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Effectiveness of feeding program and the nutritional status of grade 4 pupils towards academic performance in science subject in Geotina Elementary School, Rizal Ii District, Division of Dinagat Islands

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Abstract

The study assessed the School Feeding Program of public elementary school pupils in Geotina Elementary School, Rizal II District, Division of Dinagat Islands. It was done to determine its effects of feeding program to the academic performance of the pupils. It also elicited the living situations of their family through knowing every family's financial stability. The study adopted the survey research design and obtained its data from primary sources. The researcher adhered to ethical standards such as informed consent, anonymity, and confidentiality. Data collected was cleaned and then analyzed quantitatively by obtaining descriptive and inferential data using tables. The findings were then displayed in tables and figures. It implied the positive effect of the School Feeding Program on academic achievement and nutritional status. Moreover, the program affects children's attention measures. Another positive effect of the said program is detected in academic achievement scores and this effect is more viable to academic performance. The study also recommended that the Governments together with the National Government should offer financial support to various schools in the country to facilitate the implementation of the school feeding program in various schools. The government should sensitize the community on the nutritional and educational benefits their children will likely enjoy when they enrol their children in schools and ensure that they attend classes regularly. That the Ministry of Education together with the County board of education should organize training seminars for school management boards on how to effectively implement school feeding programs to maximize its benefits. In the end, the researchers come up with the idea to recommend that working on School Feeding Program needs to focus to enhance program effectiveness. And to support the DepEd tagline "No Children Left Behind". Despite the major challenges from their respective family financially.

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Introduction

School feeding program contributes to the education and well-being of children. A hungry child does not grow, cannot learn as well, and faces many health risks in the future. School feeding can bring children into school and out of hunger. It is far more than food-giving. They are an investment in the world's poorest children. They are an investment in our common future and global stability. School feeding can bring children into school and out of hunger. Strong partnerships can increase factors that pull children to school. It is a springboard for many positive outcomes for poor children and their families. School feeding programs engage parents and communities in the promotion of public health, education, and the creation of an independent future.

The SBFP (School Based Feeding Program) complies with the Republic Act No. 11037 otherwise known as the "Masustansyang Pagkain para sa Batang Pilipino Act", signed by President Rodrigo Duterte on June 18, 2020, and was later augmented in the Bayanihan to Heal as One A ct. The SBFP aims to (1) address hunger and encourage learners to enroll; (2) contribute to the improvement of their nutritional status; (3) provide nourishment for their growth and development and help boost their immune system, and (4) enhance health and nutrition values and behavior (Deped, 2022).

Education is clear towards its goal of contributing not only smart mines but a healthy body that will serve as a great tool in achieving greatness for the whole country. In achieving greatness in education, despite the reality that the majority of our learners are facing different problems that they experience every day. One of the problems is that pupils are suffering from malnutrition and nutrient deficiency due to poverty. Nutrient and health problems are no longer new in the Philippines and they greatly affect the academic performance of our elementary and secondary learners.

Materials and methods

Study area

This study was carried out in Geotina Elementary School, Barangay Geotina, Basilisa, Dinagat Islands, Philippines wherein one of the Hard Index areas entire Dinagat Islands Province. Geotina is situated at approximately 10.0800, 125.5864, on the island of Dinagat. Elevation at these coordinates is estimated at 12.2 meters or 40.0 feet above mean sea level.

Respondents and sampling procedure

The respondents in this research were focused only on the Grade Four pupils in Geotina Elementary School.

Research Instrument

A survey questionnaire was administered in the section Sampaguita Grade Four in Geotina Elementary School, Barangay Geotina, Basilisa, Dinagat Islands Province. Before the study was conducted, the researchers discussed the planned sampling activities with the School Head and Teachers of the school especially the teacher In-charge of grade four pupils as respondents. The respondents were interviewed following the corrected survey questionnaire. Validations were done through personal interviews and ocular inspection at the culture facilities.

Statistical Analysis

Data obtained from the study area was carefully analyzed using the Statistical Package for Social Sciences (SPSS). Results were presented using descriptive statistics such as percentages and frequencies, and One-way ANOVA to determine the significant differences between variables.

Results and discussion

The respondents of this study are the Grade IV pupils of Geotina Elementary School. Their academic performance during the first quarter of the school year will be the basis of the research since during this period the feeding program is not yet implemented. While the academic performance of the pupils in the second to third grading period after the feeding program implementation will be utilized to compare the previous performances of the pupils before and after the feeding program.

Table 1. Frequency and percentage distribution of the respondents' profile (N=28).

Profile		f	%
Sex			
	Male	10	35.7
	Female	18	64.3
Age	9-10	15	53.6
	11-12	13	46.4
Educational Attainment of Parents			
	Elementary level	8	28.6
	Elementary graduate	8	28.6
	High school level	5	17.9
	High school graduate	5	17.9
	College level	2	7.1
Income			
	2000 - 3000	11	39.3
	3050 - 5000	10	35.7
	5050- 7000	7	25.0

Table 1 reveals that female obtains the highest frequency of 18 or 64.3 percent while they have a frequency of 10 or 35.7 percent. This implies that most of the pupils at Geotina Elementary Schools are females with the highest percentage result. As to age, the result reveals that 9-10 years old has the highest percentage of 53.6. These are followed by ages 11-12 years old with 46.4 percent getting the lowest percentage. The frequencies of their ages are 15 and 13 respectively. It implies that 9-10 years old have the highest percentage among the ages of the pupils. Furthermore, on Parents' Educational Attainment, the result reveals that the Elementary level and graduates gets the highest frequency of 8 and with a percentage of 28.6 out of the respondents. This is followed by high school level and high school graduates with a frequency of 5 or 17.9 percent. Those who are in college-level level obtain a frequency of 2 and the 7.1 percent.

More so, the family monthly income that ranges from PhP 2000 to 3000 obtains the highest frequency of 11 and with a percentage of 39.3 Whereas, family income of more than PhP 3050 to 5000 has the frequency of 10 or 35.7 percent. Family income of Php 5,050 to 7,000 has the lowest frequency of 7 or 25.0 percent. This implies that most of the respondents' parents are very low-wage with a monthly income ranging from PHP 2000-3000. In addition, in terms of the Nutritional status, the result reveals that an Initial BMI of 20.5 had a good result since the percentage decreases from 42.9 to 14.3 percent. Then for 20.5 above increases at the same time from 57.1 to 85.7 percent. This implies that the nutritional status initially differs from the recent results after a series of feeding activities done by the school.

Table 2. Respondents- Body mass index.

BMI	Initial		Recent	
	f	%	f	%
20.5 below	12	42.9	4	14.3
20.5 above	16	57.1	24	85.7
Total	28	100	28	100

Table 3. Academic performance of the respondents in science subject.

Academic Performance	Quarter 1		Quarter 2		Quarter 3	
	f	%	f	%	f	%
75-80	13	46.4	10	35.7	2	7.1
81-85	12	42.9	13	46.4	21	75.0
86-90	3	10.7	3	10.7	3	10.7
91-95	0	0	2	7.1	2	7.1

Table 2 represents the Academic Performance of the Pupils in science subjects in from the first to the third quarter. The corresponding Nutritional Status indicates the number of pupils, under nutrition, normal, and over nutrition before and after the Feeding Program.

The data reveals that from quarter 2 to quarter 3 had a big impact in terms of their grades after a series of feeding activities served by the school. The results show a big difference from 35.7 (quarter 2) percent down to 7.1 (quarter 3) the grades range from 75-80. For 81-85, it goes positive results since in the second quarter only 46.4 percent have this range of grades but in the third quarter it rises up to 75.0 percent. For 86-90 and 91-95, it had a stationary result of 10.7 percent and 7.1 percent. Wherein, for the third quarter period, it is clearly stated in the data of table that school feeding program has a big impact not just on the body mass index in the pupils wherein, it shows that pupils' under nutrition status is decreasing in the second to the third quarter and normal status is increasing also, which means that feeding Program matters not just in the body mass index of the pupils but also in academic performance. Therefore, it is determined that poor nutrition among children affects their cognitive function and reduces their

ability to participate in learning activities at school. Children who are malnourished or who are unhealthy are unable to attend school regularly which in turn leads to poor academic performance. This means, that hungry children encounter difficulties concentrating and performing complex tasks than to well-nourished ones.

After 120 days of implementing the Feeding Program, this study proved that the SBFP has an impact on the academic performance of all severely wasted Grade IV pupils of Geotina Elementary School for the school year 2022-2023.

Table significant difference in the body mass indices before and after feeding

	Mean Difference	t-value	p-value	Decision	Interpretation
Initial BMI vs. Recent BMI	-0.286	-3.29	0.003	Reject Ho/ Accept Ha	Significant

Table significant difference in the academic performance before and after feeding

	Mean Difference	t-value	p-value	Decision	Interpretation
Quarter 1 Grades vs. Quarter 3 Grades	-0.536	-5.58	0.001	Reject Ho/Accept Ha	Significant

On Significant Difference in the Body Mass Indicates Before and After Feeding

The table shows that the p-value is less than 0.05 level of significance for the BMI of the respondents. Thus, the null hypothesis is rejected/alternative hypothesis is accepted, this means that there is a significant difference between the initial BMI of the respondent compared to recent BMI. Thus, it indicates that the school feeding program of the school really matters, and it gives a big impact in terms of the body mass index of the pupils, especially those malnourished.

On Significant Difference in the Academic Performance before and After Feeding

The table shows that the p-value is less than 0.05 level of significance. Thus, the null hypothesis is rejected/alternative hypothesis is accepted.

This means that there is a significant difference between the Academic performances of the respondents from Quarter one before the feeding program was conducted and Quarter three after they experienced the school feeding program of the school. This means that the feeding Program matters not just in the body mass index of the pupils but also in academic performance. Moreover, it indicates also that poor nutrition among children affects academic performance at school.

Conclusion

Based on the findings using data provided and procedure made. That the pupils who are malnourished and unhealthy have poor academic performance compared to those nourished and healthy ones. So therefore, with this statement, it is clearly understood that the DepEd feeding program gives a big help and impact in developing the learners' academic performance.

Especially nowadays, poor health and undernutrition continuously affect school children, more specifically in the urban slums and depressed areas in the country. Another finding illustrated with this study, there is an increase in nutritional status and the majority had their exam scores improved as a basis for academic performance.

A school feeding program is essential to provide a balanced diet to grade 4 learners which would, in turn, enable the children to increase their attention span, hence better academic achievement in this study. Nutrition and health are powerful influences on individual learning and how well a child performs in school. When a person is healthy, the brain is functioning at its maximum potential which is necessary for acquiring knowledge and proper development for children.

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