

Breastfeeding Practices and Early Childhood Development in Nigeria: A Descriptive Analysis of Early Childhood Development Reports (2018–2023)

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ABSTRACT

Background: Early childhood development (ECD) is a critical period for physical, cognitive, and emotional growth. In Nigeria, suboptimal breastfeeding and complementary feeding practices remain major contributors to malnutrition and poor developmental outcomes.

Objective: This study analysed national trends in breastfeeding and complementary feeding practices from 2018 to 2023 and examined their implications for early childhood development in Nigeria.

Methodology: This descriptive secondary analysis used data from five national Early Childhood Development (ECD) reports (2018–2023). Data on early initiation of breastfeeding (EIBF), exclusive breastfeeding (EBF), Minimum Acceptable Diet (MAD), under-five stunting, and risk of poor development were extracted, organised into tables, visualised using bar charts, and descriptively analysed to assess trends over the study period. Findings were synthesised across successive ECD reports to identify changes in key nutrition and child development indicators over time.

Results: EIBF increased from 33% in 2018 to 42% in 2020 but remained unchanged through 2023. EBF improved from 17% to 29% before stagnating below global targets. MAD remained critically low at 10% throughout the study period. Under-five stunting peaked at 37% in 2020 before declining to 34% in 2023. In 2023, 67% of children were at risk of poor development with marked rural disparities.

Conclusion: Despite modest improvements before 2020, breastfeeding and complementary feeding practices have stagnated in Nigeria. Persistently low EBF and MAD rates, together with sustained under-five stunting, continue to place many children, particularly in rural areas, at risk of poor development, underscoring the need for strengthened and equitable early childhood nutrition interventions.

Keywords: Early childhood development, Exclusive breastfeeding, Early Initiation of Breastfeeding (EIBF), Complementary feeding, Minimum Acceptable Diet (MAD)

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INTRODUCTION

Early childhood, the period from birth to five years of age, is a critical stage for growth and development (1). The first 1,000 days of life offer a unique window of opportunity to prevent undernutrition and its lasting consequences (2). Adequate nutrition during this period is essential for optimal growth and cognitive development of infants (3). However, poor feeding practices during

the first two years of life have both immediate and long-term effects on health, growth, and survival (1). This burden is particularly heavy in Sub-Saharan Africa, which accounts for the highest prevalence of under-five mortality and malnutrition globally. In Nigeria, inappropriate feeding practices for children aged 0-2 years and poor nutrition account for over 40% of infant deaths,

underscoring the urgent need for targeted nutritional interventions (2).

Breastfeeding is recognised as one of the most effective interventions for reducing child mortality, with the potential to avert over 800,000 child deaths annually worldwide (3). Breast milk provides infants with all the necessary nutrients in their early months, offering immunological benefits that reduce the risk of infections such as pneumonia, gastroenteritis, and meningitis (4). In recognition of its benefits, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommended early initiation of breastfeeding within the first hour of birth, exclusive breastfeeding (EBF) for the first six months, and continued breastfeeding for up to two years alongside adequate complementary feeding (5). However, breastfeeding practices remain suboptimal in Nigeria. According to the 2018 Nigeria Demographic and Health Survey (NDHS), early initiation of breastfeeding was practiced by only 32% of mothers, whereas the rate of exclusive breastfeeding was only 29% (6). Data from 2023 indicates that while early initiation has improved to 42%, exclusive breastfeeding rates have remained stagnant at 29% (18).

Complementary feeding, the gradual introduction of nutrient-dense foods alongside breast milk from six months onward, is essential to meet the increasing nutritional demands of growing children (7). The WHO defines the Minimum Acceptable Diet (MAD) as a measure combining meal frequency and dietary diversity, which ensures that children receive adequate nutrients for proper growth and development (8). While many low-income countries struggle with these standards, Nigeria lags significantly behind its regional peers. In Nigeria, only 18% of children aged 6–23 months meet the MAD standards (9); however, current reports indicate this prevalence has remained critically low at 10% as of 2023 (18), with children in rural and low-income households being disproportionately affected. The inadequate provision of diverse, nutrient-rich diets contributes to the high prevalence of undernutrition in the country, manifested in stunting, wasting, and hidden hunger (10).

Barriers to optimal breastfeeding and dietary practices in Nigeria include cultural beliefs, poor maternal education, and inadequate healthcare support (11). As a result, the complementary feeding practice in the country is yet to be optimal (6). It has been reported that a good number of infants are exposed to solid foods at an untimely

time or at a later time, which interferes with proper nutrition. The common young child's diet is usually monotonous and cereal-based, heavy on starch-rich porridges such as maize or sorghum ('pap'), which are deficient in the essential proteins and micronutrients required to guarantee rapid growth (1, 20). This low nutritional diversity is the reason why Minimum Acceptable Diet (MAD) rates are critical and is a key determinant of the high rate of stunting among Nigerian children below the age of five (9). These challenges highlight the importance of dietary intervention programs that aim to improve child and maternal nutrition. Effective interventions include exclusive breastfeeding for at least six months, the introduction of diverse complementary foods at six months, and adequate intake of essential vitamins and minerals, such as iron, vitamin A, and iodine (12). These strategies are cost-effective in improving child survival and reducing malnutrition in resource-limited settings (13).

This study evaluated the impact of breastfeeding practices and dietary interventions on early childhood growth and development in Nigeria. By analysing existing data on breastfeeding initiation rates, exclusive breastfeeding duration, and the prevalence of minimum acceptable diets, this study aimed to provide evidence-based insights into strategies for improving early childhood nutrition and overall health outcomes in Nigeria.

METHODS

Study Design

This study was a descriptive secondary data analysis. Data were obtained from five editions of Early Childhood Development (ECD) research conducted in Nigeria. The review particularly focuses on the 2018, 2019, 2020, 2021, and 2023 editions (14–18). This research provided information on demographics, threats to early childhood development, health, nutrition, early learning, security and safety, and responsive caregiving.

Selection Criteria

This review focused on only ECD editions with revealed measurable nutrition-related factors that aided the review of the impact of nutrition on early childhood development in Nigeria.

Study Variables

The variables in this study were: Early Initiation of Breastfeeding (EIBF); Exclusive Breastfeeding (EBF); Minimum Acceptable Diet (MAD); Under-5 Stunting; Risk of Poor Development by Gender and Residence

Data Extraction and Analysis

The data were manually extracted by one of the researchers and independently validated by another researcher. Although the ECD reports reviewed were published between 2018 and 2023, the indicator on young children at risk of poor development was derived from survey estimates for 2005, 2010, and 2015, which were consistently reported across the ECD reports. The extracted variables were recorded in tabular format, visualised using bar charts, and descriptively analysed to examine trends over the study period. Inferential statistical analysis was not performed because it did not apply to this descriptive secondary data analysis.

RESULTS

Trends in Breastfeeding and Complementary Feeding Practices

Analysis of the ECD reports revealed varying trends in infant feeding practices over the study period. Early Initiation of Breastfeeding (EIBF) increased from 33% in 2018 to 42% in 2020. Thereafter, the rate remained unchanged at 42% in 2021 and 2023. Similarly, Exclusive Breastfeeding (EBF) increased from 17% in 2018 to 29% in 2020 but remained unchanged through 2023, remaining substantially below the World Health Organization's global target of 50%. The Minimum Acceptable Diet (MAD) remained the lowest-performing indicator, though it did transiently increase to 15% in 2020 before returning to the

baseline of 10% in 2021 and 2023; it shows that there is a dire need to maintain better complementary feeding practices. Figure 1 represents the trends of these three indicators.

Trends in under-Five Stunting in Nigeria

The prevalence of stunting among children under five remained stagnant at 33% between 2018 and 2019 before spiking to a peak of 37% in 2020. Although the rate declined slightly to 35% in 2021 and 34% in 2023, it remains higher than the initial 2018 baseline, indicating persistent chronic malnutrition (Figure 2).

Trends in Risk of Poor Development

Survey estimates reported in the Early Childhood Development (ECD) reports showed that the proportion of young children at risk of poor development declined from 71% in 2005 to 67% in 2010 and remained unchanged in 2015 (Figure 3).

Developmental Risk by Gender and Residence

The analysis showed a low level of gender disparity, as the risks of boys (67%) and girls (68%) are similar. There is, however, a substantial disparity based on place of residence, with 84% of children living in rural areas at risk of poor development compared with 39% of those living in urban areas. This large discrepancy remained during the reporting period (Figure 4).

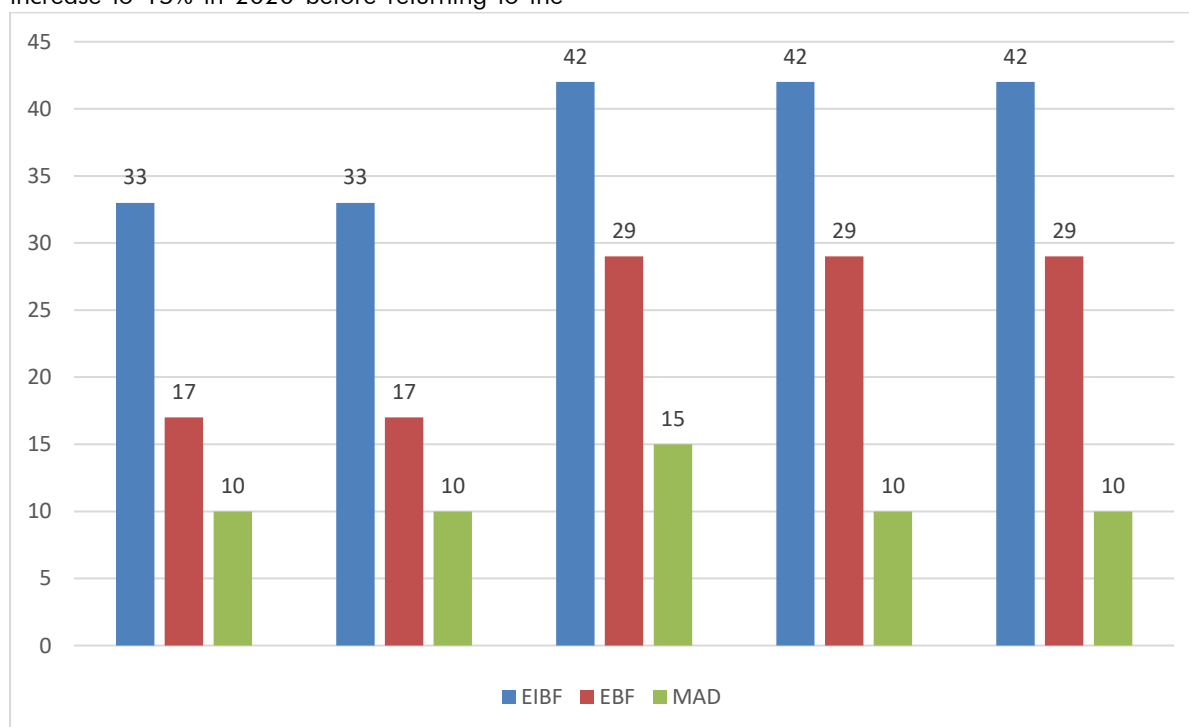


Figure 1: Trends in Early Initiation of Breastfeeding (EIBF), Exclusive Breastfeeding (EBF), and Minimum Acceptable Diet (MAD) in Nigeria, 2018–2023.

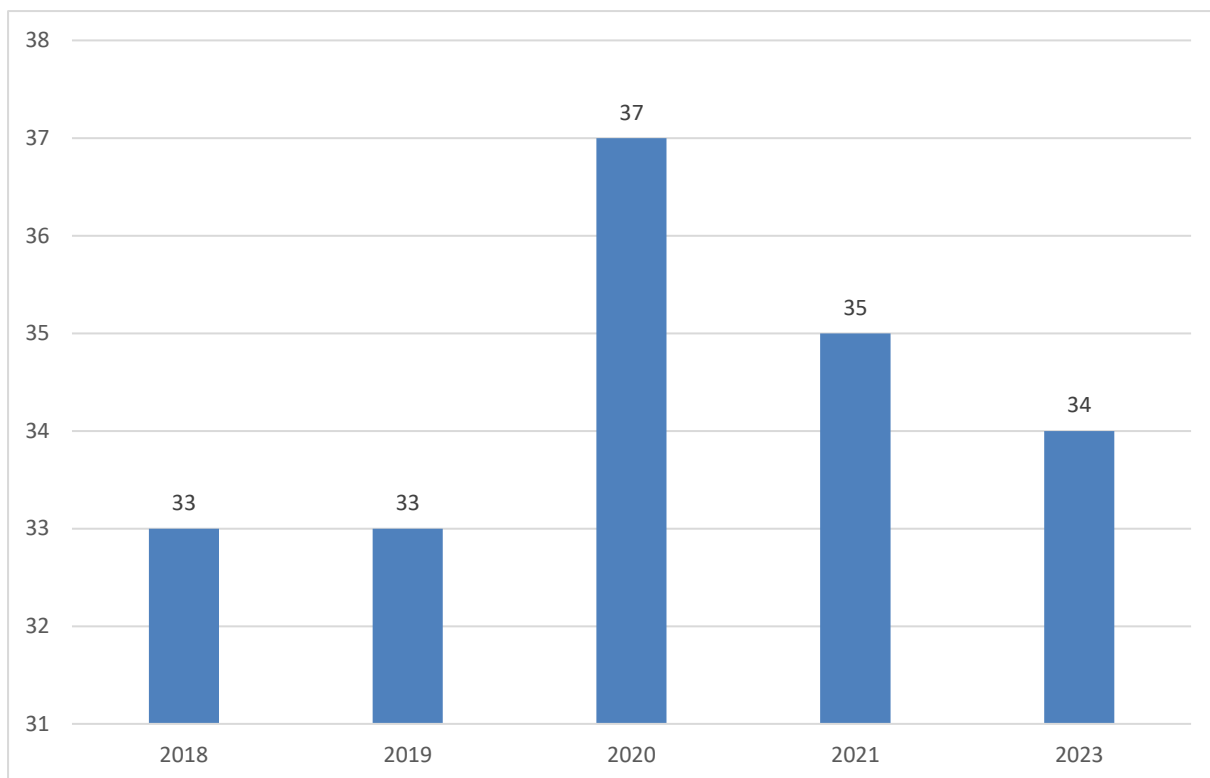


Figure 2: Trends in under-Five Stunting in Nigeria, 2018–2023.

Values represent the prevalence (%) of under-five stunting reported in the national Early Childhood Development (ECD) reports.

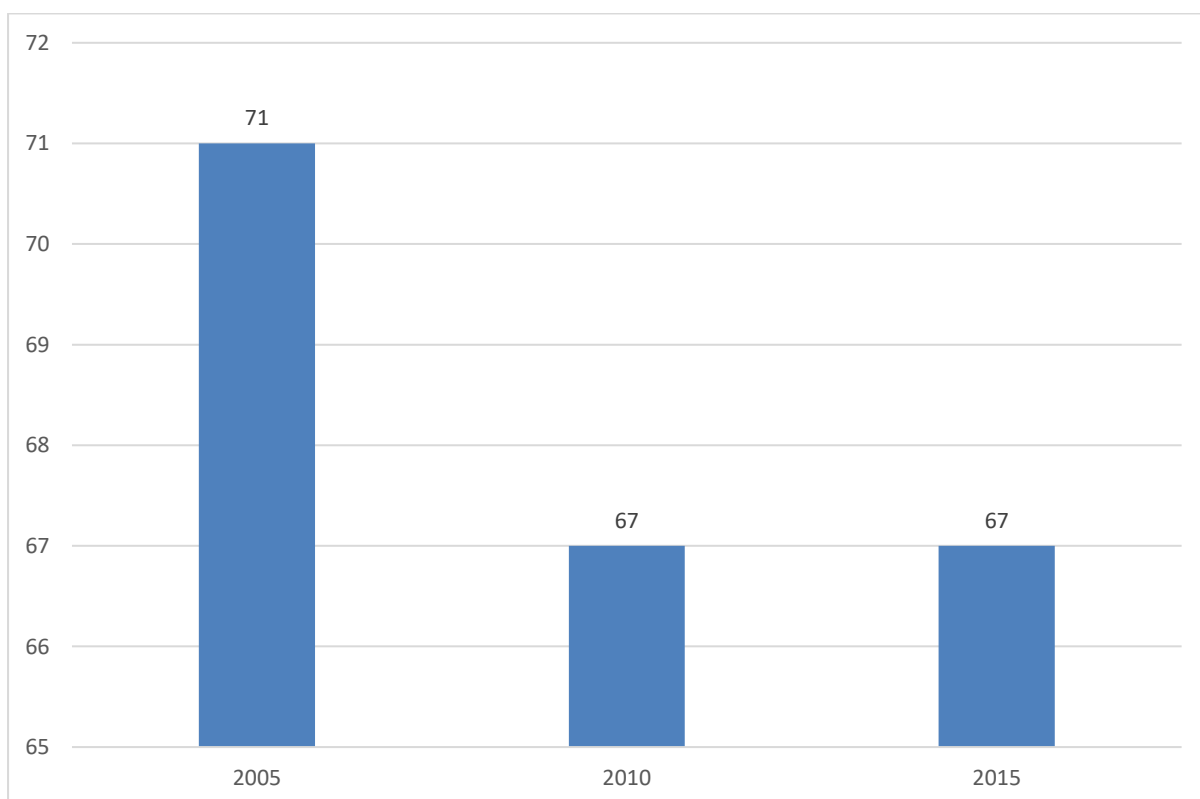


Figure 3: Proportion of Young Children at Risk of Poor Development Based on Survey Estimates for 2005, 2010 and 2015, as Reported in the Early Childhood Development (ECD) Reports (2018–2023).

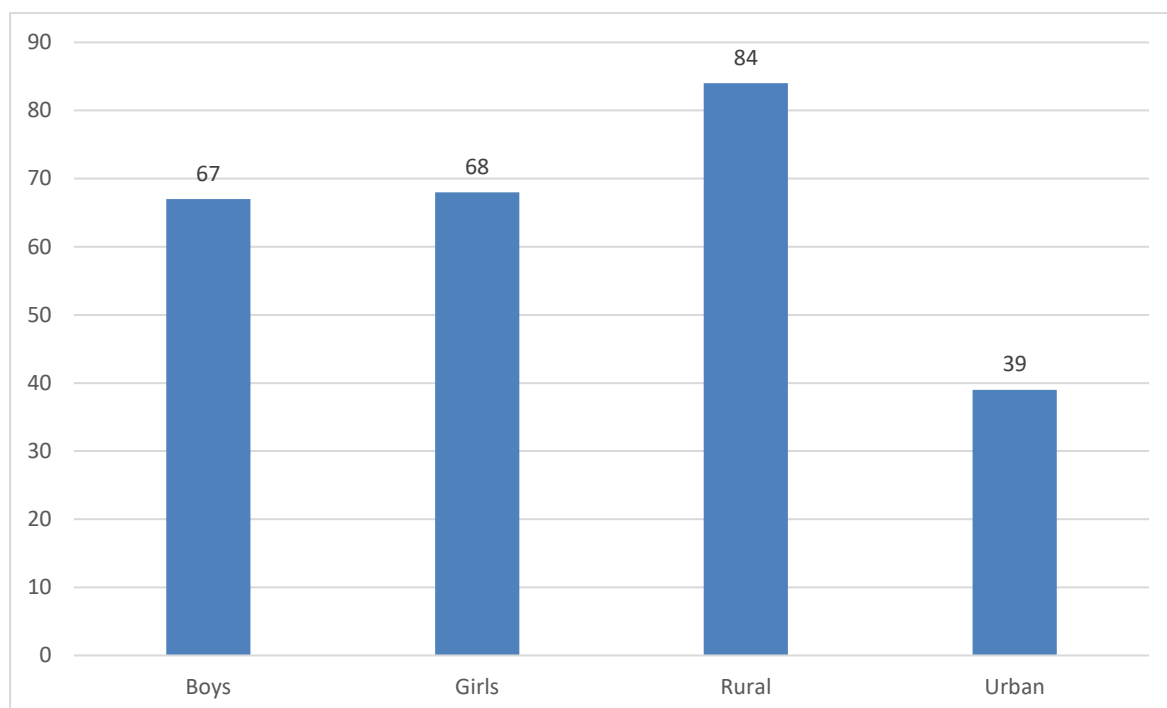


Figure 4: Risk of Poor Development among Young Children by Sex (Boys and Girls) and Place of Residence (Rural and Urban).

Values remained unchanged across the Early Childhood Development (ECD) reports (2018–2023) and are therefore presented once to avoid unnecessary repetition.

DISCUSSION

Despite extensive efforts to promote early initiation of breastfeeding (EIBF) in Nigeria, progress has remained below global expectations, despite some improvement over the study period. This trend aligns with the 2018 Nigeria Demographic and Health Survey (NDHS), which reported a national EIBF practice rate of 42.1% (6). Although progress has been made, the overall rate remains suboptimal compared with the World Health Organization (WHO) target of at least 70% of infants initiating breastfeeding within the first hour of birth by 2030 (5).

One of the key barriers to early breastfeeding initiation is delayed breast milk production, which discourages many mothers from breastfeeding immediately after birth. A study conducted in Lagos, Nigeria found that over 60% of mothers reported that delayed lactation was the primary reason for not initiating breastfeeding early (19). However, this issue is often exacerbated by cultural beliefs and hospital practice. In many northern Nigerian communities, traditional customs encourage the administration of water, herbal teas, or animal milk to newborns before breastfeeding begins, based on the belief that it helps cleanse the baby's digestive system (20). Similarly, in Southern Nigeria, studies indicate that mothers frequently

introduce water and infant formula early, driven by the strong cultural perception that breast milk alone is insufficient to quench a baby's thirst or hunger (19, 22). These practices delay the onset of EIBF and reduce its national prevalence.

The place of delivery also significantly affects the EIBF rates. Mothers who deliver in hospitals with Baby-Friendly Hospital Initiative (BFHI) policies are more likely to initiate breastfeeding within the first hour than those who give birth at home or in traditional birth centers. According to the NDHS 2018, home births remain common in rural Nigeria, where there is limited access to trained healthcare professionals who can encourage early initiation of breastfeeding (6). The stagnation of EIBF at 42% between 2020 and 2023 suggests that while hospital-based interventions have improved early breastfeeding rates, they have not effectively reached mothers in rural and low-income settings.

Despite global recommendations advocating exclusive breastfeeding (EBF) for the first six months of life (5), Nigeria continues to experience low and stagnant EBF rates. This aligns with findings from the 2018 Nigeria Demographic and Health Survey (NDHS) (6), which reported a national EBF rate of 29%, far below the 60% global target set by the World Health Organization (5).

A key reason for Nigeria's low and stagnant EBF rates is the strong belief that breast milk alone is insufficient to meet an infant's nutritional needs. A previous study found that many mothers in Southwest Nigeria introduced water, porridge, or infant formula before six months due to concerns that exclusive breastfeeding leads to infant hunger and excessive crying (20). Similarly, another study highlighted that geographical variations influence EBF rates, with urban mothers being more likely to practice EBF than rural mothers due to better healthcare access and breastfeeding awareness programs (21).

In addition to cultural beliefs, hospital and healthcare practices also play a significant role in shaping breastfeeding behaviours. Although the Baby-Friendly Hospital Initiative (BFHI) has been implemented in some teaching and specialist hospitals, enforcement remains inconsistent across primary healthcare facilities (22). A systematic review found that while some hospitals actively promoted EBF, others allowed formula supplementation, often because of pressure from infant formula companies (22). Despite international regulations, the marketing of breast milk substitutes continues to influence mothers' perceptions of infant feeding, particularly in urban areas (20).

Moreover, workplace policies and maternal leave duration have also contributed to low EBF rates in Nigeria. Many mothers return to work within three months postpartum due to inadequate maternity leave provisions, making it difficult to sustain EBF for six months (9). Unlike countries with comprehensive workplace breastfeeding support, Nigeria lacks policies that mandate workplace lactation rooms and flexible work schedules for nursing mothers (2).

The stagnation of EBF at 29% from 2020 to 2023 suggests that while awareness campaigns have improved the initial uptake of exclusive breastfeeding, systemic challenges remain unaddressed. These include inadequate training of healthcare workers, sociocultural resistance, aggressive formula marketing, and poor maternal support systems.

Appropriate nutrition during early childhood is crucial for optimal growth and cognitive development (3). However, findings from this study indicate that only 10% of children in Nigeria met the Minimum Acceptable Diet (MAD) standards from 2018 to 2023, showing no significant improvement over five years. This low prevalence is driven by poverty and poor maternal education,

with significant disparities observed between rural areas, where dietary diversity is poorest, and urban centres (9). This is significantly lower than global recommendations, where the World Health Organisation (WHO) encourages at least 50% of children aged 6–23 months to meet MAD requirements by 2030 (9).

A comparison of Nigeria's MAD rates with those of other countries revealed severe nutritional deficiencies. Studies indicate that MAD compliance is higher in Ethiopia (10.44%), Congo (33%), China (27%), and Ghana (13.8%), but remains critically low in Nigeria (23–26). The stagnation at 10% over five years suggests that existing frameworks, such as the National Policy on Infant and Young Child Feeding (IYCF) and the National Strategic Plan of Action for Nutrition (NSPAN), aimed at improving complementary feeding practices, have not yielded substantial progress.

Stunting, a key indicator of chronic malnutrition, reflects long-term deficiencies in nutrition, healthcare, and child welfare (5). Findings from this study indicate that under-five stunting rates fluctuated over five years, increasing from 33% (2018) to 37% (2020), and then slightly decreasing to 34% (2023). This trend suggests that while some progress has been made in addressing child malnutrition, stunting remains a persistent challenge in Nigeria. According to the United States Agency for International Development (27), the prevalence of stunting among Nigerian children remains above 30%, which is a severe public health concern.

The significant spike in stunting in 2020 (37%) aligns with the COVID-19 pandemic, which has led to widespread food insecurity, economic hardship, and disruption of health and nutrition services (28). A modelling study estimated that pandemic-induced food shortages could increase child wasting by 10–50% globally, resulting in millions of additional stunted children, especially in low-income nations (29). In Nigeria, COVID-19 exacerbated existing malnutrition issues as households struggled with rising food prices, loss of income, and reduced access to fortified foods and healthcare services.

Early childhood development (ECD) is critical for cognitive, emotional, and physical growth (30); however, a considerable proportion of Nigerian children remain at elevated risk of poor development due to a convergence of risk factors, primarily chronic malnutrition (stunting), low maternal education, and extreme poverty, which limit access to early learning and responsive care

(30). Findings from this study indicate that the percentage of young children at risk of poor development remained high and unchanged at 71% (2005), declining slightly to 67% (2010) and stagnating at that level in 2015. Globally, Nigeria's 67% risk level is significantly higher than the average for Low- and Middle-Income Countries (LMICs), which is estimated at 43% (30). This aligns with global estimates, which suggest that at least 43% of children under five in low-income countries are at risk of failing to reach their full developmental potential because of stunting and extreme poverty (30).

The persistent stagnation in child development risk levels (67%) suggests that interventions targeting early childhood nutrition, education, and health services are not fully effective. Several interrelated factors contribute to poor early childhood development outcomes in Nigeria.

CONCLUSION

Nigeria continues to face considerable challenges in improving early childhood development outcomes, with persistent gaps in breastfeeding and complementary feeding practices contributing to poor nutritional and developmental outcomes. The findings of this study demonstrate limited progress in key early childhood nutrition indicators over the review period, underscoring the need to strengthen interventions that promote optimal infant and young child feeding and reduce inequities in child health and development. Achieving meaningful improvements in early childhood development will require sustained, coordinated, and multisectoral efforts that integrate nutrition, healthcare, education, and social protection, with particular emphasis on reaching rural and underserved populations.

LIMITATIONS

This study was limited by its reliance on secondary national ECD reports, which lacked consistent regional disaggregation. This constraint prevented a granular analysis of sub-national disparities, limiting our ability to isolate specific cultural or geographic drivers of poor ECD outcomes. Additionally, the absence of raw data precluded independent statistical analysis and the calculation of confidence intervals. However, to contextualize these national findings, comparisons were drawn with broader regional and global trends where data permitted.

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CONFLICT OF INTEREST

The authors declare that there are no financial, personal, or institutional conflicts of interest that could have influenced the design, data analysis, interpretation, or reporting of the findings of this study.

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