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Original Article

Perceptions and Satisfaction with the Home-Grown School Feeding Programme among Pupils in Selected Government Primary Schools in Southwest Nigeria

Saratu Ajike[1*], PhD; Idara Inyang[1], MPH; Josephine Rabo[1], BSc; Saheed Lawal[1], PhD

[1]Department of Public Health, School of Allied Health Sciences, Babcock University, Ilisan-Remo, Ogun State, Nigeria

Corresponding author:* Saratu Ajike, PhD; Department of Public Health, School of Allied Health Sciences, Babcock University, Ilisan-Remo, Postal code: 21244, Ogun State, Nigeria. **Tel: +23-491-23261298; **Email:** ajikes@babcock.edu.ng

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Abstract

Background: Home-grown school Feeding Programmes (HGSFP) aim to alleviate hunger and improve nutrition, health, and well-being in schoolchildren. However, pupils' perspectives about the programme are very limited in Nigeria. Therefore, this study examined pupils' perceptions and level of satisfaction with the HGSFP in Ikenne LGA, South-West Nigeria.

Methods: A cross-sectional mixed-method study was conducted in six public primary schools in Ikenne Local Government Area, Ogun State, with a sample size of 233 pupils. Data on Satisfaction were collected using a 19-item emotion-based questionnaire and analyzed with descriptive and inferential statistics at a significance level of $P< 0.05$. Satisfaction was measured on a 70-point rating scale. Data on perception were obtained through six focus groups of six participants and analyzed using a reflexive thematic approach.

Results: Our results showed that pupils expressed positive perceptions of the program, noting its success in reducing hunger, boosting enrollment and attendance, and enhancing learning. However, they highlighted areas for improvement, including food quantity, utensils, drinking water, and staff treatment. The mean level of satisfaction was high ($\bar{x}$=62.17±7.22). In addition, no significant associations were found between satisfaction and age (P=0.527), gender (P=0.248), class (P=0.112), and location (P=0.105)

Conclusions: The Home-Grown School Feeding Programme was perceived as positively affecting well-being, and pupils were highly satisfied. However, improvements in food quantity, water availability, utensils, and staff interactions were identified. It is recommended that the programme be retained to keep promoting a sense of well-being for the pupils.

Keywords: Home-Grown, Feeding Program, Nigeria, Perception, Schools, Personal Satisfaction

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1. Introduction

The appropriate bio-psychosocial growth of children is inextricably linked to having an adequate and nutritious diet. School Feeding Program is an intervention created to help countries ensure that all school-aged children have a source of healthy meals, thereby improving their health and ability to study (1). It is a multisectoral intervention that addresses child education, health, and nutrition while strengthening food systems and economies (1). By ensuring access to balanced meals, school feeding programmes address food security and nutrition, support education, and improve the overall health of school children (2, 3). Insufficient protein and calorie intake in children has been linked to reduced development and is predictive of a variety of psychiatric problems later in life (4). Inadequate nutrition can impair a child's capacity to learn and complete difficult tasks and cause health problems that result in school absences (5).

The Home-Grown School Feeding (HGSF) programme is a form of school feeding initiative implemented in West and Central Africa. It is termed 'Home-Grown' because the food provided to the children is sourced locally from the communities where the programme operates. By procuring food from small-holder farmers, the programme supports child nutrition and contributes to local economic development (6). The Home-Grown School Feeding Programme (HGSFP) plays a crucial role in child development by enhancing nutrition, health, and educational outcomes and benefiting the local value food chain and its stakeholders (6).

Nigerian children are currently facing both educational and nutritional crises. In 2024, UNICEF reported that the country's education system is in

a critical state, with 10.2 million primary school-aged children and 8.1 million junior secondary school-aged children out of school. Additionally, 74% of children aged 7–14 lack basic reading and math skills (7). In addition to this educational crisis, one in three children in Nigeria experiences severe food poverty due to conflict, climate crises, and inequality, increasing their risk of life-threatening malnutrition by up to 50% (8). In Ogun State, Nigeria, previous studies showed that malnutrition, which includes stunting, wasting, and being underweight, is a common problem among schoolchildren (9, 10). Reports by Ajuzie and colleagues (11) revealed that less than 47% of respondents had an appropriate nutritional status, while 45.80% were underweight. Women were more underweight than men, and men were more overweight and obese than women. Micronutrient deficits in these schoolchildren were also identified, including deficiencies in vitamin A, carotene, vitamin B1, vitamin B2, folate, vitamin C, potassium, calcium, iron, and zinc (9). Furthermore, studies demonstrated a relationship between socioeconomic status and nutritional status in school-going children, with higher rates of being underweight in children of lower socioeconomic status than others, and higher rates of being overweight in children of higher socioeconomic status (10). The Home-Grown School Feeding Programme can serve as a solution to these issues. A study in Nigeria found that introducing HGSFP significantly increased pupil enrolment in public primary schools. By improving children's intake of essential nutrients such as energy, protein, iron, calcium, sodium, vitamin A, and zinc, the programme strengthens their physical and mental well-being (12).

Home-Grown School Feeding (HGSF) programmes in West and Central Africa have received much attention recently because of their link to agricultural growth. As a result, these programmes are commonly seen as a strategy for combating food insecurity, while furthering African rural development goals (13). Nigeria launched its National Home-Grown School Feeding Programme in 2016 to alleviate hunger and malnutrition among schoolchildren, while promoting Universal Basic Education (14). Ogun State of Nigeria, one of the pilot states, initiated the program in 2017, integrating numerous ministries in a joint effort. It takes a multi-sectoral approach, bringing together the Ministries of Agriculture, Education, Finance, Health, and Information in a State Steering Committee led by the Ministry of Special Duties and Inter-Governmental Affairs in Ogun State, Nigeria (15). By 2021, the program had expanded to 1510 schools, serving roughly 270,000 public primary school pupils (13). In addition to the nutritional benefits, the Home-Grown School Feeding Programme (HGSFP) boosts local economies by providing a market and a source of revenue for smallholder farmers (12).

The Ogun State Home-Grown School Feeding Programme created Community Accountability Partners (CAPs) as a monitoring tool to ensure that the program meets its intended objective of bettering the nutritional status, health, and educational outcomes of public primary school-aged children in 20 local governments in Ogun state, Nigeria (13). The Community Accountability Partners support the programme's success and include a community leader, a School Management Committee Member, a Parent of a Current Beneficiary of the Program, a Cooks' Representative, and a Health Teacher (16). Although the program has been established in Ikenne LGA, Ogun State, Nigeria since 2017 and has the potential to impact the pupils' health positively, there is limited understanding of how the pupils perceive the program. By directly engaging with the pupils' experiences, and assessing their satisfaction with the programme, the present study sought to provide a comprehensive appraisal of the programme from the standpoint of its primary beneficiaries. Additionally, by focusing on pupils' perceptions and satisfaction, this study aimed to provide valuable insights that could enhance the effectiveness and sustainability of HGSFP, ensuring that it meets the nutritional and educational needs of the target children.

2. Methods

2.1. Design

This cross-sectional mixed-method study was conducted in Ikenne Local Government Area, Ogun State, Nigeria, covering five towns: Ilishan, Iperu, Irolu, Ikenne, and Ogere from January 2024 to July 2024.

2.2. Selection and Description of Participants

The study population consisted of public primary school pupils from Primary 4 to Primary

6 who were beneficiaries of HGSFP. Eligible pupils were those who had benefited from the program since their school enrollment. Pupils who did not meet these criteria were excluded from the study. A multistage sampling procedure was applied to select respondents for the study's quantitative arm. Schools that had participated in HGSFP were identified. The schools were then divided based on their locations, with each location considered a stratum. Thereafter, one school was selected using a simple random sampling ballot method. Exceptions were made for locations with more than five schools; in such cases, two schools were chosen instead, yielding a total of six schools. Proportional allocation was used to determine the maximum number of pupils per school using the formula: [$n_{s=}$School population /Total population x sample size]. Pupils in grades four to six who had benefited from HGSFP since their enrollment were then purposively selected. This cohort of students was uniquely positioned to provide feedback on the programme because they were the most recent beneficiaries. Systematic random sampling with an interval (k) of two, was used to select respondents from each class. This process was repeated until the desired sample size for the class was achieved. For the focus group discussions, 6 pupils in grades 4 to 6 who met the inclusion criteria participated. The process began by grouping the pupils according to their grades. A pop quiz was then used to select one male student and one female one per class who participated in focus group discussion (FGD).

2.3. Sample Size Determination

The sample size was calculated to estimate the mean satisfaction score with a 95% confidence level (Z=1.96) and a margin of error of±0.96 points, assuming a standard deviation of 7.22 derived from pilot data. This yielded a minimum requirement of 218 pupils. After adjusting for a non-response rate of 10%, the final sample was 240 pupils. The sample size for each class was calculated using the formula [$n_{c=}$class population/school population x n_s].

2.4. Data Collection and Measurement

The study used two primary data collection instruments: a structured close-ended questionnaire for the quantitative survey and a focus group discussion (FGD) guide for the qualitative part. Data collection took place between June 2024 and July 2024. The structured questionnaire designed to capture the pupils' demographic characteristics and satisfaction levels with the HGSFP, was adapted from similar studies (17, 18) and comprised 14 close-ended questions to assess pupils' satisfaction, using a 5-point Emoji (smiley face) rating scale ranging from very satisfied (5) to very unsatisfied (1) and 5 socio-demographic variables. To determine face validity, a panel of seven subject matter experts assessed the questionnaire and commented on each item's relevance and intelligibility. They generally agreed that the items were suitable for measuring pupils' satisfaction with the Home-Grown School Feeding Programme (HGSFP) and that the emoji-based response format was understandable and engaging for children. Minor revisions were made based on their feedback, confirming strong face validity. Furthermore, content validity was assessed by the panel of 7 experts. Each expert rated 14 questionnaire items for relevance and essentiality. The Item-Level Content Validity Index (I-CVI) for each item was 1.00, and the Scale-Level Content Validity Index (S-CVI/Ave) was 1.00, indicating excellent content validity. The Content Validity Ratio (CVR) for each item was also 1.00, meeting Lawshe's critical value of 0.99 for 7 experts.

To assess the reliability, a pilot test was conducted among 10% (19) pupils, which yielded a Cronbach alpha coefficient of 0.78, indicating acceptable internal consistency. This visual approach, supported by previous research (20, 21), reduced adult influence and allowed children to express their views independently and accurately. The emojis used for the research were selected from the emoji list of 46 emojis appropriate to describe food experiences in pre-adolescents in study by (22). Emojis are increasingly used in research, particularly food-based studies, and have been found useful across cultural settings (19, 22). Although direct studies on emoji-based questionnaires for children in Nigeria are lacking based on literature search, similar methods have been used in Tanzania, where preschoolers responded to survey questions using picture cards (24). The questionnaire was self-administered by pupils in their classroom. The FGD guide facilitated open-ended discussions with pupils during the break periods in an empty classroom, to explore their experiences and perceptions of HGSFP. To further maintain confidentiality, numbers were

used to call participants for their input during the discussion. Each group session, lasting between 30 to 45 minutes, varying across groups as some groups were more vocal than others, encouraged participants to discuss their overall satisfaction with the programme. Discussions were moderated by a facilitator and documented by a recorder. The anonymity of participants was ensured by assigning each participant a number from 1 to 6 when reporting rather than using names. Credibility was achieved through pilot testing, researcher triangulation by involving another researcher in data collection and analysis, and member checking was achieved by reviewing the transcripts with the participants of FGD at the end of the discussions to confirm the pupils' thoughts. Furthermore, confirmability was assured through data analysis conducted using a codebook developed inductively from the data, and a second reviewer examined a sample of the transcripts to verify codes and interpretations. Through a detailed methodology, a description of the process was documented, including sampling process, data collection, and FGD procedures, which can assist other researchers in similar settings. The FGD guide comprised questions related to general knowledge about the Home-Grown School feeding programme, reasons for why the programme exists, perceptions of the quality of meals in terms of quantity, and taste; perceptions about the effect on health, classroom concentration, motivation to attend school, and any dislikes about the programme, including plausible additions to the programme. Further description of the themes and characteristics is provided in Table 1. The level of satisfaction was measured on a maximum scale of 70, where 0 – 23 was considered low-level satisfaction; 23.1 – 46 as moderate-level satisfaction, and 46.1 – 70 as high-level satisfaction.

2.5. Procedure

For the quantitative survey, a multistage sampling approach was used: schools participating in HGSFP were stratified by location, randomly selected, and pupils from grades 4–6 were proportionally allocated and chosen through systematic random sampling (interval of two). Questionnaires were self-administered in classrooms under researcher supervision.

Table 1: Code guide for thematic analysis

Themes	Code	Sub-code	Definitions
Perceptions of the Home-Grown School Feeding Program in Ikenne LGA	General Perception	Awareness and understanding	Pupils' knowledge about the purpose and creation of the School Feeding Program
		Memorable Aspects	Specific aspects of the program that stood out to the pupils, including the food served, utensils used, and the servers' appearance
		Reasons for Halting the Program	Various reasons cited for the suspension or termination of the school feeding program
	Perceived Benefit of the Program	Emotional Well-being	Reflections on the positive effects of the school feeding program on students' emotional health and overall happiness
		Health and Physical Well-being	Benefits of the school feeding program on students' physical health and general well-being
		Improved Concentration and Academic Performance	Positive impact of the school feeding program on students' ability to concentrate and perform academically
		Increased School Attendance and Motivation	Effect of the programme on students' school attendance and their motivation to attend and engage in school activities as perceived by them
Satisfied with the Home-Grown School Feeding Program	Drawbacks	Dislikes about the Program	Negative feedback, complaints, or aspects of the school Feeding program that the pupils found unsatisfactory
	Likes	Like about the program	Positive feedback and aspects of the school feeding program that were appreciated or valued by the pupils
	Suggestion	Additional Services	Suggestions provided by the students to improve their experience
		Improvement	Feedback aimed at improving the existing school feeding program
	Satisfaction	Overall Satisfaction	General satisfaction with the school feeding program, including positive, neutral, and negative feelings
		Quantity	Satisfaction with the portion sizes provided in the program
		Taste	Pupils' satisfaction with the taste and texture of the meals provided, including specific preferences for certain foods
		Variety	Pupils' responses to the variety of meals offered in the program, including preferences for different foods

LGA: Local Government Area

For the qualitative survey, six pupils (one male and one female per grade) were purposively selected using a pop quiz and engaged in focus group discussions held in empty classrooms during break periods. Sessions lasted 30–45 minutes, were moderated by a facilitator, and documented by a recorder. To maintain confidentiality, pupils were identified by numbers rather than names. Credibility was reinforced through member checking of transcripts and researcher triangulation.

2.6. Data Analysis

Quantitative data from the questionnaire were analyzed using IBMSPSS (The Statistical Package for Social Sciences) Version 27. Descriptive statistics, such as mean, median, mode, frequency, percentages, and standard deviation, and inferential statistics (chi-square test) were employed. Hypotheses were tested at a significance level of $P<0.05$. Qualitative data from the focus group discussions were analyzed using NVivo qualitative software version 14, employing Braun and Clarke's Reflexive Thematic Analysis (25). The coding guide is provided in Table 1.

3. Results

Pupils who had participated in the school feeding programme for at least one month upon enrollment in the school, and who had regular school attendance records and were at the time of the study in primary classes 4 to 6 and aged between 7-12 years were included. While pupils who had not participated in the programme for up to a month and for whom consent had not been given or obtained at the time of data collection were excluded.

A total of 230 pupils completed and returned the questionnaire out of 240, representing a response rate of 95.83%. Of the respondents, 52.2% (120) were female, while 47.8% (110) were male. The most represented age group was 11-13 years (64.8%; 149), while the least was 14-16 years (9.6%; 22). Most of the participants were in Primary 4 (42.2%; 97), with Primary 6 being the least represented class (27.0%; 62). Regarding school distribution, School C had the highest number of participants (52; 22.6%), while School F had the fewest (22; 9.6%) (Table 1).

3.1. Pupils' Perception of the Home-Grown School Feeding Programme (HGSFP)

3.1.1. General Perception of the Programme

This theme was used to explore the pupils' awareness and understanding of HGSFP, memorable aspects, and thoughts on why the programme was halted (Table 2).

Table 2: Socio-demographic characteristics of participants

Variable	Frequency N (%)
Age	
8 – 10	59 (25.7)
11- 13	149 (64.8)
14 – 16	22 (9.6)
Gender	
Male	110 (47.8)
Female	120 (52.2)
Class	
Primary 4	97 (42.2)
Primary 5	71 (30.9)
Primary 6	62 (27.0)
School	
School A	35 (15.2)
School B	39 (17.0)
School C	52 (22.6)
School D	39 (17.0)
School E	43 (18.7)
School F	22 (9.6)
Location	
Iperu	78 (33.9)
Ikenne	39 (17.0)
Ogere	52 (22.6)
Ilishan	39 (17.0)
Irolu	22 (9.6)

3.1.2. Awareness and Understanding

Pupils described the programme as a government-led social aid initiative designed to address nutritional needs, enhance academic performance, and support families with limited incomes. One participant noted, *"The programme was created because some children do not eat before coming to school"* (Participant, FG3). Others added, *"They created it because our homes cannot feed us"* (Participant, FG6) and "*It is available* b*ecause some pupils' mothers have passed away, so they have nobody to feed them*" (Participant, FG2).

3.1.3. Memorable Moments

Pupils recalled the programme with positive emotional memories, associating it with joy and excitement. A participant reflected, *"It was a good time for me when I think about it"* (Participant, FG4). Some missed its existence, as expressed by another, *"I miss it; they should continue the programme"* (Participant, FG5).

3.1.4. Thoughts on Why the Programme was Halted

When asked why they thought the programme ended, they attributed the programme's suspension to inadequate government funding, delays in staff salaries, rising food prices, corruption, economic hardship, and pupils' reactions after consumption. For instance, one participant stated, *"Governor didn't pay them"* (Participant, FG3), while another suggested, *"Maybe because there's not enough money to fund the programme"* (Participant, FG2). Another felt food had become too expensive. As expressed by a participant in FG1, *"Food is expensive in the market."* Another stated, *"The economy is bad*." One of the participants believed the after-food reaction might have been responsible and said, "*… Because we would sleep after eating, the programme was stopped*" (Participant, FG5).

3.1.5. Perceived Benefits of the School Feeding Programme

This theme describes the reflections on the perceived effect of the programme on the pupil's emotional, physical, and academic well-being.

3.2. Emotional Well-being

Pupils reported feeling happier and more content, attributing this to the programme's positive impact on their ability to concentrate in school. One participant remarked, *"When I ate the food, I was no longer sad"* (Participant, FG4), while another stated, *"I am happy, it helped me concentrate"* (Participant, FG5).

3.3. Physical Well-being

Many participants highlighted the programme's role in improving their energy levels and overall health, although some noted no significant changes in their well-being. For instance, one pupil shared, *"When I was sick and came to school, the food gave me energy"* (Participant, FG1), and another added, *"I had more energy during the programme than I do now"* (Participant, FG5). However, one noted that, "*I feel the same, so it didn't improve my health"* (Participant, FG3).

3.4. Academic Well-being

Pupils also consistently reported that the programme enhanced their ability to focus, complete classwork, and excel academically. One participant reflected, *"Yes, it helped me concentrate better because I was not hungry"* (Participant, FG1). Another added, *"I was able to listen to my teacher and do my classwork."* (Participant, FG5).

3.5. School Attendance

Additionally, meal provisions, especially popular items like bread and eggs, motivated pupils to attend school regularly. A participant noted, *"I liked coming to school on the days we were given bread"* (Participant, FG5). Some reported that the programme motivated school attendance. As expressed, *"Sometimes, when I didn't want to come to school, I would remember the food and decide to go."* (Participant, FG3). Another felt there was a difference in attendance since the programme stopped and stated that, "*When we were getting food, many pupils attended school, but now attendance has reduced."* (Participant, FG1).

3.6. Satisfaction with HGSFP

This theme sought to capture thoughts on what the pupils liked and disliked, and suggestions to improve the programme.

3.7. What Pupils Liked/Positive Notions

Pupils appreciated several aspects of HDSFP.

They commended the taste of the food, the hygiene and kindness of the cooks, and the equal treatment in food distribution. One participant shared, *"I liked the taste of the food"* (Participant, FG1), while another noted, *"They brought the food on time during break"* (Participant, FG5). A participant, FG3 commented and said, "Everyone got the same type of plate"

3.8. What Pupils Disliked/Drawbacks

However, pupils also voiced complaints about various aspects. These included insufficient food portions, absence of meat and fruits in meals, poor-quality plates, lack of spoons, and unclean or unavailable drinking water. Some pupils also reported instances of unfriendly staff behavior. For example, one participant said, *"Plates were not clean sometimes"* (Participant, FG2), while another noted, *"We were not given spoons; we brought our own spoons from home"* (Participant, FG3). Regarding staff behavior, one stated, *"The staff were not friendly"* (Participant, FG1). Regarding the absence of meat, one noted, *"They sometimes gave us food without meat."* (Participant, FG3). Another noted, *"The water was from a bucket instead of purified water"* (Participant, FG5).

3.9. Suggestions for Improvement

To address these issues, pupils made several requests and recommendations. They suggested increasing food portions, providing fruits and clean drinking water, and ensuring the availability of eating utensils such as spoons. They also proposed better seating arrangements and improvements in staff behavior and salaries. A participant commented, *"We want portable water instead of having to stand up to fetch water to drink"* (Participant, FG6), while another said, *"Provide spoons to eat our food"* (Participant, FG4). Pupils also recommended expanding the programme to include older pupils, building cafeterias for a better dining experience, and ensuring that food is served warm. For instance, one participant expressed, *"We would like different eating areas, like a cafeteria"* (Participant, FG5), and another suggested, *"We want older classes, Primary 4 to 6, to receive it too"* (Participant, FG2).

3.10. Thoughts on Perceived Satisfaction with HGSFP

This theme explored the overall feelings related to satisfaction with HGSFP.

3.11. Overall Satisfaction

This sub-theme explored the pupils' overall feelings of satisfaction with the programme across groups. Overall, participants in FG1 and FG4 expressed a range of satisfaction levels, including being unsatisfied, neutral, satisfied, and very satisfied. In contrast, participants in FG2 and FG5 expressed being very satisfied with the programme overall. Meanwhile, participants in FG6 and FG3 reported a mix of being very satisfied, satisfied, and neutral in their satisfaction with the programme.

3.12. Quantity of Food

This sub-theme explored the pupils' satisfaction with the portion sizes. While some felt the food was sufficient, others felt otherwise. The pupils reported that the quantity was sufficient to keep them full until they left school. One said, "*I was satisfied and still felt full in the afternoon*" (Participant, FG2). Another said, "*I was satisfied with the quantity of food, it wasn't too much or too little. It kept me full throughout school*." (Participant, FG6). While some others expressed, "*The quantity was small for me sometimes,* (Participant, FG1) and "…the rice and bread portions were small too" (Participant, FG4).

3.13. Variety of Food

This sub-theme explored satisfaction with the variety of meals. Most participants expressed satisfaction with the variety, and believed it met their nutritional needs. One reported that, "*I am satisfied with it because it provides a balanced diet, not just rice every day*" (Participant FG2). Another expressed, "*I was satisfied with the variety; different foods provided us with proteins*" (Participant, FG3). While another said, "*It was interesting when they changed the foods. I was satisfied with it*" (Participant, FG6).

3.14. Taste/Texture of Food

This sub-theme explored satisfaction with the taste and texture of the foods offered. Some liked the taste, while others disliked the taste of specific foods. As one expressed, "*I liked the taste of the bread and beans*" (Participant, FG4). A second said, "*I liked rice, vegetables, and meat. When I see the food, I dance and sing*" (Participant, FG1).

On the contrary, one expressed dissatisfaction with the texture and expressed this saying, "*Not satisfied, the soup was watery*" (Participant, FG3).

3.15. Pupils' Quantitative Measure of Satisfaction with HGSFP

Table 3 indicates the highest satisfaction which is reported regarding the taste of the food (87.5%) and the time allocated to eat (77.8%). The lowest satisfaction levels were related to the availability of drinking water (21.3%) and seating arrangements (10.0%). Table 4 provides a summary of pupils' satisfaction with HGSFP. Most pupils expressed high satisfaction levels with HGSFP, with a mean satisfaction score of 62.2±7.22. (Table 4).

3.16. Association between Socio-Demographic Characteristics and Pupil Satisfaction with the HGSFP

As shown in Table 5, none of the sociodemographic characteristics were found to be associated with the level of satisfaction (P>0.05).

Table 3: Descriptive statistics of responses of pupils on their satisfaction with the Home-Grown School Feeding Programme

Item	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Taste of Food	197 (87.5%)	25 (10.9%)	3 (1.3%)	3 (1.3%)	2 (0.9%)
Cleanliness of Food	156 (67.8%)	61(26 .5%)	8 (3.5%)	2 (0.0%)	3 (1.3%)
Quantity of Food	136 (59.1%)	35 (15.2%)	26 (11.3%)	16 (7.0%)	17 (7.4%)
Variety of Food	161 (70.0%)	38 (16.5%)	12 (5.2%)	6 (2.6%)	13 (5.7%)
Appearance of Food	172 (74.8%)	40 (17.4%)	7 (3.0%)	3 (1.3%)	8 (3.5%)
Available Drinking Water	118 (51.3%)	29 (12.6%)	21 (9.1%)	13 (5.7%)	49 (21.3%)
Time of the Day	172 (74.8%)	39 (17.0%)	9 (3.9%)	4 (1.7%)	6 (2.6%)
Eating Time	179 (77.8%)	28 (12.2%)	15 (6.5%)	4 (1.7%)	4 (1.7%)
Cleanliness of Utensils for Eating the Food	172 (74.8%)	38 (16.5%)	11 (4.8%)	6 (2.6%)	3 (1.3%)
Comfort of Eating Space	165 (71.7%)	32 (13.9%)	9 (3.9%)	7 (3.0%)	17 (7.4%)
Sitting Arrangement for Eating	155 (67.4%)	33 (14.3%)	14 (6.1%)	5 (2.2%)	23 (10.0%)
Behaviour of Staff Serving the Food	153 (66.5%)	47 (20.4%)	9 (3.9%)	7 (3.0%)	14 (6.1%)
Cleanliness of Staff Serving the Food	162 (70.4%)	44 (19.1%)	9 (3.9%)	7 (3.0%)	14 (6.1%)
Overall Satisfaction	174 (75.7%)	32 (13.9%)	8 (3.5%)	11 (4.8%)	5 (2.2%)

Table 4: Pupils' level of satisfaction with the Home-Grown School Feeding Programme

Categories	Points	Frequency (n)	Percentage (%)	Mean	SD
Poor	0 - 23	0	0	62.17	7.22
Moderate	23.1 - 46	9	3.9		
High	46.1 - 70	221	96.1		

SD: Standard Deviation

Table 5: Association between socio-demographic characteristics and pupil satisfaction with the Home-Grown School Feeding Programme

Variable	Category	Level of Satisfaction		χ^2	P value
		Moderate Satisfaction (23.34-46.66)	High Satisfaction (46.67-70.00)		
Age	8-10	3 (5.1%)	56 (94.9%)	1.116	0.572
	11-13	6 (4.0%)	143 (96.0%)		
	14-16	0 (0.0%)	22 (100.0%)		
Gender	Male	6 (5.5%)	104 (94.5%)	1.332	0.248
	Female	3 (2.5%)	117 (97.5%)		
Class	Primary 4	4 (4.1%)	93 (95.9%)	4.385	0.112
	Primary 5	5 (7.0%)	66 (93.0%)		
	Primary 6	0 (0.0%)	62 (100.0%)		
Location	Iperu	2 (2.6%)	76 (97.4%)	7.651	0.105
	Ikenne	0 (0.0%)	39 (100.0%)		
	Ogere	2 (3.8%)	50 (96.2%)		
	Ilishan	2 (5.1%)	37 (94.9%)		
	Irolu	3 (13.6%)	19 (86.4%)		

4. Discussion

Pupils perceived the programme as a safety net for their families, alleviating financial burdens and reducing poverty-related stressors, consistent with findings from other studies, such as (26, 27), which reported that school feeding programmes alleviate financial burdens by reducing the costs of meals. The finding highlighted the broader socio-economic impact of such programmes, suggesting that they play a crucial role in supporting low-income families and reducing poverty-related stressors. Beyond nutrition, the programme fostered emotional well-being, creating a nurturing school environment. Pupils reported that the programme improved their emotional well-being, physical health, classroom concentration, and school attendance, thus meeting its objectives. Sitali (28) supported this finding, as school feeding programmes (SFPs) have been linked to increased school enrolment and attendance rates, especially in resource-constrained settings. These benefits align with similar perceptions of school feeding programmes globally, such as the Universal School Meal programme in the United States (26). A study by Barnabas and colleagues (29) in the northern region of Nigeria, also revealed pupils' positive view of the school feeding programme. Most students agreed that the programme motivated them to attend school, concentrate in class better, complete school, and avoid absenteeism. A study in another southwest region also reported positive perceptions of the programme. Most students agreed that the programme improved their health, increased enrolment and understanding of their lessons (30). As already established (31), school feeding programmes promote physical, mental, and emotional development in school-age children and adolescents, particularly in low- and middle-income countries. However, Barnabas and colleagues (29) showed concern that school feeding programmes may foster a sense of dependency among students and their families, detracting from the primary educational focus. Additionally, Appiah (32) deduced that by addressing hunger and nutritional needs—fundamental elements of Maslow's hierarchy of needs—the programme serves as a strong motivator for pupils to attend school. Another study also reported pupils' eagerness to return to school for meals, indicating the programme's significant impact on their educational experience (33).

Furthermore, the pupils attributed the suspension of HGSFP to government failures, including financial mismanagement, payment delays for staff, and economic challenges like rising food prices highlighting the need for improved governance and financial stability to ensure sustainability. Although not much has been reported regarding other pupils' perceptions of school feeding programmes suspension, School feeding programmes elsewhere (28) have faced challenges of this sort. Challenges threatening the sustainability of the programme in Zambia, southern Africa have included climactic changes affecting weather conditions, irregularities in the food supply, food price hikes, inadequate infrastructure, and technological difficulties. A review of the HGSFP in sub-Saharan African countries identified corruption flaws in the program, including non-remittance of funds to vendors and underfunding of programs (34).

The Home-Grown School Feeding Programme (HGSFP) was also appreciated for the taste of its food, the hygiene and kindness of the cooks, timely service, and equal treatment of pupils unlike in a study by Tamiru and co-workers (27) where pupils criticized the quality and variety of food provided in school feeding programs describing them as unappetizing, which led to dissatisfaction and reduced participation in the programme. Also, in this study, some significant drawbacks were identified, such as inadequate utensils, insufficient food portions, poor food quality, lack of meat and fruit, and unclean drinking water. This was consistent with a study by Orta-Aleman and co-workers (26), which reported that many pupils expressed dissatisfaction with the lunch programme, as it did not provide food that matched the quality they expected. Dissatisfaction in certain areas of the programme can negatively affect pupils' perception of it and highlight these areas as drawbacks. To ensure the long-term success of the School Feeding Programme, it is essential to address the areas of dissatisfaction, particularly regarding food quality, portion sizes, and staff interactions, while expanding the programme to meet the needs of older pupils and incorporating additional services. By improving these aspects, the programme can enhance pupils' satisfaction, support their academic performance, and improve their overall well-being.

The lack of significant associations between age, gender, class, and location with satisfaction challenges assumptions that these demographic factors play a role in how students perceive the program. This was consistent with findings of Igboji and colleagues (35) and suggested that focusing interventions based on these variables may not yield substantial improvements in satisfaction. In contrast, the study by Kwon and colleagues (17) in South Korea, reported a significant difference between the level of satisfaction and class as elementary school pupils had a satisfaction rate, comparatively higher than that of middle and high school pupils. Younger children are less discriminating as their food needs vary from older children, who are more exposed and may be more opinionated. However, as others have opined, this study also showed that resources should be directed toward broader, school-wide improvements that benefit all pupils, regardless of age, gender, and class.

The findings demonstrated a high level of pupil satisfaction with HGSFP, emphasizing its positive impact on nutrition, school attendance, and learning outcomes. Other similar settings also reported high perception of HGSFP among pupils (36). These reports seem to call for the sustenance of such a programme. Thus, to achieve this, consistent government funding, timely staff payments, and an extension to older pupils should be prioritized. Additionally, meal quality and nutritional diversity need improvement by incorporating more protein-rich foods, fruits, and balanced portions. Addressing hygiene concerns by providing clean eating utensils, potable water, and proper dining areas is essential for improving the overall experience.

To ensure accountability and monitoring, stronger oversight mechanisms should be established, including pupil representation in programme evaluations. Since school meals encourage attendance and improve focus, HGSFP should be leveraged as a tool to boost literacy and numeracy skills. Policymakers should increase budget allocations, engage local farmers, and strengthen evaluation frameworks to ensure efficiency. Schools must integrate nutrition education, while health professionals should assess meal adequacy and explore food fortification. Community involvement through parental feedback and local partnerships will further enhance the sustainability of the programme.

4.1. Limitations

There were some limitations in this study. The high satisfaction levels reported based on past events may have been influenced by recall bias. Cross-sectional design captures satisfaction at a single point in time, failing to account for changes over time or the influence of seasonal and contextual factors. This study, which was also carried out in one LGA, South-West Nigeria and within selected schools, limits generalizability to other LGAs in the State and country.

5. Conclusions

The Home-Grown School Feeding Programme (HGSFP) was well received, with high satisfaction regarding taste, cleanliness, variety, and appearance of foods. It was perceived to enhance pupils' concentration and school attendance, though challenges such as inadequate food portions, lack of drinking water, and poor seating were noted. Satisfaction was consistent across sociodemographic groups, suggesting broad-based rather than targeted interventions would be most effective. Reinstating the programme while addressing these challenges is essential to sustain its benefits. Future research should include comparative, seasonal, and longitudinal studies across multiple sites to assess and strengthen programme effectiveness.

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Authors' Contribution

Saratu Ajike: Substantial contributions to the conception and design of the work, the acquisition and analysis of data, and its interpretation; drafting the manuscript and critically reviewing the work for important intellectual content. Idara Inyang: Substantial contributions to the conception and design of the work, the acquisition and analysis of data, and its interpretation; drafting the manuscript and critically reviewing the work for important intellectual content. Josephine Rabo:

Substantial contributions to the analysis of data and contributed to the design of the work; drafting the manuscript and critically reviewing the work for important intellectual content. Saheed Lawal: Substantial contributions to the analysis of data and contributed to the design of the work; drafting the manuscript and critically reviewing the work for important intellectual content. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such as the questions related to the accuracy or integrity of any part of the work.

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Ethical Approval

The Ethics Review Board of Babcock University, Ilisan-Remo, Ogun State, Nigeria approved the present study with the code of BUHREC 622/24. Permission to conduct the study was also obtained from the Zonal Ministry of Education Board and respective school administrators. Also, written informed consent was obtained from the participants.

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