

Sustaining Nutrition During Crisis: School Feeding Adaptations in Times of Covid-19

Teoh Ai Ni



Introduction

In early 2020, the rapid spread of Covid-19 infections prompted governments worldwide to undertake stringent measures to curb its transmission. As a result, many countries closed schools and suspended in-person learning unprecedentedly. At the height of the crisis, between April and May 2020, an estimated 1.6 billion school-age children and youth across the world were affected by school closures¹.

In Malaysia, schools nationwide closed for a total of 41.5 out of 124 weeks from mid-February 2020 to 1st July 2022², longer than what the regional neighbours like Singapore, Thailand, Indonesia and Australia experienced³. Although education continued with the shift towards digital learning,

Views are short opinion pieces by the author(s) to encourage the exchange of ideas on current issues. They may not necessarily represent the official views of KRI. All errors remain the authors' own.

This view was prepared by Dr Teoh Ai Ni, a researcher from the Khazanah Research Institute (KRI). The author is grateful for the valuable comments from Nur Sofea Hasmira Azahar and Khoo Wei Yang.

Author's email address:

aini.teoh@krinstitute.org

Attribution – Please cite the work as follows: Teoh Ai Ni. 2024. Sustaining Nutrition During Crisis: School Feeding Adaptations in Times of Covid-19. Kuala Lumpur: Khazanah Research Institute. License: Creative Commons Attribution CC BY 3.0.

Photo by cypocolour on Shutterstock.

Information on Khazanah Research Institute publications and digital products can be found at www.KRIInstitute.org.

¹ UNESCO (2023)

² Ibid.

³ KRI (2024)

essential activities that used to take place within the school compound alongside classroom learning were halted. These included the suspension of school feeding programme, leaving many underprivileged students vulnerable to food insecurity and malnutrition during the public health crisis.

As highlighted in the [State of Household 2024 report](#), the Covid-19 pandemic brought about profound impacts on the education outcomes of Malaysian students. School closures due to the pandemic caused significant disruptions to traditional schooling and widened the existing educational inequities, particularly among students with low socioeconomic status⁴. However, some students experienced losses that extended beyond education during school closures. Students from low-income households also missed out on the opportunity to acquire nutritious meals that account for one-third of their daily calorific requirements.

Discussions on educational impacts of the Covid-19 pandemic often center on academic losses, but not so much is focused on the nutritional losses possibly experienced by school children who are dependent on school feeding programmes. This article aims to shed light on the disruptions to school feeding programmes during the Covid-19 pandemic, and how countries worldwide ensure the continuity of school meal provision amidst school closures.

Disruptions to School Feeding During Covid-19 Pandemic

Globally, around 370 million school children in 150 countries missed out on nutritious school meals they depended on during school closures⁵. In Malaysia, over 500,000 students were enrolled in Rancangan Makanan Tambahan (RMT)—a national school feeding programme for primary school children from low-income households—before the pandemic⁶. With schools closed during lockdowns, these students no longer had access to free school meals.

The consequences of such disruptions can be significant. For underprivileged students, attending school is not only an opportunity to learn and socialise, but also a chance to receive a nutritious meal that their family may otherwise be unable to provide. Missing school meals means missing a key source of nutrition essential to support their growth and development.

In addition, the suspension of school feeding programme has a major impact on families, given that school meals can help to alleviate their food expenditure. For low income households, school meals represent around 10% to 15% of their daily income, which can add up to a significant amount of expenses for those with multiple school-aged children⁷. With school closures, these families may face greater financial pressure due to the need to spend more on food for their children.

⁴ KRI (2024)

⁵ Borkowski et al. (2021)

⁶ EPU (2021)

⁷ Bundy et al. (2018)

Furthermore, heightened food insecurity caused by economic downturns and job losses may further compound the malnutrition risk these children face. During the pandemic, many families living in poverty were dependent on donations and food banks, making it even more challenging for them and their children to eat well or adequately.

Malnutrition in times of crisis has both immediate and long-term implications for school children eligible for school feeding programmes. In the short term, these children can become more susceptible to infections, considering that they are already nutritionally vulnerable before the pandemic⁸. Furthermore, their learning capacity may also be affected, as hungry children cannot learn effectively, whether in school or at home.

Consequently, childhood malnutrition during the critical stage of physical growth and cognitive development can have lifelong impacts beyond health. Children who are malnourished are at higher risk of developing adverse health issues later in life, negatively affecting their education attainment, employment, productivity and earning potential⁹. This can reinforce the vicious cycle of malnutrition and poverty¹⁰.

Measures to Mitigate Disruptions to School Feeding: Global Experience

As school meals were not possible since schools were closed, some countries temporarily suspended their school feeding operations¹¹. However, many managed to devise and implement new adaptations to ensure the continuation of school meal provisions. According to the World Food Programme (WFP), an international humanitarian organisation, around 71 countries adopted alternatives to school feeding using modalities like take-home rations, food baskets, food vouchers and cash transfers. This section discusses the modalities commonly used by countries worldwide to replace on-site school feeding amid the Covid-19 pandemic.

Take-home rations

During the pandemic, take-home rations or food baskets were the most commonly used modalities to replace school meals¹². Take-home rations are commonly used as a means to ensure the food security of people in emergency situations, such as conflicts and natural disasters, before the pandemic¹³. Contrary to school meals, which are usually hot meals served at schools daily either as breakfast, lunch or snack, take-home rations refer to a basket of ingredients and food items provided for the child to take home.

⁸ Morales et al. (2024)

⁹ Galler et al. (2012); Soliman et al. (2021); Victora et al. (2008); Kirolos et al. (2022)

¹⁰ Siddiqui et al. (2020)

¹¹ Ferrero, Wineman, and Mitchell (2023)

¹² Borkowski et al. (2021)

¹³ UNHCR et al. (2004); INCAP (2019)

Take-home rations are meant to be prepared and consumed at home, and are more targeted at the entire household¹⁴. For students living in rural areas, food baskets containing both fresh and non-perishable items were found to be more appropriate, as they reduced the need for the students or their families to travel long distances frequently to access food.

In most cases, these food baskets were usually pre-packed by school staff or local retailers, with food quantities adjusted to the needs of each student's family¹⁵. There were mainly two modes of distribution for take-home rations: pick-up or home delivery¹⁶. In countries that offered pick-ups of food baskets, strict scheduling was followed to avoid overcrowding¹⁷. The frequency of pick-ups ranged from daily, weekly and bi-weekly to monthly depending on the type of food items provided, with food baskets containing fresh and minimally processed foods requiring more frequent pick-ups¹⁸.

Home deliveries were also used in certain countries to distribute food baskets directly to the beneficiaries, especially families living in rural areas. In Colombia, healthy eating guidance, menu suggestions and instructions for hygiene and proper food preparation at home were also provided along with the food baskets to encourage appropriate utilisation of the ingredients and food items¹⁹. Besides, as food shortages were an issue in certain areas, the local school feeding operators collaborated with the Ministry of Agriculture to create directories of food producers, facilitating the supply of food and preventing the speculation of food prices.

Cash transfers and food vouchers

Some school feeding programmes switched to providing monetary support in the form of cash transfers or food vouchers with an amount equivalent to the daily cost of school meals as an alternative to on-site school feeding. This gave the families the option to purchase the ingredients and food items they prefer or need. For example, in certain states of Brazil, cash was transferred to families through reloadable magnetic cards with an amount sufficient for purchasing food items for students' meals. In some cases, food vouchers were redeemable only for selected foods²⁰ or at certain commercial food stores²¹, limiting the autonomy of the beneficiaries in using these aids.

¹⁴ Adelman, Gilligan, and Lehrer (2008); Ferrero, Wineman, and Mitchell (2023)

¹⁵ WFP, n.d.

¹⁶ Ferrero, Wineman, and Mitchell (2023)

¹⁷ Borkowski et al. (2021)

¹⁸ Colón-Ramos et al. (2022)

¹⁹ Borkowski et al. (2021)

²⁰ WFP, n.d.

²¹ Corrêa et al. (2020)

However, a fundamental disadvantage of using cash transfers to replace school meals is that beneficiaries may use the amount intended for purchasing healthy ingredients for their children's meals on unhealthy foods or other items instead. This makes cash transfers more suitable to be used as a short-term immediate relief²². When schools are closed over a prolonged period, it may be more effective to replace or complement cash transfers with food distribution to better ensure the food security of school children and their families²³.

Ready-to-eat meals

Less frequently, some countries continued to prepare ready-to-eat meals for daily pickup by students or their families²⁴. For example, at certain schools in Puerto Rico, school meals cooked by school cafeteria personnel were available for students via a “grab n’ go” or takeaway mode. In some districts of the United States, curbside meal pickups were also offered²⁵, with some setting up multiple meal delivery sites in central community locations, such as community centres, apartment complexes and intersections along school bus routes to increase accessibility²⁶. For students who lived in remote areas, ready-to-eat meals were delivered directly to them²⁷. This means of food distribution helped to ensure the continuation of school meal provision while adhering to strict health and safety protocols during the pandemic.

Multimodal approach

In countries with decentralised school feeding programmes, a mix of modalities was often implemented across different localities. In these cases, a combination of ready-to-eat meals, food baskets, vouchers or cash transfers were usually provided for families whose children were eligible to receive free school meals²⁸. For example, different states in India had varied responses; some used home delivery of meals, some provided take-home rations while others provided cash transfers²⁹. In Finland, most of the schools that implemented remote learning provided hot or cold meals five times a week for students to bring home, while others distributed weekly food baskets, with a small proportion of the schools opting to distribute food vouchers or provide cash transfers³⁰. The multimodal approach allowed the autonomy of respective localities or schools to decide on the approaches best suited to their needs and capacities.

²² Lourenço et al. (2021); Carducci et al., n.d.

²³ Lourenço et al. (2021)

²⁴ Ferrero, Wineman, and Mitchell (2023); Colón-Ramos et al. (2022)

²⁵ Kenney et al. (2021)

²⁶ Kinsey et al. (2020)

²⁷ Ibid.

²⁸ Colón-Ramos et al. (2022)

²⁹ Borkowski et al. (2021)

³⁰ WFP (2020)

Malaysia's Response to School Feeding Disruptions

Throughout the pandemic, the Malaysian government launched a series of stimulus packages comprising several aids and initiatives aimed at assisting individuals and households, revitalising businesses and boosting the economy³¹. Assistance for households was mainly provided in the form of cash transfers, with amounts ranging from RM100 to RM1,800 and the objective of relieving financial burdens³².

The government also worked with non-governmental organisations (NGOs) to provide food and shelter for vulnerable communities, including the elderly, the Indigenous community and disabled individuals. Additionally, the government also launched the National Food Basket Programme, providing food baskets worth RM100 to each eligible household³³.

However, it remains unclear whether there have been any initiatives specifically aimed at addressing the disruptions to school meal provision under the *Rancangan Makanan Tambahan* (RMT). While the budgetary allocation for RMT was increased from RM295 million in 2020 to RM420 million in 2021³⁴, it is uncertain whether the allocated fund for RMT in 2020 was utilised or repurposed to ensure the nutrition security of RMT beneficiaries during school closures.

Lessons for Future Preparedness

Although each country's response might be different from one another, learning from their experience will help inform a better response to mitigate school feeding disruptions during future emergencies. Overall, countries that successfully adapted their school feeding approaches during the pandemic showed the importance of flexibility and responsiveness to complex and rapidly changing conditions in implementing timely school feeding adaptations³⁵. While not fully replacing on-site school feeding programme, modalities such as take-home rations, food baskets, vouchers and cash transfers served as important 'stop-gap' measures, minimising the nutritional impacts of the Covid-19 pandemic on school children.

Taking into account the food and nutritional needs of not just the students but also their households is crucial when designing the appropriate school feeding adaptations, considering that the families or caregivers will be responsible for feeding the children when they are out of school. In circumstances where cash or voucher transfers are to replace school meals, integrating such measures with the existing social protection structures is recommended³⁶.

³¹ Yin and Wan Amirah (2022)

³² Ibid.

³³ Bernama (2021); MOF (2021)

³⁴ The Edge (2020). A part of the increased allocation to RMT was made to ensure daily milk supply, presumably as an effort to promote calcium and vitamin D intake among RMT students.

³⁵ WFP, UNICEF, and others (2020); WFP, n.d.

³⁶ WFP, UNICEF, and others (2020)

Despite the variations in the modality used to replace in-school feeding, most countries followed the nutritional guidelines that were established for school meals pre-pandemic³⁷. This shows that maintaining or enhancing the nutritional quality of meals, take-home rations or food baskets is feasible and should continue to be a priority even in times of crisis. Rising food costs during the pandemic due to supply chain disruptions also highlighted the importance of strengthening local food supply chains and integrating local agri-businesses in school meal provision.

To ensure better preparedness for future school feeding disruptions, government should develop immediate, as well as medium- to long-term contingency plans and implementation guides³⁸. This will help facilitate quick responses and minimise interruptions to school feeding operations in emergency situations. Studies have shown that the success of school feeding adaptations during the pandemic was highly dependent on the pre-pandemic level of financial resources and autonomy of school feeding programmes³⁹. Hence, ensuring continued or greater financial support for RMT is one crucial step the government can take to ensure that the programme has the adequate capacity to mitigate similar disruptions in the future.

Concluding Remarks

The impacts of Covid-19 pandemic on school children are immeasurable and inequitable, with the socioeconomically disadvantaged ones being hit the hardest. The full extent of nutritional loss due to missed school meals during school closures and its implications remain uncertain because of the lack of monitoring. However, given the benefits school feeding programmes have on the health, educational outcomes and social development of school children⁴⁰, the disruptions to school meals provision during school closures likely had a negative impact on RMT beneficiaries, many of whom were already nutritionally vulnerable before the pandemic. Moving forward, improving the resilience of school health and nutrition programmes, including the school feeding programme, will be imperative to better prepare for future emergencies or crises and avoid compromising the nutrition of vulnerable children.

³⁷ Colón-Ramos et al. (2022)

³⁸ WFP (2021)

³⁹ Ferrero, Wineman, and Mitchell (2023); Colón-Ramos et al. (2022)

⁴⁰ Khalidi and Tan (2020)

References

- Adelman, Sarah, Daniel Gilligan, and Kim Lehrer. 2008. *How Effective Are Food for Education Programs?: A Critical Assessment of the Evidence from Developing Countries*. Vol. 9. Intl Food Policy Res Inst.
- Bernama. 2021. "National Food Basket Initiative More than Providing Food." NST Online. July 25, 2021. <https://www.nst.com.my/news/nation/2021/07/711547/national-food-basket-initiative-more-providing-food>.
- Borkowski, Artur, Javier Santiago Ortiz Correa, Donald AP Bundy, Carmen Burbano, Chika Hayashi, Edward Lloyd-Evans, Jutta Neitzel, and Nicolas Reuge. 2021. "COVID-19: Missing More than a Classroom. The Impact of School Closures on Children's Nutrition. Innocenti Working Paper 2021-01." *UNICEF Office of Research-Innocenti*. ERIC.
- Bundy, Donald AP, Nilanthi de Silva, Susan Horton, Jean T Jamison, and George C Patton. 2018. "Re-Imagining School Feeding - A High Return Investment in Human Capital & Local Economies | World Food Programme." Washington, DC: World Bank. <https://www.wfp.org/publications/re-imagining-school-feeding-high-return-investment-human-capital-local-economies>.
- Carducci, Bianca, Georgia Dominguez, Emily Kidd, Karlie Janes, Aatekah Owais, and Zulfiqar A Bhutta. n.d. "Pivoting School Health and Nutrition Programmes during COVID-19 in Low- and Middle-Income Countries: A Scoping Review." *Journal of Global Health* 14:05006. <https://doi.org/10.7189/jogh.14.05006>.
- Colón-Ramos, Uriyoán, Rafael Monge-Rojas, Jael Goldsmith Weil, Florencia Olivares G, Rebecca Zavala, Mariana Fagundes Grilo, Diana C. Parra, and Ana Clara Duran. 2022. "Lessons Learned for Emergency Feeding During Modifications to 11 School Feeding Programs in Latin America and the Caribbean During the COVID-19 Pandemic." *Food and Nutrition Bulletin* 43 (1). SAGE Publications Inc:84–103. <https://doi.org/10.1177/03795721211062371>.
- Corrêa, Elizabeth Nappi, Janaina das Neves, Lidiamara Dornelles de Souza, Camila da Silva Lorintino, Priscila Porrua, and rancisco de Assis Guedes de Vasconcelos. 2020. "School Feeding in Covid-19 Times: Mapping of Public Policy Execution Strategies by State Administration." *Revista de Nutrição* 33 (October). Pontifícia Universidade Católica de Campinas:e200169. <https://doi.org/10.1590/1678-9865202033e200169>.
- EPU. 2021. "Malaysia Voluntary National Review (VNR) 2021." Putrajaya, Malaysia: Economic Planning Unit, Prime Minister's Department.
- Ferrero, Elisabetta M., Ayala Wineman, and Arlene Mitchell. 2023. "Changes in School Feeding Operations during the COVID-19 Pandemic: Evidence from 139 Countries." *Food Security* 15 (6):1521–37. <https://doi.org/10.1007/s12571-023-01393-1>.
- Galler, Janina R., Cyralene Bryce, Deborah P. Waber, Miriam L. Zichlin, Garret M. Fitzmaurice, and David Eaglesfield. 2012. "Socioeconomic Outcomes in Adults Malnourished in the First Year of Life: A 40-Year Study." *Pediatrics* 130 (1):e1–7. <https://doi.org/10.1542/peds.2012-0073>.

- INCAP. 2019. "Food and Nutrition in Disasters." PAHO/WHO Institute of Nutrition of Central America and Panama (INCAP). <https://www.paho.org/en/health-emergencies/food-and-nutrition-disasters>.
- Kenney, Erica L., Caroline G. Dunn, Rebecca S. Mozaffarian, Jane Dai, Katie Wilson, Jeremy West, Ye Shen, Sheila Fleischhacker, and Sara N. Bleich. 2021. "Feeding Children and Maintaining Food Service Operations during COVID-19: A Mixed Methods Investigation of Implementation and Financial Challenges." *Nutrients* 13 (8):2691. <https://doi.org/10.3390/nu13082691>.
- Khalidi, Jarud Romadan, and Zhai Gen Tan. 2020. "Understanding School Feeding in Malaysia." *Khazanah Research Institute (KRI) Discussion Paper* 1:20.
- Kinsey, Eliza W., Amelie A. Hecht, Caroline Glagola Dunn, Ronli Levi, Margaret A. Read, Courtney Smith, Pamela Niesen, Hilary K. Seligman, and Erin R. Hager. 2020. "School Closures During COVID-19: Opportunities for Innovation in Meal Service." *American Journal of Public Health* 110 (11):1635–43. <https://doi.org/10.2105/AJPH.2020.305875>.
- Kirolos, Amir, Magdalena Goyheneix, Mike Kalmus Elias, Mphatso Chisala, Samantha Lissauer, Melissa Gladstone, and Marko Kerac. 2022. "Neurodevelopmental, Cognitive, Behavioural and Mental Health Impairments Following Childhood Malnutrition: A Systematic Review." *BMJ Global Health* 7 (7). BMJ Specialist Journals:e009330. <https://doi.org/10.1136/bmjgh-2022-009330>.
- KRI. 2024. "Households and the Pandemic 2019-2022: The State of Households 2024." Kuala Lumpur: Khazanah Research Institute.
- Lourenço, Ana Eliza Port, Naiara Sperandio, Priscila Vieira Pontes, and Luana Silva Monteiro. 2021. "School Feeding and Food and Nutrition Security in the Context of the Covid-19 Pandemic in the Northern Region of the State of Rio de Janeiro, Brazil." *Food Ethics* 6 (2):11. <https://doi.org/10.1007/s41055-021-00092-x>.
- MOF. 2021. "RM300,000 under Food Basket Programme for Each MP Distributed, 438,376 Baskets given out as of July 7." Official Portal of Ministry of Finance. 2021. <https://www.mof.gov.my/portal/en/news/press-citations/rm300-000-under-food-basket-programme-for-each-mp-distributed-438-376-baskets-given-out-as-of-july-7>.
- Morales, Fátima, Sergio Montserrat-de la Paz, Maria J. Leon, and Fernando Rivero-Pino. 2024. "Effects of Malnutrition on the Immune System and Infection and the Role of Nutritional Strategies Regarding Improvements in Children's Health Status: A Literature Review." *Nutrients* 16 (1). Multidisciplinary Digital Publishing Institute:1. <https://doi.org/10.3390/nu16010001>.
- Siddiqui, Faareha, Rehana A. Salam, Zohra S. Lassi, and Jai K. Das. 2020. "The Intertwined Relationship Between Malnutrition and Poverty." *Frontiers in Public Health* 8 (August):453. <https://doi.org/10.3389/fpubh.2020.00453>.
- Soliman, Ashraf, Vincenzo De Sanctis, Nada Alaaraj, Shayma Ahmed, Fawziya Alyafei, Noor Hamed, and Nada Soliman. 2021. "Early and Long-Term Consequences of Nutritional Stunting: From Childhood to Adulthood." *Acta Bio Medica: Atenei Parmensis* 92 (1):e2021168. <https://doi.org/10.23750/abm.v92i1.11346>.
- The Edge. 2020. "With Kids out of School Most of This Year Due to Covid-19, What Happens to the Unused Money for Supplementary Food?" The Edge Malaysia. 2020.

<https://theedgemalaysia.com/article/kids-out-school-most-year-due-covid19-what-happens-unused-money-supplementary-food>.

UNESCO. 2023. "One Year into COVID-19 Education Disruption: Where Do We Stand?" UNESCO News. 2023. <https://www.unesco.org/en/articles/one-year-covid-19-education-disruption-where-do-we-stand>.

UNHCR, UNICEF, WFP, and WHO. 2004. "Food and Nutrition Needs in Emergencies." World Health Organisation.

Victora, Cesar G, Linda Adair, Caroline Fall, Pedro C Hallal, Reynaldo Martorell, Linda Richter, and Harshpal Singh Sachdev. 2008. "Maternal and Child Undernutrition: Consequences for Adult Health and Human Capital." *Lancet* 371 (9609):340–57. [https://doi.org/10.1016/S0140-6736\(07\)61692-4](https://doi.org/10.1016/S0140-6736(07)61692-4).

WFP. 2020. "School Feeding in Times of COVID-19: What Can Governments Do?" Rome, Italy: World Food Programme.

———. 2021. "School Feeding Amidst a Pandemic: Preparing For the New Normal in Asia and The Pacific | World Food Programme." Rome, Italy: World Food Programme. <https://www.wfp.org/publications/school-feeding-amidst-pandemic-preparing-new-normal-asia-and-pacific>.

———. n.d. "Managing Continuity and Preparedness of School Feeding Programmes under COVID-19 and the SSC Role." World Food Programme.

WFP, FAO, UNICEF, and others. 2020. "Mitigating the Effects of the COVID-19 Pandemic on Food and Nutrition of Schoolchildren." *Interim Guidance Note*, 1–14.

Yin, Shao Loong, and Wan Usamah Wan Amirah. 2022. "The Malaysian Economy and COVID-19: Policies and Responses from January 2020–April 2021." United Nations Conference on Trade and Development.