



Assessment of Barriers Affecting the Provision of Adequate Nutrition under School Feeding Program in Public Primary schools in Gombe Local Government Area of Gombe State

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Abstract

This study explored the systemic barriers affecting the provision of adequate nutrition through school feeding programs and identified actionable strategies for improving nutritional interventions in public primary schools in Gombe local government area. Data was collected from pupils, teachers, and programs administrators within the study area, descriptive survey design was adopted for the study, questionnaire was used as an instrument for data collection. Data collected were analyzed using descriptive statistic (mean and Standard deviation). The findings revealed that economic constraints and infrastructural challenges are the major barriers to achieving adequate nutrition among pupils. The findings further indicate that improved funding, monitoring, education, and community involvement are essential for enhancing the effectiveness of school feeding programs. The study recommended a community-driven participation, school gardens, and the integration of local farmers to enhance sustainability and meal diversity. It concludes that overcoming structural and operational barriers is essential to achieving equitable and effective school feeding outcomes in Gombe local government area and similar contexts across Nigeria.

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INTRODUCTION

School feeding programs can help bridge the nutritional gaps that hinder cognitive development. When children are well-nourished, they can actively participate in classroom activities, grasp new concepts, and progress through the stages of intellectual development (piaget theory). Adequate nutrition is vital for the physical and cognitive development of children, yet achieving this in public primary schools remains a challenge in many parts of Nigeria. Despite the implementation of the Home-Grown School Feeding Programme (HGSFP), various operational and policy barriers continue to hinder the programme's effectiveness. In Gombe State, evidence shows that irregular food supply, insufficient funding, and weak monitoring mechanisms limit the full potential of school feeding initiatives.

While numerous interventions, such as school feeding programs, have been implemented to address the issue of malnutrition, the effectiveness of these programs in improving the socio-emotional and intellectual development of children in public schools remains unclear. Furthermore, there is limited research on the long-term impact of poor nutrition on children's emotional and intellectual growth, particularly in public primary schools in developing countries. The problem, therefore, lies in the persistent gap between the nutritional needs of children and the actual dietary support provided in public primary schools, which continues to hinder their overall development and academic potential.

Existing studies have identified several barriers to accessing adequate nutrition, including household food insecurity, poor water and sanitation (WASH) conditions, and limited caregiver knowledge (Kamudoni et al., 2024). However, a comprehensive understanding of these barriers within the Gombe context is lacking. Factors such as corruption, irregular payments, and late food deliveries, as highlighted by Agu et al. (2023) in Enugu, Nigeria, may also play a significant role in limiting the effectiveness of SFPs in Gombe LGA. Further research is needed to identify and address these local barriers to ensure that SFPs can effectively improve nutritional outcomes.

In many cases, school feeding programs, such as Nigeria's Home-Grown School Feeding Programme (HGSFP), are designed to address this issue by providing daily meals to students. However, even these programs can struggle to meet the needs of all students due to resource limitations, especially in regions where food insecurity is rampant. Studies have shown that in areas with high rates of poverty, the meals provided by school programs are often insufficient to meet the children's full nutritional needs, as they are heavily reliant on donations or inconsistent food supply from local farmers (Ajani et al., 2021). Additionally, food shortages due to inflation or global supply chain disruptions can further weaken the impact of school feeding initiatives (World Bank, 2020).

Moreover, the high prevalence of food insecurity may affect children nutrition at home, even outside of school hours. Research by Osinbajo et al. (2019) highlights that for many children, the meals provided at school may be their only reliable source of food throughout the day. When these meals are not enough to meet their dietary requirements, the students are left vulnerable to malnutrition, which can affect their physical and cognitive development. The cyclical nature of poverty and food insecurity thus perpetuates a situation where adequate nutrition is difficult to achieve, even when school-based interventions are in place.

Similarly, parental attitudes towards nutrition may also affect children's willingness to participate in school feeding programs. Some parents may be unaware of the benefits of school meals or may hold misconceptions about the quality of the food provided. In such cases, children may be discouraged from eating at school, further exacerbating nutritional deficiencies (Adegoke et al., 2019). Studies have shown that parental education and engagement in school-based nutrition programs can lead to better nutritional outcomes for children, as parents are more likely to reinforce healthy eating habits at home when they are involved in such initiatives (Ogundipe & Nwachukwu, 2021).

The role of parents in supporting and advocating for improved school nutrition programs is often limited due to economic constraints. Many parents in impoverished communities may prioritize work and income generation over active involvement in their children's schooling and health (Amadi, 2019). This lack of parental support can hinder efforts to improve school feeding programs, as community advocacy is crucial for securing government funding, resources, and infrastructure improvements. Government policy also plays a critical role in ensuring that school feeding programs are effective and sustainable. However, inadequate policy implementation and insufficient government support often act as barriers to accessing adequate nutrition in public primary schools. While many governments, including Nigeria's, have

implemented national school feeding programs, the lack of proper oversight, coordination, and funding often results in ineffective delivery of these programs (Adewole & Agboola, 2021).

One of the key challenges is the lack of clear guidelines and standards for school feeding programs, which leads to inconsistencies in the quality and quantity of food provided to students. Without proper monitoring and evaluation systems in place, schools may fail to adhere to nutritional standards, resulting in meals that do not meet the dietary needs of children (Odeyemi, 2020). In some cases, the lack of coordination between different government agencies and departments responsible for school feeding programs leads to delays in food distribution and interruptions in service delivery (FAO & WFP, 2018).

Additionally, the politicization of school feeding programs can undermine their effectiveness. In some regions, school feeding programs are used as political tools to garner support during election periods, with little focus on long-term sustainability or improving nutritional outcomes for children (Obasi et al., 2020). This results in fluctuating levels of government support for these programs, leaving schools and children vulnerable to disruptions in meal services.

Lack of government investment in improving school infrastructure, such as kitchens, storage facilities, and sanitation systems, further hampers the effectiveness of school feeding programs. Without adequate facilities, schools struggle to provide nutritious meals in safe and hygienic conditions, which compromises the health and well-being of the children (Osinbajo et al., 2019). Government support is crucial not only for funding but also for ensuring that the necessary infrastructure and policies are in place to guarantee access to adequate nutrition for all children in public primary schools.

In view of the above, numerous study reveals the several challenges affecting nutritional adequacy among student in different context and location. There is no any study that investigate this in North eastern Nigeria This study therefore, investigates the barriers and provides strategic recommendations for improving the delivery and sustainability of nutritional interventions in public primary schools specifically in Gombe local government area of Gombe state.

Objective of the study:

Specifically, the study seeks to:

1. Identify Barriers to Accessing Adequate Nutrition for Pupils in public primary schools in Gombe local Government Area of Gombe State.
2. Determine Strategies for Improving Nutritional Interventions for pupils in public primary schools in Gombe local Government Area of Gombe State.

Research Questions

The study sought answers to the following research questions:

1. What are the Barriers in Gombe local Government Area of Gombe State to Accessing Adequate Nutrition for Pupils in public primary schools?
2. What are the Strategies for Improving Nutritional Interventions for Pupils in public primary schools in Gombe local Government Area of Gombe State?

METHODOLOGY

The method of research design adopted for the study was descriptive survey, the area of the study was Gombe State which is located in northeastern Nigeria on latitude 10.25 N and longitude 11.17 E. The population of the study comprised 3156 students enrolled in basic 4, 5, and 6 in public primary schools in Gombe metropolis, specifically including Babadidi Primary School Alqahira, Model Primary School, Family Support Primary School, Jauro Abare Primary School, and Wuro Ladde Nomadic Nursery and Primary School. Additionally, teachers, school administrators, and parents were engaged to gather comprehensive data on the barriers affecting nutritional interventions: A simple

random sampling technique was employed to select respondents for the study. A total sample of 355 participants was determined using the Taro Yamane formula for sample size calculation:

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

N= Where n sample size,

N = population

e = the level of significance

$$\text{thus, } n = \frac{3156}{1 + 3156(0.05)^2}$$

$$n = \frac{3156}{1 + 7.89} = \frac{3156}{8.89}$$

N = 355

Table 1, Population Distribution

S/N	SCHOOLS	Number of students in basic 5 and 6
1	Jauro T/Wada primary school	680
2	Model primary school	460
3	Family support primary school	390
4	Jauro Abare primary school	260
5	Wuro ladde nomadic nursery and primary school	366
Total		2156
Teachers		
1	Jauro T/Wada primary school	21
2	Model primary school	20
3	Family support primary school	21
4	Jauro abare primary school	19
5	Wuro ladde nomadic nursery and primary school	19
Total		100
Over all total		3156

Data was collected using a structured questionnaire which was validated by three experts. The questionnaire was also subjected to reliability test, reliability coefficient of 0.7 was obtained. The reliability coefficient obtained was a crucial factor in assessing the suitability of the instrument for the study.

The instrument was administered once to the subjects, and the completed copies were retrieved. The data were analyzed using the Statistical Package for Social Sciences (SPSS).using descriptive statistics, specifically mean and standard deviation. The benchmark for assessing the items was set at a mean score of 3.0; items with a mean score greater than 3.0 were accepted, while those with a mean rating below 3.0 were rejected. This approach ensured a clear evaluation of the data in relation to the study's objectives.

Results and Discussion

Research question 1: What are the Barriers in Gombe local Government Area of Gombe State to Accessing Adequate Nutrition for Pupils in public primary schools?

Barriers to accessing adequate nutrition for pupils.

The result in Table 2 showed the mean and standard deviation on barriers to accessing adequate nutrition for pupils. The findings indicate that inability of parents to afford nutritious meals (4.10), over-reliance on school feeding programs (4.06), and high cost of food (4.03) were the most highly rated barriers. Other factors such as lack of government financial support (3.99), limited access to clean water (3.90), parents' lack of knowledge about balanced diets (3.90), poor storage facilities (3.89), poor road networks (3.88), cultural beliefs (3.77), and gender roles influencing food allocation (3.69) were also accepted. Overall, the results suggest that economic constraints and infrastructural challenges are the major barriers to achieving adequate nutrition among pupils.

Table 2 Barriers to Accessing Adequate Nutrition for Pupils in Public Primary Schools in Gombe Local Government Area

S/NO	Statements	Frequency (n = 355)							Decision
		SA	A	N	D	SD	Mean	Standard deviation	
1	High cost of food	153	123	29	37	13	4.03	1.12	Accepted
2	Inability of parents to afford nutritious meal	162	117	34	34	8	4.1	1.06	Accepted
3	Over reliance on school feeding programme	163	102	43	41	6	4.06	1.09	Accepted
4	Lack of financial support from the government	152	123	23	39	18	3.99	1.18	Accepted
5	Poor storage facilities in schools	104	169	34	15	13	3.89	1.05	Accepted
6	Limited access to clean water	140	114	42	44	15	3.9	1.18	Accepted
7	Poor road networks make it difficult for food supplies to reach schools.	136	126	28	46	19	3.88	1.21	Accepted
8	Cultural beliefs	94	158	44	47	12	3.77	1.08	Accepted
9	Gender roles influence food allocation in households	101	124	64	52	14	3.69	1.15	Accepted
10	Parents lack knowledge about balanced diets	139	120	36	42	18	3.9	1.19	Accepted
		Grand mean					3.92	1.13	Accepted

Research Question 2: What are the Strategies for Improving Nutritional Interventions for Pupils in public primary schools in Gombe local Government Area of Gombe State?

Strategies for improving nutritional interventions for pupils.

The result in Table 3 showed the mean and standard deviation on strategies for improving nutritional interventions for pupils. The findings indicate that increasing government funding for school feeding programs (4.37), strengthening monitoring of food distribution (4.34), and expanding the feeding program to cover all pupils (4.25) were the most highly rated strategies. Other strategies such as implementing food hygiene training (4.24), educating parents on balanced diets (4.19), regular evaluation of nutrition programs (4.18), enhancing school kitchen facilities (4.14), encouraging local food production (4.10), providing nutrition education to teachers and pupils (4.08), and community participation in meal planning (3.84) were also accepted. Overall, the results suggest that improved funding, monitoring, education, and community involvement are essential for enhancing the effectiveness of school feeding programs.

Table 3: Strategies for improving nutritional Interventions for pupils in public primary schools in Gombe local Government area of Gombe state.

S/NO	Statements	Frequency (n = 355)					Mean	Standard deviation	Decision
		SA	A	N	D	SD			
1	Increasing government funding for school feeding programs will enhance nutrition.	231	17	18	24	11	4.37	1.06	Accepted
2	Strengthening the monitoring of food distribution will improve school nutrition programs.	207	96	19	27	6	4.34	0.99	Accepted
3	Community participation in school meal planning	133	105	62	37	18	3.84	1.18	Accepted
4	Providing nutrition education to teachers and pupils	108	89	36	33	17	4.08	1.19	Accepted
5	Enhancing school kitchen facilities	192	89	22	33	18	4.14	1.19	Accepted
6	Encouraging local food production	173	106	30	32	14	4.1	1.13	Accepted
7	Parents should be educated on the importance of balanced diets for children.	195	93	22	30	15	4.19	1.14	Accepted
8	Implementing food hygiene training for school staff	214	72	22	33	14	4.24	1.16	Accepted
9	Expanding school feeding programs to cover all pupils will enhance nutrition outcomes.	215	68	29	30	13	4.25	1.14	Accepted
10	Regular evaluation of school nutrition programs	207	73	26	31	18	4.18	1.2	Accepted
		Grand mean					4.17	1.14	Accepted

Discussion of Finding

Barriers to accessing adequate nutrition for pupils

The result on Barriers to accessing adequate nutrition for pupils showed that parents are unable to afford nutritious meals is a major barrier agrees with Harvey, K. (2016) who identified poverty as a key factor limiting access to balanced diets among children. The finding that over-reliance on school feeding programs aligns with Vilar-Compte (2021), who noted that dependence on school meals without adequate home support can lead to nutritional gaps. The finding that high cost of food affects access to adequate nutrition supports Bai, Y and Alemu (2021), who reported that rising food prices significantly reduce households' ability to maintain healthy diets.

Strategies for improving nutritional interventions for pupils.

The result on Strategies for improving nutritional interventions for pupils showed that increasing government funding for school feeding programs will enhance nutrition agrees with Drake, L. J and Lazrak, (2020), who emphasized that adequate funding is essential for sustaining effective nutrition interventions. The finding that strengthening monitoring of food distribution will improve school nutrition programs aligns with Schultz, L., & Ruel-Bergeron, J. (2021), who highlighted that proper monitoring ensures accountability and efficiency in program implementation. The finding that expanding school feeding programs to cover all pupils will enhance nutrition outcomes is consistent with Awojobi, O. N. (2019), who reported that wider program coverage leads to better health and academic performance among pupils.

Based on the analyses of the research questions, the following findings emanated from the study:

1. The inability of parents to afford nutritious meals is the major barrier to accessing adequate nutrition among pupils in public primary schools in Gombe Local Government Area.
2. Increasing government funding for school feeding programs is considered the most effective strategy for improving nutritional interventions among pupils in public primary schools in Gombe Local Government Area.

Conclusion

The study concludes that while school feeding programs hold great promise for improving children's nutritional and educational outcomes, several systemic barriers undermine their effectiveness in Gombe State. Addressing these barriers requires a multi-stakeholder approach that integrates government commitment, community participation, and private sector engagement.

Recommendations

1. Government and relevant stakeholders should provide financial support and empowerment programs for parents to improve their ability to afford nutritious meals at home.
2. The government should increase funding for school feeding programs to ensure sustainability, improve food quality, and expand coverage to all pupils.

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