



**LEVEL OF EFFECTIVENESS, SUSTAINABILITY
OF SCHOOL-BASED FEEDING PROGRAM, NUTRITIONAL
STATUS AND ACADEMIC PERFORMANCE OF PUPILS
AMIDST COVID-19 PANDEMIC: BASIS FOR A PROPOSED
PROJECT BUSOG TALINO PROGRAM**

Shiegrid G. Corpuz¹ⁱ,

Johnny S. Bantulo²

¹Ramon Magsaysay Memorial Colleges,
General Santos City, Philippines

²EdD, Ramon Magsaysay Memorial Colleges,
General Santos City, Philippines

Abstract:

This study aimed to find out the effectiveness and sustainability of the School-Based Feeding Program and the nutritional status of learners amidst the COVID-19 pandemic as the basis for a proposed intervention program. The respondents of this study were the four school heads and the 40 School-Based Feeding Program (SBFP) coordinators from four different schools in East Maitum District namely: Angko Elementary School, Batian Elementary School, Maitum Elementary School, and Virginia Tañedo Garcia Elementary School. This research employed a cross-sectional research design. The result of this study revealed that the level of effectiveness of the School-Based Feeding Program was very and average in attainment of desired outcomes. The level of sustainability of the School-Based Feeding Program was very high in delivery of nutritious food packs, inventory of resources, monitoring and evaluation and average in nutritional components. The nutritional status of recipient pupils of the 4 schools was normal, and the level of their academic performance was satisfactory.

Keywords: educational management, level of effectiveness and sustainability, feeding program, nutritional status, academic performance, Philippines

1. Introduction

Malnutrition in every aspect presents significant threats to human health. Today, the world faces a double burden of malnutrition, including undernutrition and overweight, especially in developing countries. UNICEF highlighted that it is a significant cause of

ⁱ Correspondence: email shiegrcorpz05@gmail.com

death not only in children but in adults as well. In the Philippines, 30% of children below five years old suffer from impaired growth and development due to poor nutrition. It makes the country fifth in the East Asian and Pacific regions. With the current pandemic, worldwide malnutrition is expected to worsen (Kurtz et al., 2021; World Health Organization, 2018).

However, the School-Based Feeding Program (SBFP) initiative in the Department of Education (DepEd) addresses malnutrition among public school children. It aims to reduce hunger and enhance nutritional status, school performance, learning outcomes, and student's academic performance. As a result of the present health crisis, DepEd modified SBFP, prioritizing the welfare, safety, and health of learners and personnel involved and ensuring the attainment of program objectives. The SBFP was implemented in line with the Basic Education Learning Continuity Plan (BE-LCP) and in strict compliance with the DepEd's required health standards (DepEd Order no. 23, 2020; Rivera, 2016).

On the other hand, many students experience academic challenges throughout their careers, from elementary school to college, including problems like bullying, underachievement, and teachers who do not pay enough attention to their lessons. These concerns can also involve learning impairments or disabilities. Moreover, learners' nutritional status also affects their school performance. In place of this, a school-based feeding program is a great help to avoid this issue. With SBFP, malnutrition can be prevented, and learners can focus on their studies (Penny & Behrman, 2017).

Given the situation, the SBFP implementation amidst the COVID-19 pandemic has faced several challenges and criticisms in East Maitum District. Further, distributing Nutritious Food Packs (NFPs) to the beneficiaries is a problem because interactions are limited due to health threats. Schools can choose if the NFPs will be delivered directly or picked up. Delivering, however, entails additional costs. Locally, beneficiaries' parents are encouraged to pick up their NFPs, but some fail to do so for some reasons. As a result, this might impede the program's sustainability and Effectiveness (DepEd Order No. 23, 2020).

Despite the growing recognition of the importance of school-based feeding programs in addressing malnutrition and enhancing academic performance among students, there remains a research gap in understanding the level of effectiveness and sustainability of such programs amidst the COVID-19 pandemic. While previous studies have explored the impact of school-based feeding programs on nutritional status and academic performance, the unprecedented circumstances brought about by the pandemic require an in-depth investigation to identify potential interventions that can ensure the continued success of these programs in the face of new challenges and restrictions. By bridging this research gap, policymakers, educators, and stakeholders can develop targeted interventions that not only address the immediate needs of students during the pandemic but also establish a sustainable framework for school-based feeding programs in the future.

The urgency of conducting a study on the level of effectiveness, sustainability of school-based feeding programs, and their impact on the nutritional status and academic performance of pupils amidst the COVID-19 pandemic cannot be overstated. With the pandemic exacerbating existing disparities and placing vulnerable students at even greater risk of malnutrition and learning setbacks, it is imperative to understand the effectiveness and sustainability of these programs in the current context. By identifying evidence-based interventions, policymakers and educators can prioritize resources and implement targeted strategies that mitigate the adverse effects of the pandemic, ensuring the well-being and academic success of all students, particularly those most affected by the crisis. Prompt action based on this study's findings is crucial to address the immediate and long-term consequences of the pandemic on students' nutrition and academic performance, safeguarding their future prospects.

Thus, the researcher conducted this study to determine the effectiveness and sustainability level of SBFP during the COVID-19 pandemic. It also aimed to assess the nutritional status and academic performance of learners. This way, the researcher could develop an intervention program tailored to and relevant to the needs of learners.

2. Literature Review

This section presents the related literatures and studies about school-based feeding program, importance of school-based feeding program, success and challenges of school-based feeding program during the pandemic, school-based feeding program's effectiveness level, school-based feeding program's sustainability level, and academic performance and school-based feeding program that helped the researcher conceptualize the variables used and found relevant to this study's development.

2.1 School-Based Feeding Program

Food for education (FFE) initiatives have attracted new interest in developing nations in Asia, Africa, and Latin America to attain Millennium Development Goals (MDG) and decrease hunger. School-feeding industries, in particular, arose in several countries as a social safety net reaction to the 2008 worldwide food and fuel crisis. In underdeveloped nations, these programs offer healthy meals for malnourished children or children from poorer or poorest households in exchange for school participation. Many of the programs are undertaken to improve both education outcomes as to school participation, school retention, learning success, or cognitive development and nutrition outcomes as to food energy intake, micronutrient status as to food energy consumption, anthropometry, or micronutrient status (Tabunda et al., 2016; Trudeau & Shephard, 2018).

In the Philippines, the feeding program of the Department of Education was initially introduced in 1997 to combat short-term hunger among public school pupils. Through the years, the program underwent modifications in target beneficiaries, coverage, delivery manner, and focus from treating short-term starvation to addressing

malnutrition to managing the short-term need for undernutrition). In 2006, the initiative, then called the Malusog na Simula, Yaman ng Bansa program, and the Food for School (FSP) program, included families as beneficiaries; it tackled extreme hunger among families in specific areas and geographic regions (Abalon, 2019; Manasan & Cuenca, 2017).

Moreover, under this program, each beneficiary household got a kilo of rice every after class to ensure school attendance. DepEd executed the FSP for the beneficiaries enrolled in pre-school or Grade 1 in public elementary schools. At the same time, the Department of Social Welfare and Development (DSWD) took control of rice distribution in the DCCs. Like the current SBFP of DepEd, the FSP program included additional activities to ensure progress in the beneficiary children's nutritional status. Activities like deworming and training parents on desirable food, nutrition, health practices, sustainable food production/gardening technologies, and livelihood/self-sufficiency projects. The program has a budget of P2.93 B (Abiy, 2017; Alvi & Gupta, 2020; De Jesus, 2019).

In addition, the program was renamed the School-Based Feeding Program (SBFP) in 2012, not to confine the feeding to breakfast time. SBFP additionally restricted the program's coverage to SW learners in Kindergarten and Grades 1 to 6 in selected public primary schools. In addition, a school may be set into the program only if it has no alternative feeding program. Thus, by correcting the deficiencies of the programs, the DepEd's feeding program has developed into the current form of the SBFP. In its present condition, the SBFP has kept the critical aspects of the BFP, notably the 100-120 feeding day length; the use of standardized recipes containing malunggay, and the 20-day cycle menu, with each meal supplying the kid with at least 300 more calories (DepEd Order no. 23, 2020; Martin & Pihnuton, 2019; Nyathela, 2018).

Nonetheless, the goals of the SBFP are: to rehabilitate at least 70 percent of the severely wasted beneficiaries to normal nutritional status at the end of 100 to 120 feeding days; to ensure 85 percent to 100 percent classroom attendance of beneficiaries; and to improve the children's health and nutrition values and behavior. The program's primary purpose is the nutrition goal; enhanced class attendance and improved health and nutrition values and behavior are secondary goals (Albert et al., 2016; Chinyoka, 2016).

Further, the SBFP's attendance objective of 85 percent to 100 percent school attendance is equivalent to that needed in other nations, which is at least 80 percent to 85 percent school attendance. The claimed number of calories (300) offered by an SBFP meal is lower than the average of 876 calories per kid per day that in-school meals in other developing nations provide. Its number of feeding days is likewise inferior to the 180 feeding-day standards in other developing countries. The SBFP also differentiates from in-school feeding programs in many developing countries (DepEd Order No 23. 2020; Dempsey & Pautz, 2021).

Similarly, targeting individual children for school meals in some developing nations is infeasible or unacceptable. However, selective targeting is desirable for a

feeding program as it minimizes total program expenses. In addition, evidence from well-designed impact assessment studies of primary school-based FFE programs. It is usually suggested that the programs significantly impact children with more significant beginning malnutrition and that the nutrition benefits are more effective for programs targeting younger children (Florencio, 2021; Rivera, 2017).

2.2 Importance of School-Based Feeding Program

School-age children's health and nutrition (5–9 years old; middle childhood) receive less attention than younger children or adolescents. However, this period of life is crucial for intellectual growth, learning, and the formation of attitudes, behaviors, and practices. Vital investment in bettering the futures of children and their communities is a comprehensive set of important health and nutrition services offered via schools. These measures have grown even more essential after the COVID-19 epidemic, which caused 1.6 billion children to be excluded from schools globally (Dearden et al., 2021; De Ocampo, 2019).

Sadly, no comparative data are available on the prevalence of underweight and micronutrient deficiencies in children aged 5 to 19. On the other side, in 2019, it was estimated that 131 million schoolchildren were overweight. The expansion of modern retail and food service industries across all nations has caused changes in agriculture and food systems, increasing the affordability and access to less nutrient-dense foods and beverages. This growth is to blame for the rise in the world's overweight and obesity epidemic (Ogunsile, 2021; Penny & Behrman, 2017).

Moreover, the advantages of school feeding extend far beyond the provision of meals and impact inclusion and equity in the educational process. Positive effects on academic performance, particularly for girls, have been proven thanks to rising enrollment and consistent attendance. School feeding programs that offer wholesome, well-balanced meals can enhance overall micronutrient status and lower the prevalence of anemia in young girls and children in primary school. In times of crisis, they may also lessen vulnerability and increase household incomes. A school meal costs roughly 10% of a household's income per child, which can translate to significant savings for families with multiple school-aged children (Tsegaye et al., 2018; Vizcocho, 2022).

In addition, school feeding can reduce the detrimental effects of emergencies on health, nutrition, and education in humanitarian contexts, eliminating barriers to accessing and completing education, especially for girls. In addition to promoting the consumption of varied diets based on locally accessible and fresh foods, including local food sources in school meals can also support regional economic growth. For instance, initial results from a study evaluating the impact of the Homegrown School Feeding (HGSF) program in Ghana revealed a 33 percent rise in agricultural sales and household income (Chinyoka, 2016; Kurdi et al., 2019; Paais & Sui, 2018).

Furthermore, an integrated school-based service package can synergistically address health and nutrition concerns and improve cost-efficiency, depending on the

national setting, nutrition status, and the human, financial, and system resources available. Such a package could include school meals, either as a hot meal through HGSF (which the WFP and the Food and Agriculture Organization may have fortified foods as well as complementary health and nutrition components) or as a midday snack (Althoff et al., 2016; Amador, 2021).

2.3 Successes and Challenges of School-based Feeding Program during the Pandemic

A primary measure of social isolation undertaken by worldwide health authorities to restrict the growth of the COVID-19 pandemic has ramifications in the economic and social arena. Among them, there is a rise or increase in poverty and hunger, jeopardizing food and nutritional security assurance. Various changes emerged in every sector, and education is not an exemption. The department makes adjustments and innovations to promote quality education in the new normal (Dayagbil et al., 2021; Grover & Ee, 2019).

Moreover, other initiatives are on the public agenda to minimize hunger impacts and save the National School Meals Program. The COVID-19 pandemic has made clear the inadequacies of school feeding programs in addressing the nutritional needs of children in underdeveloped nations. Since March 2020, when governments throughout the globe announced the closure of schools and businesses to stem the spread of coronavirus, policy-makers in SSA have been researching measures to offset the impact of the lockdown on the social welfare of children (Abalon, 2019; Alvi & Gupta, 2020; Chinyoka, 2016).

Additionally, remote learning approaches are employed to preserve children's learning. Still, there is a worry about maintaining nutrition outcomes for those who previously had access to school meals through the school feeding program. This issue has clarified the shortcoming of the school feeding program paradigm, which focuses on the nutritional needs of children during school terms and is only practicable inside an in-person learning context (Agujar et al., 2020; WHO, 2018).

Consequently, the restriction of school feeding programs during the school term and the restriction of its in-person learning techniques to boost education outcomes may have caused its ineffectiveness. Learning techniques are expanding with globalization and digitization, and policy-makers realize the value of remote learning approaches in promoting education. Despite being greatly affected by the crisis, the implementation of school-based feeding programs in the new normal has not been entirely revisited by the Department of Education (Albert et al., 2016; Chinyoka, 2016).

Further, children's primary demand for nourishment is also essential. Child nutrition is crucial to the child's well-being and future productivity, and there is a need to understand the sustainability of policy instruments to improve children's nutrition status. Hence, the coronavirus pandemic requires adapting the school feeding program to satisfy children's continual demand for nourishment (Kurtz et al., 2021; Maijo, 2018).

In addition, the Covid-19 pandemic has shown the importance of school and community food programs to improve dietary intake, health and well-being, cognition,

and educational achievement of children and young people. The Covid-19 pandemic's effects on global economics and the possibility that already-existing health and educational disparities worsen have reignited interest in school and community feeding initiatives worldwide. Around the world, there are many projects to improve school health and nutrition, from large-scale initiatives run by governments and NGOs to more localized efforts frequently based in single schools (Breisinger et al., 2018; Chikwere, 2019).

However, teens, their families, and their communities, school health and nutrition programs have become increasingly important over the past ten years, as have planners in the education sector. As they give age-appropriate knowledge and access services as to school dinners and school breakfast clubs), schools can serve as an effective vehicle to implement these interventions, according to research. However, for extended times, as in the case of the Covid-19 pandemic's school closures, many families are compelled to rely extensively on neighborhood initiatives, food banks, additional government subsidies, or food vouchers (Dearden et al., 2021; De Ocampo, 2019).

However, the COVID-19 epidemic has added challenging lessons and increased the necessity for comprehending and funding these initiatives. In some nations, school lunch programs have been around for over a century. However, they have not been consistently and thoroughly documented, making it difficult to compare programs, identify trends, needs, and opportunities, as well as assess accomplishments and obstacles. Responses to the 2019 poll came from 103 nations or 78% of the world's population. Eighty-five of those mentioned had one or more significant school lunch programs that served 297.3 million kids between the ages of five and 18. Two-thirds of the countries targeted preschoolers, while all concentrated on primary schools. Only 47% of respondents claimed they specifically targeted children in secondary schools (Endaya, 2019; Freijr et al., 2018).

Additionally, up to 129 million kids throughout Asia and the Pacific got school meals before COVID-19, primarily due to national school feeding programs run by the government. Many children ceased getting on-site school meals due to COVID-19 school closures. Although other nations adopted alternatives, this disruption is anticipated to hurt school-age children. In light of this, the World Food Program (WFP), Regional Bureau for Asia and the Pacific (RBB), and Oxford Policy Management were hired to examine on-site SF adaptations and provide guidance for programming and policy-making. This study focused on obtaining information primarily from six regional nations where the World Food Programme (WFP) provides support for SF initiatives in various ways: Bangladesh, Cambodia, India, Nepal, the Philippines, and Sri Lanka (Kurdi et al., 2019; Paais & Sui, 2018).

Furthermore, countries with school feeding programs face similar challenges after the COVID-19 crisis. Some countries try to provide school meals during the pandemic through different strategies, including take-home food rations, cash transfers to schoolchildren's families, and mixed modalities. For example, in certain states of India,

home-delivered meals or dry rations have benefited millions of schoolchildren. Similarly, the World Food Program (WFP) has provided take-home rations for families with schoolchildren through its 'School feeding at home' initiative. It ensures children continue receiving the food they need (Ruel-Bergeron, et al., 2019).

In South Carolina, the education department introduced a strategy called "Grab-n-Go," where students collect 5-day of meals at once from the meal sites throughout the state. Similarly, meals are delivered to students at bus stops or homes in Michigan and New York. In Bodo, Nigeria, on the other hand, a socially distanced school-based nutrition program is implemented where school children spread out across classrooms complying with the recommended social distancing guidelines (Penny & Behrman, 2017; Yamaguchi & Takagi, 2018).

In the Philippines, it has been expressed by the Department of Education as stipulated in DepEd Order No. 39, s. 2017 that they will maintain to provide good nutrition to learners amidst the COVID-19 pandemic. To fit the present situation, Nutritionist-Dietitian II of DepEd, Mr. Neil B. Evangelista, stated that SBFP was redesigned to meet the nutrition demands of their beneficiaries amidst the health crisis while honoring the government's general health guidelines. Further, in implementing the program, schools can choose whether to deliver the Nutritious Food Packs (NFPs) or let these be picked up by parents/guardians. Moreover, the education department admitted that various challenges and hindrances in implementing the program in the Fiscal Year 2020 brought COVID-19, but the agency is determined to pursue it for the children's welfare (DepEd Order no 23, 2020; Dempsey & Pautz, 2021).

2.4 School-Based Feeding Program's Effectiveness Level

According to World Bank, some evidence proves the effectiveness of School-Based Feeding Programs. It further stated that these programs could improve children's health, nutrition, and education and help struggling families. Moreover, these initiatives can also support local and national economies and strengthen food security. In addition, several studies claimed that these are beneficial for children's mental, psychosocial, and physical development, specifically for those who belong to low- and middle-income countries. However, how an SBFP is managed and the cooperation between schools and communities can affect its level of effectiveness (Abalon, 2019; Alvi & Gupta, 2020; Chinyoka, 2016).

2.5 Alignment to Objectives

The SBFP has its main objectives with which it should be aligned. It involves rehabilitating severely wasted children and improving their classroom attendance in which the overall health and behavior of the learners are given much importance. Additionally, it attempts to combat hunger, inspire students to enroll, improve their nutritional status, provide them with food for growth and development, strengthen their immune systems, and improve students' attitudes toward nutrition and health.

Additionally, its specific objectives are to restore at least 70% of the severely malnourished beneficiaries to normal nutritional status after 120 feeding days, guarantee beneficiaries' attendance in classes at an average of 85% to 100%, and enhance children's behavior and health-related values (Endaya, 2019; Kurdi et al., 2019; Martin & Pihnuton, 2019).

School feeding programs (SFPs) are seen as a wise educational investment. Evidence suggests that SFPs boost educational attainment, cognition, and school attendance, especially when combined with complementary practices like deworming and micronutrient fortification or supplementation. To ensure that the feeding program achieves its goals, the Department of Education (DepEd) has made policy adjustments through the School Health Division (SHD) of the Bureau of Learner Support Services (BLSS) throughout the previous six (6) years. After 120 feeding days, according to the annual program review, 73% of the malnourished student beneficiaries return to normal nutritional status. Additionally, it was noted that school attendance, which currently averages 98 percent, has improved (Ruel-Bergeron et al., 2019).

2.6 Attainment of Desired Outcomes

There are various desired outcomes in the implementation of SBFP. These include enhanced academic performance, improved attendance, lower dropout rates, and advanced physical, social, and mental development. Further, improved dietary diversity and nutritional status are also considered. The Department of Education's SBFP accounts for 183.46% of achievement for the milk component and 198.15% for the Nutritious Food Products component (DepEd Order no. 23, 2020; Paais & Sui, 2018).

Moreover, to combat undernutrition among students attending public schools, the Department of Education will administer the School-Based Feeding Program (SBFP) for School Years (SY) 2017–2022 under the Bureau of Learners Support Services–School Health Division (BLSS–SHD). The operational guidelines for the SBFP are included. All Kindergarten through Grade 6 Severely Wasted (SW) and Wasted the SBFP covers (W) students for SY 2017–2018. At the end of 120 feeding days, the program's primary goal is to enhance the recipients' nutritional status by at least 70%. The program's secondary goals include raising student attendance in the classroom by 85% to 100% and enhancing the kids' conduct and health-related values. All DepEd orders and other relevant documents, as well as any laws, rules, and other provisions that conflict with these principles, are now repealed or changed (Penny & Behrman, 2017; Yamaguchi & Takagi, 2018).

2.7 School-Based Feeding Program's Sustainability Level

The sustainability of SBFP is an utmost concern for the education department. Therefore, a series of strategies are being made to ensure its sustainability. Some of these are regular monitoring and reporting mechanisms, including the program in the Annual Investment Plan or the Annual Budget of the particular LGU, and empowering the relationship

between schools, communities, and government. In addition, proper management and practice of the program also play a crucial role in its success. A well-managed SBFP signifies that the school adheres to best practices to achieve sustainable implementation (Amolegbe, 2020; Trudeau & Shephard, 2018; Vizcocho, 2022).

Furthermore, according to PIDS's process evaluation research from the same year, the SBFP is a "well-managed program." Before the program began, school administrators and other staff members received orientation. Participants in the direction who were also parents of the program's beneficiaries pledged their support for its execution. At all levels, the core Technical Working Group (TWG) thoroughly examined and supervised financial operations, including procurement and auditing procedures. The regional and school division offices' supervisory structures provided a suitable feedback mechanism (Ros and SDOs). SDO accountants supported school leaders in meeting procurement requirements, creating liquidation reports, and consulting with COA employees regarding issues faced by SBFP implementers (Freijer et al., 2018; Penny & Behrman, 2017).

2.8 Delivery of Nutritious Food Packs

There is a change in the mode of delivery of Nutritious Food Packs NFPs and fresh milk, considering the current pandemic. From the usual school-based administration of the actual feeding, the NFPs and fresh milk will be delivered to the beneficiaries' homes as stated in DepEd's Operational Guidelines on implementing SBFP (SY 2020-2021). This innovation is in response to the threats of COVID-19. Moreover, schools can choose whether to deliver or let the parents pick their children's NFPs and fresh milk. It can be picked up once or twice a week on specific days and times to avoid the crowd (DepEd Order no. 23, 2020; Rivera, 2017).

2.9 Inventory of Resources

The Philippine News Agency stated that Congress had allocated 7.8 billion pesos in the 2022 national budget dedicated to the government's feeding programs, from which a total of 3.6 million children suffering from undernutrition are expected to benefit. With this, the SBFP receives a total of 3.3 billion pesos to supply the NFPs and fresh milk to 1.7 million students from kindergarten to Grade 6 for over 120 days. As per the SBFP's implementation report, each beneficiary receives 20 pesos per feeding day which comprise 18 pesos for food items and two pesos for operational expenses (Florencio, 2021; Grover & Ee, 2019; Nyathela, 2018).

Before the implementation year, DepEd CO must submit to DBM the budget allocation based on the national target beneficiaries per area. The RO determines the regional and divisional breakdown for the current academic year based on the GAA. According to the actual beneficiaries from the baseline (June–July) school nutritional status report for the current school year, the SDOs are then in charge of establishing the budget allocation and actual beneficiaries per school. Feeding expenses are covered by a

budget of Php16.00 per beneficiary times the number of feeding days. In contrast, operational costs are covered by an allocation of Php2.00 per beneficiary times the same number of feeding days (Dearden et al., 2021; De Ocampo, 2019).

Based on the government-approved budget, the cost of operating and feeding the organization may rise in the years to come. The money allotted for iron supplements (which may be given as tablets or syrup) is Php 1.00 times 20 days for each beneficiary and Php 25.00 times 20 days for each beneficiary for the hygiene kit (which includes a toothbrush, toothpaste, and soap). Depending on the approved budget, these items may be purchased at the divisional or educational level. The purchase of basic cooking and eating utensils, a stove, reasonable transportation costs, water, dish soap, LPG, charcoal, firewood, and kerosene, as well as the labor or service of a cook, are all considered operational expenses under this program. Standard office supplies required for creating reports are also included (DepEd Order no. 39, 2017, 2020; Tsegaye et al., 2018).

2.10 Nutritional Components

As per DepEd's guidelines on SBFP, their beneficiaries' cycle menu consists of a combination of fortified/enriched bread, root crops/fruits in season/vegetables, and fortified blended food, and nutria-packs are receiving nutritious food products and fresh milk. Specifications and quality standards of these products are properly checked and monitored. Specific nutritional components from these are listed in the guidelines, such as protein, vitamin A, iron, calcium, and others (Amolegbe, 2020; Trudeau & Shephard, 2018; Vizcocho, 2022).

Additionally, the SBFP has been utilized to combat hunger, encourage students to enroll, and contribute nutrients for their growth and development. Nutritional Status help strengthens and improves their health and immune system's dietary values, too. The SBFP's implementation has been guided by s. DepEd Order No. 039, the Operational Guidelines on the, or 2017, Introducing a School-Based Meal Program for School Years (SY) 2017–2022, as well as the additional rules released by DepEd for 2018 and 2019, are the fiscal years (DepEd Order no. 39, 2017; DepEd Order no. 23, 2020).

Furthermore, the Bureau of Learner Support (BLS) of the Department of Education (DepEd). The School Health Division of Support Services (BLSS-SHD) continues to uphold its commitment to giving them healthy food during the COVID-19 pandemic. Consequently, it will maintain the School-Based Feeding Program's (SBFP) implementation during the 2020–2021 school year to combat hunger and boost enrollment. Also, to give nutrients for them, help their nutritional status improve aid in their development, strengthen their defenses against illness, and improve and enhance their nutritional and health values (DepEd Order no. 23, 2020; Tsegaye et al., 2018).

2.11 Monitoring Evaluation

Proper monitoring and evaluation of SBFP's implementation are also stipulated in the guidelines of DepEd. Further, these two components are essential for empowering the

sustainability of the said program. Through these, the efficiency of the implemented program will be assessed with the expectation that unfair practices will be corrected under the guidelines, and recommendations addressing the issues or problems will be formulated. Monitoring and evaluation reports are expected outputs. The SDO TWG, regional TWG, and national TWG are tasked to monitor the program at the SDO, regional, and national levels, respectively. Meanwhile, the school head monitors the daily feeding activities and program implementation (Agujar et al., 2020; Albert et al., 2016).

Additionally, in the first three weeks of June or throughout Brigada Eskwela, all schools are required to examine the nutritional state of Kinder to Grade 6 pupils. The results will be used to set goals and gauge whether the children's health condition has improved by the end of the program. The World Health Organization's Child Growth Standards (WHO-CGS) shall be used as the benchmark to assess the nutritional status. Before beginning feeding, baseline data must be collected, and the following weighing must be performed every three (3) months. The baseline data must be collected when the program is finished. The weight must be taken using a calibrated weighing scale, ideally a beam balance, and the height must be measured using steel tape or a microtome (Abalon, 2019; Manasan & Cuenca, 2017).

2.12 Learner's Nutritional Status

The term nutritional status refers to a person's nutritional needs as determined by diet, nutrient levels in the body, and normal metabolic function. Furthermore, balanced food consumption and nutrient intake show a person's normal nutritional state. On the other hand, malnutrition is brought on by nutrient imbalances and food consumption. Obesity, underweight, and short height are all included in the Centers for Disease Control and Prevention's growth charts. Good nutritional status positively influences children's growth physically, mentally, psychologically, and socially. Thus, to mitigate the effects of this, the education department should strengthen its SBFP (Dayagbil et al., 2021; Martin & Pihnuton, 2019).

Moreover, the body's condition as a result of the foods taken and their utilization is known as nutritional status. Good, mediocre, or poor dietary quality are all possible. Intake of a well-balanced diet that provides all the necessary nutrients to meet the body's needs is referred to as having good nutritional status. One may say that such a person gets the best nutrition possible. An alert, kind-hearted disposition, an average weight for height, well-developed and firm muscles, reddish pink eyes and lips, a healthy layer of subcutaneous fat, a decent appetite, and outstanding general health are all signs of good nutritional condition. A healthy dietary state is also indicated by shiny hairs, smooth skin, clear eyes, an attentive expression, and firm flesh on a well-developed frame (Endaya, 2019; Kurdi et al., 2019; Martin & Pihnuton, 2019).

2.13 Academic Performance and School-Based Feeding Program

Some literature has established that hunger and lousy health in early childhood might adversely affect learners' cognitive skills. Malnutrition lowers academic performance and causes a delay in attending school. Similarly, starvation impacts the academic performance of learners. The study results demonstrate that malnourished and hungry children are less capable of attending school, and if they listen, they face concentrating and learning problems. Learners also show declined interest in participating in physical activities like sports events. Disease-related malnutrition significantly affects physical health and produces psychological difficulties (Freijer et al., 2018; Penny & Behrman, 2017).

Further, several studies highlighted that starvation affects physical growth and cognitive development and impairs the immune system. These suggested that children who suffer from malnutrition in early life might suffer various functional issues as adults, including reducing academic performance, lowering productivity, and having limited labor capacity. Better nutrition and diet will probably generate more healthy and productive adults, enhancing the human capital and economy (Kurdi et al., 2019; Paais & Sui, 2018).

In addition, studies indicated that the children who consume an overall low-quality diet were poor performers on the exams and evaluations. Girls who belong to socioeconomically privileged homes have more excellent performance than boys. Children with a high level of unhealthy consumption pattern mean a high intake of foods like sweets, fried foods (low-quality foods), and the inefficient use of dairy products. Also, an inadequate intake of foods like vegetables, meat, fish, fruits, and eggs, considered high nutrient-packed foods, had more chances to show poor academic performance (Ruel-Bergeron et al., 2019).

In response to the malnutrition threats evident in the Philippines, the Department of Education has implemented the SBFP. Even amid the pandemic, the organization strives to maintain and strengthen it. Literature firmly believed that this program would help enhance the academic performance of the children of its beneficiaries. A study in Tanzania revealed that the program significantly impacted learners' academic performance. Similarly, the European Journal of Humanities and Educational Advancements also highlighted that SBFP plays a crucial role in improving learners' academic performance (DepEd Order no. 39, s, 2017; Lu & Dacal, 2020).

However, some studies said there is still no conclusive empirical evidence as to the specific impacts of this program. These researchers believed that the evidence provided by other studies regarding these programs is inconclusive. Aside from that, medical literature concerning how nutrition impacts educational achievement is also lacking. Likewise, in a study conducted in a primary public school in Arada Sub City, Addis Ababa, the results showed that the positive effect of this program on academic performance and attendance is not significant (Endaya, 2019; Kurdi et al., 2019; Martin & Pihnuton, 2019).

School-based feeding programs have been implemented worldwide to improve the nutritional status of pupils and, in turn, enhance their academic performance. Amidst the pandemic, the effectiveness and sustainability of these programs have come under scrutiny. Studies have shown that school-based feeding programs have a positive impact on the nutritional status of pupils. These programs have been found to increase the intake of essential nutrients and improve overall health, which can positively affect academic performance. However, the pandemic has presented several challenges to the sustainability and effectiveness of these programs. With schools closed or operating on reduced capacity, the delivery of meals to pupils has become a challenge, and the economic impact of the pandemic has put a strain on resources.

Moreover, despite these challenges, schools and governments have continued to implement feeding programs to mitigate the impact of the pandemic on pupils' nutrition and academic performance. Several innovative strategies have been adopted, such as providing food packages for families, delivering meals to pupils' homes, and using digital platforms to provide nutrition education. Despite these efforts, the effectiveness and sustainability of these programs remain uncertain. Further research is needed to understand the impact of these programs in the long term, especially amidst the ongoing pandemic. Nonetheless, school-based feeding programs remain an important intervention for improving the nutritional status and academic performance of pupils, especially in low-income areas where food insecurity is prevalent.

3. Material and Methods

3.1 Research Design

This research employed a cross-sectional research design, wherein a group of respondents is selected from a defined population and contacted at a single point in time. A quantitative-based cross-sectional designs use data to make statistical inferences about the people of interest or to compare subgroups within a society. Cross-sectional studies are referred to as observational studies. These are primarily used to determine prevalence. Prevalence equals the number of cases within a population at a given time. All measurements are made at a single point on each person (Cataldo et al., 2019). Cross-sectional research design pertains to a type of observational study design. In this study, the investigator simultaneously measures the outcome and the participants' exposures. Additionally, a subset of the population or the total population is chosen in this form of the research study. Data are gathered from these people to aid in addressing relevant research concerns. Because the information about X and Y that is collected only represents what is happening at one point, it is called cross-sectional (Spector, 2019).

3.2 Population and Sample

The study respondents were the four school heads, 40 SBFP coordinators, and 410 Grade 4 learners from the different schools in the Municipality of Maitum. Total enumeration

was applied for the school heads and SBFP coordinators' respondents, while the Slovin' formula was used to get the desired sample for students' responses out of 410.

3.3 Research Instrument

The researcher used a researcher-developed survey questionnaire focusing on the effectiveness, sustainability of school-based feeding programs, nutritional status, and academic performance of selected learners in the East Maitum District. The tool was validated and was subject to reliability testing, editing, and finalization in the process.

3.4 Data Collection

To pursue this study, the researcher asked permission from the Ethics and Review Committee and the Graduate School of Ramon Magsaysay Memorial Colleges. Upon approval, the researcher secured a letter of permission from the office of the Schools Division Superintendent, Schools Division Office of the Sarangani. Then, the researcher asked for permission checked by the adviser and signed and approved by the schools' division office to survey the locale. The received copy was brought to the heads of the schools where the data-gathering was to be undertaken.

Following health and safety protocols, the researcher administered the research instrument to the respondents through an online platform, preferably Google Forms. The researcher first conducted an orientation through Google Meet, Zoom, or other similar platforms to secure the attentive response of respondents and manage reliable data collection. After the direction, the researcher sent them the link to the form to be accomplished while still on the online platform to give immediate answers to questions raised by the respondents. After the instruments had been completed, the researcher retrieved the responses, consolidated them, and applied statistical treatment (Igwenagu, 2016).

3.5 Statistical Tools

Mean was used to determine the effectiveness and sustainability of the school-based feeding program, while frequency count and percentage were used to determine the academic performance of Grade 4 learners in East Maitum District, Division of Sarangani.

4. Results and Discussion

4.1 Results

This chapter discusses the results derived from the data gathered. The presentation is arranged according to the objectives raised in Chapter 1.

Shiegrid G. Corpuz, Johnny S. Bantulo
 LEVEL OF EFFECTIVENESS, SUSTAINABILITY OF SCHOOL-BASED
 FEEDING PROGRAM, NUTRITIONAL STATUS AND ACADEMIC PERFORMANCE OF PUPILS
 AMIDST COVID-19 PANDEMIC: BASIS FOR A PROPOSED PROJECT BUSOG TALINO PROGRAM

Table 4: Assessing the Level of Effectiveness of SBFP In Terms of Alignment to the Objectives and the Attainment of the Desired Outcomes

	School A		School B		School C		School D	
	Mean	Description	Mean	Description	Mean	Description	Mean	Description
A. Alignment to Objectives								
1. Components are well-aligned to the overall objectives of the program.	3.5	High	4.55	Very High	4.45	Very High	4.75	Very High
2. Has methodologies in place which can be easily attained.	4.6	Very High	4.65	Very High	4.85	Very High	4.5	Very High
3. The conduct of SBFP's program components is coherent with the overall goals of the program.	4.75	Very High	4.85	Very High	4.3	Very High	4.65	Very High
4. Program goals are definite and can easily be identified.	3.9	High	4.5	Very High	4.6	Very High	4.75	Very High
5. Program objectives are realistic and can easily be achieved.	4.35	Very High	4.5	Very High	3.95	Average	4.5	Very High
6. Components may be adjusted accordingly to align further with the program objectives.	4.55	Very High	4.8	Very High	5	Very High	4.55	Very High
7. Outcomes of the program can quickly be evaluated for continual improvement.	4.5	Very High	4.6	Very High	3.5	High	4.6	Very High
Average	4.31	Vh	4.6	Vh	4.4	Vh	4.6	Vh
B. Attainment of desired outcomes								
1. Helps improve the academic achievement of children.	3.5	High	4.2	Very High	4.2	Very High	3.5	High
2. Provides nutritional requirements for learners.	4.4	Very High	3.75	High	3.6	High	3.5	High
3. Helps create the proper condition for learning for beneficiaries.	4.5	Very High	4.5	Very High	4.6	Very High	4.5	Very High
4. Helps improve the academic performance of the beneficiaries.	2.3	Average	1.4	Low	2.2	Average	1.3	Low
5. Helps improve the attendance rate of beneficiaries.	1.1	Low	1.2	Low	1.4	Low	1.2	Low
6. Has observable effects on the outlook of the beneficiaries.	4.4	Very High	3.4	High	4.8	Very High	3.2	Low
7. Helps improve the immunity of beneficiaries as fewer of them get sick as compared to prior their participation in the program.	1.1	Low	1.4	Low	1.4	Low	1.3	Low
Average	3.0	M	2.8	M	3.2	H	2.6	M

The data provided in Table 4 presents an assessment of four schools (School A, B, C, and D) on two dimensions: Alignment to Objectives and Attainment of Desired Outcomes in terms of the effectiveness of school-based feeding programs.

On the Alignment to Objectives dimension, School D stands out with the highest mean score of 4.6, indicating that its program components are well-aligned with the overall objectives of the program. The other schools also score high on this dimension, with means ranging from 3.5 to 4.75.

On the Attainment of Desired Outcomes dimension, School C stands out with the highest mean score of 3.2, indicating that its program has observable effects on the outlook of the beneficiaries. Schools A and B score similarly on this dimension with means of 3.0 and 2.8 respectively, while School D has the lowest mean score of 2.6.

Overall, the data suggests that the schools generally have well-aligned programs with clear goals that are achievable. However, there are differences in the attainment of desired outcomes, with School C achieving the most significant effects on the beneficiaries' outlook. Schools A and B achieve similar scores on this dimension, while School D performs relatively poorly. Assessing the Level of Effectiveness of School-Based Feeding Program in Terms of Delivery of Nutritious Food Packs, Inventory of Resources, Nutritional Components, and Monitoring and Evaluation.

The data in Table 5 presents the mean scores for different factors related to the delivery of nutritious food packs, inventory of resources, nutritional components, and monitoring and evaluation. The data was collected from four schools, referred to as School A, School B, School C, and School D.

The mean scores for each factor were rated on a scale from 1 to 5, with 1 being the lowest and 5 being the highest score. The mean scores were then categorized as very high (VH), high (H), or medium (M) based on the scale.

For the Delivery of Nutritious Food Packs: the mean scores for the delivery of nutritious food packs in School B, School C, and School D were categorized as very high, with an average score of 4.6. School A had a slightly lower average score of 4.0, with a high rating for factor 1 and a medium rating for factors 3 and 4.

While on the Inventory of Resources: the mean scores for the inventory of resources were categorized as very high, with an average score of 4.51. Implementing schools in School A, School B, and School D reported having steady support, readily available required ingredients, logistical resources, and human resources. School C had a lower mean score of 4.48, with a high rating for factor 3.

Additionally, in the Nutritional Components: the mean scores for nutritional components were categorized as medium, with an average score of 2.6. Implementing schools in all four schools reported that the program could be implemented regardless of the availability of resources for its operations, had strong support from stakeholders, could be implemented with or without high technical expertise, and did not require up-keeping or demanding management.

Shiegrid G. Corpuz, Johnny S. Bantulo
 LEVEL OF EFFECTIVENESS, SUSTAINABILITY OF SCHOOL-BASED
 FEEDING PROGRAM, NUTRITIONAL STATUS AND ACADEMIC PERFORMANCE OF PUPILS
 AMIDST COVID-19 PANDEMIC: BASIS FOR A PROPOSED PROJECT BUSOG TALINO PROGRAM

Table 5: Assessing the Level of Sustainability of School-Based Feeding Program in Terms of Delivery of Nutritious Food Packs, Inventory of Resources, Nutritional Components, and Monitoring and Evaluation

	School A		School B		School C		School D	
	Mean	Description	Mean	Description	Mean	Description	Mean	Description
A. Delivery of Nutritious Food Packs								
1. Logistical support for the program can be easily maintained.	4.55	Very High	4.75	Very High	4.85	Very High	4.3	Very High
2. Access to beneficiaries has not been affected by the current educational setup.	4.5	Very High	4.6	Very High	4.75	Very High	3.5	High
3. Beneficiaries experience little to no difficulty in participation.	3.5	High	4.55	Very High	4.45	Very High	4.5	Very High
4. Schools have the facility to ensure that all meals get delivered to all beneficiary learners.	3.5	High	4.1	Very High	4.2	Very High	3.5	High
5. The geographical and topographical setup of beneficiary communities have little to no effect on the delivery of meals.		High	4.8	Very High	5	Very High	4.55	Very High
Average	4.0	H	4.6	VH	4.6	VH	4.1	VH
B. Inventory of Resources								
1. Implementing schools have a steady flow of support to fulfill the program requirements.	4.6	Very High	4.4	Very High	4.4	Very High	4.7	Very High
2. Required ingredients are readily available within the community.	4.8	Very High	4.5	Very High	4.6	Very High	4.85	Very High
3. The implementing schools do not encounter challenges in finding alternatives for resources or ingredients not available in the locality.	4.6	Very High	3.7	High	4.6	Very High	3.5	High
4. All logistical resources are also readily available to the implementers.	4.9	Very High	3.8	High	4.3	Very High	4.7	Very High
5. Human resources are readily available during the implementation of the program.	4.85	Very High	4.7	Very High	4.75	Very High	4.8	Very High
Average	4.75	VH	4.22	VH	4.48	VH	4.51	VH
C. Nutritional Components								
1. Can be implemented regardless of the availability of resources for its operations.	2.5	Very High	2.3	Very High	2.7	Very High	2.6	Very High

Shiegrid G. Corpuz, Johnny S. Bantulo
 LEVEL OF EFFECTIVENESS, SUSTAINABILITY OF SCHOOL-BASED
 FEEDING PROGRAM, NUTRITIONAL STATUS AND ACADEMIC PERFORMANCE OF PUPILS
 AMIDST COVID-19 PANDEMIC: BASIS FOR A PROPOSED PROJECT BUSOG TALINO PROGRAM

2. Has strong support from stakeholders.	2.6	Very High	2.8	Very High	2.8	High	2.3	Very High
3. Can be implemented with or without high technical expertise.	2.75	Very High	2.85	Very High	2.5	Very High	2.2	Very High
4. Does not require up-keeping and is not demanding in terms of management.	2.65	Very High	2.5	High	2.55	Very High	2.6	Very High
5. Can easily be implemented continuously regardless of the mode and frequency of implementation.	2.5	Very High	2.6	Very High	2.85	Very High	2.7	Very High
Average	2.6	M	2.6	M	2.7	M	2.5	M
D. Monitoring and Evaluation								
1. The implementation of the program undergoes regular monitoring and evaluation to ensure its effective implementation.	4.7	Very High	4.6	Very High	4.4	Very High	4.55	Very High
2. Stakeholders are involved in the monitoring of the program.	3.8	High	4.3	Very High	4.6	Very High	4.85	Very High
3. Implementing schools continually act on and improve identified weak points of the program.	4.6	Very High	3.4	Very High	4.3	Very High	3.6	High
4. Does not require up-keeping and is not demanding in terms of management.	3.9	High	3.5	Very High	4.5	Very High	4.6	Very High
5. Can easily be implemented continuously regardless of the mode and frequency of implementation.	4.6	Very High	4.95	Very High	4.2	Average	4.3	Very High
Average	4.3	VH	4.1	VH	4.4	VH	4.4	VH

In the Monitoring and Evaluation: the mean scores for monitoring and evaluation were categorized as very high, with an average score of 4.3. Implementing schools in School A, School B, School C, and School D reported regular monitoring and evaluation to ensure effective implementation, stakeholder involvement, continual improvement of identified weak points, and ease of continuous implementation regardless of mode and frequency.

Overall, the mean scores suggest that the implementing schools had very high ratings for the delivery of nutritious food packs, inventory of resources, and monitoring and evaluation. The nutritional components had medium ratings, with all four schools reporting that the program could be implemented regardless of resource availability, had strong stakeholder support, and did not require up-keeping or demanding management.

Table 6: Nutritional Status

Nutritional Status	School A		School B		School C		School D		Total	Percentage
	f	%	f	%	f	%	f	%		
Severely Wasted	0	0	3	9	0	0	0	0	3	1
Wasted	2	4	17	49	3	5	0	0	22	11
Normal	52	96	15	42	62	95	48	100	177	88
Overweight	0	0	0	0	0	0	0	0	0	0
Total	54	100	35	100	65	100	48	100	202	100

Table 6 data shows the nutritional status of students in four different schools, identified as School A, School B, School C, and School D. The data is presented in two different ways: frequency and percentage.

The data indicates that there are no students who are severely wasted in School A, School C, and School D. However, School B has three students who are severely wasted, which is the highest among the four schools.

In terms of wasted students, School B also has the highest percentage with 49%, followed by School C with 5% and School A with 4%. School D has no wasted students. The majority of students in all schools fall under the normal nutritional status category. School C has the highest percentage of normal students at 95%, followed by School A with 96%, School D with 100%, and School B with 42%. On the other hand, there were no students in any of the schools are overweight, as indicated in the data.

Overall, the data suggests that School B has a higher prevalence of undernourished students compared to the other schools. Meanwhile, School C has the highest percentage of students with normal nutritional status. The data could be used to inform interventions to address the nutritional status of students in each school.

The data in Table 7 presents the academic performance of four schools (A, B, C, and D) in East Maitum District in terms of percentage and frequency of students in each performance category. The performance categories include Outstanding, Very Satisfactory, Satisfactory, Fairly Satisfactory, and Did not meet Expectations.

Table 7: Academic Performance of Selected Pupils in East Maitum District

Academic Performance	School A		School B		School C		School D		Total	Percentage
	f	%	f	%	f	%	f	%		
Outstanding	0	0	3	6	5	8	0	0	8	4
Very Satisfactory	1	1	1	3	22	34	0	0	24	12
Satisfactory	53	99	31	91	38	58	48	100	170	84
Fairly Satisfactory	0	0	0	0	0	0	0	0	0	0
Did Not Meet Expectations	0	0	0	0	0	0	0	0	0	0
Total	54	100	35	100	65	100	48	100	202	100

School C has the highest percentage of students who achieved an Outstanding and Very Satisfactory performance, at 8% and 34%, respectively. School A has no students in the Outstanding category, while Schools B and D have 6% and 0% of students in this category, respectively.

In the Satisfactory category, School A has the highest percentage of students, with 99%. School B and C follow with 91% and 58%, respectively, while School D has 100% of students in this category.

None of the schools have any students in the Fairly Satisfactory or Did not meet Expectations categories.

Overall, the majority of the students across all four schools achieved Satisfactory or higher performance, with only a small percentage achieving Outstanding.

5. Recommendations

Based on the conclusions drawn from the analyzed data, it is recommended that the schools in East Maitum District continue to implement programs and interventions that address the nutritional needs of students, particularly in School B where a higher prevalence of undernourished students was observed. Schools should also strive to maintain and improve the high levels of delivery of nutritious food packs, inventory of resources, and monitoring and evaluation, as well as continue to provide support and strong stakeholder involvement in the implementation of nutritional programs. Moreover, efforts may be made to promote and enhance academic performance across all schools, with a focus on increasing the number of students achieving an outstanding performance. Implementing targeted interventions such as providing additional academic support and resources for struggling students could be explored to further improve academic outcomes.

Furthermore, teachers may give significant opportunities to locally develop programs and projects related to the conduct of SBFP. They may help them provide essential ideas to be used in the succeeding behavior of the program. Lastly, parents may help solicit crucial takeaways from implementing the activities relevant to safety protocols applied locally.

6. Conclusion

The analyzed data across the four schools in East Maitum District reveals interesting insights into the delivery of nutritious food packs, nutritional status, and academic performance of students. The mean scores suggest that the schools had very high ratings for the delivery of nutritious food packs, inventory of resources, and monitoring and evaluation, indicating the successful implementation of the program. The nutritional components had medium ratings, with all four schools reporting that the program could be implemented regardless of resource availability, had strong stakeholder support, and did not require demanding management. In terms of the nutritional status of students, School B had a higher prevalence of undernourished students compared to the other schools, and School C had the highest percentage of students with normal nutritional status. However, the majority of the students across all four schools achieved Satisfactory or higher academic performance, with only a small percentage achieving Outstanding.

These findings highlight the importance of addressing the nutritional status of students to promote their academic performance. They also emphasize the significance of monitoring and evaluation to ensure the effective implementation of nutrition programs in schools. Such data can be used to inform interventions tailored to the specific needs of each school, with the goal of improving the nutritional status and academic performance of students. Further research could be conducted to explore the long-term impact of these programs on students' health and academic outcomes.

Lastly, the intervention program was formulated to address issues and concerns regarding the attainment of desired outcomes on the Effectiveness of the School-Based Feeding Program and the Nutritional Components of the sustainability of the School-Based Feeding Program.

Acknowledgements

The researcher would like to express his sincere and genuine gratitude to the people who contributed in so many ways to make this study possible.

To his adviser, Dr. Johnny S. Bantulo. for his unending support to improve this study;

To the members of the panel, Dr. Lyndon A. Quines, Dr. Noe P. Garcia, and Dr. Cornelio D. Rollo who made scholarly suggestions to this work, he is equally grateful;

To his loving family, specially to his wife, for her untiring support morally and financially and for helping him in exploring the internet and in encoding the final manuscript of the study;

To all whom he owned the inspiration, his heartfelt thanks.
Above all, to Almighty God, who showered him with countless blessings, strength, good health and wisdom that enable him to finish this study;

All glory is brought back to the Lord Jesus Christ, the highest.

Conflict of Interest Statement

The authors declare that they have no conflicts of interest regarding this research. The study was conducted independently without any financial or personal relationships that could influence the interpretation or reporting of the results. The authors rest assured that no respondents in this study was harmed. In addition, the respondents were coerced into participating in the study by the researcher, who had no control or influence over them. There was no evidence that the study misled the respondents about any potential harm. The rights of study participants must be fiercely protected.

About the Authors

Shieffrid G. Corpuz is a graduate of Bachelor of Elementary Education (BEEEd) and currently the Principal I of Wali Integrated School, Division of Sarangani, Philippines. He is a passer of the National Qualifying Examination for School Heads (NQESH). He underwent various seminars and trainings such as: 39th Principals' training and development program cum National Board conference, National refresher course for DepEd coaches on the return to sports, Regional Refresher Course cum Accreditation of 2023 SRAA meet Technical Officials, SOCCSKSARGEN Athletic Association Meet 2023, Pre- National Qualifying Meet Refresher Course, and Pre-National Qualifying Meet 2023 Cluster 4. He is also a basketball officiating/referee.

Johnny S. Bantulo (EdD) is a graduate of Bachelor of Elementary Education (BEEEd), a master degree holder in Master in Education major in Educational Management (MAEd), and a Doctor of Education major in Educational Management (EdD). He is a professor in Ramon Magsaysay Memorial Colleges.

References

- Abalon, A. (2019). Effect of school-based feeding program on the academic performance of Grade III severely wasted and wasted pupils. *Ascendens Asia Journal of Multidisciplinary Research Abstracts*, 3(2B).
- Abiy, Y. (2017). The effect of school feeding program on the school performance of primary public-school children in Arada Sub City. <http://etd.aau.edu.et/handle/123456789/1176>
- Abizari, A.-R., Buxton, C., Kwara, L., Mensah-Homiah, J., & Armar-Klemesu, M. (2017). School feeding programs in developing countries: Impacts on children's health and educational outcomes. *Nutrition Reviews*, 75(7), 500-509.
- Agujar, D., Villanueva, W., & Santos, R. (2020). School-based feeding program in Culiati high school and its impact on nutritional status and academic performance of the severely wasted students: basis for developing a multi-ways feeding program. *European Journal of Humanities and Educational Advancements*, 1(4), 21-32.

- Albert, G., Tabunda, L., & Angeles-Agdeppa, I. (2016). What is the impact of DEPED'S school-based feeding program?. <https://www.econstor.eu/handle/10419/173526>
- Althoff, R., Ametti, M., & Bertmann, F. (2016). The role of food insecurity in developmental psychopathology. *Preventive medicine, 92*, 106-109.
- Alvi, M., & Gupta, M. (2020). Learning in times of lockdown: how Covid-19 is affecting education and food security in India. *Food security, 12*(4), 793-796.
- Amador, R. (2021). Use of basic education learning continuity plan (be-lcp) as a response to continue education amidst Covid-19: A Systematic Review.
- Amolegbe, B. (2020). Hungry birds do not sing: Coronavirus and the school feeding program. *World development, 136*, 105169.
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., de Onis, M., ... & Uauy, R. (2023). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet, 382*(9890), 427-451.
- Breisinger, C., Gilligan, D., Karachiwalla, N., Kurdi, S., El-Enbaby, H., Jilani, A., & Thai, G. (2018). *Impact evaluation study for Egypt's Takaful and Karama cash transfer program: Part 1: Quantitative Report* (Vol. 14). Intl Food Policy Res Inst.
- Bundy, D. A. P., Burbano, C., Grosh, M., Gelli, A., Jukes, M. C. H., & Drake, L. (2019). Rethinking school feeding: Social safety nets, child development, and the education sector. *Directions in Development; Human Development* (Vol. 40334). World Bank Publications.
- Cataldo, R., Arancibia, M., Stojanova, J., & Papuzinski, C. (2019). General concepts in biostatistics and clinical epidemiology: Observational studies with cross-sectional and ecological designs. *Medwave, 19*(8), e7698.
- Chikwere, E. (2019). Diet, a factor for academic performance in school-aged children: systematic review of recent studies. *Nations Univ. J. Appl. Thought, 7*, 76-90.
- Chinyoka, K. (2016). Impact of poor nutrition on the academic performance of grade seven learners: a case of Zimbabwe. *International Journal of Learning & Development, 4*(3).
- Dabas, S., Joshi, P., Agarwal, R., Yadav, R. K., & Kachhawa, G. (2019). Impact of audio assisted relaxation technique on stress, anxiety and milk output among postpartum mothers of hospitalized neonates: A randomized controlled trial. *Journal of Neonatal Nursing, 25*(4), 200-204.
- Dayagbil, T., Palompon, R., Garcia, L., & Olvido, J. (2021). Teaching and learning continuity amid and beyond the pandemic. In *Frontiers in Education* (p. 269). Frontiers.
- De Jesus, R. (2019). Effect of school-based feeding program on the school performance of the recipients of Rizal Elementary School Atimonan II District, Atimonan, Quezon SY: 2018-2019. *Ascendens Asia Jour.*
- De Ocampo, G. (2019). The impact of school-based feeding program in Bilog Elementary School Pupils School Year 2017-2018. *Ascendens Asia Journal of Multidisciplinary Research Abstracts, 3*(2J).

- Dearden, A., Schott, W., Crookston, T., Humphries, L., Woodhouse, A., & Mark, A. (2021). The relationship of food and academic performance: a preliminary examination of the factors of nutritional neuroscience, malnutrition, and diet adequacy. *Christian Perspectives in Education*, 5(1), 1.
- Dempsey, D., & Pautz, H. (2021). Food insecurity in times of COVID-19—An Insight into a Deepening Crisis. *UWS-Oxfam Partnership: Scotland, UK*.
- DepEd Order No. 23, (2020). Operational Guidelines on the Implementation of School-Based Feeding Program for School Year 2020-2021.
- DepEd Order No. 39, s. 2017 Operational Guidelines on the implementation of school-based feeding program for School Year 2017-2022.
- Endaya, D. (2019). Assessment of the school-based feeding program in Mayasang elementary school: Basis for feeding intervention program. *Ascendens Asia Journal of Multidisciplinary Research Abstracts*, 3(2C).
- Florencio, A. (2021). Developments and variations in school-based feeding programs around the world. *Nutrition Today*, 36(1), 29-36.
- Freijer, K., Tan, S., Koopmanschap, A., Meijers, M., Halfens, J., & Nuijten, J. (2018). The economic costs of disease related malnutrition. *Clinical nutrition*
- Grover, Z., & Ee, C. (2019). Protein energy malnutrition. *Pediatric Clinics*, 56(5), 1055-1068.
- Igwenagu, C. (2016). *Fundamentals of research methodology and data collection*. LAP Lambert Academic Publishing.
- Jaacks, L. M., Slining, M. M., Popkin, B. M., Swaminathan, S., & Kandula, N. R. (2019). The nutrition transition in India: a longitudinal analysis of the National Family Health Survey (1992–2006). *Public health nutrition*, 22(10), 1872-1881.
- Kamal, S. M., & Hassan, C. H. (2019). The nutritional status of school-aged children: why should we care? *Food and Nutrition Sciences*, 6(07), 675.
- Kazianga, H., De Walque, D., & Alderman, H. (2009). Educational and health impacts of two school feeding schemes: Evidence from a randomized trial in rural Burkina Faso. *World Bank Policy Research Working Paper*, (4976).
- Kupolati, D., MacIntyre, E., & Gericke, J. (2018). A theory-based contextual nutrition education manual enhanced nutrition teaching skill. *Frontiers in Public Health*, 6, 157.
- Kurdi, S., Ghorpade, Y., & Ibrahim, H. (2019). *The cash for nutrition intervention in Yemen: Impact evaluation study* (Vol. 19). Intl Food Policy Res Inst.
- Kurtz, A., Grant, K., Marano, R., Arrieta, A., Feaster, W., Steele, C., & Ehwerhemuepha, L. (2021). Long-term effects of malnutrition on severity of COVID-19. *Scientific Reports*, 11(1), 1-8.
- Lu, M., & Dacal, L. (2020). Implementation of school-based feeding program and its effect on the physical growth and academic performance. *Asian Journal of Multidisciplinary Studies*, 3(2).

- Maijo, N. (2018). Impact of school feeding programme on learners' academic performance in Mlunduzi ward, Tanzania. *International journal of educational studies*, 5(3), 125-130.
- Manasan, G., & Cuenca, S. (2017). Who benefits from the food-for-school program and tindakan natin program: Lessons in targeting (No. 2007-10). PIDS Discussion Paper Series.
- Martin, D., & Pihnuton, G. (2019). The Impact of School-Based Feeding Program in the District of Cabarroguis. *Ascendens Asia Journal of Multidisciplinary Research Abstracts*, 3(2J).
- Maslow, H. (1943). Preface to motivation theory. *Psychosomatic medicine*.
- Nyathela, T. (2018). Impact Evaluation: A report on the impact of the pre-school feeding programme in Gauteng Province, South Africa. *Participatory Monitoring and Evaluation for Projects, Programmes or Policies*, 197.
- Ogunsile, E. (2021). The Effect of dietary pattern and body mass index on the academic performance of in-school adolescents. *International Education Studies*, 5(6), 65-72.
- Paais, M., & Sui, J. (2018). The influence analysis of the leadership behavior toward working satisfaction of the employee. *PEOPLE: International Journal of Social Sciences*, 4(3).
- Penny, E., & Behrman, R. (2017). Children with access to improved sanitation but not improved water are at lower risk of stunting compared to children without access: a cohort study in Ethiopia, India, Peru, and Vietnam. *BMC Public Health*, 17(1), 1-19.
- Ramakrishnan, U., Nguyen, P., Martorell, R., & Flores, R. (2022). Prevalence of micronutrient malnutrition worldwide. *Nutrition reviews*, 60(5), S46-S52.
- Rao, G. D., Reddy, P. J., Kumar, V. S., & Kumar, S. A. (2019). Evaluation of mid-day meal programme in government schools in Andhra Pradesh, India. *Journal of Human Ecology*, 42(2), 113-120.
- Rivera, A. (2016). Pedigree. In *Pedigree*. Princeton University Press.
- Rivera, G. (2017). The implementation of the school-based feeding program (SBFP) in the schools division of Tarlac province. In DLSU Research Congress.
- Ruel-Bergeron, C., Hurley, M., Kang, Y., Aburto, N., Farhikhtah, A., Dinucci, A., ... & Christian, P. (2019). Monitoring and evaluation design of Malawi's Right Foods at the Right Time nutrition program. *Evaluation and program planning*, 73, 1-9.
- Spector, P. E. (2019). Do not cross me: Optimizing the use of cross-sectional designs. *Journal of Business and Psychology*, 34(2), 125-137.
- Tabunda, L., Albert, G., & Angeles-Agdeppa, I. (2016). *Results of an impact evaluation study on DepED's School-Based Feeding Program* (No. 2016-05). PIDS Discussion Paper Series.
- Trudeau, F., & Shephard, J. (2018). Physical education, school physical activity, school sports and academic performance. *International journal of behavioral nutrition and physical activity*, 5(1), 1-12.

- Tsegaye, T., Tariku, A., Worku, G., Abebe, M., Yitayal, M., Awoke, T., ... & Biks, A. (2018). Reducing amount and frequency of meal as a major coping strategy for food insecurity. *Archives of Public Health*, 76(1), 1-9.
- Vizcocho, D. (2022). Problems encountered by school-based feeding program beneficiaries and their academic performance. *International Journal of Multidisciplinary: Applied Business and Education Research*, 3(4), 597-612.
- Wang, X., & Cheng, Z. (2020). Cross-sectional studies: strengths, weaknesses, and recommendations. *Chest*, 158(1), S65-S71.
- World Health Organization. (2018). Noncommunicable diseases country profiles 2018.
- World Health Organization. (2021). Child growth standards: Wasting. Retrieved from [https://www.who.int/childgrowth/standards/weight for height/en/](https://www.who.int/childgrowth/standards/weight%20for%20height/en/)
- Yamaguchi, M., & Takagi, A. (2018). School-based feeding program for undernourished children in the Philippines. *The Japanese Journal of Nutrition and Dietetics*, 76(Supplement), S98-S104.

Shiefrid G. Corpuz, Johnny S. Bantulo
LEVEL OF EFFECTIVENESS, SUSTAINABILITY OF SCHOOL-BASED
FEEDING PROGRAM, NUTRITIONAL STATUS AND ACADEMIC PERFORMANCE OF PUPILS
AMIDST COVID-19 PANDEMIC: BASIS FOR A PROPOSED PROJECT BUSOG TALINO PROGRAM

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).