

The Implementation of the School-Based Feeding Program (SBFP) In Improving the Grade 4 Learners' Health Status in the Public Elementary Schools in Ragay Districts I And II, Division of Camarines Sur

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ARTICLE INFORMATION	ABSTRACT
Article history: Published: October 2026	The study assessed reported implementation of the School-Based Feeding Program (SBFP) and appraisals of Grade 4 learners' health status in 33 public elementary schools of Ragay Districts I and II, Division of Camarines Sur, during school year 2025–2026. A descriptive–evaluative–inferential survey included 33 SBFP coordinators and 45 Grade 4 teachers (N = 78) through purposive locale selection and total enumeration. A 100-item questionnaire, weighted means, and reported Mann–Whitney comparisons were used. Detailed Table 9 gives overall implementation 4.43 (Much Implemented), highest for monitoring and feedback (4.61) and lowest for community and parental partnership (4.18). Detailed Table 15 gives perceived health-status-related implementation 4.45 (Much Evident), highest for personal hygiene and health practices (4.61). Five of six implementation domains and all four health-related domains were labeled significant in district rank comparisons. These are staff ratings rather than directly measured nutritional or health change, so the study cannot establish that feeding caused an improvement.
Keywords: School-Based Feeding Implementation Grade 4 Nutrition Health Practices Ragay Mann–Whitney test	

1. Introduction

School feeding has operational and health-related aims. Provision of meals depends on funds, nutrition standards, supply chains, food preparation, community partnership, and monitoring. DepEd's operational guidance illustrates the need to specify responsibilities and monitor delivery (Department of Education [DepEd], 2020). The study examined how coordinators and Grade 4 teachers rated those implementation domains in Ragay Districts I and II, then asked about reported aspects of learners' health status.

Health and school environments are connected, but a perception that feeding is “Much Evident” in a health domain is not a nutritional assessment. WHO and UNESCO (2021) present a broader health-promoting-school framework in which food, hygiene, and school systems operate together. The study's survey did not present individual anthropometric measurements, disease records, or baseline and follow-up comparisons. This distinction is essential when interpreting a title that uses “improving.”

The research questions concerned the extent of SBFP implementation, district rank comparisons across six implementation domains, the extent of appraised health-related outcomes across four domains, district rank comparisons for those outcomes, and policy recommendations. The detailed findings were prioritized where the study abstract conflicts with them. No numerical discrepancy was silently corrected, and the study retains the design and reported test labels.

2. Methods

2.1 Design, setting, and respondents

The study used a descriptive–evaluative–inferential survey during school year 2025–2026 in 33 schools. Ragay Districts I and II were selected purposively; SBFP coordinators and Grade 4 teachers were enumerated because of their implementation responsibilities. The respondent table lists 17 coordinators and 20 teachers in District I, and 16 coordinators and 25 teachers in District II. The respective subtotals are 37 and 41, totaling 78. Its percentages of 56 and 44 do not correspond to these counts and are retained as printed in Table 1.

The title page and methods specify Grade 4, whereas the abstract's first paragraph says Grade 1. The study did not enumerate pupil participants or measure individual pupil health in the reported tables. District means therefore represent adult appraisals. The different mix of coordinator and teacher roles across the districts could influence a district comparison, yet role-stratified means and response distributions were not supplied.

2.2 Instrument and procedures

The researcher-made questionnaire comprised 100 items in two parts according to its specification. Six domains assessed resource mobilization and allocation, nutritional standard compliance, logistics and supply-chain management, community and parental partnership, kitchen and sanitation infrastructure, and monitoring and feedback. Four more domains appraised nutritional status, physical health and resistance to illness, energy and activity, and personal hygiene. Five-category ratings classified 4.50–5.00 as Very Much Implemented or Very Much Evident, and 3.50–4.49 as Much Implemented or Much Evident.

The study described planning, juror review, revision, distribution, and retrieval of the instrument. It reported KR-21 reliability of 0.87 for five-category responses, but not the pilot size, scoring, or item-level data needed to assess that calculation. No directly

measured height, weight, morbidity, or dietary intake was tabulated. Administration dates, missing-value treatment, and the linkage of a coordinator's rating to a particular child were not specified.

2.3 Statistical treatment

Counts, percentages, means, and ranks summarized survey data. A Wilcoxon–Mann–Whitney U procedure was named for comparisons of the two districts at .05, with z values and probabilities in Tables 10 and 16. Each test table lists the number of questionnaire indicators per district (nine to eleven), rather than 37 and 41 respondents. The exact ranked input and treatment of ties are unexplained. Printed probabilities are reproduced, although some correspond more nearly to one-sided normal tails while the test direction was not specified. These are rank comparisons, not effect estimates for a feeding intervention.

3. Results

3.1 Respondents and implementation

Table 1. SBFP personnel and Grade 4 teachers by district

District	Schools	Coordinators	Teachers	Total	Printed %
Ragay District I	17	17	20	37	56
Ragay District II	16	16	25	41	44
Grand total	33	33	45	78	100

Note. Counts and percentage labels reproduce the respondent table. The two percentage labels do not reconcile with 37 and 41 out of 78. There were more teachers than coordinators overall, and the two districts differed in role mix. The printed 56%/44% shares reverse what the district totals imply, a material denominator issue for descriptive interpretation. The analysis does not show whether the health-status appraisals came from comparable respondent roles in both districts or how school-level responses were weighted.

Table 2. Summary of SBFP implementation ratings

Domain	District I Wx	District II Wx	Overall Wx	Printed category
Resource Mobilization and Allocation	4.71	4.22	4.47	MI
Nutritional Standard Compliance	4.48	4.34	4.41	MI
Logistics and Supply Chain Management	4.59	4.34	4.47	MI
Community and Parental Partnership	4.26	4.09	4.18	MI
Kitchen and Sanitation Infrastructure	4.55	4.33	4.44	MI
Monitoring and Feedback Systems	4.69	4.52	4.61	VMI
Average	4.55	4.31	4.43	MI

Note. Values and categories follow detailed Table 9. Wx = weighted mean; MI = Much Implemented; VMI = Very Much Implemented. Monitoring and feedback was the only overall domain in the Very Much Implemented band. Community and parental partnership was the lowest, while resources and logistics tied at 4.47. District I means exceeded District II means in every domain, most notably resource mobilization (4.71 versus 4.22). Such differences may suggest areas to inspect, but the survey does not document actual meal deliveries, stockouts, budgets, or family participation. The overall mean describes favorable perceptions of implementation rather than verified fidelity.

Table 3. Reported district rank comparisons for implementation

Domain	Items per district	z	Printed p	Decision
Resource Mobilization and Allocation	10	−3.06	0.0011	Rejected
Nutritional Standard Compliance	11	−3.41	0.0003	Rejected
Logistics and Supply Chain Management	10	−3.51	0.00023	Rejected
Community and Parental Partnership	11	−1.44	0.0749	Accepted
Kitchen and Sanitation Infrastructure	10	−3.21	0.0007	Rejected
Monitoring and Feedback Systems	10	−2.61	0.0045	Rejected

Note. The numbers, p strings, and decisions reproduce detailed Table 10. “Items per district” is its sample count, not the count of staff respondents.

Five of six domain comparisons were labeled significant at .05. Community partnership was the sole exception, despite its lower mean in both districts. The test can at most compare the ranked indicator summaries entered into it; it does not tell whether the districts' individual staff views or actual delivery outcomes differed. The rank sums and apparent one-tailed probabilities should be recalculated from the underlying inputs before an inferential district claim is relied upon.

3.2 Perceived health-related outcomes

Table 4. Summary of perceived health-status-related implementation

Domain	District I Wx	District II Wx	Overall Wx	Printed category
Nutritional Status	4.52	4.28	4.40	ME
Physical Health and Resistance to Illness	4.38	4.20	4.29	ME
Energy Level and Physical Activity Capacity	4.62	4.35	4.49	ME
Personal Hygiene and Health Practices	4.69	4.52	4.61	VME
Average	4.56	4.34	4.45	ME

Note. Values and labels reproduce detailed Table 15. ME = Much Evident; VME = Very Much Evident. The study abstract instead reports a 4.36 average and a different ordering.

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The detailed table places hygiene first at 4.61 and physical health and resistance to illness last at 4.29. Its overall 4.45 is different from the abstract's 4.36, and its leading domain differs as well. The two versions cannot both be the final result. Even if the detailed table is confirmed, a rating that health practices are evident is not a recorded improvement in nutrition, immunity, or illness incidence. Hygiene may be promoted alongside feeding without being caused by feeding alone.

Table 5. Reported district rank comparisons for health-related domains

Domain	Items per district	z	Printed p	Decision
Nutritional Status	9	-3.53	0.0002	Rejected
Physical Health and Resistance to Illness	10	-3.67	0.0001	Rejected
Energy Level and Physical Activity Capacity	10	-3.74	0.0001	Rejected
Personal Hygiene and Health Practices	9	-3.53	0.0002	Rejected

Note. Values and decisions reproduce detailed Table 16; all four were labeled significant at .001.

All four health-related rank comparisons were labeled significant, yet these comparisons concern indicator rankings of adult appraisals. No pupil-level outcome difference between districts entered the reported test. The unequal respondent role mix and uncertain test units prevent translating the z values into a difference in children's measured health. The raw questionnaire, rank calculations, and any actual health records would be necessary to resolve that gap.

3.2 Operational priorities

Table 6. Selected implementation indicators from detailed findings

Indicator	Overall Wx	Printed category
Nutritional content periodically evaluated using standard monitoring tools	4.32	MI
Community and Parental Partnership domain	4.18	MI
Nutritional Standard Compliance domain	4.41	MI
Monitoring and Feedback Systems domain	4.61	VMI

Note. The selected item mean 4.32 comes from the nutritional-standard findings, and domain means and categories follow Table 9. The item wording is condensed for width.

The 4.32 item rating for periodic evaluation of nutritional content was below its own nutritional-compliance domain mean of 4.41 and the separate monitoring-and-feedback mean of 4.61. This distinction is a useful prompt to inspect the actual nutritional checks and feedback records. The low partnership mean raises another issue about community support. A district review could examine meal logs, nutrition standards, sanitation records, and parent participation alongside the staff ratings.

3.4 Selected operational and hygiene items

Table 7. Selected resource-mobilization indicators

Statement in detailed findings	Overall Wx	Printed category
Sufficient funds allocated from the number of identified beneficiaries	4.73	VMI
Accurate, updated financial records maintained	4.61	VMI
Feeding materials available before implementation	4.58	VMI
Personnel adequate for daily feeding operations	4.49	MI
Contingency resources available for unexpected shortages	4.45	MI
External stakeholders provide supplementary material or financial support	3.70	MI

Note. Selected item means and categories follow detailed resource-mobilization findings. Wording is condensed; VMI = Very Much Implemented, MI = Much Implemented.

The resources domain's 4.47 mean combines high ratings for initial funding and records with a lower rating for support from outside stakeholders. A program can have an assigned budget and still face a weak contingency reserve or an uncertain local partner. The ratings do not reveal actual fund release dates, meal costs, stocks, or donor commitments. A comparison of planning and delivery records would help determine whether the less favorable items indicate genuine operational exposure or different expectations among respondents.

The 3.70 item for external support is consistent with the lower community-partnership domain. That consistency can guide a question about how schools invite and organize assistance, but it should not be read as a directive to rely on donations. Feeding entitlement and nutritional standards require stable public provision. The study did not compare schools with and without partners or evaluate a partnership model. Any proposed mobilization plan should define roles, accountability, and a way to document supplementary contributions without displacing the core program.

Table 8. Selected hygiene-practice indicators from detailed Table 14

Indicator	District I Wx	District II Wx	Overall Wx
Handwashing before and after meals	4.70	4.54	4.62
Awareness of basic hygiene practices taught in school	4.73	4.56	4.65
Safe and hygienic eating during feeding sessions	4.65	4.56	4.60
Cleanliness of eating areas	4.59	4.51	4.55
Health and hygiene practices beyond feeding activities	4.70	4.56	4.63

Note. Selected values follow detailed Table 14. Every selected item is printed VME overall. The neighboring narrative gives a different 4.39 domain mean, conflicting with the table's 4.61.

The selected hygiene items are uniformly high in the detailed table, with cleanliness of the eating area lowest among them at 4.55. This domain is particularly vulnerable to common-source interpretation: staff may rate what they teach, observe, and hope to see as part of feeding

sessions. Direct observation at meal times and outside feeding activities would distinguish routinely practiced habits from a favorable general appraisal. The neighboring narrative's 4.39 domain figure also needs author reconciliation before reporting this as a settled summary. Even a confirmed hygiene rating cannot attribute change to a meal. Children may encounter handwashing instruction, sanitation facilities, and family routines independently of the feeding program. A longitudinal design would document each component and measure it with a repeatable checklist. It would also establish the period during which children received meals, which the present aggregate survey does not quantify.

4. Discussion

The implementation question yielded generally favorable ratings but comparatively lower community and parental partnership. Operational guidance for SBFP emphasizes organized provision and monitoring (DepEd, 2020). The high monitoring score should therefore be checked against actual records, not assumed to reflect consistent delivery. Some practices may receive favorable general ratings while specific activities, such as use of monitoring tools, are rated lower.

The health-related question is more constrained. The study did not directly assess children's nutritional status, illness, or physical activity. WHO and UNESCO (2021) describe health-promoting schools as systems incorporating multiple determinants. The relatively high hygiene appraisal can plausibly coexist with a feeding program, but it cannot isolate a feeding effect from sanitation instruction or family practices. A future evaluation would need baseline and follow-up anthropometry, a defined feeding exposure, attendance and dietary measures, and suitable comparison or contextual adjustment.

The reported district comparisons use indicator counts rather than the adult sample sizes. Five implementation domains and all four health-related domains were marked significant, but the unit of the Mann–Whitney test remains uncertain. The reported p values appear to use a directional tail for several z values; without a prespecified tail and raw ranks, the exact significance claims are provisional. Descriptive district differences can guide local review while the inferential calculations are audited.

The study's internal differences are material. Its title, respondent description, and methods specify Grade 4, whereas the abstract opens with Grade 1. The detailed health table reports an average of 4.45 with hygiene leading at 4.61, whereas the abstract summarizes 4.36 and places nutritional status first at 4.40. The respondent table prints 56% and 44% despite totals of 37 and 41 out of 78. These differences affect the population and the headline outcome. The detailed tables are presented as printed, and final figures require author confirmation.

The design was cross-sectional, used a self-report instrument with a KR-21 claim not transparently suited to five-category items, and lacked child-level measurements. Neither temporal change nor a comparison of fed and unfed pupils was analyzed. The proposed actions—equitable resources, community partnership, and consistent technical support—are policy ideas arising from perceptions. Their feasibility and effects need separate monitoring. The study's valid local contribution is a profile of reported implementation priorities rather than proof of improved Grade 4 health.

The distinction between delivery and outcome is central to policy use. Detailed Table 9 measures reports about how the program is run; detailed Table 15 presents perceived health-related domains. Neither quantifies the nutritional content received by each learner, meal adherence, or a child's growth trajectory. Combining those two ratings in a regression without matched pupil data would not solve the causal problem. A school-based evaluation should record delivery fidelity, beneficiary eligibility, attendance, and repeated health measures, with privacy safeguards appropriate to pupil records.

The results are also sensitive to document reconciliation. The detailed hygiene Table 14 average is 4.61, while its neighboring narrative says 4.39; the abstract gives another pattern for the four health domains. The title's Grade 4 population and abstract's Grade 1 wording are not interchangeable. The author should establish the definitive data table and statistical output, then update every narrative, abstract, and percentage from the same validated analysis. Until then the study's detailed-table presentation remains provisional.

The participant table identifies 33 coordinators and 45 teachers across two districts. They describe SBFP implementation from a school perspective; they are not a sample of Grade 4 children with repeated health measurements. The study supplies no individual anthropometry, nutritional classification, dietary intake, illness, or baseline and follow-up health measure. A favorable 4.45 perceived-health appraisal thus supports a conclusion about respondent judgments rather than demonstrated improvement in children's health status.

Monitoring may be visible as routine records, while partnership depends on cooperation beyond a classroom. The lower partnership mean of 4.18 could reflect fewer opportunities, less documentation, or lower perceived intensity; the questionnaire does not distinguish these explanations. A program audit could inspect meal schedules, procurement and food-safety records, attendance, community commitments, and referral paths. The rating is a signal for such verification, not evidence of a particular cause.

The detailed health results favor hygiene over physical health. Hygiene may be easier for a teacher to observe in daily routines, while physical health needs consistent criteria and clinical expertise. This is a construct-based inference, not a measured mechanism. Interpretation of the health domains therefore rests on their separately reported indicators rather than on an inferred combined intervention effect.

The reported Mann–Whitney analyses compare sets of indicator means rather than independent children. They do not establish whether one district's program improved health more, and a one-tailed probability requires a pre-specified direction. A district comparison would retain respondent and school identifiers and define the independent unit. A child-outcome question would require repeated pupil measures and a relevant comparison. The printed tests can be described, but their interpretation remains limited to what was analyzed.

The Grade 1 reference in the abstract conflicts with Grade 4 in the title and methods; the participant percentages do not agree with counts. KR-21 for a five-category questionnaire also needs justification. A future evaluation could specify eligibility and feeding exposure, collect anthropometry at stated times, and analyze change with school clustering and plausible confounders. WHO and UNESCO (2021) frame school health broadly, but the present results cannot isolate feeding as the cause of a perceived pattern.

5. Conclusion

Staff rated SBFP implementation Much Implemented overall (4.43), with monitoring and feedback highest (4.61) and community partnership lowest (4.18). The detailed table rated health-related implementation Much Evident overall (4.45), highest for hygiene

(4.61). Most district rank comparisons were labeled significant. The Grade 1/Grade 4 wording, conflicting health summaries, respondent shares, and inferential units require correction. The survey does not establish a causal improvement in learners' measured health.

References

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