



School Food Environments in the Philippines

Research Brief #03

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School food environments (SFE)- which include school cafeterias, fast-food restaurants, supermarkets, and other forms of food outlets and food vendors found in the vicinity of the school- offer a unique opportunity to address malnutrition among school children. **SFE interventions** can **promote fruit and vegetables consumption**, as well as set children on a life-long path of **healthy and sustainable eating behaviors**.

Key Findings

There are only a **few studies** characterizing **SFE** in the Philippines. However, there is **growing interest** in examining SFE from both non-government organizations and government agencies.

While **school-based feeding, school gardening and nutrition education** initiatives have been established, information on the **evaluation** of such initiatives and related policy is **scant**. Sporadic efforts to assess their implementation and a lack of national-level analysis and synthesis reports has resulted in only **limited evidence** of their effectiveness.

The **articulation, operationalization and scope** of **policies and ordinances** issued by the Department of Education (DepEd), as well as local government units, to promote fruit and vegetable consumption in schools, can be **improved**.

The **absence** of a **legal basis** for sourcing financial and human resources and the budget for certain SFE initiatives coming from **regular school operating funds**, has resulted in **resource allocation challenges**.

Recommendations

Prioritize **further research on SFE**- specifically qualitative/lived experiences analysis and geospatial analysis of the food environment and vendors outside and around schools.

Set up regular, standard **evaluations** of school-based food and nutrition interventions. Comprehensive **bottleneck analyses** can also be used to identify challenges and to facilitate factors in implementation, monitoring and evaluation, and resources to help **identify policy gaps** and points for **improvement**.

Develop policies that help **institutionalize integrated school-based interventions**; explicitly articulate how to **operationalize guidelines** and **allocate adequate resources** for implementation; and **extend the coverage** of current policies beyond school grounds. **Food safety standards** should also be updated.

Strengthen **collaboration** within DepEd program teams, and with national government agencies and non-governmental organizations for more holistic implementation of interventions and policies; and to provide supplementary inputs for school programs.



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Fruit and Vegetables
for Sustainable
Healthy Diets

Background

National experts recommend that a healthy food plate for Filipino adults must include **33% of vegetables**, however the average Filipino consumes only **9.5%** (DOST-FNRI, 2021). Expectedly, nutrition-related problems are a widespread challenge across age groups in the Philippines. In 2021, the rate of **stunting** among children under 5 years old reached **26.7%**; about **15.5%** of children aged 6 months to–5 years old suffered from **vitamin A deficiency**; and the overall prevalence of **anemia** was **10.4%** (DOST-FNRI, 2022).

Schools play an important role in child development and the fight against malnutrition, but it is important to consider **school food environments** (SFE) in their entirety- that is, all the spaces, infrastructure, and conditions

inside and around the school premises where food is available, obtained, purchased and/or consumed- when designing and implementing policies and initiatives that aim to improve **childhood nutrition** and set them on a path towards **healthy and sustainable eating behaviors** even as adults.

In the Philippines, the **Department of Education (DepEd)** regularly issues Department Orders and Memoranda to guide the implementation of **school-based food and nutrition interventions**. It is also the leading implementer of such interventions, frequently collaborating with various agencies and organizations. Though there is some evidence supporting the potential of these initiatives to improve the nutrition status of learners- implicitly including increased intake of fruits and vegetables- there is room for improvement.

School Food Environment Initiatives

Current initiatives promoting the consumption of fruits and vegetables in schools includes the:

School-Based Feeding Program (SBFP) which since its inception, has restored to normal nutritional status, more than 70% of school children benefiting from the program by promoting consumption and the integration of local fruits and vegetables in school menus.

School-Based Nutrition Education (SBNE) which aside from its positive effect on children's consumption of fruits and vegetables within the school, has also shown to generate positive outcomes on the

knowledge, attitude, and practices (KAP) of caregivers within the home, thus directly impacting children's nutritional status (Glorioso et al., 2020).

Gulayan sa Paaralan Program (GPP) which promotes food security in public schools and communities through self-help food production activities and fostering the appreciation of agriculture as a life support system. One study specifically documented that school children's consumption of indigenous vegetables in their regular diet had increased after the introduction of the nutritional garden initiative (Alcedo, 2019).

School-Plus-Home Gardens Project (S+HGP) which redesigned the DepEd's original school

garden programs and used an innovative approach focusing on the nutrition, education, and economic well-being of target schoolchildren, but also their families and communities. Notably, S+GHP has shown to help improve the capacity of school children to name and classify vegetables according to their food groups and nutrients. It also improved the children's attitude and practice towards consuming vegetables.

Characteristics of School Food Environments

As mandated by the DepEd, most schools in the Philippines have canteens often run by **canteen** staff, parents, or volunteers. However, there are also **restaurants and supermarkets nearby the schools** which likewise influence the SFE, namely, **available foods, food prices, food quality and safety, and marketing and regulations.**

Although, as seen above, there are existing initiatives and related policies mandating school canteens to offer nutrient-rich foods (specifically fruits and vegetables), there is a high density of surrounding stalls or **sari-sari stores** selling unhealthy foods high in sugar, salt and fat that undermine efforts to develop healthy eating habits in children. Many children also bring **packed lunches** to school, most of which are made using highly processed foods such as canned or frozen meats and sweetened juices (Glorioso et al, 2020).

Based on an assessment by Reeve et al. (2018), **highly processed foods** were also **“cheaper”** than healthy, locally prepared alternatives such as steamed corn on the cob, fruits, and local peanuts. For example, chips cost Php2.00 (\$0.03 USD) per packet while fruits might cost five times as much.

Integrated School Nutrition Model (ISNM) which is a collaboration between the International Institute of Rural Reconstruction (IIRR), the Department of Science and Technology – Food and Nutrition Research Institute (DOST-FNRI) and DepEd. It features Bio-intensive gardening (BIG), supplementary feeding to schoolchildren using nutrient-rich indigenous vegetables from the school gardens, complemented by nutrition education.

In terms of **food safety**, studies have shown that school **food handlers** have **“moderate” food safety knowledge** (Pajarillo and Declaro-Ruedas, 2021; Pascual et al, 2019), however **safety and sanitary practices** among canteens are **“poor”**- primarily due to poor hygienic practices among staff, improper storage of utensils and equipment, and



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inefficient food production flow increasing the tendency of cross-contamination.

Currently, food safety provisions in the various DepEd policies also do not require checking of **pesticide/chemical** levels of food ingredients used in schools.

Finally, since there are **no existing marketing regulations on selling unhealthy foods around schools**, the density of food advertisements around schools in the Philippines are doubled every 100-square meter (m²) and increases in the area

closest to schools which provides cues for the purchase, choices, and consumption of children (Kelly et al, 2015).

Evidently there is a **need to improve existing SFE interventions and related policy** and in doing so, there is great potential to bring forth synergistic results not just to improve children's nutritional status and their fruit and vegetable intake, but also to improve the KAP of parents regarding topics such as food safety and home gardening.

This research brief is based on a working paper titled '**Desk review of school food environment literature, policy and guidelines in the Philippines**'

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The CGIAR Research Initiative on Fruit and Vegetables for Sustainable Healthy Diets (FRESH) aims to use an end-to-end approach to increase fruit and vegetable intake and in turn improve diet quality, nutrition and health outcomes while also improving livelihoods, empowering women and youth and mitigating negative environmental impacts.

PRIMARY IMPACT AREA

 **Nutrition, health & food security**

