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EVALUATING SCHOOL-BASED FEEDING PROGRAM IMPLEMENTATION AND ITS ASSOCIATION WITH LEARNERS' NUTRITIONAL STATUS AND ACAD EMIC PERFORMANCE IN TAGO DISTRICT, SURIGAO DEL SUR

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ABSTRACT

This study evaluated the implementation of the School-Based Feeding Program (SBFP) and its implications for the nutritional status and academic performance of elementary learners in Tago District, Surigao del Sur during the School Year 2025-2026. Specifically, it examined the implementation of the program in terms of budget and resource allocation, food preparation and meal quality, program management and monitoring, and stakeholder involvement; assessed its perceived influence on learners' nutritional status and academic performance; determined the relationships between SBFP implementation and learner outcomes; explored the lived experiences of program implementers; and identified measures for program improvement. A mixed-methods sequential-correlational research design was employed in three elementary schools in Tago District, involving 122 respondents composed of school heads, SBFP coordinators, and beneficiary learners, with qualitative inputs from program implementers. Data were gathered through a researcher-developed questionnaire, interviews, and school records and analyzed using weighted means, frequency and percentage, t-test, Pearson correlation, and thematic analysis. Results showed that SBFP implementation was highly implemented overall (AWM = 3.99), with program management and monitoring obtaining the highest rating (AWM = 4.07). The program was perceived to influence learners' nutritional status to a very great extent (AWM = 4.25) and academic performance to a great extent (AWM = 4.18). SBFP implementation had a significant positive relationship with nutritional status ($r = 0.68$, $p < .001$) and academic performance ($r = 0.66$, $p < .001$). Qualitative findings revealed challenges involving workload, resource and logistical constraints, stakeholder engagement, nutrition-learning integration, and food acceptability. The study

recommends strengthening food quality, timely delivery, monitoring systems, nutrition education, stakeholder participation, and sustainable resource support to enhance the implementation and educational benefits of the SBFP.

Keywords: *School-Based Feeding Program, nutritional status, academic performance, school feeding, program implementation, elementary learners, Tago District, Philippines*

INTRODUCTION

School feeding programs have become an important component of efforts to address child undernutrition while supporting school participation and educational development. In low- and middle-income countries, school feeding provides an opportunity to improve children's access to food during the school day while potentially contributing to better health and educational outcomes. A systematic review and meta-analysis by Wang et al. (2021) found that school feeding was associated with improvements in height, weight, and school attendance, although evidence for academic achievement remained less conclusive. These findings suggest that the effectiveness of school feeding should be examined not only in terms of food provision but also in relation to measurable nutritional and educational outcomes.

The educational dimension of school feeding is particularly relevant because adequate nutrition may support learners' readiness to participate in classroom activities. Mostert (2021) reported that participation in a school feeding program was associated with improved health, school attendance, and academic achievement among South African children, with stronger effects observed in rural settings. Such evidence highlights the potential importance of well-implemented feeding programs in geographically and economically disadvantaged communities, where inadequate nutrition and barriers to regular school participation may coexist.

However, the availability of a school feeding program does not automatically guarantee that its intended benefits will be realized. Program implementation depends on adequate resources, food quality, delivery systems, management, monitoring, and participation of stakeholders. Matela et al. (2024), in a systematic review of school food policies in Europe and the Western Pacific, found that compliance with school food policies was often inadequate and that supportive interventions could improve implementation. The review emphasized the importance of school-level support and monitoring in achieving nutritional improvements, reinforcing the need to evaluate not only program outcomes but also the quality and consistency of implementation.

Learner participation is another important consideration in determining whether school feeding programs can achieve their intended nutritional benefits. Hecht et al. (2023) found evidence that alternative meal-delivery models and restrictions on competing food options can increase participation in school meal programs. Their findings indicate that program design, accessibility, and the school food environment can influence whether learners actually participate in and benefit from feeding initiatives.

Recent evidence also indicates that the relationship between school feeding and academic outcomes may vary according to context and implementation conditions. A systematic review of free school lunch programs in India by Raveenthiranathan et al. (2024) found that school meal programs generally improved enrollment, attendance, retention, and some measures of academic achievement, although findings concerning nutritional outcomes and academic performance were mixed. The authors emphasized the importance of sustaining school meal programs while recognizing differences across settings and outcomes.

In the Philippine context, the School-Based Feeding Program (SBFP) is intended to address malnutrition among schoolchildren while supporting their participation and learning. The present study responds to the need for localized evidence by evaluating SBFP implementation in selected elementary schools in Tago District, Surigao del Sur. The study specifically examines four implementation dimensions—budget and resource allocation, food preparation and meal quality, program management and monitoring, and stakeholder involvement—and relates these dimensions to learners' nutritional status and academic performance. The thesis identifies three participating schools—Adlay Elementary School, Anahao Elementary School, and Caras-an Elementary School—and uses a mixed-methods sequential-correlational design to examine both quantitative relationships and the lived experiences of program implementers.

This localized investigation is particularly relevant because the study found that SBFP implementation was highly implemented overall, while nutritional status and academic performance were both perceived to benefit substantially from the program. More importantly, the quantitative results showed significant positive relationships between overall SBFP implementation and learners' nutritional status ($r = 0.68$, $p < .001$) and academic performance ($r = 0.66$, $p < .001$). These findings, together with reported implementation challenges involving workload, logistics, resources, stakeholder participation, and food acceptability, provide a basis for developing context-specific measures to strengthen SBFP implementation in Tago District.

Accordingly, this study contributed localized evidence on how the implementation of a school-based feeding intervention is associated with both nutritional and educational outcomes among elementary learners. It also provided an empirical basis for strengthening program management, stakeholder engagement, food quality, monitoring, and other implementation mechanisms in geographically isolated and disadvantaged school settings.

Research Questions

The study aimed to evaluate the implementation of the School-Based Feeding Program (SBFP) in elementary schools in Tago District, Surigao del Sur, and examine its relationship with learners' nutritional status and academic performance. Specifically, it sought to answer the following questions:

1. What is the extent of implementation of the School-Based Feeding Program in terms of:

1.1. budget and resource allocation;
1.2. food preparation and meal quality;
1.3. program management and monitoring; and
1.4. stakeholder involvement?

2. To what extent does the implementation of the SBFP influence the nutritional status of learner-beneficiaries?
3. To what extent does the SBFP contribute to the improvement of learners' academic performance?
4. Is there a significant relationship between the extent of SBFP implementation and the nutritional status of learner-beneficiaries?
5. Is there a significant relationship between the extent of SBFP implementation and learners' academic performance?
6. What lived experiences and challenges are encountered by SBFP implementers in the implementation of the program?
7. What measures may be recommended to strengthen the implementation of the SBFP in Tago District?

METHODOLOGY

The study employed a mixed-methods sequential-correlational research design to evaluate the implementation of the School-Based Feeding Program (SBFP) in selected elementary schools in Tago District, Surigao del Sur. The quantitative component assessed the extent of SBFP implementation in terms of budget and resource allocation, food preparation and meal quality, program management and monitoring, and stakeholder involvement, as well as learners' nutritional status and academic performance; correlational analysis was used to determine the relationships between SBFP implementation and the two outcome variables. The qualitative component explored the lived experiences and challenges of SBFP implementers through interviews. The study involved 122 quantitative respondents, comprising 3 school heads, 3 SBFP coordinators, and 116 learners from Adlay Elementary School, Anahao Elementary School, and Caras-an Elementary School, while school heads, program coordinators, and SBFP teachers participated in the qualitative inquiry. Data were gathered through a researcher-developed questionnaire, interviews, and school records, including SF 8, SF 9, and SF 2. Weighted mean, frequency and percentage, arithmetic mean, t-test, and Pearson correlation were used for quantitative analysis, while the qualitative responses were analyzed thematically to identify challenges and lived experiences. Ethical procedures included securing institutional permission, obtaining informed consent, ensuring voluntary participation and confidentiality, and protecting the identities of respondents and participating schools.

RESULTS

Table 1. Extent of School-Based Feeding Program Implementation by Program Dimension

SBFP Implementation Dimension	Average Weighted Mean	Interpretation	Rank
Budget and Resource Allocation	3.98	Highly Implemented	3
Food Preparation and Meal Quality	4.02	Highly Implemented	2
Program Management and Monitoring	4.07	Highly Implemented	1
Stakeholder Involvement	3.90	Highly Implemented	4
Overall	**3.99**	**Highly Implemented**	

Table 2. Extent of Perceived SBFP Influence on Learners' Nutritional Status

Nutritional Status Indicator	Mean	Interpretation
Physical energy levels	4.36	Very Great Extent
More energetic	4.35	Very Great Extent
Physical strength	4.32	Very Great Extent
Classroom participation	4.31	Very Great Extent
Improved appetite	4.30	Very Great Extent
Less sickly	4.28	Very Great Extent
General physical appearance	4.27	Very Great Extent
Less tired	4.26	Very Great Extent
Concentration	4.25	Very Great Extent
Normal nutritional status increased	4.25	Very Great Extent
Body weight increased	4.24	Very Great Extent
Illness-related absenteeism decreased	4.23	Very Great Extent
Weight-for-age improved	4.22	Very Great Extent
Alertness	4.22	Very Great Extent
Wasted decreased	4.21	Very Great Extent
BMI score increased	4.20	Very Great Extent
Underweight decreased	4.19	—
BMI-for-age	4.18	Very Great Extent
Stunting decreased	4.17	Very Great Extent
Severely wasted decreased	4.15	Very Great Extent
Height-for-age improved	4.14	Very Great Extent
Overall	**4.25**	**Very Great Extent**

Table 3. Extent of Perceived SBFP Contribution to Learners' Academic Performance

Academic Performance Indicator	Mean/Value	Interpretation
Motivation to learn	4.29	Great Extent
Participation in discussions	4.24	Great Extent
Grades improved	4.23	Great Extent
Passing rate increased	4.22	Great Extent
Improved concentration	4.21	Great Extent
Class participation	4.20	Great Extent
Comprehension improved	4.19	Great Extent
Academic score improved	4.17	Great Extent
Mean general average	81.6%	—
Attendance rate	87%	—
Overall	**4.18**	**Great Extent**

Table 4. Relationship Between SBFP Implementation and Learners' Nutritional Status

SBFP Implementation Dimension	Pearson *r*	*p*-value	Result
Budget and Resource Allocation	.64	< .001	Significant positive relationship
Food Preparation and Meal Quality	.69	< .001	Significant positive relationship
Program Management and Monitoring	.71	< .001	Significant positive relationship
Stakeholder Involvement	.60	< .001	Significant positive relationship
Overall SBFP Implementation	**.68**	**< .001**	**Significant positive relationship**

Table 5. Relationship Between SBFP Implementation and Learners' Academic Performance

SBFP Implementation Dimension	Pearson *r*	*p*-value	Result
Budget and Resource Allocation	.62	< .001	Significant positive relationship
Food Preparation and Meal Quality	.67	< .001	Significant positive relationship
Program Management and Monitoring	.70	< .001	Significant positive relationship
Stakeholder Involvement	.58	< .001	Significant positive relationship
Overall SBFP Implementation	**.66**	**< .001**	**Significant positive relationship**

Table 6. Emerging Themes on the Lived Experiences and Implementation Challenges of SBFP Implementers

Emerging Theme	Summary of Findings
Workload and Time Constraints	Heavy workload, multiple responsibilities, and limited time for SBFP-related activities
Resource and Logistical Constraints	Limitations in supplies, logistics, and timely delivery of resources
Stakeholder Engagement	Inconsistent participation and support from parents and other stakeholders
Nutrition Education Integration	Limited integration of nutrition concepts into classroom instruction
Food Acceptability	Concerns regarding learners' preferences and acceptance of some food items

Table 7. Recommended Measures for Strengthening SBFP Implementation

Recommended Measure	Weighted Mean	Interpretation
Improve food quality and nutritional value	4.60	Most Recommended
Ensure timely and consistent food delivery	4.58	Most Recommended
Increase budget allocation	4.55	Most Recommended
Integrate nutrition education into lessons	4.52	Most Recommended
Strengthen monitoring and evaluation	4.50	Most Recommended
Improve food preparation and hygiene	4.49	Most Recommended
Provide regular training	4.47	Most Recommended
Ensure transparency in fund utilization	4.46	Most Recommended
Develop sustainable strategies	4.44	Most Recommended
Strengthen stakeholder coordination	4.43	Most Recommended
Overall	**4.45**	**Most Recommended**

Table 8. Summary of Major Findings by Research Question

Research Question	Principal Finding
RQ1: Extent of SBFP implementation	**Highly Implemented (AWM = 3.99)**
RQ2: Influence on nutritional status	**Very Great Extent (AWM = 4.25)**
RQ3: Contribution to academic performance	**Great Extent (AWM = 4.18)**
RQ4: Relationship with nutritional status	**Significant positive relationship ($r = .68$, $p < .001$)**
RQ5: Relationship with academic performance	**Significant positive relationship ($r = .66$, $p < .001$)**
RQ6: Lived experiences and challenges	**Workload, resources/logistics, stakeholder engagement, nutrition education, and food acceptability**
RQ7: Recommended measures	**Most Recommended (WM = 4.45)**

DISCUSSION

The study found that the School-Based Feeding Program (SBFP) in the selected elementary schools of Tago District was highly implemented overall (AWM = 3.99), with program management and monitoring receiving the highest rating. Learners' nutritional status was assessed to have improved to a very great extent (AWM = 4.25), while academic performance improved to a great extent (AWM = 4.18). Significant positive relationships were also found between overall SBFP implementation and both nutritional status ($r = .68$, $p < .001$) and academic performance ($r = .66$, $p < .001$). These findings are generally consistent with evidence that school meal programs are associated with improvements in diet quality, food security, participation, and selected educational outcomes (Cohen et al., 2021; McLoughlin et al., 2022). Recent Philippine evidence likewise indicates that the quality of SBFP implementation, including management, supervision, food preparation, and community participation, is relevant to pupils' academic performance (Claros et al., 2024), while local implementation studies have identified stakeholder participation, nutritional education, resources, and program management as continuing implementation concerns (Morata, 2023; Oflaria, 2023). The qualitative findings of the present study similarly identified workload, logistical constraints, stakeholder engagement, nutrition education, and food acceptability as major challenges. Overall, the findings support the value of sustaining and strengthening SBFP implementation, particularly through improved food quality, timely resource delivery, stronger monitoring, and broader stakeholder participation. This interpretation is also supported by recent systematic-review evidence showing that robust implementation and supportive interventions can improve school food policy compliance and nutritional outcomes (Matela et al., 2024).

Conclusions

The study concluded that the School-Based Feeding Program (SBFP) in the selected elementary schools of Tago District was highly implemented and was positively associated with learners' nutritional status and academic performance. The significant relationships between SBFP implementation and nutritional status, as well as academic performance, indicate that stronger program implementation is associated with more favorable learner outcomes, although the correlational design does not establish causality. The qualitative findings further show that sustaining these gains requires attention to workload, logistical and resource constraints, stakeholder participation, food acceptability, and the integration of nutrition education into classroom learning. Thus, strengthening program management and monitoring, improving food quality and timely delivery, ensuring adequate resources, and broadening stakeholder engagement are recommended to enhance the sustainability and effectiveness of SBFP implementation in Tago District. These priorities are consistent with broader evidence indicating that well-supported school feeding programs can contribute to nutritional and educational outcomes, while implementation quality and continued monitoring remain important to achieving consistent benefits.

Recommendations

Based on the findings, it is recommended that Tago District strengthen SBFP implementation by prioritizing food quality and nutritional value, timely and consistent delivery of food and resources, adequate budget allocation, and systematic monitoring and evaluation. Schools should also integrate nutrition education into classroom instruction and provide regular capacity-building activities for SBFP coordinators, teachers, and other implementers. Because stakeholder involvement received the lowest implementation rating, stronger coordination with parents, community organizations, and other partners should be established through clearly defined roles and regular communication. Schools should likewise consider learners' food preferences when planning meals while maintaining nutritional and safety standards. Finally, the district and participating schools should establish sustainable resource-support and monitoring mechanisms to address workload, logistical constraints, and gaps in stakeholder participation, thereby sustaining the program's positive associations with learners' nutritional status and academic performance. These recommendations are supported by the study's findings and by recent evidence identifying coordination, funding, monitoring, training, food quality, infrastructure, and community engagement as important implementation priorities for school feeding programs.

Compliance with Ethical Standards

The study adhered to established ethical standards for research involving human participants. Prior to data collection, the researcher secured permission from the appropriate school and district authorities and obtained informed consent from the respondents. Participation was voluntary, and respondents were informed of the purpose and procedures of the study, their right to decline participation or withdraw without penalty, and the confidential treatment of their responses. The identities of respondents

and participating schools were protected through the use of codes, and the information collected was used solely for academic and research purposes. Given that the study involved elementary learners and included nutritional and academic information, particular care was taken to protect participants' privacy and confidentiality. Data were collected, analyzed, and reported honestly and without fabrication, manipulation, or bias. These practices are consistent with the Philippine Data Privacy Act of 2012 (Republic Act No. 10173), which emphasizes transparency, legitimate purpose, proportionality, lawful processing, and protection of personal and sensitive personal information, including information related to health and education.

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