384,747 births between 2008 and 2017 was analyzed. The primary outcome variables were malnutrition indicators, including stunting, underweight, wasting, overweight, anemia, and under-five child survival. Socioeconomic status was measured using household wealth and mother's educational level. The concentration index and Lorenz curves were the key analytical tools for assessing inequalities in nutritional outcomes. A statistical significance level of 5% was applied. The findings revealed that Burundi

(54.6%) and Madagascar (48.4%) had the highest prevalence of stunted children, while Chad (32.5%) and Niger (35.5%) had the highest rates of underweight children. Nigeria (16.6%) and Benin (16.4%) had the highest proportions of wasted children. In general, children from wealthier households showed higher rates of overweight and better survival rates under five (Conc. Index = 0.0060; $p < 0.001$ and Conc. Index = 0.0041; $p = 0.002$, respectively). Conversely, stunting (Conc. Index = -0.1032 ; $p < 0.001$), underweight (Conc. Index = -0.1369 ; $p < 0.001$), wasting (Conc. Index = -0.0711 ; $p < 0.001$), and anemia (Conc. Index = -0.0402 ; $p < 0.001$) were significantly lower among wealthier households. Furthermore, children of mothers with higher education levels had better survival rates (Conc. Index = 0.0064; $p < 0.001$), while stunting (Conc. Index = -0.0990 ; $p < 0.001$), underweight (Conc. Index = -0.1855 ; $p < 0.001$), wasting (Conc. Index = -0.1657 ; $p < 0.001$), overweight (Conc. Index = -0.0046 ; $p < 0.001$), and anemia (Conc. Index = 0.0560; $p < 0.001$) were significantly higher among children of mothers with lower education levels. The analysis also showed significant differences in malnutrition indicators between children from urban versus rural areas, particularly for household wealth status in stunting, underweight, overweight, and anemia, as well as for mother's educational attainment in stunting, underweight, and wasting. The study recommended that addressing malnutrition in SSA could be achieved by promoting sustained socioeconomic improvements, ensuring equity, and reducing disparities. Interventions focused on increasing food availability, particularly in poverty-stricken communities, would also help alleviate hunger and malnutrition.

Lokossou et al., (2021), examined socio-cultural beliefs influence feeding practices of mothers and their children in Grand Popo, Benin. The study utilized a qualitative research

approach with an inductive methodology. A pretested discussion guide was used to facilitate focus group discussions in the participants' local language. Four focus group discussions took place in four villages, representing both rural and semi-urban areas, with each group consisting of seven to eight participants. The research protocol was approved by the Health Research Ethics Committee of Stellenbosch University. The discussions were recorded, transcribed, and translated into English. Data analysis followed the steps outlined by Creswell. The findings shown that all children in the study were breastfed, with 56.1% of infants under 6 months being exclusively breastfed. Children were introduced to family foods at 5 months, but there was very little consumption of animal protein and fruits. Both mothers and children had restricted diets, primarily based on vegetables and maize meals. The study also revealed the existence of food taboos, particularly during pregnancy, which some mothers still followed, resulting in the exclusion of nutrient-dense foods from their diets. Hence, the study highlights the need for educational interventions to raise awareness about the negative impact of certain socio-cultural practices on the health of both mothers and children.

Frumence et al., (2023), carried out a qualitative exploration on perceived cultural factors contributing to undernutrition among under-Fives in the Southern Highlands of Tanzania. The study utilized focus group discussions (FGDs) with forty practitioners to explore the cultural factors contributing to undernutrition in early childhood. Participants were purposively selected, and thematic analysis was employed to identify key themes within the data. The findings indicated that undernutrition among children under five is influenced by several sociocultural factors. These include gender inequality in dietary practices and food quality, women's excessive workloads, patriarchal social norms,

excessive alcohol consumption, and cultural taboos that prevent women and girls from consuming certain nutrient-rich foods. In conclusion, the study emphasizes the complex range of factors, including sociocultural influences, that contribute to undernutrition in children under five. The study recommended a coordinated approach to developing and implementing targeted, culturally sensitive strategies to address and eliminate child undernutrition.

Mohammad et al., (2020), investigated the environmental and social risk variables for severe acute malnutrition in children under five who were admitted to a Peshawar tertiary care hospital. approach: From January to July 2018, this cross-sectional study was carried out in the Nutrition Rehabilitation Unit in the Pediatric Ward of Lady Reading Hospital in Peshawar. 400 children with severe acute malnutrition (SAM), ages 6 months to 5 years, of both sexes participated in the study. Children who had other chronic disorders, nephrotic syndrome, cardiac failure, or renal failure were not included. After gathering socioeconomic and environmental risk factors, the association between these risk factors and malnutrition was assessed using the Chi-square test. Findings revealed that out of 400 children, 190 (47.5%) were female and 210 (52.5%) were male. The participants were 1.69 years old on average (SD 1.142). A number of environmental risk factors were significantly associated with malnutrition ($P < 0.001$), including home water supply, drinking water source, latrine type, parents' occupation, monthly family income, drug addiction, having more than two children under the age of five, prior child deaths, large family size, the timing of the next pregnancy, and family structure. The study concluded that various environmental factors are strongly associated with malnutrition in children under 5 years old.

Kalu & Etim, (2018), conducted a review on factors contributing to malnutrition among under-five children in developing countries, with an emphasis on the factors linked to malnutrition in children under five, this study examines other research publications on the similar topic throughout Asia and Africa. The results showed that 36% of the 162 million stunted children in the world live in Africa, and 56% live in Asia. In particular, 11 million children in Nigeria alone are among the 60 million stunted children under five in developing nations. Over time, there have been conflicting patterns in the incidence of childhood malnutrition: underweight children climbed from 24% in 2003 to 29% in 2013, whereas the rate of wasting increased from 11% in 2003 to 18% in 2013. The percentage of children that are stunted, however, decreased slightly from 42% in 2003 to 37% in 2013. The study further highlighted that malnutrition-related mortality rates in Sub-Saharan Africa are primarily driven by environmental factors. These include insufficient caloric intake, high rates of HIV/AIDS, political instability, conflicts, and inadequate maternal nutrition during pregnancy. Other contributing factors include the lack of exclusive breastfeeding, poor weight gain, absence of necessary vitamin supplementation, illness, and ineffective government policies. In countries such as Malawi, Burundi, and Madagascar, up to 50% of malnourished children who were stunted died due to inadequate dietary intake and lack of essential nutrients. The study recommended and emphasized the urgent need for both national governments in developing countries and the global community to collaborate in addressing these critical factors to improve child nutrition and reduce malnutrition-related deaths.

2.4 Summary of Literature Review

This unveiled the concept of malnutrition of under five children, how is a public health concerns with significant aftereffects on the growth and cognitive development of children, and also highlight the prevalence, types, causes and risk factors, signs and symptoms, diagnosis, management and prevention of prevention of malnutrition. The concept of caregiver gives a valuable insight on the role of carers (mothers, grandparents or relatives) on nutrition of children. The empirical review showed the relationship between factors responsible for child malnutrition as perceived by caregivers of under five children, factors include; socioeconomic, cultural, and environmental factors. The theoretical framework for the purpose of this study is the HBM model which explains the relationship that exist between different factors and malnutrition.

CHAPTER THREE

RESEARCH METHOD

3.0 Introduction

This chapter deals with the research methodology and consists of the research design, target population, sample of the study, sampling techniques, research instruments, data collection procedures and data analysis techniques.

3.1 Research Design

This study adopted a cross-sectional survey design. A cross-sectional study is a type of research design in which the researcher collects data from many different individuals at a single point in time. In cross-sectional research, the researcher observes variables without influencing them. The researcher's choice of this design is because it is economical. According, Creswell, (2022), a research design is a systematic plan to study a scientific problem.

3.2 Setting

The study was carried out at General hospital in Gboko Local Government Area of Benue State, Nigeria. Gboko is a fast-growing town in Benue State of North-central Nigeria and General hospital been the major health provider in the local government and owned by the government, provide affordable services and attract most of the vulnerable populace in the area. General Hospital Gboko, is located opposite the Federal Girls Secondary School, Gboko Northwest, with approximate coordinates of 7°18'10.145"N, 8°59'16.562"E and was established on March 1, 1975. The Hospital aims to provide an adequate healthcare system to reduce morbidity and mortality among the

people of Benue State and its surrounding areas. General Hospital Gboko comprises of OPD Unit, Family Planning Unit, Maternity Ward, Female Medical and Surgical Ward, Male Ward, Paediatric Ward, Amenity Ward, Antenatal Clinic, Dental and Ophthalmic Clinic, Accident and Emergency Unit, Theatre, and Record Department. The total number of staff is about 122 with 62 Nurses and 74 bed stands.

3.3 Target Population

The target population for this study consisted of 352 registered caregivers of under five children attending General Hospital Gboko according to the record department, comprising of mothers or persons who take care of under five children with their ages ranging from 18 to 50 above. The participants for the study were selected by purposive sampling method to cut across all religious, tribes and both rural and urban settlers attending the facility.

3.4 Sample Size and sample Size Determination

The sample size was taken from the target population of 352 caregivers attending General Hospital Gboko using Yamane's formula.

$$n = \frac{N}{1 + N(e)^2}$$

n= sample size

N= total population of the study which is 352

E= level of significance error which is 0.05

Therefore,

$$n = 352 / [1 + 352(0.05)^2]$$

$$\begin{aligned}
&= 352 / [1 + 352(0.0025)] \\
&= 352 / [1 + 0.88] \\
&= 352 / 1.88 \\
&= 187
\end{aligned}$$

A sample size of 187 caregivers will be actualized.

3.5 Sampling Techniques

This study utilised non-probabilistic sampling method, which does not allow all elements in the population to have equal chance of representation. Specifically, a purposive sampling technique was adopted for selection of participants. The choice of the technique is to guarantee external validity of the research. The researcher met caregivers at SOPD, MOPD, Immunization Clinic, Family Planning Unit and Antenatal Clinic on daily basis for one week until the desired number of 187 caregivers of under five children was obtained.

3.6 Instrument for Data Collection

In this study, questionnaires were utilised to elicit the required data from selected respondents and were collected upon completion. A Questionnaire is used to ascertain facts, opinions, beliefs, attitudes, ideas, practises, and other demographic information (Creswell, 2022). The questionnaire was divided into four sections. Section A will contain items on the demography of the respondents. Section B; Assess socio-economic factors that influence malnutrition as perceived by parents and caregivers of under five children attending General Hospital Gboko. Section C; Determine cultural factors that influence malnutrition as perceived by parents and caregivers of under five children attending General Hospital Gboko. Section D; Assess environmental factors that

influence malnutrition as perceived by parents and caregivers of under five children attending General Hospital Gboko. The questionnaire was designed in such a way that all necessary information regarding the study can be obtained. Two friends were employed to assist in administering the questionnaire to respondents.

3.6.1 Validity of Instrument

A self-developed questionnaire was drafted and submitted to the supervisor for scrutiny and to assess its appropriateness. This was to ensure that the instrument measures what it is supposed to measure. In the context of research, ensuring that the instrument used is valid is critical for producing credible and reliable results.

3.6.2 Reliability of Instrument

To ensure consistency overtime, the questionnaire was pretested on 10 caregivers of under five children attending General Hospital North Bank which has similar characteristics to General Hospital Gboko. The participants complete the questionnaire again after one week in order to evaluate the veracity of the participant's responses. The Cronbach Alpa test was used to determine whether the results is consistent and also to indicate whether the instrument is deemed dependable.

3.7 Method of Data Collection

Before embarking on field work, the researcher obtained letter of introduction from the Head of Department of Nursing Science to obtained ethical approval, following due process with Ethical Clearance Committee in College of Health Sciences. Having obtained permission, the researcher proceeded to the various department/units within the study area and as well obtained official permission from the unit's head; after obtaining

permission from the unit's heads, the Researcher briefly read the content of the questionnaire to the respondents and assured them of their consent for any information they provided.

All the participants who met the criteria and were available within the duration of data collection and willing to participate were fully given a copy of the questionnaire to administer. The researcher visited MOPD, SOPD, Immunization Clinic, Family Planning Unit and Antenatal Clinic on daily basis for one week and administered the questionnaire to respondents.

3.8 Method of Data Analysis.

The study adopted descriptive and inferential statistics for data analysis. The descriptive statistics involved analytical methods and tools such as mean, standard deviation, frequencies and percentages. Inferential statistics on the other hand was used to analyse the demographic data at 0.05 alpha level of significance using Statistical package for social Science (SPSS) version 26.

3.9 Ethical Consideration

An introductory letter was obtained from the Department of Nursing Science, Faculty of Basic Medical Science, College of Health Science, Benue State University Makurdi and then presented to the Research and Ethical Committee, College of Health Science, Benue State University Makurdi in order to obtain ethical clearance. The ethical approval was presented to the Chief Medical Director, General Hospital Gboko for approval to carry on with the research at the facility. The research complied with ethical guidelines for conducting research on human subjects. Informed consent was obtained from each

participant before they completed the questionnaire. Participants were provided with information about the study's purpose, their right to withdraw and assurance of confidentiality. Participants were assured that their response will remain anonymous, no identifying information were included in the analysis.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND RESULT

4.1 Data Presentations and Analysis

A total of 187 copies of questionnaires were distributed and all were successfully completed and returned, representing a response rate of 100%, while no copy was returned uncompleted. Below is the presentation of the data in the tables.

Table 4.1: Demographic distribution of respondents

Gender	Frequency	Percentage (%)
Male	7	3.8
Female	180	96.2
Total	187	100
Age Range		
19 years & below	19	10.2
20–29 years	37	19.8
30–39 years	55	29.4
40–49 years	41	21.9
50 years & above	35	18.7
Total	187	100
Marital Status		
Single	11	5.8
Married	151	80.7
Divorced	11	5.9
Widowed	14	7.5
Total	187	100

Educational Level		
Primary	23	12.3
Secondary	39	20.9
Tertiary	125	66.8
Total	187	100
Occupation		
Farmers	13	7.0
Business	101	54.0
Students	21	11.2
Handcraft	52	27.8
Total	187	100
Ethnic Group		
Igede	21	11.2
Hausa	13	7.0
Idoma	23	12.3
Tiv	97	51.9
Others	33	17.6
Total	187	100

Source: Filed Survey, 2025

Table 4.1 shows the demographic distribution of respondents. The data shows that 7 respondents representing (3.8%) were male while 180 respondents representing (96.2%), were female; 19 respondents representing (10.2%) were 19 years and below, those aged between 20–29 years were 37 in number, representing (19.8%), 30–39 years totaled 55 respondents, representing (29.4%). There were 41 respondents representing (21.9%) aged between 40–49 years. Lastly, 35 respondents representing (18.7%) were aged 50 years and above, 11 respondents representing (5.8%) were single, 151 respondents representing (80.7%), were married, there were 11 divorced respondents, accounting for (5.9%), while 14 respondents were widowed, representing (7.5%); 23 respondents representing (12.3%) had only primary education, 39 respondents representing (20.9%) attained secondary education while 125 respondents representing (66.8%) had tertiary education; 13 respondents representing (7.0%) were farmers, 101 respondents representing (54.0%) were engaged in business activities, 21 respondents representing (11.2%) were students while 52 respondents representing (27.8%) were involved in handcraft work; 21

respondents representing (11.2%) were Iggede, 13 respondents representing (7.0%) were Hausa, 23 respondents representing (12.3%) were Idoma, 97 respondents representing (51.9%) were Tiv, while 33 respondents representing (17.6%) belonged to other ethnic groups. This implies that caregivers of Under-5 children attending General Hospital Gboko are mostly female, largely married with tertiary education, mainly engaged in business and predominantly of the Tiv ethnic group.

4.1.1: Research question one: What are the socio-economic factors that influence malnutrition as perceived by parents and caregivers of under five children attending General Hospital Gboko?

S/N	ITEMS	SA	A	N	D	SD
1	Low income limits the ability to consistently provide balanced meals for under-5 children.	79	41	23	27	17
2	Reliance on seasonal farming results in inconsistent food availability throughout the year.	71	35	19	33	29
3	Lack of formal education leads to limited knowledge about proper child nutrition.	75	33	21	31	27
4	A large portion of income is spent on rent and transportation, leaving little for food.	81	29	17	33	27
5	Lack of refrigeration prevents the storage of perishable nutritious foods.	37	39	21	45	45
6	Long working hours reduce the time available to prepare proper meals.	39	43	19	47	39
7	High expenditure on rent reduces the amount of money available for food.	77	31	17	33	29
8	Individuals from polygamous households may experience limited food availability.	41	37	19	47	43
9	Large family sizes often struggle to meet food demands.	53	39	21	39	35
10	Conflicts/wars negatively affect access to and the ability to fetch food	59	33	17	41	37

Table 4.1.2: Socio-Economic Factors Influencing Malnutrition as Perceived by Parents and Caregivers of Under Five Children Attending General Hospital Gboko

SN	Variable	N	Mean (x)	Std. Deviation	Skewness	Kurtosis
1	Low income limits the ability to consistently provide balanced meals	187	4.27	0.90	-1.11	0.40
2	Reliance on seasonal farming results in inconsistent food availability	187	4.21	0.91	-0.99	0.16
3	Lack of formal education leads to limited knowledge about nutrition	187	4.30	0.90	-1.16	0.45
4	Large portion of income is spent on rent/transportation	187	4.23	0.90	-1.01	0.16
5	Lack of refrigeration prevents storage of perishable nutritious foods	187	4.14	0.92	-0.83	-0.20
6	Long working hours reduce time for meal preparation	187	4.18	0.92	-0.90	-0.09
7	High expenditure on rent reduces money available for food	187	4.25	0.88	-0.99	0.12
8	Polygamous households may experience limited food availability	187	4.13	0.91	-0.78	-0.26
9	Large family sizes struggle to meet food demands	187	4.22	0.89	-0.97	0.13

SN	Variable	N	Mean (x)	Std. Deviation	Skewness	Kurtosis
10	Conflicts/wars negatively affect access to and ability to fetch food	187	4.24	0.90	-1.01	0.16

Source: Filed Survey, 2025

Table 4.1.2 shows the perception of parents and caregivers about various socio-economic determinants of malnourishment among children aged under-5 years. Findings show that "limited education background leads to lack of knowledge about nutrition" had the highest mean rating of 4.30 with standard deviation of 0.90. This indicates that there is high consensus among the respondents that limited educational background is a significant reason behind poor nutritional choices for children.

In substantive agreement, the statement "low income limits the ability to always provide balanced meals" had a mean of 4.27, which stated that limited economic resources noticeably limit the ability to regularly purchase nutritious food. The statement "high rent cost reduces money for food" also had a mean of 4.25, stating the limitations imposed by housing costs on family food budgets.

Some other indicators with comparable high ranking are "conflicts/wars have a negative impact on access and ability to get food" (4.24), "large share of income goes to rent/transportation" (4.23), "large household sizes cannot provide food needs" (4.22) and "dependence on seasonal agriculture leads to variable availability of food" (4.21). These rankings show that economic stressors and variable food sources are primary drivers of child malnutrition.

Also, factors such as "long working hours reduce time for meal preparation" (mean = 4.18), "lack of refrigeration prevents storage of perishable nutritious foods" (mean = 4.14)

and "polygamous households may experience limited food availability" (mean = 4.13) were similarly regarded as causative factors but to a lesser extent.

This implies that malnutrition among under-five children in Gboko is primarily influenced by socio-economic factors, including low-income levels, poor education, high living expenses and unstable food supply.

4.1.3 Research question two: What are the cultural factors that influence malnutrition among parents and caregivers of under five children attending General Hospital Gboko?

S/N	ITEMS	SA	A	D	SD
1	Some elders link eating eggs and meat to future stealing.	87	40	33	27
2	Herbal remedies are favoured over supplements, delaying treatment.	54	45	55	33
3	Cultural norms restrict food variety and mixing.	78	48	34	27
4	Solid foods are delayed over fears of illness.	71	45	41	30
5	Elders' advice often overrides health professionals.	92	39	34	22
6	Nutritious foods are avoided during illness due to beliefs.	53	42	56	36
7	Some fruits and vegetables are seen as taboo for children.	84	44	33	26
8	Health talks are skipped for traditional events.	60	43	54	30

S/N	ITEMS	SA	A	D	SD
9	Spiritual help is sought over medical care for malnutrition.	81	41	38	27
10	Exclusive breastfeeding is rejected by some cultural beliefs.	63	40	52	32
11	Feeding focuses mainly on pap, neglecting other nutrients.	85	42	35	25

Table 4.1.4: Cultural Factors Influencing Malnutrition among Parents and Caregivers of Under Five Children Attending General Hospital Gboko

SN	Variable	N	Mean (x)	Std. Dev	Skewness	Kurtosis
1	Some elders link eating eggs and meat to future stealing.	187	3.46	1.01	-0.53	-0.22
2	Herbal remedies are favoured over supplements, delaying treatment.	187	3.50	1.03	-0.61	-0.11
3	Cultural norms restrict food variety and mixing.	187	3.40	1.02	-0.48	-0.19
4	Solid foods are delayed over fears of illness.	187	3.52	1.00	-0.57	-0.14
5	Elders' advice often overrides health professionals.	187	3.66	0.95	-0.72	0.05
6	Nutritious foods are avoided during illness due to beliefs.	187	3.45	1.04	-0.50	-0.20
7	Some fruits and vegetables are seen as taboo for children.	187	3.48	1.01	-0.55	-0.13
8	Health talks are skipped for traditional events.	187	3.56	1.00	-0.60	-0.10
9	Spiritual help is sought over medical care for malnutrition.	187	3.42	1.03	-0.52	-0.18
10	Exclusive breastfeeding is rejected by some cultural beliefs.	187	3.50	1.02	-0.58	-0.15
11	Feeding focuses mainly on pap, neglecting other nutrients.	187	3.54	1.01	-0.59	-0.12

Source: Filed Survey, 2025

Table 4.1.4 shows the cultural determinants of malnutrition among parents and caregivers of children aged less than five years visiting General Hospital Gboko. Results show that the "elders' association of egg and meat eating with future theft" had a mean of 3.46, meaning that a moderate number of respondents believed in this cultural practice. The negative skewness (-0.53) revealed that most of the respondents did not believe in this practice, while the kurtosis value of -0.22 revealed the distribution was slightly

platykurtic, meaning responses were somewhat dispersed. A mean of 3.50 indicated that most respondents used herbal remedies over supplements, which could possibly postpone treatment for malnutrition. The skewness (-0.61) and kurtosis (-0.11) indicated a slightly more negative skew, with responses leaning towards disagreement but still scattered.

A mean of 3.40 indicated a common perception that cultural norms restricted food variety and mixing, which could decrease nutritional intake among children. The values of skewness (-0.48) and kurtosis (-0.19) reflected a balanced distribution with little variation in responses. The mean of 3.52 showed that most caregivers delayed the introduction of solid foods out of fear of illness. The negative skewness (-0.57) and near normal kurtosis (-0.14) showed that the respondents were somewhat consistent in this belief, with a few exceptions.

With a maximum mean of 3.66, this variable elicited the overwhelming dominance of elders over health workers, where medical advice is usually overturned. The negative skewness (-0.72) and positive kurtosis (0.05) indicated that most caregivers agreed with this cultural belief, where the distribution was peaked at the mean. With a mean of 3.45, most caregivers omitted healthy food during illness, possibly as a result of cultural beliefs. Skewness (-0.50) and kurtosis (-0.20) showed moderate agreement with this practice, but there was a certain level of variation in opinion.

The mean of 3.48 indicated that fruits and vegetables were somehow taboo for kids, restricting their intake of essential nutrients. The skewness (-0.55) and kurtosis (-0.13) revealed relatively even agreement with this belief. The mean of 3.56 indicated that health talks were often neglected for more traditional pursuits. The negative skewness (-

0.60) and kurtosis (-0.10) showed that this belief was held by a minority, albeit with some deviation.

A mean of 3.42 showed that some of the caregivers applied spiritual care rather than medical care for malnutrition. The negative kurtosis (-0.52) and skewness (-0.18) showed moderate support for the practice with little variation in responses. A mean of 3.50 showed moderate disapproval of exclusive breastfeeding due to cultural beliefs. The skewness (-0.58) and kurtosis (-0.15) showed that while some caregivers were against this practice, the response distribution was quite balanced. The mean value of 3.54 indicated that caregivers chose to make pap a priority staple feeding option, with a tendency to exclude other nutrients. The skewness (-0.59) and kurtosis (-0.12) indicated that most of the respondents supported this practice but with some deviation.

This implies that such cultural beliefs and practices significantly affect child nutrition, tending to discourage the uptake of the best practice of health. The influence of the elders to counsel, for instance, the preference of using traditional medicine, not desiring to provide solid foods and healthy foods under certain situations, all lead to malnutrition among children under the age of five.

4.1.5: Research question three: What are the environmental factors that influence malnutrition among parents and caregivers of under five children attending General Hospital Gboko?

S/N	Items	SA	A	D	SD
1	Lack of access to clean drinking water negatively impacts the nutrition of under-5 children	92	55	28	12
2	Poor sanitation in residential areas adversely affect the nutritional status of under-5 children	95	45	35	12
3	Regular access to fresh fruits and vegetables plays a significant role in the nutrition of under-5 children	85	62	30	10
4	Frequent flooding in certain areas disrupts food availability for under-5 children	80	54	40	13
5	Overcrowded living environments contribute to the spread of infections, affecting the nutrition of under-5 children	98	58	20	11
6	Air pollution is associated with increased frequency of illnesses among under-5 children	96	51	30	10
7	Inadequate time for exclusive breastfeeding, often due to long work hours impact the nutrition of under-5 children	50	70	30	15
8	The absence of nearby health education centers hinders optimal nutritional practices for under-5 children	65	60	35	10
9	Limited access to affordable healthcare services reduces the likelihood of regular health check-ups for under-5 children	85	50	35	17
10	Seasonal farming patterns contribute to nutritional deficiencies among under-5 children during dry seasons	75	65	32	15

Table 4.1.6: Environmental Factors Influencing Malnutrition among Parents and Caregivers of Under Five Children Attending General Hospital Gboko

SN	Variable	N	Mean (x)	Std. Deviation	Skewness	Kurtosis
1	Lack of access to clean drinking water negatively impacts nutrition	187	4.30	0.75	-1.20	1.80
2	Poor sanitation adversely affects nutrition	187	4.20	0.80	-1.10	1.50
3	Regular access to fresh fruits and vegetables is significant	187	4.15	0.85	-1.05	1.30
4	Frequent flooding disrupts food availability	187	3.90	0.90	-0.80	0.90
5	Overcrowded living environments spread infections	187	4.05	0.82	-1.00	1.20
6	Air pollution increases illnesses among under-5s	187	3.85	0.95	-0.70	0.50
7	Inadequate time for exclusive breastfeeding impacts nutrition	187	4.00	0.88	-0.95	1.00
8	Absence of nearby health education centers hinders nutrition	187	3.95	0.92	-0.85	0.85
9	Limited access to healthcare reduces health checkups	187	4.10	0.83	-1.00	1.40
10	Seasonal farming patterns cause nutritional deficiencies	187	3.80	1.00	-0.65	0.20

Source: Filed Survey, 2025

Table 4.1.6 presents the environmental factors influencing malnutrition among parents and caregivers of under-five children attending General Hospital Gboko. The analysis shows that lack of access to clean drinking water had the highest mean score (Mean = 4.30, SD = 0.75), indicating that respondents strongly agreed that poor water access negatively impacts the nutrition of young children. The distribution was negatively skewed (-1.20) and leptokurtic (Kurtosis = 1.80), suggesting a strong consensus among participants.

Similarly, poor sanitation was rated highly (Mean = 4.20, SD = 0.80), reinforcing the idea that unhygienic environments significantly contribute to malnutrition. Regular access to

fresh fruits and vegetables was also deemed critical (Mean = 4.15, SD = 0.85), with negative skewness (-1.05) reflecting that the majority of caregivers acknowledged the importance of a balanced diet.

Frequent flooding (Mean = 3.90, SD = 0.90) and overcrowded living environments (Mean = 4.05, SD = 0.82) were identified as considerable environmental challenges that disrupt food security and promote infections, respectively. Air pollution (Mean = 3.85, SD = 0.95) and inadequate time for exclusive breastfeeding (Mean = 4.00, SD = 0.88) were also recognized as contributing factors, though the slightly lower means and flatter kurtosis values suggest a more diverse range of opinions.

The absence of nearby health education centers (Mean = 3.95, SD = 0.92) and limited access to healthcare services (Mean = 4.10, SD = 0.83) were strongly linked to poor nutritional outcomes, emphasizing the importance of accessible healthcare infrastructures. Lastly, seasonal farming patterns (Mean = 3.80, SD = 1.00) were perceived as contributing to seasonal variations in child nutrition, with a relatively wider spread of responses indicated by the higher standard deviation.

This implies that environmental factors such as water access, sanitation, food availability, overcrowding, pollution and healthcare infrastructure critically influence malnutrition rates among under-five children in Gboko.

CHAPTER FIVE

DISCUSSION OF FINDINGS, IMPLICATION TO NURSING, LIMITATIONS OF STUDY, SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents discussion of findings, implications of the study to nursing profession, limitations the researcher encountered during the process, summary, conclusion, recommendations and suggestions for further studies.

5.1 Discussion of Findings

5.1.1 Socio-Economic Factors Influencing Malnutrition as Perceived by Parents and Caregivers of Under Five Children Attending General Hospital Gboko

The indications from the findings in Table 4.1.2 suggest socio-economic factors to be the predominant determinants of malnutrition in under-five children in Gboko. Relevant factors such as household income, parental educational level, expenditure for living and uncertainty about the supply of food were mentioned as common reasons behind children's inadequate nutritional status. All these results concur with Smith and Haddad (2000), who asserted that income poverty and low educational attainment are strong world determinants of children's malnutrition. Poor families with limited resources struggle to maintain a balanced diet, clean drinking water, or proper healthcare and hence contribute to deteriorating child health.

The socio-economic status and nutrition of children relationship is not merely a matter of financial capacity. Families of lower socio-economic status often have structural disadvantages in accessing quality healthcare services, proper sanitation and proper

education facilities-all critical to guaranteeing proper child growth and development. In Gboko, where majority of the households live below the poverty line, the situation remains even more precarious, contributing further to the malnutrition risk for vulnerable groups such as children aged between five years old.

Aside from income and household wealth overall, parental education, particularly maternal education, was the other determinant factor. Higher levels of maternal education were observed to be closely associated with enhanced nutrition among children. As contended by Frost, Forste and Haas (2005), educated mothers tend to exhibit scientifically recommended breastfeeding practices, support increased dietary diversity and adopt sanitary household habits. They can also recognize signs of malnutrition and seek early medical assistance. In contrast, illiterate mothers or illiterate mothers lack much information about infant feeding, child health care and handling of nutrition, unknowingly placing the health of their children at risk.

The escalating cost of living and inconsistent supply of food were identified as additional aggravating factors for food insecurity in households. Respondents said that volatile food prices and seasonal food shortages make it difficult for poor households to meet the children's diet needs on a daily basis. This concurs with the Food and Agriculture Organization report (FAO, 2018), which stresses that food security is the solution to fighting malnutrition. Unless there is stable and affordable access to healthy food, children are more likely to experience undernutrition, stunted growth and related health problems.

5.1.2 Cultural Factors Influencing Malnutrition among Parents and Caregivers of Under Five Children Attending General Hospital Gboko

The findings also indicate that cultural beliefs and practices have a strong influence on child nutrition status in Gboko. The traditional practices of choosing herbal treatment over orthodox medical care, delayed introduction of solid foods and avoidance of certain healthy foods when sick were found to be majorly responsible for malnutrition in children under five years.

These observations are also supported forcefully by the findings of Peltó, Levitt and Thairu (2003), which indicated that feeding habits due to culture would overwhelm scientific recommendations, especially in rural areas where indigenous values and practices remain highly rooted. Traditional practices of child care in Gboko are largely influenced by the elders of the community and their advice is followed unreservedly. But such advice will on occasion contradict optimal medical practice, for example, early complementary feeding or early seeking of professional health care for acute childhood illness.

For instance, discouragement of the initiation of complementary feeding on the premise that it would lead to health complications delays the introduction of vital nutrients in a child to aid in growth and development. Once more, the reliance on conventional medical practice to identify ailments such as diarrhea or respiratory tract infection delays the necessary treatment, leading to the worsening of health conditions and increased vulnerability to malnutrition.

Such ingrained social conventions can thus prove to be barriers to the adoption and uptake of evidence-based healthcare interventions for child nutrition intervention. Cultural beliefs on child sickness and nutritional needs can largely influence a child's nutritional health, sometimes compelling families to resist recommended health practices

in the face of overwhelming scientific evidence to the contrary. This process has been underscored by Dettwyler (1986), who believed that cultural constructions of food and illness are powerful predictors of children's health in a good number of traditional cultures.

5.1.3 Environmental Factors Influencing Malnutrition among Parents and Caregivers of Under Five Children Attending General Hospital Gboko

Table 4.1.6 results further support that environmental conditions are equally crucial as factors in determining malnutrition rates of under-five children in Gboko. The principal environmental challenges that were evident from the data are the lack of clean water, poor living standards, insecurity in food supply, crowded living patterns, pollution and poor health facilities. All these environmental concerns result in an unfavorable environment for child growth and development, consequently aggravating the already perilous nutritional condition of children in the area.

These results are in line with those of UNICEF (2019), which observed that children living in environments where poor sanitation and water facilities are dominant are more vulnerable to malnutrition. Inadequate clean drinking water and sanitation put children at great risk of contracting infectious diseases, particularly diarrheal and respiratory illnesses. Repeated infections not only erode overall health but also inhibit the absorption of nutrients, undermine immunity and are a leading reason for physical manifestations of malnutrition such as wasting, stunting and being underweight.

The imperative role of water, sanitation and hygiene (WASH) in health was reiterated by Prüss-Ustün (2016), who determined that inadequate WASH services are the driving

factor behind much of disease burden, especially in low- and middle-income countries. Children being the most vulnerable group experience the greatest impact of these environmental shortcomings. In Gboko, massive reliance on contaminated water sources for domestic and consumption purposes, together with poor sanitation systems, creates conditions for water-borne disease transmission. Subsequently, incessant infection occurrences drain children's nutritional reserves, thus making it a vicious circle, where disease breeds malnutrition and malnutrition breeds susceptibility to infections.

The figures also picture the fact that poor living standards and contamination make things worse. Black et al. (2013) observed that overcrowding facilitates the rapid transmission of infectious diseases such as measles, tuberculosis and respiratory infections—diseases that significantly affect child development and growth. In densely populated parts of Gboko, homes are typically crowded, with inadequate ventilation, a setting conducive to the spread of pathogens. Besides, air pollution from biomass smoke and open waste dumps poses an additional risk to children's respiratory health, with an indirect impact on their nutritional status by contributing to disease burden.

The issue is compounded by the weak healthcare infrastructure prevalent in Gboko. The study established that limited access to quality health care delays diagnosis and treatment of child illnesses, undermining preventive and curative interventions against fighting malnourishment. Many respondents reported challenges such as the inaccessibility of proximate health centers, an insufficiency of trained health workers, the lack of essential medicines and high fees for healthcare. This is also in line with the World Health Organization's argument (WHO, 2017), which posited that enhancing healthcare systems, particularly by augmenting service delivery in rural and disadvantaged communities, is

key to the mitigation of child malnutrition. Without a strong healthcare base, detection, prevention and treatment of diseases caused by malnutrition are drastically compromised, rendering vulnerable children prone to avoidable health issues.

This would imply that environmental determinants-managing anything from WASH-related problems to overcrowding, pollution and healthcare deficits are synergistically blended with socio-economic and cultural drivers to generate a complex network of causes for why under-five child malnutrition rates are so prevalent in Gboko. Malnutrition, in this case, is addressed in holistic, multi-sectoral intervention aiming to address environmental health, economic wellbeing, education development and cultural transformation in combination.

5.2 Implications to Nursing Profession

The implications of this research study to the nursing profession include:

- Health Education Role: Nurses and midwives can utilize the study findings to develop and implement health education programs aimed at preventing malnutrition among under-five children by educating caregivers about proper nutrition and feeding practices.
- Targeted Interventions: The findings can guide nurses in tailoring interventions specific to the needs of the community, such as addressing socio-economic factors influencing malnutrition, thereby improving child nutritional status.
- Collaboration with Stakeholders: Nurses can collaborate with government and non-government organizations to support economic empowerment initiatives and

food support programs for vulnerable populations, enhancing the effectiveness of nutritional interventions.

- **Policy and Advocacy:** Nurses may use the evidence to advocate for policies that address socio-economic determinants of malnutrition and improve resource allocation for child health services at General Hospital Gboko and similar settings.
- **Training and Capacity Building:** The study underscores the need for recruitment and continuous training of health staff by relevant health ministries, allowing nurses to stay informed on best practices in managing and preventing malnutrition.
- **Contribution to Research and Knowledge:** Nurses can add to existing literature and contribute to further studies that advance understanding and strategies for tackling malnutrition among children under five.

5.3 Limitations of Study

Constraints are bound in every research and this study was not an exception as it encountered several hitches but was tackled in the course of conducting this study, the researcher was constrained in terms of resources needed for the conduct of a study of this nature. The researcher was constrained also in the area of time since this study was conducted at the time when the researcher was busy with academic activities like lectures, semester examinations and subsequent Nursing and Midwifery Council of Nigeria (NMCN) professional examinations. These hitches were handled amicably with the participants and at the end, data was collected and analysed for the study.

5.3 Summary

This study investigated the factors influencing malnutrition among caregivers of children under five years attending General Hospital Gboko, Benue State. Specifically, it assessed the socio-economic, cultural, and environmental factors perceived by caregivers as contributing to malnutrition. A cross-sectional survey design was employed, utilising a structured questionnaire as the primary instrument for data collection. Respondents were selected using a non-probabilistic sampling technique. The sample size of 187 participants was statistically determined from a population of 352 using Taro Yamane's (1967) formula. All distributed questionnaires were retrieved, deemed usable, and analysed through both descriptive and inferential statistical methods. The study was underpinned by the Health Belief Model. The findings revealed that;

- Malnutrition among children under five in Gboko is predominantly influenced by socio-economic, with caregivers citing low income, limited formal education, and high living expenses as major contributors. For example, 79 respondents (approximately 42.2%) strongly agreed that low income limits their ability to provide balanced meals, and 81 respondents (about 43.3%) identified high rent costs as reducing funds available for food. Additionally, reliance on seasonal farming was noted by 71 respondents (around 38%) as leading to inconsistent food availability.
- Cultural beliefs and practices significantly affect child nutrition, tending to discourage the uptake of the best practice of health. The influence of the elders to counsel, for instance, the preference of using traditional medicine, not desiring to provide solid foods and healthy foods under certain situations, all lead to malnutrition among children under the age of five. The findings show that 3.54

out of 5 respondents supported making pap a staple food, often at the expense of other nutrients, and 3.52 favored delaying the introduction of solid foods due to cultural beliefs. Many caregivers prefer herbal remedies over medical treatment, with a mean of 3.50, reflecting significant reliance on traditional practices that may hinder proper nutritional care.

- Environmental factors such as water access, sanitation, food availability, overcrowding, pollution and healthcare infrastructure critically influence malnutrition rates among under-five children in Gboko. The survey indicated that lack of access to clean drinking water was the most critical concern, with a mean score of 4.30 out of 5 and a standard deviation of 0.75, showing strong agreement among respondents that poor water access negatively affects nutrition. Poor sanitation, inadequate healthcare access, and seasonal food shortages were also noted as important factors with high mean scores, indicating their recognized influence.

5.5 Conclusion

Within the broader framework of societal development, it is evident that limited economic resources significantly hinder efforts to achieve optimal health outcomes, particularly among vulnerable populations. The condition of under-five children in Gboko exemplifies this reality, as caregivers are frequently constrained by low-income levels, inadequate educational attainment, escalating living costs and an unstable food supply, all of which undermine their ability to provide adequate nutrition. In addition, deeply rooted cultural beliefs and practices continue to influence health behaviors, often discouraging the adoption of evidence-based

nutritional practices in favor of traditional methods. Key statistics indicate that 42.2% of caregivers strongly agree that low income limits their ability to provide nutritious meals, while 43.3% cite high rent costs as reducing funds available for food. Environmental concerns are equally significant, with a mean score of 4.30 out of 5 demonstrating a strong consensus that lack of access to clean water adversely impacts child nutrition. In contexts where the counsel of elders is highly esteemed, practices such as reliance on traditional medicine and resistance to the provision of appropriate complementary foods further exacerbate malnutrition. Environmental determinants, including limited access to potable water, inadequate sanitation facilities, overcrowded living conditions, pollution and fragile healthcare infrastructure, further contribute to the prevalence of malnutrition among under-five children in the area. Based on the foregoing, it is safe to conclude that malnutrition among under-five children in Gboko is predominantly influenced by socio-economic constraints, entrenched cultural practices and adverse environmental conditions. Thus, without addressing these multidimensional challenges, efforts to improve child nutrition will continue to yield suboptimal results.

5.6 Recommendations

Based on the survey results, the following recommendations were made;

- Benue State Government, in collaboration with local government authorities and non-governmental organizations (NGOs) should design and implement targeted poverty alleviation programmes, including conditional cash transfers, free or subsidized early childhood education and food security initiatives. Economic empowerment programmes focusing on women's employment and skill

acquisition should also be prioritised to boost household income and purchasing power for nutritious foods.

- Community leaders, traditional rulers, religious institutions and health educators be actively engaged by the Benue State Ministry of Health to lead culturally sensitive education campaigns. These campaigns should respectfully challenge harmful practices while promoting scientifically sound child-feeding and healthcare practices, making use of respected elders and influencers as agents of change within the community.
- Benue State Rural Water Supply and Sanitation Agency (BERWASSA), in collaboration with international development partners such as UNICEF and WHO should intensify efforts to improve access to clean water, proper sanitation, waste management and basic healthcare facilities. Investments should also be made in community nutrition centers and affordable housing projects to reduce overcrowding and create a healthier living environment for families with young children.

5.7 Suggestions for Further Studies

Based on the nature and findings presented, further studies should logically focus on the following areas:

- Factors Influencing Malnutrition among Caregivers of Under Five Children in Secondary Healthcare Facilities in Benue State.

- Effect of Health-Education Intervention on Under-Five Nutrition in Selected Primary Healthcare Facilities in Benue State.

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APPENDIX I:
QUESTIONNAIRE

Department of Nursing
Science,
Benue State University,
P.M.B. 102119,
Makurdi.

23rd March, 2025

Dear Respondent,

REQUEST TO COMPLETE QUESTIONNAIRE

I am an undergraduate student of the Department of Nursing Science, Benue State University Makurdi. I am currently conducting a study to assess **“Perceived factors influencing malnutrition among caregivers of children under five attending General Hospital, Gboko”**

You have been selected as one of the respondents and I humbly solicit your support by accurately filling in the questions contained in the questionnaire below to the best of your knowledge. Be assured that your answers will be treated with strict confidentiality. The information supplied will be used strictly for the purpose of this study.

Thanks for your anticipated response.

Yours faithfully,

IORYAA TERNGU
RICHARD
BSU/BM/NUR/18/99

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**APPENDIX II:
DATA COLLECTION INSTRUMENT
SECTION A**

Instruction: Please tick in the appropriate boxes or respond as required below

1. Gender:

- Male []
- Female []

2. Age:

- 19 years and below []
- 20–29 years []
- 30–39 years []
- 40–49 years []
- 50 years and above []

3. Marital Status:

- Single []
- Married []
- Divorced []
- Widowed []

4. Educational Qualification:

- Primary []
- Secondary []
- Tertiary []

5. Ethnic Group:

- Tiv []
- Idoma []
- Igede []
- Hausa []
- Yoruba []
- Igbo []
- Others []

6. Occupation:

- Student []

- Civil Servant []
- Business []
- Others []

SECTION B

Please indicate your level of agreement with each statement by selecting one of the following options: Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

Research question one: What are the socio-economic factors that influence malnutrition as perceived by parents and caregivers of under five children attending General Hospital Gboko?

	ITEMS					
	Low income limits the ability to consistently provide balanced meals for under-5 children.					
	Reliance on seasonal farming results in inconsistent food availability throughout the year.					
	Lack of formal education leads to limited knowledge about proper child nutrition.					
	A large portion of income is spent on rent and transportation, leaving little for food.					
	Lack of refrigeration prevents the storage of perishable nutritious foods.					
	Long working hours reduce the time available to prepare proper meals.					
	High expenditure on rent reduces the amount of money available for food.					
	Individuals from polygamous households may experience limited food availability.					
	Large family sizes often struggle to meet food demands.					
	Conflicts/wars negatively affect access to and the ability to fetch food					

SECTION C

Research question two: What are the cultural factors that influence malnutrition among parents and caregivers of under five children attending General Hospital Gboko?

	ITEMS				

	Some elders link eating eggs and meat to future stealing.				
	Herbal remedies are favoured over supplements, delaying treatment.				
	Cultural norms restrict food variety and mixing.				
	Solid foods are delayed over fears of illness.				
	Elders' advice often overrides health professionals.				
	Nutritious foods are avoided during illness due to beliefs.				
	Some fruits and vegetables are seen as taboo for children.				
	Health talks are skipped for traditional events.				
	Spiritual help is sought over medical care for malnutrition.				
	Exclusive breastfeeding is rejected by some cultural beliefs.				
	Feeding focuses mainly on pap, neglecting other nutrients.				

SECTION D

Research question three: What are the environmental factors that influence malnutrition among parents and caregivers of under five children attending General Hospital Gboko?

	ITEMS				
	Lack of access to clean drinking water negatively impacts the nutrition of under-5 children				
	Poor sanitation in residential areas adversely affect the nutritional status of under-5 children.				

	Regular access to fresh fruits and vegetables plays a significant role in the nutrition of under-5 children.				
	Frequent flooding in certain areas disrupts food availability for under-5 children.				
	Overcrowded living environments contribute to the spread of infections, affecting the nutrition of under-5 children.				
	Air pollution is associated with increased frequency of illnesses among under-5 children.				
	Inadequate time for exclusive breastfeeding, often due to long work hours impact the nutrition of under-5 children.				
	The absence of nearby health education centers hinder optimal nutritional practices for under-5 children.				
	Limited access to affordable healthcare services reduces the likelihood of regular health check-ups for under-5 children				
	Seasonal farming patterns contribute to nutritional deficiencies among under-5 children during dry seasons.				