



Interventional study on School-Based Feeding Program (SBFP) In Fourth Estate Elementary School (FEES): Its effects on the academic performance of the SBFP recipients

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Abstract

The study investigated the effects of the School-based Feeding Program (SBFP) on the academic performance of pupils at the Fourth Estate Elementary School, Paranaque City. Malnutrition seems consistently tenacious in developing countries and the SBFP serves as a promising interventional solution of the government to address these nutritional deficiencies among the public-school pupils. Employing a descriptive research design, 665 SBFP recipients, Kindergarten to Grade 6 pupils, took part in this study. Demographics such as pupils' profiles, nutritional status and their academic performance from first to fourth quarters were obtained and analyzed. Results revealed that majority of the research participants were considered as wasted and severely wasted, with Body Mass Index (BMI) records displaying significant improvement after undertaking the feeding program. Notable academic progress was demonstrated, specifically with decreased number of pupils who fell the lowest grade brackets (70-75) and likewise increased number of pupils who fell the grade brackets (86-91+). Findings suggested that consistent and sustained implementation of SBFP may have had positive influences both the physical health and scholastic achievement of the pupils. On the contrary, challenges such as inconsistent program management, parents' participation and sustainability of nutritional gains remain evident. Based on the results of the study, several recommendations and research directions were provided.

Keywords: Feeding Program; Academic Performance; Health Status; Grades

1. Introduction

Health is an integral, indispensable aspect of human growth and development. The World Health Organization (WHO) in its Constitution provides that health pertains to the totality of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 2024). As the changes become prevalent both in domestic and international communities, health has become a central topic since it posits challenges, trends, and opportunities alike. Thus, the United Nations through its specialized agencies i.e. Food and Agriculture Organization (FAO) and World Health Organization (WHO), declares that health is a fundamental human right by which all state actors including non-state actors are duty-bound to uphold the right to health of all citizens regardless of their race, color, religious affiliations, political creed, citizenship, and demography. Despite this collective adherence and commitment to the basic and fundamental principle of health, still malnutrition in many states especially in the developing countries remains devastating.

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Malnutrition covers two broad categories namely; (1) undernutrition which includes stunting, micronutrient deficiencies, wasting, and underweight; and (2) obesity and diet-related noncommunicable diseases (UNICEF, WHO, World Bank, 2021). Hence, malnutrition is a global not just domestic problem. Children on the other hand are more prone to this health phenomenon. Globally, around 16,000 children die every day due to malnutrition and many of them are living in the poor countries (Feng, et.al. 2022). Another manifestation of malnutrition is that a high percentage of children are considered stunted since they fail to achieve the international standard height-for-age (Nti & Lartey, 2006). In the study conducted by Amoah et.al. (2024), it was found that female children as compare to their counterpart aged 11 to 23 months found that underweight is more prevalent among them whereas stunting and wasting are second and third, respectively, the other health problems that directly affect children in terms physical and psychological.

Because of the wide-ranging adverse effects of malnutrition, the Philippines on its part has committed itself to helping the people especially the children in the marginalized sectors of society. An intervention has been implemented such as among others; 4Ps, *ayuda*, and food supplementation schemes in public elementary schools otherwise known as School-Based Feeding Program (SBFP). The latter being a food-based strategy adopted by the government is aimed to solve malnutrition problems that tremendously affect their health.

The people being the principal labor force of a country have to be healthy so as to achieve societal progress and development. However, if the people are sick or otherwise afflicted with malnutrition then the social and economic foundation of the country will experience debilitating consequences thereby perpetuation of poverty will ensue (Sicat, 1983; Gronjerg, Danziger & Weinberg, 1987).

In the Philippines as a developing country, it is a truism that poverty is common despite it being known as the powerhouse in Asia and the Pacific region. According to the report 15.5% of the population live below the national poverty line (ADB, 2024). This in turn creates a snowballing effect in all sectors of society especially the education sector. Poverty due to unemployment and abnormal population boom has immensely affected the children thereby leading to malnutrition.

Consequently, in order to resolve this problem, the Philippine government in 1997 implemented the Breakfast Feeding Program which aimed to alleviate the school children's short-term hunger. The said program underwent changes as to the coverage, delivery mode, focus, and target beneficiaries. In 2006 the Department of Education implemented the *Malusog na Simula, Yaman ng Bansa* program or Food for School (FSP) program which included families as beneficiaries. The families received 1 kilo of rice each day after class hours of their Grade 1 or pre-school child to ensure the attendance of the target child (Abalon, 2019; Manasan & Cuenca, 2017). In 2012, the program was named School-Based Feeding Program (SBFP).

The Philippine Constitution provides under Article II, Section 13 that the it is the State's policy to promote and protect the youth's physical, moral, spiritual, intellectual, and social well-being. Likewise in Section 15 of the same article says that the State shall protect and promote the health of the people and instill health consciousness among them (Cruz & Cruz, 2022). Because of these Constitutional mandates, the Department of Education (DepEd) under the Executive Department has promulgated DepEd Order No. 39 s. 2017 entitled, "Operational Guidelines on the Implementation of School-Based Feeding Program" in line with the basic Education Continuity Plan (Rivera, 2017). As such, DepEd acknowledges that education and health must have a symbiotic relationship.

Albert et. al. (2016) and Chinyoka (2016) identified the primary and secondary goals of SBFP. The primary according to them is nutrition among the target pupils and the secondary goals are: enhance attendance and improved health and nutrition values and behavior. Likewise, there are two functions of School Feeding Programs (SFPs) to wit; (1) Social safety net; and (2) Educational Intervention. The said program helps the families especially those with multiple members to save at least 10% of their expenses (Tseyage et. al. 2018). On the other hand, children-beneficiaries become more interactive and participative in school related activities.

The SBFP aims to restore at least 70% of the severely malnourished beneficiaries to normal nutritional status after the 120 feeding days. Also, it aims to guarantee attendance among the pupils up to 85-100% and enhance their behavior and health-related values (Endaya, 2019; Kundi et. al. 2019).

There have been many benefits and positive outcomes that are linked to SBFP. For instance, children who satisfy their hunger may perform well in school thereby decreasing absenteeism and increasing their participation (Kaziaga, Dewalque, & Alderman, 2009; Vizcocho, 2022). Additionally, according to Maslow's Hierarchy of Needs foods are among the basic physiological needs of human persons to be able to flourish and to subsequently achieve the other higher

needs such as safety needs, love and belonging, self-esteem, and self-actualization. Physiological needs in effect therefore must first be satisfied before a child can move on to another phase of the hierarchy.

In the study conducted by Alcantara and Frontreras (2024) regarding the impact of SBFP on academic achievement of selected elementary students, they found that there is a clear link between feeding program and improved overall health and nutrition among students. Also, class participation has increased and truancy has significantly decreased. Furthermore, nutritionally enriched school meals positively impact the well-being of the students as manifested in their height, weight, and General Weighted Average (GWA). Devereux et. al. (2018) in like manner found that SBFP boosts academic performance and increases students' attendance. Conjointly, Hablero (2018) propounded that SBFP in public schools lowers the dropout rates of the students, accelerates their energy, and increases concentration in their academic tasks. All these findings concurred with WHO (2021) and FAO (2021) reports saying that healthy food environment in schools can significantly control the students' Body Mass Index (BMI) or diet.

In contrast to the above positive benefits of SBFP, Yamaguchi and Takagi (2018) revealed in their study that undernourished students who are beneficiaries of the said program remained the same after the 120 days of feeding. Children's condition does not persist during the summer break; thus, after the 120 day feeding program, children revert to their undernourished state of health. Furthermore, SBFP has limited range of beneficiaries as a result not all children attain satisfactory nutrition status. In line these they also found that public schools who implemented SBFP have the following common problems such as; (1) Poor Nutritional Management since no nutritionist/dietician is designated to the school; (2) Poor sanitation management; and (3) Limited integration of nutrition education is provided since textbooks and other learning materials are wanting.

There are many factors affecting the effectivity and sustainability of SBFP. Flores (2023) identified socio-economic factors, social factors, psychological factors, and demographic factors as contributory elements to the challenges in the successful implementation of the SBFP. In a study conducted by Solania and Cubillas (2021) they identified other problems insofar as the implementation of SBFP is concerned thus: (1) poor feeding system; (2) lack of enthusiasm on the part of the beneficiaries to eat vegetables; and (3) teachers' erratic and heavy workload.

It is beyond cavil that implementation of the said program is difficult. This has been exacerbated during the peak of COVID-19 in the Philippine settings. Since physical interactions had been limited both by local and national governments, schools had to adopt another method to reach the target students of the program notwithstanding the presence of the COVID virus. For that reason, DepEd released DepEd Order No. 23 s. 2020 which mandated the school administrators to adapt strategies to continue the implementation of the SBFP among Grade 1 to Grade 6 learners who are wasted and severely wasted based on SBFP Report for School Year 2019-2020. The DepEd policy which was summarized in the slogan "No Child Left Behind" had been a driving force for DepEd to continue the program.

Based on the study of Deuna and Doncillo (2024) the study revealed that transition from pre-pandemic to post-pandemic implementation of SBFP resulted to a tremendous challenge. The principal obstacle has been related to insufficiency of funding. To resolve this problem Lara and Saracostti (2019) recommended the collective and collaborative involvement of parents in the execution of the program. Increase participation is necessary so as to ensure the effectiveness and sustainability of the SBFP. All stakeholders in the community must participate since the welfare and future of the children are involve in the feeding program (Sahagun, 2022). However, it was found by Flores (2023) that parental involvement in the SBFP is low; but this does not provide strong and significant correlation to students' demographics.

Given the foregoing, the research studies cited above have tackled different research variables like students' attendance. However, upon the perusal of local and foreign studies, there is less attention paid in the effects of SBFP in the academic performance of the recipients. Also, since every public school has distinct contextual atmosphere, methods, or strategies in relation to the implementation of SBFP it thus submitted that this research is worth-studying. Specifically, the pertinent study sought to answer the following questions:

- What is the effect of the School-Based Feeding Program (SBFP) on the academic performance of recipients from Fourth Estate Elementary School?
- What is the relationship between the nutritional status of SBFP recipients and their cognitive performance in school activities?
- How does SBFP intervene to the overall academic performances of students who are recipients of the said program?

2. Methodology

Six-hundred sixty- five (665) SBFP recipients took part in this study. The following demographic data of the research participants were also considered: age, grade levels, family income, and their academic performance from the First grading until Fourth grading periods. Descriptive research design is employed by the current study. The data were obtained from the data system of Fourth Estate Elementary School as authenticated by the Schools Division of Paranaque City head doctor and nurses.

3. Results and Discussion

Table 1 Distribution of participants' demographic data in terms of grade level

KINDER	MALE	50	114
	FEMALE	64	
GRADE 1	MALE	73	142
	FEMALE	69	
GRADE 2	MALE	66	122
	FEMALE	56	
GRADE 3	MALE	29	68
	FEMALE	39	
GRADE 4	MALE	41	88
	FEMALE	47	
GRADE 5	MALE	36	62
	FEMALE	26	
GRADE 6	MALE	39	69
	FEMALE	30	
Male		334	665
Female		331	
Total			665

The table shows the distribution of the number of recipients per grade levels, which were from Kinder to Grade 6: key stage 1 (Grades 1-3 including kindergarten) and Key Stage 2 (Grades 4-6). As can be seen from the data, key stage 1 obtained less than 450 participants and less than 220 for key stage 2. Specifically, grade 1 had the highest research participants with 142, whereas grade 5 had the lowest research participants with 62. Predominantly, there were female research participants or less than 51%, while male research participants occupied 49% of the research population or 331.

Table 2 Distribution of participants' demographic data in terms of age:

Age	<i>f</i>
5-6 (4-6)	277
7-8	155
9-10	140
11-12 911-15)	93

The table exhibits the distribution of the participants' demographic data in terms of their age. As seen from the table, 277, which obtained the highest number of SPFP recipients, fell under the age of 4-6 age bracket, while the 11-15 age bracket obtained the lowest number of SPFP recipients.

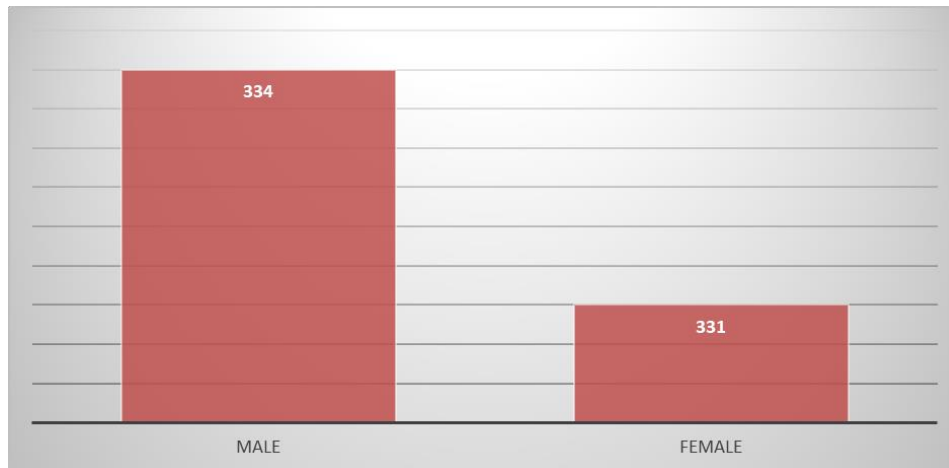


Figure 1 Total Number of SBFP Participants Based on Sex

Figure 1 pertains to the total number of pupil-participants who were under the School-Based Feeding Program (SBFP) at Fourth Estate Elementary School in Paranaque City. As can be seen from the data above, both female and male students have almost equal participation in the said program. The difference is 3 pupils which belong to male category. Hence, there is no substantial distinction that can be drawn from this iota of difference in numbers.

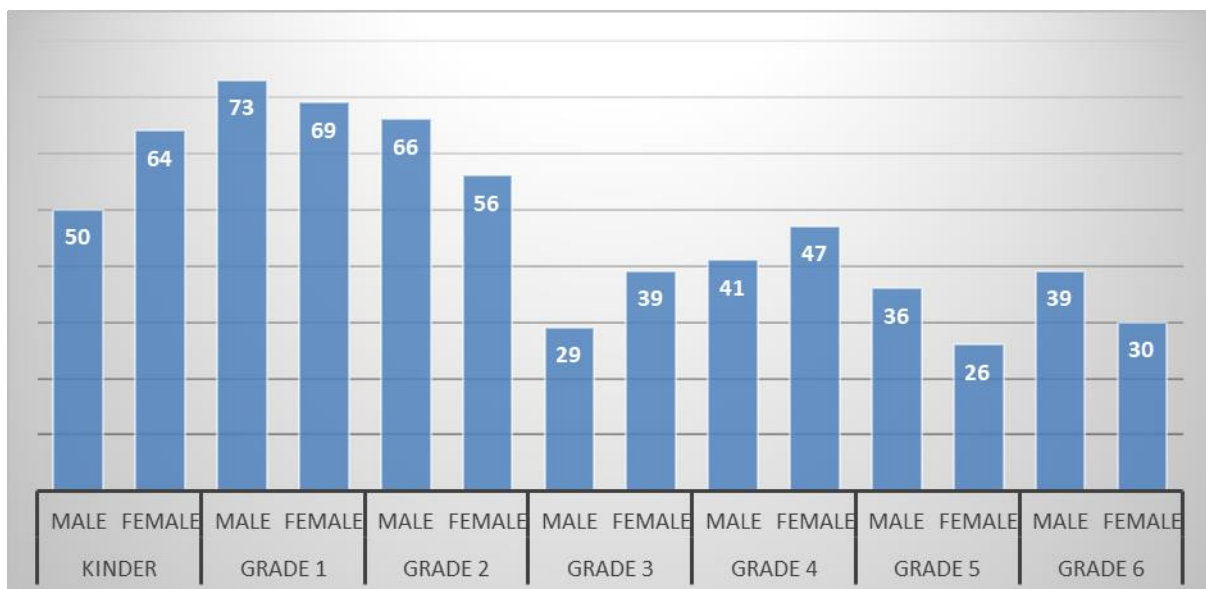


Figure 2 Number of Pupils from Kinder to Grade 6

Figure 2 provides a clearer picture as regards the number of pupils for each grade level including kindergarten. As can be gleaned above, grade 1 level has the highest participants in SPFB. This is followed by grade 2 level. This may say that grade levels 1-2 are the critical point by which pupils increase in numbers with respect to the need for nutritional supplements i.e. nutritional foods rich in vitamins, proteins, carbohydrates, and the like that can be given under SBFP. This may be in congruence to the finding of Bernardino et. al. (2024) that children aged 7-11 years old are prone to malnutrition, stunting, and other health related illnesses albeit they have the ability to distinguish healthy from unhealthy foods, they still choose to eat the latter. This may bolster the primordial objective of the 2006 DepEd SBFP whereas families of grade 1 schoolers received 1 kilo of rice each day after class hours (Abalon, 2019; Manasan & Cuenca, 2017).

On the other hand, the data above may somehow dissent to what Amoah et.al. (2024) found out by which more female children as compare to their counterpart aged 11 to 23 months fall under the category of underweight followed by stunting and wasting to be the secondary and third health problems among female children.

In all there is no signification as to the number of pupils. The fact remains, as provided in the data, that both female and male pupils from kindergarten to grade 6 level need to be included under the intervention of SBFB for them to be considered healthy. Hence, normal.



Figure 3 Nutritional Status of Kinder to Grade 6 Pupils

Figure 3 summarizes the number of pupils from kindergarten to grade 6 level. As can be observed, there are 509 pupils who are considered wasted. While the remaining 156 are severely wasted. The participants who are considered “severely wasted” suffer from severe malnutrition while those “wasted” are those whose weight is not parallel to their height. The latter is more corrigible by proper balance of food intake, exercise, and other supplements while the former is life threatening which necessitates an instantaneous health intervention. According to the United Nations International Children’s Emergency Funds (UNICEF, 2019), children who belong to severely wasted are 11 times more likely than those well-nourished children to die of common childhood illnesses since their bodies are more susceptible to getting viruses and other forms of bacteria and pathogens. Thus, severely wasted children have very low immune system which accelerates complications of supposed-mild disease. On the other hand, “wasted” children are nonetheless prone to illnesses but their immune system is more capable of handling the bodies’ foreign invaders thereby children can slow down the aggravation of whatever disease they may have.

The common denominator between severely wasted and wasted is that both are susceptible of getting disease although they vary in the way the body reacts. Be that as it may, both children do not fall under the “normal” category; thus, prompting the school administrators to include them in the SBFP.

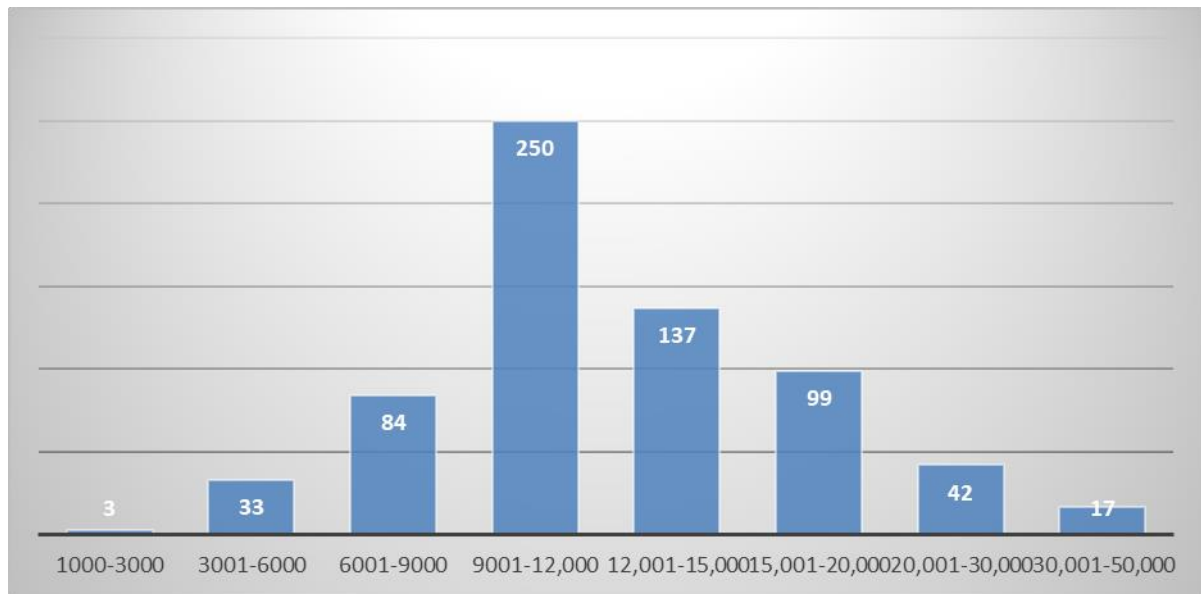


Figure 4 Family Monthly Income

Figure 4 encapsulates the significant role of familial monthly income. Based on the bar graph, 250 families have a monthly income ranging from 9,000 to 12,000 pesos. Likewise, there are 137 families whose monthly income ranges from 12,000 to 15,000 pesos. It is vital to note that there are 17 families whose monthly income is 30,000 up to 50,000 pesos. The data reveal that there is a huge gap between families with regard to monthly income whose children are enrolled or studying in public elementary institutions. This discrepancy and gap may explain why many pupils are considered severely wasted and wasted. Since income per capita is incongruent to consumption, members of the family would not be able to receive sufficient and necessary nutritional needs. Hence, the most affected are the children of school age.

Table 2 Pupils' Body Mass Index (BMI)

INITIAL BMI	f (frequency)	%
13.5 BELOW	581	87.37
13.5 UP	84	12.78
RECENT BMI		
13.5 BELOW	450	67.67
13.5 UP	215	32.33

Table 2 provides the data as regards the Body Mass Index (BMI) obtained from the pupils from kindergarten to grade 6 level before and after they underwent to the feeding program of the school. BMI is defined as the means or tool to determine estimation of the amount of fat by using weight and height as the measuring variables (NIH, 2025). BMI therefore helps the administrators of the schools to assess the students' health in general.

Based on the data presented above, 87.37% of the students from Kinder to Grade 6 are severely underweight or severely wasted. However, after the initiation of the SBFP, there is a significant change as to the BMI of the students, from severely wasted the BMI became acceptable. Moreover, there are still some students whose BMI is considered severely underweight which in effect therefore needs to be taken into consideration. However, the data further provides a critical point that in order to fully achieve the 100% normal BMI, consistency in the program is of a paramount consideration. This finding supports Alcantara and Fronterras (2024) which state that feeding programs in schools give positive impact on the health of students. Likewise, this assertion is corroborative in nature as regards the findings of WHO (2021) and FAO (2021) which reported that healthy food environment in schools can significantly control the students' Body Mass Index (BMI) or diet.

Table 3 Distribution of participants' demographic data in terms of academic performance in the First Quarter SY 2024-2025

GRADE LEVEL	GENDER	DATA	FIRST QUARTER AVERAGE					TOTAL
			70- 75	76- 80	81 - 85	86 - 90	91 - up	
KINDER	Male	50						
	Female	64						
	Total	114						
GRADE 1	Male	73	3	34	29	8	0	74
	Female	69	6	37	14	11	0	68
	Total	142	9	71	43	19	0	142
GRADE 2	Male	66	1	25	32	4	4	66
	Female	56	0	17	36	1	2	56
	Total	122	1	42	68	5	6	122
GRADE 3	Male	29	0	12	17	0	0	29
	Female	39	0	19	20	0	0	39
	Total	68	0	31	37	0	0	68
GRADE 4	Male	41	0	15	23	3	0	41
	Female	47	0	18	28	1	0	47
	Total	88	0	33	51	4	0	88
GRADE 5	Male	36	3	28	4	1	0	36
	Female	26	2	16	7	1	0	26
	Total	62	5	44	11	2	0	62
GRADE 6	Male	39	0	17	17	5	0	39
	Female	30	0	9	17	3	1	30
	Total	69	0	26	34	8	1	69

As seen in Table 3 the highest number of students, 71 in total, who fell within the grade bracket of 76-80 and these SBFP recipients belong to Grade 1 level. In contrast, there was only one SBFP recipient, Grade 6 in particular, who fell within the grade bracket of 91- up. Furthermore, the data above indicate that there are 18 pupils from Grade 1 to Grade 6 that fell under the 70-75 bracket. This may indicate that nutrition deficit which affects the students' cognitive faculty is a reason as to why they fell short as compare to their peers and counterparts. As elucidated by Hablero (2018) that students who have received sufficient and appropriate foods have a higher tendency to exhibit academic competence. Likewise, this assumption is supported by the Maslow Hierarchy of Needs which asserted that individuals who received their physiological needs e.g. foods, would excel in other aspects of life thereby leading to achievement of security up to self-actualization.

Table 4 Distribution of participants' demographic data in terms of academic performance in the Second Quarter SY 2024- 2025

GRADE LEVEL	GENDER	DATA	SECOND QUARTER AVERAGE					TOTAL
			70- 75	76- 80	81 - 85	86 - 90	91 - up	
KINDER	Male	50						
	Female	64						
	Total	114						
GRADE 1	Male	73	0	27	35	12	0	74
	Female	69	1	27	29	11	0	68
	Total	142	1	54	64	23	0	142
GRADE 2	Male	66	1	6	47	7	5	66
	Female	56	0	8	36	10	2	56
	Total	122	1	14	83	17	7	122
GRADE 3	Male	29	0	3	26	0	0	29
	Female	39	0	10	29	0	0	39
	Total	68	0	13	55	0	0	68
GRADE 4	Male	41	0	8	31	2	0	41
	Female	47	0	12	33	2	0	47
	Total	88	0	20	73	4	0	88
GRADE 5	Male	36	1	28	6	1	0	36
	Female	26	1	17	7	1	0	26
	Total	62	2	45	13	2	0	62
GRADE 6	Male	39	0	16	20	3	0	39
	Female	30	0	6	19	3	2	30
	Total	69	0	22	39	6	2	69

Table 4 summarizes the grades obtained by the students during second quarter for the School Year 2024-2025. As can be detected from the data above, it seems that pupils who have consistently received the proceeds of feeding program of the school excel academically. Presently, only 4 pupils fell under 70-75 grading bracket unlike in First quarter, there were 18 pupils under such a bracket. Corollary to this development is the increase of number of pupils who obtained 91 and up grades. There were two students under 91-up grading bracket. This supports Endaya, 2019 saying that students who have undergone to feeding program are more likely to exude enthusiasms in their behavior which affect their grades and performance in school. Likewise, Kristjansson et. al. (2022) support the current findings. According to the, children who are experiencing socio-economic challenges and are beneficiaries of school feeding program are physically and psychologically healthy.

Table 5 Distribution of participants' demographic data in terms of academic performance in the Third Quarter SY 2024-2025

GRADE LEVEL	GENDER	DATA	THIRD QUARTER AVERAGE					TOTAL
			70- 75	76- 80	81 - 85	86 - 90	91 - up	
KINDER	Male	50						
	Female	64						
	Total	114						
GRADE 1	Male	73	1	25	30	15	3	74
	Female	69	1	15	32	15	5	68
	Total	142	2	40	62	30	8	142
GRADE 2	Male	66	0	6	32	19	9	66
	Female	56	0	5	27	20	4	56
	Total	122	0	11	59	39	13	122
GRADE 3	Male	29	0	6	22	1	0	29
	Female	39	0	9	19	9	2	39
	Total	68	0	15	41	10	2	68
GRADE 4	Male	41	0	10	23	7	1	41
	Female	47	0	8	28	8	3	47
	Total	88	0	20	73	15	4	88
GRADE 5	Male	36	0	29	5	2	0	36
	Female	26	1	17	6	2	0	26
	Total	62	1	46	11	4	0	62
GRADE 6	Male	39	0	17	16	6	0	39
	Female	30	0	6	18	4	2	30
	Total	69	0	23	34	10	2	69

Table 5 embraces the grades obtained by pupils in the Third Quarter. Interestingly, during the program one student was added to the bracket 70-75. This inadvertence may support the assertion of Yamaguchi and Takagi (2018) that in the implementation of SBFP in public schools, there is inconsistency as to the management of the said program thereby adversely affecting students which in turn would drive the students' health to revert to the previous malnourished status. If the students revert to their previous status, then their scholastic report would parenthetically and necessarily revert to the same point. On the other hand, the data dispense a significant preponderance of evidence to support that the feeding program increased the students who attained 91 and up grades during this quarter. This phenomenon can be *prima facie* presumed to be an inversed proportional event by which students increase in one aspect while the other decrease as a product of the said increase in grades. The current data support what Mohammed et. al. (2023) that students who were previously considered stunted have an increased performance in academics after they underwent to school feeding program since their cognitive, socio-economic, and emotional domains have been considered to be satisfied and nourished.

Table 6 Grades obtained by Kindergarten pupils

Average Grade				
Kinder	1 st Grading	2 nd Grading	3 rd Grading	4 th Grading
B-BEGINNER	88	17	3	0
C-CONSISTENT	0	2	14	7
D-DEVELOPING	26	95	97	107

Table 6 provides the non-numerical grades of kindergarten pupils. There are three legends by which the pupils are graded viz: B for beginning, C for Consistent, and D for Developing. As can be seen from the data there are 88 students who were under the Beginning category. This means that their cognitive faculty are not so fully developed in line with their grade level. For the 1st quarter, there were 26 students already under Developing stage. Likewise, the data provide that from 1st Quarter up to the 4th Quarter of the School Year 2014-2025, there is a consistent increase of students under Developing which indicates that their grades are satisfactory vis-à-vis the feeding program implemented by the school. These results corroborate the findings of Vizcocho (2022) saying that pupils show positive performance in their academics whenever they receive nutritious foods from the school. Furthermore, Kaziaga, Dewalque, and Alderman (2009) stated that because of SBFP there is a sudden shift of behavior with regard to attendance and more specifically positive impact on their health and grades

4. Conclusion

The implementation of School-Based Feeding Program has provided a significant positive impact on the academic in particular and overall physical well-being of the pupils. Pupils under the said program have exhibited positive indicia of change insofar as their physical, cognitive, and social domains are concerned. It is found that if the pupils are consistently monitored by the teachers with the help of school administrators and parents, the overall health of the students concerned changed. However, it was found also that consistency on the part of the school administrators on the one hand and pupils' participation on the other hand shall be observed diligently so as to prolong the benefits of the program and thus maintain the normal health status of the children thereby maintaining their good scholastic standing in class. Finally, considering the results it is thus recommended by the researchers the following:

- There must be consistency as to the implementation of the School-Based Feeding program in school;
- Teachers may provide activities that will motivate both parent and pupils to fully incorporate the feeding program related ideas into their daily lives even after the said program has been concluded in school;
- Parents are encouraged to motivate their students to participate and to not circumvent the schedule of feeding;
- Parents may, upon the requests of the teachers and administrators concerned, volunteer with the preparations of foods so as to have interactive relations with teachers and the children; and,
- Collaboration and shared plans and actions with parents and local officials are encouraged so as to maintain the objectives of the Feeding Program that will ensure the consistency of the program.

While the findings of the current study may not be enough to make judicious conclusions for some of the complicated matters such as program implementation and post implementation and the after effects of the nutritional interventions, more studies with larger number of participants are still needed to be conducted with the same research variables to make reasonable conclusions in the future.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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