

SEAMEO RECFON

AWE SOME

SOUTHEAST ASIAN MAGAZINE ON FOOD AND NUTRITION

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Schools and Families as Nutrition Education Settings for Children and Adolescents

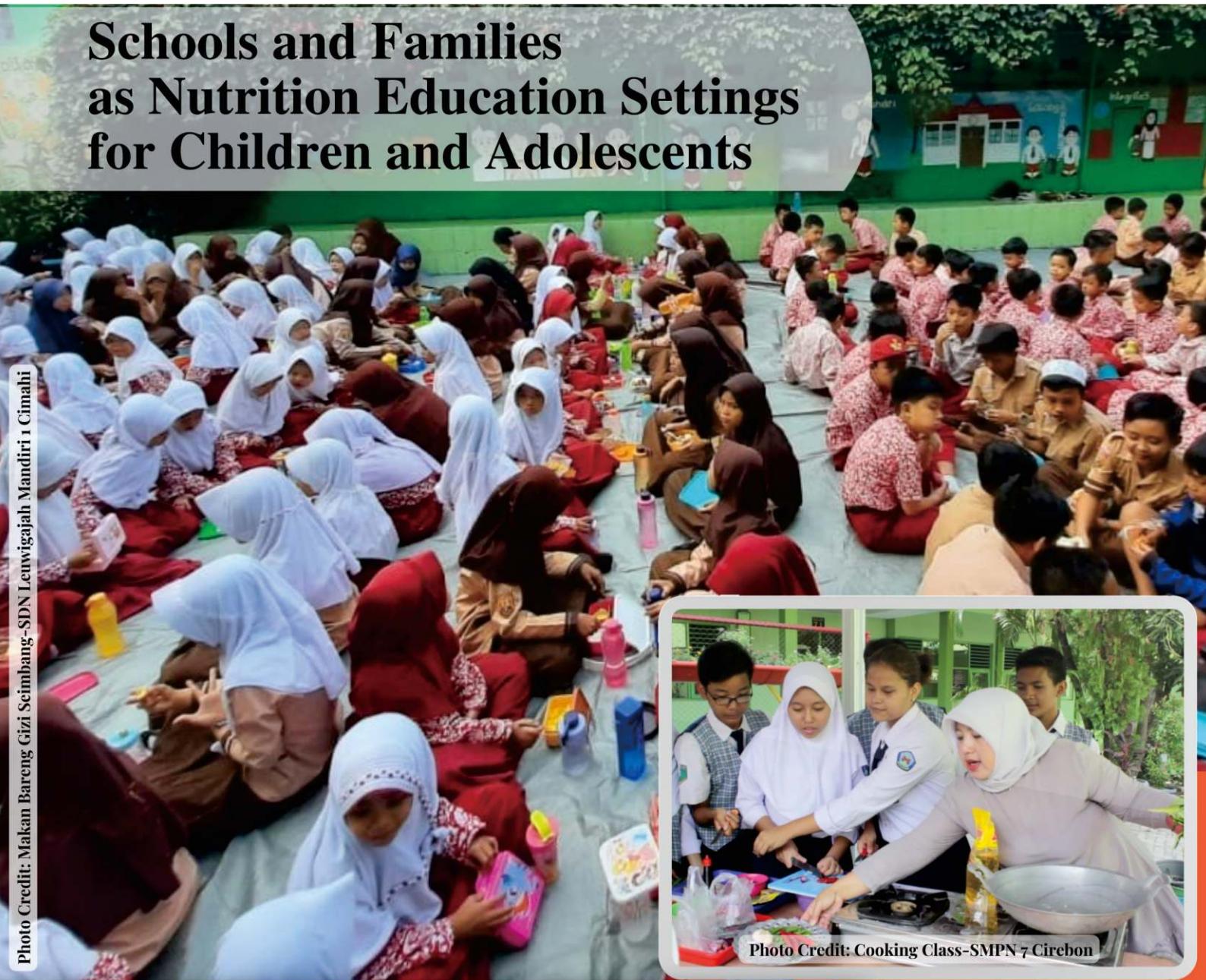


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MESSAGE FROM CHIEF EDITOR



Dear Readers,

For the theme of our magazine issue this year, we thought of focusing on the important role of families and schools in nutrition education of children and adolescents considering that these age groups in general suffer from various forms of malnutrition.

Children and adolescents are important human resources as the future workforce for national development. Unhealthy eating habits as well as physical inactivity and sedentary behavior are prevalent among these age groups which can lead to malnutrition and affect the way they can realize their full human potentials when they reach adulthood. The family and school, as the institutions where children and adolescents spend most of their time daily, bear the responsibility of providing and educating them about proper nutrition and healthy lifestyle. However, not all families and schools are aware of this role thus they also need to learn about healthy eating and living.

For this issue, we put together articles and infographics that contain insights from research results and personal views of writers on the theme of the magazine. We also provided updates on completed activities of our flagship programs as a regular section of our magazine. The opinions of school teachers from various countries in Southeast Asia about the theme will also be an interesting article to read. Ms Nindhita Priscillia Muharrani's column, Flavours of the Mind, discusses an interesting topic as well about ways to prevent school-based eating disorders among students.

We hope that you can enjoy reading this year's issue of our magazine and share it to your colleagues. We welcome your feedback about this issue by writing a letter to our Executive Editor via email (jcfernandez@seameo-recfon.org) as well as propose a theme for our next issue.

Prof. Muchtaruddin Mansyur, MD, PhD

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Procedures for Submission and Acceptance of Articles:

The Magazine will announce a call for articles at the start of every year. The submitted articles shall be screened and selected by the Editorial Board according to certain criteria. For more information you can contact the Knowledge Management and Policy Support Unit at information@seameo-recfon.org or recfon.awesome@seameo-recfon.org

Gauging the Readiness of Indonesian Schools in Implementing Nutrition Programs for Adolescents

By Yessi Crosita and AA GB Genta Budhi Dharma, UPN Veteran Jakarta and SMAK Budi Mulia Bogor

Adolescence is often considered as the second window for growth and development of a person. However, the nutritional conditions of people in this age group are often overlooked because they seemingly look healthy in general. In the case of Indonesia, more than a quarter of its adolescents are considered stunted, almost one third of women aged 15 - 24 years old suffer from anaemia, and cases of obesity among them have been increasing overtime. (1) These nutritional problems would have long-lasting impacts on public health which would require concerted efforts and appropriate resources from various sectors to address them towards improving the quality of life of the current as well as the future generations of adolescents.

Unhealthy eating habit and lack of physical exercises among adolescents are said to largely contribute to the abovementioned nutritional problems. The Indonesian basic health research report in 2018 stated that 93.6 percent of respondents above the age of 10 had consumed inadequate amounts of fruits and vegetables, while more than half of adolescents had consumed foods that were either high in sugar, fat, salt, or all three. (1) In addition, data from the Indonesian Global School-based Students Health Survey in 2015 showed that only one third of students always had breakfast, and only 3.81% of adolescents brought their own food to school.(2) These data imply the important role that school communities must play in providing the appropriate food environment and nutrition interventions to their students as most of them often eat their two main meals, i.e., breakfast and lunch, during school hours.

Are the schools ready to play their role?

Around 70% of Indonesian adolescents are students. Thus, schools are expected to deliver essential nutrition interventions for them. Nutrition programs for adolescents would typically require more efforts than those for children due to the difference in their physical and

psychosocial development stages. Stronger commitment from the school community is needed to make such programs work well for adolescents. The question is: how ready are the school communities in Indonesia to accept and play such important role?

Our research in Bogor City in 2019 showed that majority of 90 teachers and principals from 10 public schools involved in the study were unaware of the nutritional problems of their students such as wasting, obesity, stunting and anemia. They were also reluctant to discuss about these problems with their students since body shape is considered as a sensitive topic and is largely attributed to the genetic makeup of a person. (3) Nevertheless, most of the teachers and principals were very much aware of the unhealthy eating habits among their students such as skipping breakfast, snacking unhealthy foods and eating non nutritious meals either from their school canteen or food stalls around the school. This infers that the teachers and principals were either inattentive of the effect of unhealthy eating habits and life style on the nutritional status of their students or they lacked the knowledge and skills on how to tackle this issue.

All of the schools in the study reported that they were running and supportive of the breakfast program of the city mayor which requires students to bring their own food from home. However, the implementation of such program differed from school to school. Some schools reported that they conduct the program monthly, while some of them only run the program on important dates, or around two to three times each semester. Some of the schools stated that they check the contents of the students' packed breakfast while others do not. Aside from the breakfast program, the school teachers and principals mentioned that they were operating a "healthy school canteen." However, healthy school canteen for most of them only meant having "safe food" and "clean environment" but not providing balanced diet and a variety of healthy menus. Interestingly, the teachers and school principals

identified several strategic barriers in implementing their school-based nutrition programs. These barriers included the following:

1. Lack of clear policy and implementation guidelines from the city government education office to establish a nutrition-friendly school which hindered the schools to set targets and track the progress of their performance.
2. Inadequate funding to build a healthier school food environment and to translate the teachers' knowledge gained from nutrition related training to produce menus or foods to be sold in their canteens
3. The profit orientation of food vendors in the school canteen resulting in selling of unhealthy food items that are popular and preferred by the students
4. Lack of time for teachers and principals to attend nutrition related training making them incapable to deliver nutrition education and promotion to their students
5. Limited number of teachers and conflict in their teaching workload versus devoting time to do nutrition programs
6. Lack of concrete examples of healthy and budget-friendly recipes to guide the school canteen managers and food vendors in providing a variety of food choices for the students and other members of the school community
7. Competing priorities of the school community members



The need for long-term planning and collaborative mindset among school community members

Addressing the abovementioned barriers is a big task for any school which would certainly require active and consistent collaboration and support from all the school community members. Support should be focused on sustaining efforts that are already working well and instituting continuous improvements where needed. Long-term planning with clear objectives and feasible targets are essential to produce impacts. For the school breakfast program for instance, more frequent implementation and stricter monitoring as well as provision of proper assistance to financially-challenged students may be needed until proper habits of eating breakfast is established. For the healthy school canteen program, regular trainings on food literacy and preparation must be provided to the school canteen management team and contracted food vendors to improve the food intake options of students.

The schools may also consider including the street vendors in such training because they also influence the food choices of students. For this purpose, it is important for schools to find a training provider that could conduct a nutrition

training for them either at their schools or via online mode on a more flexible schedule that suits their workload and schedule.

The SEAMEO Regional Centre for Food and Nutrition (SEAMEO RECFON) is one institution based in Indonesia that offers a blended training program for teachers consisting of topics on overview of adolescent nutrition, healthy school canteen, school gardening, hygiene and sanitation, and integrating nutrition concepts in classroom subjects, and school-based management of nutrition programs as part of its Nutrition Goes to School (NTGS) flagship program. The Ministry of Education, Culture, Research and Technology of Indonesia recognizes this training and gives professional credit points for promotion to teachers who can complete the training.

The schools may also need to establish a functional system to monitor and evaluate the implementation of their nutrition interventions for quality assurance and continuous improvement as the malnutrition problems of their students can vary from time to time.

One important thing that schools must realize is that the impacts of any nutrition intervention do not come instantly as shown by a study from the USA. It would take three to five years before concrete results of a nutrition intervention could be manifested such as better policy implementation and significant changes on students' eating habits or body weight.(5) Hence, schools may need to switch mindset from pursuing rapid change driven by short lasting urgency into a growing change driven by much deeper need to invest on improving human resources among the school community members with special focus on the students as well as making the school system to operate better.

This will enable schools to appreciate the incremental changes that will take place and evaluate the steps they have taken so far. In addition, schools need to realize that they are creating change on the lives of students thus adequate consultations with all school stakeholders are crucial because their opinions matter. A school-based nutrition program is a school community-wide efforts.



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Developing Healthy Eating Habits of School Children through Nutrition Education from Family, School and Local Government Efforts

By Nur Intania Sofianita, Department of Nutrition, Faculty of Health Science, UPN Veteran Jakarta

School children usually tend to choose foods that look attractive, sweet, savory, and delicious which they can easily get at a cheap price compared to healthy and nutritious foods such as vegetables and fruits. Such eating behavior tends to be formed early in their lives and can be maintained into adulthood –(Campbell & Crawford, 2001; Westenhoefer, 2002). The kinds of food that are available at home and/or at school usually influence this eating behavior.

In general, the availability of vegetables and fruits at home and at school remains rare which is also the reason why children do not develop the liking to eat them. Moreover, most children perceive vegetables as less appetizing aside from their unwelcome taste. Not appetizing could be due to a lack of variety in taste and menu which would usually need the use of spices to increase vegetable intake among children (DAdamo et al., 2021). The availability and taste factors can influence children's eating habits.

Family support, especially from parents, is crucial in establishing children's consumption behavior as well as their health and nutritional status. Parents, as regulators of child care patterns and the household as a whole, play a significant role in making food available at home. Less availability of fruits and vegetables at home and less parental support to consume them is a risk factor for lack of consumption of these food sources among children (Pradigo, 2017). Parents function as gatekeepers who can support and control healthy dietary behavior in children (Larsen et al. 2015). Thus, parents must create food choices through the purchase and preparation of food and indirectly influence children's food choices by setting rules, providing information, and changing their behavior (Holsten et al., 2012). This implies that parents must have a basic knowledge about proper nutrition. The availability and consumption of healthy food habits in the family and school environment has a significant impact on children's eating behavior. A study found that

nutrition education interventions have an effect ($p > 0.000$) on the knowledge, attitudes, and practice scores of mothers who received the interventions compared to those who did not (Sofianita, 2021). Another study on mothers' participation in the "Healthy Habits" program revealed a positive influence on children's eating behavior as well as an improvement in mother's behavior (Huwaikem & Campa, 2021). These findings indicate that nutrition education involving mothers has a significant impact on children's eating habits by altering the selection and preparation of healthier meals and creating a supportive family environment.

The school environment can also affect students' eating behavior considering that they spend five to six hours a day attending classes and other school activities. Schools can provide healthy food options in the school canteen, or implement health and nutrition programs such as nutrition literacy classes and encouraging students to bring lunch to school and eat together with their classmates. Several studies (Khairuna Hamida, Siti Zulaekah, 2012; Mulyono et al., 2017; Pittman et al., 2018; Wahyuningsih et al., 2015; Yurni & Sinaga, 2018) using various methods of nutrition education intervention in schools have resulted in a significant increase in nutritional knowledge among students after the intervention. However, this knowledge is usually not translated in their daily eating practices and habits to consume healthy foods. Having school-based nutrition policies and providing support from the school community to implement them are important which can limit weight gain and other nutritional problems among school students (Ickovics et al., 2020; Schwartz et al., 2021).

Local governments can enhance the food choices of consumers, including

students, by enacting appropriate food and nutrition policies. They can encourage increased consumption, facilitate access and availability, and control prices of nutritious food sources. Nutrition policies that are complementary and synergistic in supporting multicomponent needs and translate evidence into action are needed to reduce the risk of chronic disease and inequalities in diet and health (Mozaffarian et al., 2018). Policies on food safety and those that regulate the selling of sweet, salty and fatty foods in school can also shape the eating habits and ensure the health and nutritional status of school children and adolescents. Equally important are policies that would institutionalize nutrition education as an integral part of the school curriculum.



Developing Healthy Eating Habits of School Children through Nutrition- Education from Family, School and Local Government Efforts

The 2018 national school curriculum of Indonesia consists of 468 competencies which mostly focus on physical activity and clean and healthy living behaviors. Interestingly, only one competency pertains to understanding and choosing nutritious food and healthy snacks to maintain a healthy body which is incorporated in sports lessons as third grade basic competencies of elementary school students (Sofianita et al., 2020). There may be a need to mainstream this competency in other subjects, through a more structured classroom and extracurricular activities, and reinforced in all grade levels to ingrain it in the hearts and minds of the students. Of course,

this is easier said than done because there are many factors to consider including the tight school activity schedules of the students as required by the curriculum, limited number of teachers and their lack of knowledge about nutrition, lack of tools and learning materials to teach nutrition education as well as the challenge to establish a healthy school canteen as a medium for nutrition literacy. Certainly, this will require collaboration among all school community members to advocate and realize this concern.

Nutrition education has been proven to increase the knowledge and change the

attitudes and practices which will later affect the food consumption behavior and nutritional status of school children. And because formation of good eating habits takes time, nutrition education must start from early childhood and must be sustained until such habit is established. This would certainly require concerted efforts among families, schools and local government education units to provide the guidance and other forms of support for school children to become healthy eaters. Once these supportive environments are functioning well, a healthy future generation is most likely to be achieved.



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By Dr. Mary Chong Foong Fong, National University of Singapore

As our children transit into adolescence, they enter a stage where they have a growing appetite for independence and want to make personal decisions on their food and activity choices.

Convincing our children to listen and adhere to advice on eating healthily, being more physically active and having less screen time becomes incredibly challenging. This, plus them spending a large proportion of time out-of-home, we find ourselves struggling to be fully aware of their activities and have less control of what they choose to consume or do.

As a researcher in child nutrition at the Saw Swee Hock School of Public Health of the National University of Singapore and a parent myself, I wanted to better understand children's perceptions of factors that influence their food choices. About two years back, my team and I conducted focus group discussions with primary school children, aged nine to 12 years. Here are some of the valuable insights my team gleaned from these children.

In general, all the children we interviewed demonstrated a good understanding of healthy eating and were able to share why it is important. However, having this knowledge did not necessarily translate into consistent healthy eating behaviors. While a few children tried to adhere to a healthy diet, many felt that the consequences of unhealthy food was not a concern.

Instead, food and taste preferences appeared to be the key factors determining their food choices. This resonates with existing research suggesting that children's food intake intentions and behaviours tend to be influenced by habitual responses and emotional (affective) factors such as whether the food is pleasant, enjoyable or disgusting, and less by cognitive persuasion.

This is likely because children have yet to develop the cognitive abilities to understand concepts like nutrition and health and care much less about how it will affect them in the future.



Parents as Key Role Models

One thing that stood out was how much children look up to parents as role models and the amount of influence parents have on them. The children we interviewed described their parents as largely influential in their dietary behaviors.

Some recounted that their parents would talk to them about healthy eating and reinforced their advice by providing healthy meals at home (such as using healthier cooking methods and preparing vegetables and fruits) and ensuring well-balanced meals when eating out.

Others mentioned that their parents would reprimand or scare them, to get them to eat certain healthy foods. Some of the children also expressed displeasure at their parents' constant nagging at them to consume fruits and vegetables, yet they do not eat these themselves.

Several children described that their parents would forbid the storage of 'junk' foods at home. But their parents would reward them with these 'junk' foods when they engaged themselves in physical activities or consumed vegetables. A few of the children said they follow this food restriction at home to appease their parents, while some chose to consume the restricted foods in secrecy.

Practices like these often do not teach children how to self-regulate their food consumption and instead undermine a child's perceived importance of adherence to healthy eating and lead to increased preference of the less healthy reward foods.

Social Influences: Teachers and Social Media

Having heard what children said in our focus groups, I appreciate even more the health education lessons and the healthy school meals programme in schools, and the important role teachers play in reinforcing healthy behaviors - things we so often taken for granted as parents.

The children we interviewed were aware that fruits and vegetables were mandatory for all meals sold in their schools, although some alluded to only eating the fruits and vegetables that were prepared in ways they preferred, for example vegetables stir-fried with garlic and seasoning instead of simply boiled and plain, fruits cut and bagged up rather than placed on the same plate beside the main meal.

Besides learning about healthy eating as part of the school curriculum, some children spoke of how their teachers would monitor their fruit and vegetable intakes during recess time and the types of snacks consumed during snack time.

This showed the importance of ensuring consistency of healthy eating messages across home and school, as conflicting ones may confuse children and hinder their ability to make prudent dietary choices.

Then there is the potent impact of social media and advertising on our children. The children we interviewed revealed that while they were aware of health promotion posters in and around their schools, the advertisements on online

platforms were the ones that often captured their attention. For example, one student cited the video advertisement from the Let's Beat Diabetes campaign as one that left a lasting impression and even tried re-enacting it.

At this age, children are still cognitively immature and are particularly vulnerable to messaging from advertisements and social media.

More can be done to engage online social media platforms frequented by children to deliver health promotional messages to positively influence their food choices, and at the same time, counter-balance the marketing appeal of less healthy foods.



Challenges Faced by The Family



We also spoke to parents and many of them shared the immense challenges they faced when instilling healthy eating habits in their children.

The lack of time and skill to prepare healthy food meant that they also struggle to have a balanced diet for themselves and their family. Having to juggle multiple responsibilities of work and supervision of multiple aspects of their children's life (including studies, screen time and physical activity) means that at times, something has to be compromised. This may mean having to eat out more frequently or order in takeaways, which sometimes end up being fast-foods.

Some also mentioned that grandparents' or their spouses' dietary preference for less healthy food often undermine their own efforts in being good role models for their children.

Until children fully develop the understanding and want for eating foods that are good for them, we can help them be much more involved in the process of

preparing food. These could be done by gamifying healthy eating through creating experiments or/ and competitions in food preparation, cooking or during grocery shopping and even gain experiential learning opportunities through urban farming and gardening.

Such activities have shown to increase children's willingness to try new foods and enhance their ability to recognize and describe a variety of fruit and vegetables. Also, studies have shown that such experiential learning translate to more positive dietary behaviors among primary school children.

While it is important to constantly provide good incentives to get kids to eat healthier, studies have shown that the practice of imposing too strict a restriction on less healthy foods can sometimes backfire, as it may increase a child's desire to consume these foods, and may even contribute to dysregulated eating behaviors in the long-term.

Teaching children to self-regulate their food consumption by providing guidance and routines, setting limits, and considering the child's perspectives are much better alternatives. Balancing healthier meals during the weekdays with some weekend takeaways or occasional fast-food treats would make a good compromise.

Children are at the life stage of developing their attitudes and values towards certain behaviors, so influencing them to adopt healthy lifestyle behaviors become important. These efforts may be tedious and challenging but will pay off as healthy taste preferences and eating habits established during childhood go a long way into adulthood.

As the African proverb goes 'It takes a village to raise a child.', it is clear that efforts from parents alone are not enough, but synergy with schools and the community at large will be required, so that our next generation can not only eat better, but live healthier lives too.

Implementing Healthy School Canteens for Nutrition Education of Students

By Sandra Amalia Dewanto, Department of Health Nutrition, Gadjah Mada University

The school environment contributes to the formation of students' eating habits. Students' food choices are influenced by the kinds of food supply available and accessible to them either from their school canteen or from street vendors around their school. Research results from the USA⁽²⁾, the Philippines⁽⁴⁾ and the Netherlands⁽¹²⁾ reveal that school children are more exposed to unhealthy foods and drinks from their school canteens. A school food environment that allows easy access to food and beverages that are high in sugar-salt-fat and low in nutrition contributes to the emergence of obesity as well as nutrient deficiency among students.

The 2018 Global Nutrition Report states that school-age children around the world still practice poor food choices. Consumption of sugary foods and beverages in school-age children is quite high, while consumption of healthy intakes is still low. Around 30.3% of school-age children do not consume fruit every day while around 43.7% of school-age children consume soda every day.

Efforts to change the unhealthy consumption behavior of children can be overcome by educating them about healthy and nutritious food from an early age⁽¹⁰⁾. This step is certainly more effective if it is directed to school age-children where the level of nutritional insecurity often occurs especially among elementary school students who are still unable to choose healthy and clean food by themselves. This is where the presence of a healthy school canteen and the commitment of the school to sustain it become important.

Since students spend a lot of time everyday at school, it is important for school canteens to provide healthy foods to them to sustain them in their school activities. The implementation of a healthy canteen in schools requires four

basic interrelated pillars, namely: commitment and school management, human resources, facilities and infrastructure, and food quality⁽⁹⁾.

Maintaining a healthy school canteen also requires support from parents/guardians of students. The schools must also consider the affordability of selling healthy foods in the canteen in relation to the economic status of the families of the students. But, at the same time, accommodating the food sellers' interest for profit.

SEAMEO RECFON's book on "Practical Guidelines for Developing a Healthy School Canteen," highlights the important role of school canteen in promoting proper nutrition among students⁽⁹⁾. Apart from providing for the food and beverage needs of students, the functions of a school canteen include the following:

1. As a medium for students to learn about safe and nutritious and acquire a balanced diet habit
2. As a medium for students to learn entrepreneurship and enhance their innovative and creative skills
3. As a venue for the school community to implement hygiene and sanitation standards in preparing, processing, and serving food

In 2014, the Ministry of Education and Culture of Indonesia laid down the following steps to create a healthy school canteen⁽¹¹⁾:

1. The school coordinates with the local education office and health office/PUSKESMAS
2. The school conducts socialization to parents and canteen managers or food sellers at school
3. The school appoints the builder and supervisor of the school canteen
4. The school sends a designated school canteen supervisor to participate in healthy canteen training held by relevant agencies
5. The school conducts training and coaching for canteen managers and food sellers in the school canteen
6. The school has a written policy regarding the school's healthy canteen
7. The school provides and maintains healthy canteen facilities
8. The school and its canteen supervisors periodically monitor and evaluate the operation of its health school canteen



Implementing Healthy School Canteens for Nutrition Education of Students

To accomplish these steps and fully realize the functions of a school canteen, members of the school community must engage themselves actively and continuously. Aside from having a clear vision and mission for the school canteen, the school management must ensure that financial and human resources are available for the daily operation of a healthy school canteen during school season. School canteen supervisors/managers and food vendors must continuously learn about new things about proper nutrition as well as government policies and regulations on school canteen. Parents and school

committee members must be willing to participate in monitoring and evaluating the performance of the school canteen. Local government education offices must provide appropriate budget for facility maintenance while health offices must conduct regular inspections of the school canteen and mentoring to the school management.

Once a healthy school canteen is established, it can provide a conducive environment and opportunities for students, school heads, teachers and personnel, as well as food vendors to learn and practice about healthy eating

in a more friendly and natural setting. Each of these members of the school community can become a role model in making appropriate food choices and eating a balanced diet as well as practicing proper hygiene and sanitation during every meal and snack time at school. A healthy school canteen, as a nutrition education medium, can build individual as well as group awareness about the importance of proper nutrition for a healthy life. A healthy school canteen is a major part of a healthy school environment.



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Teacher's Opinions on the Roles of Schools in Improving Students' Nutritional Status



A school plays an important role in improving the knowledge, skills and attitude of students to become responsible citizens and be able to contribute to national development. A school is also a potent venue where children can learn healthy eating habits and lifestyle considering the length of time they spend in classroom and extra-curricular activities.

For the AWESOME Magazine's third issue theme on "Making Schools and Households as Effective Settings for Nutrition Education for Children and Adolescents", we conducted an online opinion survey among school teachers in Southeast Asia. We received 187 responses from the Philippines, Indonesia, Malaysia, Vietnam, Thailand, Cambodia, Timor Leste, India, Bangladesh, Australia, and Romania. However, we only selected 18 responses from school teachers coming from Southeast Asian countries to be published in this issue. For publication purposes, we edited some parts of their opinions but certainly kept their essence. We translated the opinions of two Indonesian school teachers to English for understanding of the general readers.

Majority of the school teachers' responses emphasized the importance of school feeding, parent and student engagements, healthy canteen, and nutrition education through integrated curriculum and skill-based education. Here are the views of the 18 school teachers:

"Schools can help improve the nutritional status of the students by providing healthy, clean, and nutritious foods in the school canteen. During school committee activities, schools can also educate the parents about the importance of preparing healthy and nutritious foods

for their children. School management and parents can work together to meet the required nutrient intakes of the students."

(Yeni Ronalisa Saselah, SMK SPP Negeri Samarinda, Indonesia)

"Giving nutrition education to students and requiring school canteens to sell only healthy food and drinks are among the key roles of schools to improve students' nutrition."

(Eri Teguh Kurniawan Suyatna, S.Si, SMPN 1 Ciasem, Indonesia)

"Schools can help to reduce the risk of malnutrition among their students by offering a feeding program, particularly to poor students. This could also enhance the academic performance of their students."

(Jennlyn E. Avila, Francisco P. Felix Memorial National High School, Philippines)

"Schools can reinforce healthy dietary habits and physical activity to improve the nutritional status of adolescent girls and boys through curricular and extra-curricular activities and also by ensuring that they have access to adequate nutritious foods in the school canteen."

(Wong Kin Tung, Sekolah Sri UCSI Springhill, Malaysia)

"To effectively improve the nutritional status of students, school canteens should provide variety of local and nutritious foods that the student can choose from. Parents must be informed on the importance of preparing breakfast for their children, and encourage them to always have healthy diet and physical exercises. Aside from that, schools should provide feeding program for students who are diagnosed as underweight and adopt "healthy break sessions" where students bring their own healthy snacks

to eat at school." **(Ronnel C. Tolentino, Dingras National High School, Philippines)**

"The roles of the school in providing effective interventions to enhance students' nutritional status include having policies on nutrition diagnoses and providing guidance, education, and supply of nutritious foods for a particular diet. It is crucial to safeguard students from eating too many high-energy, low-nutrient foods by promoting food and nutrition awareness."

(Florimen R. Catipay, Tupi National High School, Philippines)

"Schools play an important role in orienting and helping students realize the importance of nutrition and have the skills to choose the right foods for themselves. In day-boarding schools, it is possible to add a supporting role to supplementing balanced nutrition in students' meals. Students need to be equipped with knowledge and skills to develop physically and mentally from an early age to avoid unintended consequences later."

(Hoa Dang Thi Mai, Truong Boi duong can bo giao duc Ha Noi, Viet Nam)

"The school should (1) not allow students and teachers to bring or sell any junk food, sweet drinks even some sweet water to school; (2) have a small class for students every week to teach them how to choose daily healthy food, and why junk foods are harmful to our health; (3) have School Lunch Program that promotes balanced nutrition; and (4) conduct outside classes for students to do some exercises to burn their energy, fat." **(Surachai Worapureegul, Ban Maipattana, Thailand)**

"The school plays a very important role in giving correct information about the value of food quality, healthy eating habits and food safety. This can help keep students in school thus lessen drop out rate." **(Delia Lago Enriquez, Community Vocational High School, Philippines)**

"The school can create programs and projects wherein the students, parents and the community can participate such as planting nutritious vegetables in school and house backyard. The harvested vegetables can be used for feeding the students and members of the family." **(Rebecca J. Apilan, Leocadio Alejo Entienza High School, Philippines)**

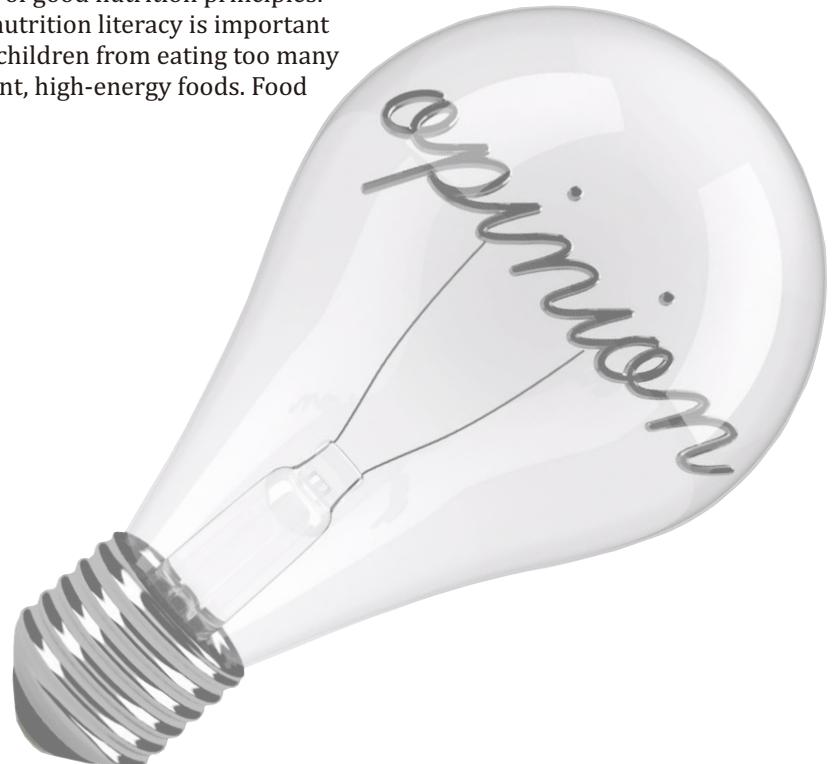
"The school's responsibility to enhance students' nutritional status is to promote and explain to them the benefits of having a healthy eating habit. A nutrition month program that incorporates entertaining and creative methods to engage students in both healthy food and physical activities should also be implemented once a year. School cafeteria should provide healthier food options like fruits and veggies. And teachers should ensure that the school has a clean and healthy environment." **(Christine M. Carillo, St. Mary's College of Tagum, Inc., Philippines)**

"The school can improve the nutritional status of students through alternative interventions by teaching them to acquire the skills to provide for their own food. These alternative interventions include to planting and harvesting their own food using containers and recyclable materials and limiting the use of harmful chemicals. This can also be a way to provide income to students and their own families aside from improving their nutritional status." **(Ruzzel Grace Carbajal, Luna National High School, Philippines)**

"The school has a vital role to promote healthy lifestyle among the students. The integration of vegetable garden in school as well as healthy cooking and selling of nutritious foods in school canteens are just some of the effective ways to achieve such goal. Program on physical activity everyday for the students is also essential for them to stay healthy." **(Marynoll Escalera, Heracleo Casco Memorial National High School, Philippines)**

and nutrition literacy promotion needs multi-dimensional interventions." **(Pearly Ann Barba Babak, Sto. Domingo Elementary School, Philippines)**

"The school has to provide a psychoeducation program in collaboration with dietitians and nutritionists to give awareness to students on healthy food intake as well as managing health issues. The school can also promote a healthy lifestyle by encouraging students to actively engage in physical and mindfulness activities such as jogging, camping, etc." **(Dayang Rafidah Binti Awang Osman, SMK Padawan, Malaysia)**



Addressing Disordered Eating in Schools: How Far We've Come?

By Nindhita Priscillia Muharrani

In a globalized and urbanized world we now live in, changing our eating habits and physical activity happens so easily. A constant shift in our perspectives towards foods, body shapes and sizes is also apparent, along with the rising prevalence of eating disorders that accounts for more than 5% of the global population¹. Disordered eating, the term used to describe abnormal eating and body behaviours, is commonly practiced by many who are at high risk of developing a clinically serious eating disorder². For most of us who live in urban settings, it is common to see friends, and even some family members, who glorify thinness and judge someone's food choices as a usual way of living. We might not be aware that this culture constitutes an early onset of eating disorders, particularly in adolescence, that could be perpetuated throughout adulthood³. Due to the severity of clinical and psychological consequences of eating disorders⁴, it is imperative to implement preventive measures and early intervention for young people.



Schools play vital roles in preventing disordered eating among children and adolescents. However, are teachers in our educational system equipped to prevent and identify students' disordered eating behaviours? In western countries, the numbers of evidence and professionals specializing in eating disorders are extensive. Established guidelines are available for

the clinicians and communities to follow, including school teachers⁵. Teachers would know exactly what to do when they indicate early signs of disordered eating among students. A systematic referral pathway from school to healthcare settings has boosted early identification, leading to better treatment outcomes. Although effective early interventions are continuously evaluated and improved, prevention initiatives have been implemented to eradicate disordered eating risk factors, such as body image concerns and eating problems, that have shown enhancement in their awareness⁶. Do other countries adopt a similar system? How about in Southeast Asia? Previously, eating disorders were considered a 'western' illness, but such cases have been increasing in many ethnicities, including Southeast Asians⁷. This is alarming considering the scarcity of experts in eating disorders in our region.

Let us look into the current school-based healthy eating programs in Southeast Asia. It appears that only a few programs include body image concerns, food obsessions, and body and eating behaviour⁸. Most of these programs mainly focus on nutrition-related factors apart from the mental health dimensions. This potentially occurs due to the limited experts in eating behavior and low awareness of government education institutions and the school community about disordered eating. It could also be the result of the mental health stigma in some cultures that may lead to limited screening tests towards identifying cases of disordered eating.

Our school environment may have unconsciously created a diet culture for children and adolescents to be disordered eaters. A range of disordered eating patterns is rampant and normalized among school children. These include skipping meals, ignoring hunger and fullness signals, avoiding certain food categories, strict food rules, post-eating guilt or shame, excessive exercise, obsessive weight loss behaviour, preoccupation with calories and weight watchers^{9,10}. Again, these common behaviours are often not adequately addressed in the current school-based nutrition program in most Southeast



Asian countries. While there has been an increase in the number of non-western countries that have started incorporating aspects of food- and body-related emotions and behaviour in their school programs, most, if not all, Southeast Asian countries still have a long way to go.

Several studies have reported cases of disordered eating among school children and adolescents in Southeast Asia. Some regions in Malaysia have almost 28% of adolescents that are disordered eaters¹¹. Similarly, Singapore has one-fifth of adults at high risk of developing an eating disorder, which has the likelihood of disordered eating onset in adolescence¹². In Jakarta, Indonesia, almost 38% tend to adopt disordered eating behaviours¹³. These numbers warrant attention and integrated approaches that could be used in school communities to prevent the long-term impacts of an eating disorder.



Addressing Disordered Eating in Schools: How Far We've Come?

So, what should Southeast Asian countries do to prevent and identify disordered eating in the school setting? A complex issue requires a comprehensive solution. Here are some actions for consideration on this matter:

1. The interconnection between physical, psychological and environmental factors as risks of disordered eating needs a holistic effort to tackle. Advocacy to stakeholders in the ministries of health and education is crucial, and collaborations between clinicians, academics, and non-governmental organizations can be

the start to initiate a need assessment and formulate a school-based program for disordered eating prevention.

2. A validated screening tool adjusted based on the characteristic of its population needs to be developed and widely implemented in schools to promote early intervention and data on a larger scale.
3. Clear national guidelines for referral pathways to link school and health and psychological supports are paramount to saving more lives.

4. Training for teachers and clinicians is also critical to shaping efficient preventive action.

All the above may sound like much hard work, but recognizing and preventing disordered eating demand a national movement to help improve the quality of life of our future generation.



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Some Best Practices in School-Based Nutrition Promotion in Indonesia

Wikipedia defines a best practice as a method or technique that has been applied and generally accepted that produces a consistent result that is superior to other known alternatives. It usually addresses certain current needs of a particular group of people.

SEAMEO RECFON's Nutrition Goes to School (NGTS) Program has been assisting several schools in Indonesia to implement school-based nutrition activities towards enhancing the awareness of students on the importance of balanced nutrition for their health. This year, the Centre embarked on enabling NGTS school partners to identify some of their

practices which they consider best in promoting balanced nutrition and healthy living to their students.

In this issue, we feature snapshots and brief descriptions of nine NGTS "best practices" from the Centre's school partners from primary to high school levels in Indonesia.

Elementary School

1. Public Elementary School 12 Suah Api, Sambas, West Kalimantan: Planting Rice in the School Yard: Meaningful Learning through Joyful Activity

As a part of the school garden activity, the school conducts rice planting that is integrated in the school curriculum. This activity was conceived to optimize the vacant lot of the school, teach students about rice farming skills and to respect local wisdom of their most parents or local residents as farmers, and enable them to harvest their produce for their consumption. The students consider this activity as meaningful and joyful to them as rice farming is an outdoor activity and considered a lifelong skill.



Cheerful faces of students during the Rice Planting activity

2. Public Elementary School 1 Glagahwangi, Klaten, Central Java: "Engaging Multi-stakeholders through WASH Program to Improve Students' Awareness and Behavior!"

Recognizing personal hygiene as an essential component in healthy living, the school had long inculcated this matter to students through various activities years before Covid-19 started. One of the activities is hand washing. Each classroom has access to hand washing facilities. Initially, water basin, soap, and towel napkins were provided but these were replaced by either a portable or permanent hand washing facilities that could provide fresh and clean running water.

Before entering the class, before and after eating during break time, and after using the restroom, students are accustomed to washing their hands. The school also instituted a "Hand Washing Day" every Friday to strengthen the handwashing practice among the students. In implementing this program, the school receives donations from GIZ for the portable hand washing facilities, and soaps from the District Health Office and Village Office. The school also used its operational funds (BOS) to support the continuation of the program.



Students queue to wash their hands before entering their classroom using a portable handwashing facility

3. Elementary School Kartika XIX-5, Cimahi, West Java: "Sarapan BTS (Bersama Teman Sebaya): Enjoy Your Healthy Meals, Together with Your Peers!"

GEMARI (*Gemar Makan Ikan/Let's eat fish!*), GEMAS (*Gemar Makan Sayur/Let's eat vegetables!*), and GEMBIRA (*Gemar Makan Buah Bervitamin dan Nikmat Rasanya/Let's eat nutritious and delicious fruits!*) are attractive themes to encourage the students to consume healthy meals by bringing their breakfast once a week and eating it together with their classmates at school. This program also involves the parents in preparing healthy breakfasts for their children. The collaboration among parents, teachers, and students has created an enabling environment for the students to consume healthy meals as daily habit.



Students enjoy eating the meal prepared by their parents together with their classmates

Junior High School

1. Public Junior High School 7 Tebas, Sambas, West Kalimantan: "Fun Friday with Physical Activity and Breakfast Together"

Doing physical activity and eating healthy breakfast together every Friday engage the school community members to create a healthy movement among them through a program called "GeMa" (*Gerakan Berirama/Rhythmic Movement*). By preparing a healthy breakfast according to "*Isi Piringku*" (an Indonesian balanced nutrition guideline for one meal) and seeing how happy their children are about the program, parents are also encouraged to adopt healthy habits daily by consuming healthy meals and engaging in routine physical activity.



Students participate in "GeMa" (*Gerakan Berirama/Rhythmic Movement*) as part of their Fun Friday activity at school

2. Junior High School 36 Muhammadiyah Jakarta: "Interactive Nutrition Education to Attract Student Attention"

The school seized the opportunity to teach nutrition education to their students during the Covid-19 pandemic by optimizing the Zoom platform. Through this program, the school invites resource persons from local public health center, universities, and academic institutions to deliver interesting topics related to health and nutrition such as healthy breakfast, healthy school models, dangers of smoking, and waste recycling. This activity enables the students to gain new knowledge from various perspectives on top of their regular subjects.



The school disseminates Healthy Breakfast flyer to students and parents through WhatsApp Group (top) for them to join the webinar through Zoom platform (bottom).

3. Public Junior High School 5 Cirebon, West Java: "Iron Folic Acid Supplementation and Healthy Breakfast"

Anemia is prevalent among adolescent girls as they undergo menstruation and growth spurt period. Iron folic acid supplementation (IFAS) is a strategy to address anemia among female students. Thus, to make IFAS more effective especially among female adolescents, the school implements a program on taking IFA tablet after eating healthy breakfast together. Parents' participation in this program is crucial in supporting their children to choose and prepare nutritious meals for themselves to bring to school.



Female students show the IFA supplement they will take after consuming breakfast at school

Senior High School

1. Vocational High School

Diponegoro Tumpang, Malang, East Java: "Encouraging Students' Creativity and Entrepreneurship through Healthy School Canteen"

The school provides the opportunity for their students to create and sell nutritious processed foods from local food sources available at school through its Healthy School Canteen program. This program is integrated in the school curriculum and teachers are involved in ensuring the food quality and safety that the students produce. Healthy school canteen program does not only enhances the students knowledge about nutritious foods when they produce them, but it also improves their entrepreneurship skills.



Some of the healthy snacks produced by the students which are sold in the school canteen.

2. Vocational School Wikrama

Bogor, West Java: "Engaging Parents through Nutrition Education"

The school has an annual nutrition education program for parents to reinforce their responsibility to provide balanced nutrition to their children. This program taps experts from local public health office and academic institutions to deliver lectures. The school continues to hold this program even during COVID-19 pandemic via online mode using the Zoom platform.



Parents attend food and nutrition session before pandemic (top) and during pandemic (Bottom)

3. Islamic Senior High School

Basiuni Imran, Sambas, West Kalimantan: "Kultum Gizi: Nutrition Topic within Spiritual Talk"

The school implements "Kultum" or *Kuliah Tujuh Menit* (Short Lecture about Islamic Value) once a week before fasting break with specific topics related to nutrition during Ramadhan. The aim of this extracurricular program is to educate students about the importance of practicing balanced nutrition after fasting. The program is coordinated by the UKS/M-NGTS teacher (school health unit) and administrator of the boarding school (*Pesantren*).

UKS/M-NGTS Madrasah teachers initially deliver the nutrition/health topics to the students. For the succeeding lectures, students will deliver the same topics to their peers under the supervision of the UKS/M-NGTS teachers. This *Kultum Gizi* activity is conducted independently between student pairs. The activity is conducted in the dormitory for female students and in the mosque for male students.



Male students attend *Kultum Gizi* at the mosque (above) and female students at the dormitory (below)

Photo Credits : Photos are from the schools featured in this article



SEAMEO RECFON Establishes Collaboration with Local Governments and Academic Institutions for Stunting Prevention in Indonesia

Eight local governments and eight academic institutions signed Memoranda of Understanding with SEAMEO RECFON between February and March 2022 to contribute in achieving Indonesia's target of reducing the prevalence of stunting among children to 14 percent by 2024.

Eight local governments and eight academic institutions signed Memoranda of Understanding with SEAMEO RECFON between September 2021 to March 2022 to contribute in achieving Indonesia's target of reducing the prevalence of stunting among children to 14 percent by 2024.

The local government and academic

partners include East Aceh Regency and Poltekkes Kemenkes Aceh in Aceh Province, East Tanjung Jabung Regency and University of Jambi in Jambi Province, Bangka Regency and Poltekkes Kemenkes Pangkal Pinang in Bangka Belitung Province, East Lombok District and Mataram University in West Nusa Tenggara Province, Ogan Ilir District and Sriwijaya University in South Sumatra Province, North Bengkulu District and Poltekkes Kemenkes Bengkulu in Bengkulu Province, and Pekalongan Regency and Brebes Regency Poltekkes Kemenkes Yogyakarta in Central Java Province.

The MoU signing was preceded by a workshop with each local governments

to discuss the current nutrition status of children, existing health and nutrition programs, challenges, and opportunities to address stunting in their localities. The workshops generated action plans to realize the partnerships in research, capacity building, community building and knowledge dissemination for a period of three years.

These partnerships will be carried out by SEAMEO RECFON under its flagship programs on Early Childhood Care, Nutrition and Education (ECCNE) and Nutrition Goes to School (NGTS).

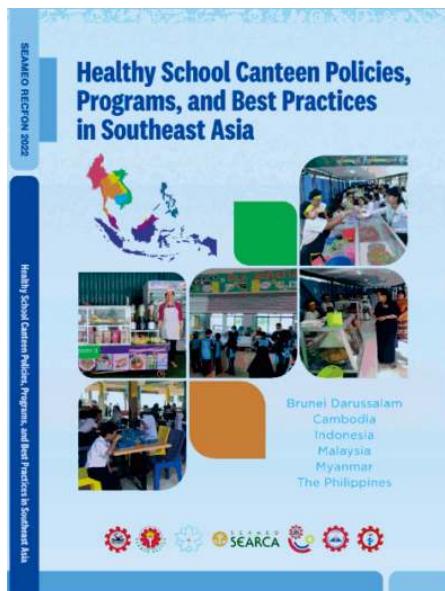
SEA Country Profiles on SBNP and Compilation Book on Healthy School Canteen in Southeast Asia Launched

SEAMEO RECFON launched five country profiles on school-based nutrition promotion and a compilation book on healthy school canteen programs, policies and best practices in Southeast Asia during its 11th anniversary celebration on 28 January 2022.

The SBNP country profiles are envisioned to serve as reference materials for schools in Southeast Asia to learn and improve the implementation of their school-based nutrition programs and activities. Aside from containing information on SBNP programs, policies and best practices, each SBNP country profile also provides overviews of the educational system as well as the malnutrition problems among school children of each country. The first batch of SBNP country profiles launched are on Brunei Darussalam, Indonesia, Lao PDR, the Philippines and Thailand. They were developed in collaboration with the Ministries of Education of the said countries.

As reference materials, the SBNP country profiles are meant to provide inputs for research, capacity building, advocacy and policymaking by governments, NGOs, academic and research

institutions, and schools to address the gaps in SBNP implementation and improve the nutritional status and dietary practices of school children in Southeast Asia. The SBNP country profiles are also expected to initiate collaborations among schools in the region to learn from each other to achieve common progress in SBNP implementation under the Centre's Nutrition Goes to School Program.



On the other hand, the healthy school

canteen compilation book features 26 schools from Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar and the Philippines. It contains a brief overview of the geographic and sociodemographic profile, educational system, malnutrition and eating habits among school-aged children and adolescents, policies and programs on school health and healthy school canteens, examples of healthy school canteen best practices, lessons learned and recommendations from each country.

The book was developed in collaboration with five other SEAMEO Centres, namely: Regional Centre for History and Tradition (CHAT) for Myanmar, Regional Centre for Special Education Needs (SEN) for Malaysia, Regional Centre for Graduate Study and Research in Agriculture (SEARCA) for the Philippines, Regional Centre for Technical Education Development (TED) for Cambodia, and Regional Centre for Vocational and Technical Education and Training (VOCTECH) for Brunei Darussalam. SEAMEO RECFON represented Indonesia.



SEAMEO RECFON Initiates Formation of Working Group on Early Childhood Development Promotion in Southeast Asia

SEAMEO RECFON hosted a virtual workshop on 2-3 August 2022 to establish the Southeast Asian Early Childhood Development Promotion (SEA-ECDP) Working Group as part of its roadmap to scale up its flagship program on Early Childhood Care, Nutrition and Education (ECCNE) in the region.

The workshop brought together 50 participants from government, academic, and development organization representatives to discuss the current state of ECDP implementation in Southeast Asia and agree on how the formation of the SEA-ECDP Working Group could help address ECDP issues and concerns that are common among SEAMEO member countries. The SEA-ECDP Working Group is envisioned to enhance the quality of ECD implementation in Southeast Asia and contribute to achieving Sustainable Development Goal Target 4.2 and SEAMEO Priority 1 on Universal Early Childhood Care and Education. It is expected to perform the following functions, namely: (1) Compile a region-wide information on ECD programs and activities, policies and regulations as well as their impacts on student nutrition; (2) Maintain a user-friendly platform for gathering and sharing of ECD learning resource materials, experiences and expertise for ECE teachers and related stakeholders including academic partners, and policymakers in the region; (3) Conduct

advocacies to integrate ECD activities in ECE centers and similar settings, and (4) Conduct harmonized capacity building activities for ECE teachers and related stakeholders in the region.

The first day of the workshop consisted of country presentations on ECDP policies, programs, best practices and challenges, overview and discussions of the SEA-ECDP Working Group's implementing guidelines, and formulation of action plans for the next three years. The country presenters and their organizational affiliations were Ms. Hajah Nur Amalina binti Haji Sidik (Ministry of Education, Brunei Darussalam), Ms. Thong Chanchhada (Ministry of Education, Youth and Sports, Cambodia), Mr. Aria Ahmad Mangunwibawa, S.Psi., M.Si and Ms. Beryana Evridawati, S.Pt., M.Pd (Ministry of Education, Culture, Research, and Technology, Indonesia), Dr. Phoutong Rattanavong (Ministry of Health, Lao PDR), Dr Mardziah Binti Abdullah (Ministry of Education, Malaysia), Dr. Lwin Mar Hlaing (Ministry of Health, National Unity Government of Myanmar), Ms. Ma. Katrina M. Libron (Early Childhood Care Development Council, Philippines), Ms. Irene Lee (Early Childhood Development Agency, Singapore), and Ms. Wongduan Suwansiri (Office of the Basic Education Commission, Thailand).

The country presentations revealed common areas needing improvements in ECDP implementation in the region, namely: advocacy and enforcement of government regulations, coordination among concerned institutions in various sectors, building the competencies of ECD teachers versus limited number of specialists to provide capacity building, availability of standard and comprehensive ECD curriculum and learning materials/tools, parents education and engagement, provision of ECD services to both urban and rural households/ communities, differences in ECD services among ECD providers within a country, accreditation of ECD education centres/pre-schools, ECD databanking, and monitoring and evaluation of ECD programs and activities. These common concerns as well as the functions of the SEA-ECDP Working Group became the basis for the action plan development.

The second day of the workshop was devoted to presenting the action plans and the ways forward for SEA-ECDP Working Group to start operating including obtaining the commitment of the institutions represented during the workshop and developing proposals for each of the action plans identified.



26 Cambodian technical vocational school heads and teachers undergo NGTS Training Course

SEAMEO RECFON conducted an in-country online training course on Nutrition Goes To School (NGTS) for 26 Cambodian principals and teachers from 5 technical vocational schools on 9-22 June 2022. The training course was a collaboration with the SEAMEO Regional Centre for Technical Education Development (TED) towards strengthening the food and nutrition education among Cambodian technical vocational schools through the NGTS Program.

The schools that participated in the training course were Bavet General and Technical High School, Preah Bat Samdech Preah Boromneath Norodom Sihamoni General and Technical High

School, Saint Francois Private General and Technical High School, Samdach Aka Moha Sena Padei Techo Hun Sen – ROTA General and Technical High School and Pouk General and Technical High School.

Undergoing the training course was a requisite for the said schools to initiate their own NGTS Program to integrate nutrition education in their intra- and extra-curricular activities for their students. The training consisted of synchronous and asynchronous sessions on the following topics: Overview of adolescent nutrition, Anthropometric measurements, Cambodian National Nutrition Guidelines, Hygiene and sanitation, Healthy School Canteen, School garden for nutrition literacy,

Nutrition in entrepreneurship, School-Based Management (SBM) of Health and Nutrition Programs, Management of the NGTS program, Lesson plan development and microteaching for nutrition education. Each participating school formulated an NGTS action plan as the major requirement of the training course.

The resource persons during the training course came from the School Health Department of the Ministry of Education, Youth and Sports of Cambodia, the National Institute of Public Health of Cambodia, the Royal University of Agriculture of Cambodia, SEAMEO TED, and SEAMEO RECFON.

SEAMEO RECFON conducts 1st Regional Learning Exchange Forum on Early Childhood Development Promotion in Southeast Asia

In line with its Third Five-Year Development Plan to scale up the implementation of its Early Childhood Care, Nutrition and Education (ECCNE) Flagship Program, SEAMEO RECFON organized the First Learning Exchange Forum on Early Childhood Development Promotion (ECDP) in Southeast Asia on 1 August 2022.

SEAMEO RECFON envisioned the Forum to be a platform for sharing policies, programs, and practices in ECDP implementation in Southeast Asia under its ECCNE Program. The ECCNE Program aims to provide models of integrated

implementation of essential components of childcare and education, health and nutrition, parenting, policy and multi-sectoral cooperation, and provision of enabling environments to optimize child growth and development. For the first Forum, the Centre featured the mapping results of ECCNE activities in the region and the experiences and challenges in ECDP implementation in Indonesia, Cambodia and the Philippines.

The speakers consisted of Mr. Garry Pawitandra Poluan from Paramadina Public Policy Institute, Dr. Harris

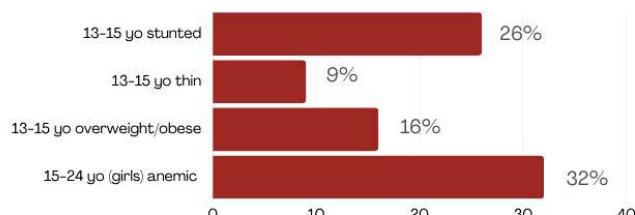
Iskandar from the Ministry of Education, Culture, Research, and Technology of Indonesia, Dr. Teresita G. Inciong from the Early Childhood Care Development Council of the Philippines, and H.E. Dr. Prak Kosal from the Ministry of Education, Youth and Sports of Cambodia as Forum speakers.

The presentations highlighted the need for stronger collaboration among institutions from government and nongovernment sectors in Southeast Asia to promote the developments thus far and address the common challenges in ECD implementation in the region.

Evidence-Based Nutrition Interventions Improved Adolescents' Knowledge and Behaviors in Indonesia

Background

Triple burden of malnutrition is persistent among adolescents in Indonesia (Risksedas, 2018)



This is attributed to the changes in dietary intake patterns (i.e., increased consumption of unhealthy foods) and a decrease in physical activity, associated with industrialization and urbanization.

Objective

To assess the effect of the package of interventions on nutrition knowledge, attitudes, and diet and physical activity behaviors among adolescents in Indonesia



Methods

- The study was conducted in Klaten and Lombok Barat districts
- Three components of intervention:
 - (1) breakfast and weekly iron-folic acid supplementation (WIFS)
 - (2) a school-based nutrition education program,
 - (3) a social behavior change communication strategy
- Study design used stratified random sampling in 48 public junior and 12 senior high schools ($N = 540$ adolescents)
- Data collection: April-May 2019 (baseline) and October-November 2020 (endline)

Recommendation



Reference:

Ondo VM, Roshita A, Khan Md T, Ariawan I, Wiradnyani LAA, Chakrabarti S, Izwardy D, and Rah JH. Evidence-Based Nutrition Interventions Improved Adolescents' Knowledge and Behaviors in Indonesia. Nutrients 2022, 14, 1717. <https://doi.org/10.3390/nu14091717>

Results

At post-intervention there was significantly:



higher consumption of vitamin A-rich fruits and vegetables (OR: 1.5; 95% CI: 1.1, 2.0)



lower consumption of unhealthy foods (SSBs and snacks) (OR: 0.4; 95% CI: 0.3, 0.5)



higher odds of reporting 60 min of daily physical activity (OR: 2.3; 95% CI: 1.7, 3.2)



higher odds of reporting IFA consumption among girls (OR: 6.7; 95% CI: 1.5, 30.9)

Conclusion



The package of interventions was associated with greater knowledge on nutrition, and changes in physical activity and IFA supplementation behaviors.

- Scale-up the intervention nationwide, using the national school health program as the delivery platform
- Conduct advocacy and large-scale capacity building to ensure the success and sustainability
- Implement intensive efforts to adapt gender-responsive adolescent nutrition program for out-of-school adolescents
- Improve the school food environment toward healthier lifestyle

A Mixed-Methods Exploration of Implementation of a Healthy School Canteen Program after a Year Intervention

Background



- Unhealthy eating habits among adolescents will affect their nutritional status in adulthood and old age.
- School canteen is a part of food retailing and provisioning that influence the diet quality of the adolescents.
- A number of schools in Indonesia do not have a canteen while others do not meet prescribed standards.
- Selling unhealthy and unsafe food and beverages in school canteens can result in the decline in students' health and academic performance as well as can negatively impact the school's.
- Thus, school-based nutrition program may contribute in solving in the nutritional problem among adolescents.

Objective

To evaluate the effects of a healthy school canteen intervention program among junior high school children.

Methods



- Involved 4 schools each as intervention and control groups in six sub-districts in Malang District, East Java from 22 April-2 May 2019
- School teachers in the intervention group received training on nutrition education, development of healthy school canteen, and school gardening. The schools were also assisted in developing information system to monitor progress and advocate the adoption of school-based nutrition program into the school policy.
- Schools in the control group received nutrition education training for teachers and school-related booklets
- Adopted mixed method design for data collection:
 - 1) interview of 35 school principals and teachers, and observation of school canteens
 - 2) survey of 27 food handlers using structured questionnaires

Results



Only one out of eight schools had written commitment and a food safety team.



Only 2 out of 4 schools in the intervention group had nutritious foods available in the canteen and 3 out of 4 schools in the control group.



In intervention school, 50% of food handlers used personal protective equipment and 25% of them received training.



None of the school canteens were found positive for metanil yellow. Higher positive findings for Rhodamin B, Formaldehyde, and Borax (33.3%, 60.0%, and 33.3%, respectively) in the intervention group compared to the control group (28.6%, 27.3%, and 28.6%, respectively).



In the control group, none of the food handlers used personal protective equipment and had not received any training but obtained a higher rate of correct answers.

Conclusion

- Intervention groups were slightly more successful in creating healthy school canteens, based on their total score in the observation sheet, compared to the schools from the control group.
- However, there are still gaps in human resources for intervention group, especially in the food handlers' practice, improper use of facilities and utilities, and low quality of food.

Recommendation

- Schools should collaborate with other school stakeholders such as Primary Health Center to train food handlers about healthy food handling practices.
- Schools should involve parents to support school-based nutrition program for more effective program implementation.

Reference:

Fudia H, Pratiwi AA, Tarmizi NAA, Meiyetriani E, Wangge G, Prameshti IL, Ananda AJN, Anggraini R, Iswarawanti DN, Ermayani E. A Mixed-Methods Exploration of Implementation of a Healthy School Canteen Program after a Year Intervention. Open Access Maced J Med Sci. 2022 Jan 03; 10(18):58-68. <https://doi.org/10.3889/oamjms.2022.9483>

Our Services



Biochemical Assessment

Zinc* (300uL) | Vitamin A* (40uL) | Vitamin E* (40uL) |
Beta carotene* (40uL) | Vitamin D-25OH* (450uL) |
Vitamin C (300uL) | Ferritin (450uL) | Hematologic profile** (3mL)
The numbers above are the minimum volume of sample needed
for analysis. **) Whole blood, while the others are serum/plasma



Dietary Assessment

1. Interview and Analysis on Food Frequency Questionnaire (FFQ), Semiquantitative Food Frequency Questionnaire (SQFFQ) and 24-h Food Recall.
2. Analysis on standard nutrients, additional nutrients, additional food intake by food group/ sub group/ food intake.



Genetic Analysis

SNP Detection |
Gene Expression Analysis



Food Analysis

Borax† | Formaldehyde# | Nitrate-Nitrites†
Rhodamine† | Methanil Yellow† |
Cyclamate† | Mercury # |
Escherichia Coli | Total Coliform |
Physic |
† Semi Quantitative; # Qualitative



Freeze Dry Services

Primary applications of freeze drying include biological (e.g. bacteria and yeasts), biomedical (e.g. surgical transplants) and food processing (e.g. coffee). The quality of the product is excellent and nutritional content generally remain unchanged.



Anthropometry and Body Composition Assessment

- Anthropometric measurements (Weight, Height, Length, & mid-upper arm circumference)
- Body composition assessment (Skin folds & Bioelectrical Impedance Analysis (BIA))

SEAMEO RECFON LABORATORY



Assessment Packages

Risk of Metabolic Syndrome

- Complete Blood Count
- Blood Glucose
- Blood Cholesterol
- Blood Uric Acid
- Bioelectrical Impedance analysis
- Blood pressure

Risk of Anemia

- Complete Blood Count
- Ferritin
- Zinc
- HsCRP
- Dietary Assessment

Oxidative Stress

- Vitamin A
- Betacaroten
- Vitamin C
- Vitamin E
- Dietary Assessment

Vitamin D Deficiency

- Vitamin D
- Dietary Assessment

Healthy Canteen

- | | |
|--------------------------|---------------------------------|
| Chemical Contaminations: | Microbiological Contaminations: |
| - Borax | - Total Coliform |
| - Formaldehyde | - E - coli |
| - Nitrates - Nitrites | - Staphylococcus |
| - Rhodamine | |
| - Methanil Yellow | |
| - Cyclamate | |
- Healthy Canteen Checklist

*Accredited by



Southeast Asian Ministers of Education
Regional Centre for Food and Nutrition



About Us

SEAMEO RECFON Laboratory aims to support research in food and nutrition by providing biochemical assessment, dietary assessment, anthropometry assessment, food analysis, genetic analysis, freeze dry services and panel of laboratory tests. Accredited by ISO/IEC 17025:2017, the laboratory committed to assure quality and serve the best for you.

Contact Us

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<http://seameo-recon.org/laboratory-services>



Scan here

Our Facilities



HPLC Waters
Alliance E2695



AAS GBC 932AA



Hematology Analyzer



Chemiluminescence
immunoassay
(CLIA) Analyzer



StepOne™ Real-Time
PCR System



MaestroNano Pro,
Micro-volume
Spectrophotometer



BIA Analyzer



Freeze Dryer

Other Equipments



Hemocue 201



Shorrboard
(Shorr)



Body Weighing
Scale (Seca 876)



Microtoise



Food Model



Measuring Tape
(Seca 201)



Knee Height
Caliper (Shorr)



Baby Length
Board



Skinfold Caliper
(Holtain)

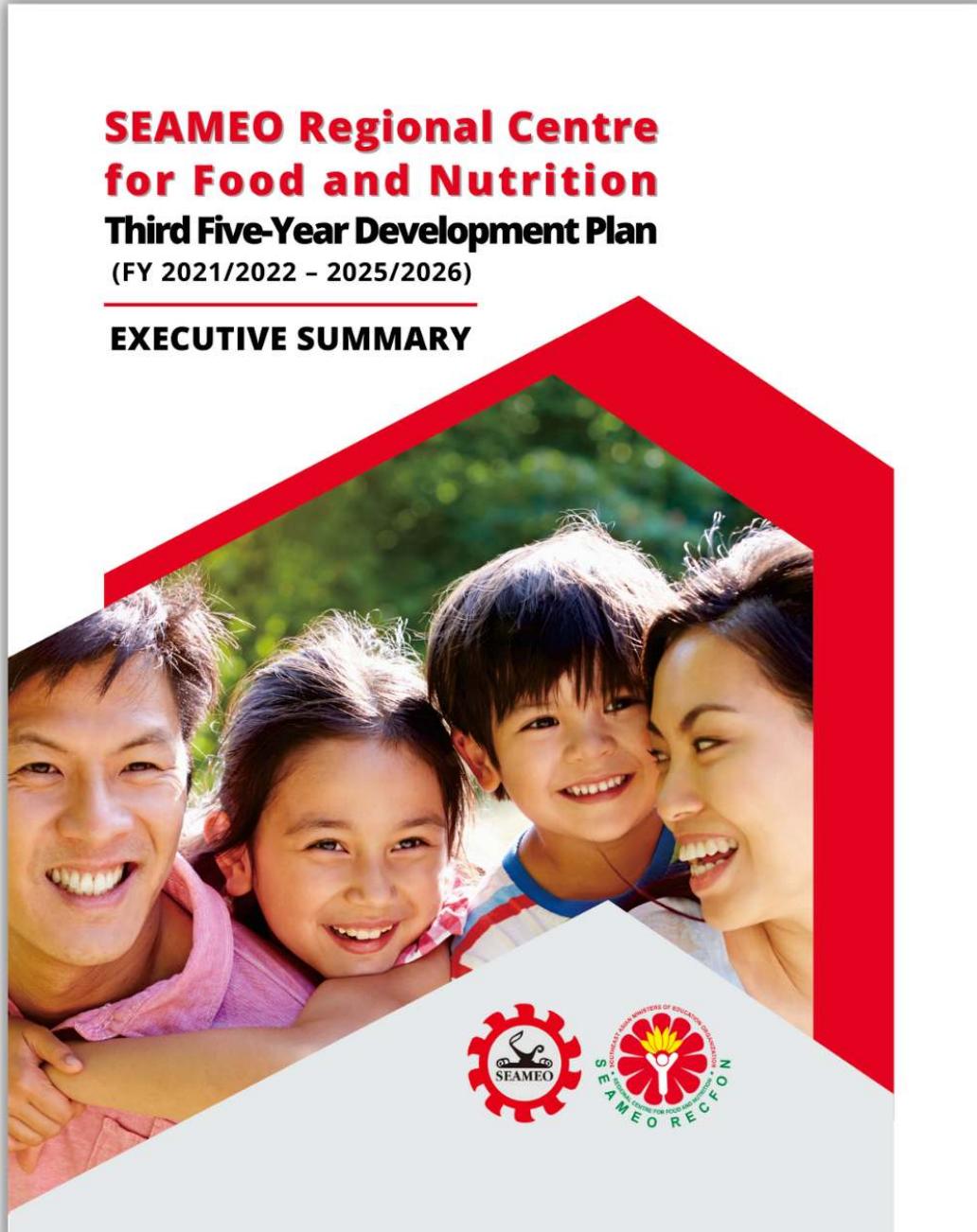


Food Weighing Scale
(Tanita KD-160)

**Collaborate with SEAMEO RECFON in being
MINDFUL in Southeast Asia!
Know more about the Centre's programs and
special initiatives in the next five years.**

**SEAMEO Regional Centre
for Food and Nutrition**
Third Five-Year Development Plan
(FY 2021/2022 – 2025/2026)

EXECUTIVE SUMMARY

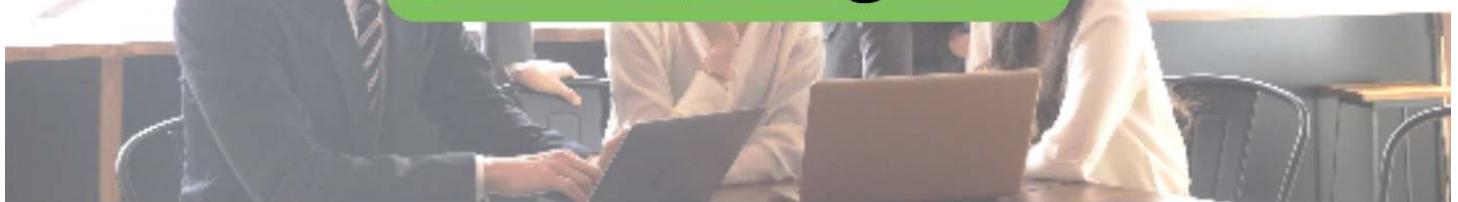


LINK TO DOWNLOAD:

<http://www.seameo-recfon.org/books/booklet/>



Nutrition Goes To Workplace (NGTW) Program



GOAL

To optimize the productivity and well-being of working adults toward enabling them to contribute to their family's welfare and company's viability through an integrated implementation of appropriate community nutrition and occupational health interventions.

OBJECTIVES

1. To bridge the health and nutrition gaps among various demographics of working communities in different work settings toward developing appropriate food-based recommendations.
2. To enhance the knowledge and practice of workers and employers on healthier food choices and better eating habits that leads to their optimum productivity.
3. To enhance the institutional capacities of employers to address workers' food and nutrition security through relevant policy and program interventions.
4. To build strategic partnerships with workers' and employers' organizations to promote healthy and nutrition-friendly workplace for optimum productivity.

**SEAMEO RECFON
welcomes collaboration
for NGTW Program
Implementation**

COMPONENTS

- Nutrition and health education for employers and workers
- Development of food based recommendations
- Advocacy for health and nutrition policy strengthening in the workplace
- Partnerships with workers' and employers' organizations

ROADMAP

- 2021-2022: Preparation phase and situation mapping
- 2021-2023: Establishment of partnerships and working groups
- 2021-2023: Conduct of benchmarking studies on nutritional status and productivity of target working communities in SEA and identification of lessons learned
- 2022-2024: Piloting the NGTW Program implementation in Indonesia
- 2025: Expansion of the NGTW Program piloting experiences to other SEA countries



Learning Opportunities through Volunteer Engagements (LOVE) Program

AIM

To optimize the civic-mindedness and potentials of young professionals and graduate students to contribute to addressing food and nutrition issues and concerns, across age groups in Southeast Asia.

IMPLEMENTATION SCHEME

1. Volunteer engagements can either be by an individual volunteer or several volunteers that could work together as a team/group.
2. Volunteer engagement period can range from a minimum of 2 weeks to a maximum of 6 months.
3. Volunteers can be engaged in both field and desk-based tasks. Field tasks shall be in the different sites where SEAMEO RECFON flagship programs are implemented. Desk-based tasks can either be at SEAMEO RECFON office in Indonesia or from the home institution of the volunteer/s.

BENEFITS TO VOLUNTEERS

- Gain knowledge and experiences in implementing food and nutrition programs
- Expand professional, personal networks, and job opportunities in relevant field.
- Learn the local culture of other people.
- Will receive a certificate upon completion of the volunteer engagement.

ELIGIBILITY CRITERIA

- All citizens of SEAMEO member countries
- 20 to 35 years old
- Proficient in oral and written English
- Young professionals, working either on a full- or part-time arrangement
- MS or Ph.D. students on study leave from his/her office or as working students who are within two years of graduation
- Fresh graduates of BS/MS degrees who are currently looking for a job

APPLICATION PROCESS

- Submit your application documents through the application link:
https://bit.ly/RECFON_LOVE_Program
- Important dates:
 1. Submission Deadline: 30 October of every year
 2. Screening process: Week 1-3 of November of every year
 3. Announcement of Qualified Volunteers: Week 4 of November of every year

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