STRATEGIES FOR EMPOWERMENT OF NUTRITION AMONG SCHOOL CHILDREN: A SCOPING REVIEW

LOTFI, W. H. N. W. M.[1*] – MOKTI, K.[1] – ALIAS, A.[1] – AZHAR, N.[1] – WOON, F. C.[1]

[1] *Faculty of Medical and Health Sciences, Universiti Sabah Malaysia, Sabah, Malaysia.*

**Corresponding author*
e-mail: peace_zu777[at]yahoo.com

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Abstract. School-age children are in a critical stage of physical and cognitive development, and adequate nutrition is essential for achieving their full potential. Malnutrition during this period has immediate effects on growth, learning, and mental health, and long-term consequences for adult productivity and public health. While schools remain important entry points for nutrition interventions, sustainable improvements often depend on public health initiatives that target interventions through parental involvement, community engagement and empowerment and also policy settings. However, evidence on which strategies are most effective in shaping a conducive nutritional environment for school children remains limited. This review aimed to explore existing evidence on strategies for community empowerment to improve nutrition among school children. A scoping review was conducted using literature from Scopus and Science Direct. Six studies published from 2018-2023 were included, comprising quasi-experimental designs, randomized controlled trial, qualitative study, and case study. Articles were selected if they assessed community-based strategies addressing nutrition in school-age children. Three key strategies emerged; (i) children's direct involvement in shaping their food choices, (ii) community engagement and empowerment in planning and delivering interventions, and (iii) school food programmes that provided structured nutrition support. These approaches demonstrated positive impacts on children's nutritional status, knowledge, and dietary behaviours, with community ownership enhancing sustainability. Community empowerment strategies show promise in addressing school-age nutrition by improving dietary intake and fostering long-term health benefits. Successful interventions should be culturally sensitive, economically viable, and designed for sustainability. Future research should evaluate large-scale implementation and policy integration to maximize public health impact.
Keywords: *community empowerment, child nutrition, school feeding, public health interventions, school-age children*

Introduction

A child is defined by The United Nations Convention on the Rights of the Child (Article 1) as any person under the age of eighteen (Qamar, 2021). Children represent the future of our society, and their well-being is therefore of paramount importance. It is essential for public health experts to understand the transitions that children experience and the elements that contribute to these changes to enable the development of focused interventions, programmes and policies that can support them during these crucial stages and effectively foster their overall well-being (Board on Children Youth and Families, 2015). The Geneva Declaration of the Rights of the Child in 1924 and the Declaration of the Rights of the Child, which was adopted by the General Assembly on November 20, 1959, have both acknowledged the need to provide special care for children (Bäckström, 1989). Optimal child development requires access to diverse resources, including responsive caregiving, opportunities for learning, safety and security, proper nutrition, and overall well-being (WHO, 2018). While much attention highlights the importance on the first 1000 days of life which represents critical window from conception to a child's second birthday, the subsequent period of life cycle

receives relatively less emphasis (Likhar and Patil, 2022). Yet, school-age children represent a dynamic demographic as their health and development are intricately linked to their educational experiences which shape their future growth and development physically and mentally. This period is marked by rapid growth, learning, and exploration (OECD, 2018). Nutrition during the school years is a major determinant of academic performance, overall health, and long-term well-being. Inadequate nutrition can lead to a range of issues, from stunted physical and cognitive development to increased vulnerability to infectious diseases whereas good nutrition can enhance cognitive function, improve concentration, and contribute to better academic outcomes.

In 2022, an estimated 390 million children and adolescents aged 5–19 years were overweight, including 160 million living with obesity. The prevalence of overweight in this age group has increased sharply, rising from 8% in 1990 to 20% in 2022, with similar patterns observed among both sexes: 19% of girls and 21% of boys were overweight in 2022. At the same time, undernutrition persists, with approximately 190 million children and adolescents experiencing thinness, defined as a BMI-for-age more than two standard deviations below the reference median (WHO, 2014). Childhood is a formative period during which nutritional habits, attitudes, and beliefs are established and often persist into adulthood. Interventions and nutritional knowledge during this period therefore have the potential to reduce the long-term burden of malnutrition, obesity, and related non-communicable diseases (Rasheed, 2023). Moreover, the school years represent the final critical window of opportunity to positively influence growth trajectories, health outcomes, and lifelong dietary behaviors (Likhar and Patil, 2022). Given these challenges, there is a compelling need to strengthen interventions targeting nutrition among school-aged children. The urgency lies in bridging existing gaps and implementing evidence-based, context-specific solutions that meet the needs of this population, particularly through community-based approaches and empowerment strategies. The purpose of this scoping review is therefore to examine the current body of evidence to identify effective strategies for enhancing community engagement and empowerment in improving school children's nutrition. Importantly, the skills and capacities built during childhood not only influence individual outcomes across the life course but also shape the health and human development of future generations.

Materials and Methods

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist was used to guide this review (Tricco et al., 2018). Web-based search was conducted using databases mainly Scopus and Science Direct to retrieve published research articles on nutritional interventions and community empowerment for school children.

Eligibility criteria

Inclusion criteria were: (1) Studies published between 2018 and 2023; (2) Conducted among school-aged children; (3) Focused on nutritional interventions or community empowerment related to school children's nutrition; (4) Designed as observational (cross-sectional, cohort, qualitative) or experimental/intervention studies; (5) Published in the English language; and (6) Available in full-text access. Exclusion criteria were: (1) Studies focusing solely on children younger or older than the school-age group; (2)

Review papers (systematic, scoping, or narrative); (3) Editorials, commentaries, policy briefs, reports, or book chapters; and (4) Studies with incomplete or insufficient data.

Search strategy, study selection, data extraction and synthesis

The literature search was conducted on 22nd of December 2023 using two databases which were Scopus and ScienceDirect. Boolean operators and keywords were applied to optimize search precision. The search terms included: "community empowerment" AND "school children" AND "nutrition." The search was restricted to articles published between 2018 and 2023 in English. The selection process followed the PRISMA-ScR framework (Tricco et al., 2018), including stages of identification, screening, eligibility, and inclusion. Titles and abstracts were screened for relevance, and full-text reviews were conducted to determine eligibility according to the predefined criteria. Data extraction was carried out in two phases. In the first phase, bibliographic and methodological details were extracted, including author, year, country, population, sample size, and study design. In the second phase, data were charted on the interventions, strategies, and outcomes related to community empowerment for nutrition among school children. Results were organized thematically according to strategies for community empowerment, nutritional interventions, implementation approaches, and reported outcomes. Consistent with scoping review methodology, no formal quality appraisal of individual studies was undertaken.

Results and Discussion

The initial search yielded 6,607 records. After removing 10 duplicates and 5,287 non–open access items, a total of 1,310 full-text articles were retained (*Figure 1*). Title screening led to the exclusion of 1,271 publications that were irrelevant to the review objectives, leaving 39 articles for abstract-level screening. A further 33 studies were excluded at this stage for not meeting the inclusion criteria (non-school-age-children, studies of challenges and barriers without strategies and studies with nutrition as a factor rather than as an outcome or complications as main objectives in the studies) resulting in a final pool of 6 articles deemed eligible for in-depth review and analysis. The review included three quasi-experimental studies, one randomized controlled trial, one qualitative study, and one community-based participatory case study, all of which reported evidence on interventions targeting nutrition among school children. *Table 1* presents the key characteristics of the included studies, including author, year of publication, study location, participant profile, and nutrition-related strategies which were conducted across diverse geographical contexts, including Asia, the Americas, Africa, Europe, and the Middle East (Gago et al., 2023; McEachern et al., 2022; Nosi et al., 2021; Ghattas et al., 2020; Teo et al., 2019; Muzaffar et al., 2018). Participants comprised schoolchildren, caregivers, and community members. The review identified three overarching strategies: (i) children's direct involvement in food choices, (ii) community engagement and empowerment, and (iii) school food programmes providing structured nutrition support. The included studies highlighted a range of nutritional challenges commonly faced by school-aged children, including poor dietary habits contributing to obesity, poverty and food insecurity due to marginalization, undernutrition, excess weight, and a high prevalence of anaemia. To address these issues, interventions employed diverse approaches such as empowering local women, mobilizing community resources, implementing social marketing and school nutrition

campaigns, fortifying school meals, and engaging children in co-creation of healthy food options.

Table 1. *Summary of the included study characteristics, nutrition issues and strategies*.

AYL	PC	SD	NI	IS
Adelman et al. (2019) Uganda	School children	Cluster randomized controlled trial	High prevalence of anemia among school children.	School feeding program (SFP) providing multiple-micronutrient-fortified meals and a nutritionally equivalent take-home ration (THR).
Mceachern et al. (2022) Canada	Community Members	Community-based participatory research (CBPR) case study	Indigenous communities in Canada are concerned about long-term food sovereignty and the reclamation of traditional food-related skills among their people.	The Learning Circle (LC) brought together interested community members to plan and implement activities aimed at enhancing access to local, healthy, and traditional foods for school communities.
Nosi et al. (2021) Italy	Primary School Children	Quasi Experimental	Excess weight in children is due to unhealthy lifestyles including poor nutrition habits and sedentary behavior.	Creating a formative evaluation of a social marketing campaign on healthy nutrition and lifestyle in Italian primary school children
Teo et al. (2021) Malaysia	Primary School Children	Quasi Experimental	Malnutrition among school children may contribute to adverse health consequences such as non-communicable diseases, poor cognitive performance, psychological distress and poor quality of life that may persist into adulthood.	Study protocol of a school-based intervention programme that integrates nutrition education and healthy school food environment, namely School Nutrition Programme (SNP) to promote healthy lifestyle.
Ghattas et al. (2020) Lebanon	Schoolchildren 5-15 years old	Quasi Experimental	Marginalization among the refugees community including school children leading to poverty and food insecurity.	Establishment of two community kitchens (Healthy Kitchens (HK) as social enterprises, linked to a community-based school nutrition intervention to show that it was feasible to supply schoolchildren with healthy meals cooked by a women's cooperative.
Galler et al. (2022) Norway	School children	Qualitative Study	Poor dietary habits contributing to childhood obesity.	Involving children in the development of healthy food products that they will actively chose and enjoy.

Note: AYL=Authors, Year, Location; PC=Participants Characteristics; SD=Study Design; NI=Nutrition Issues; IS=Intervention/Strategies.

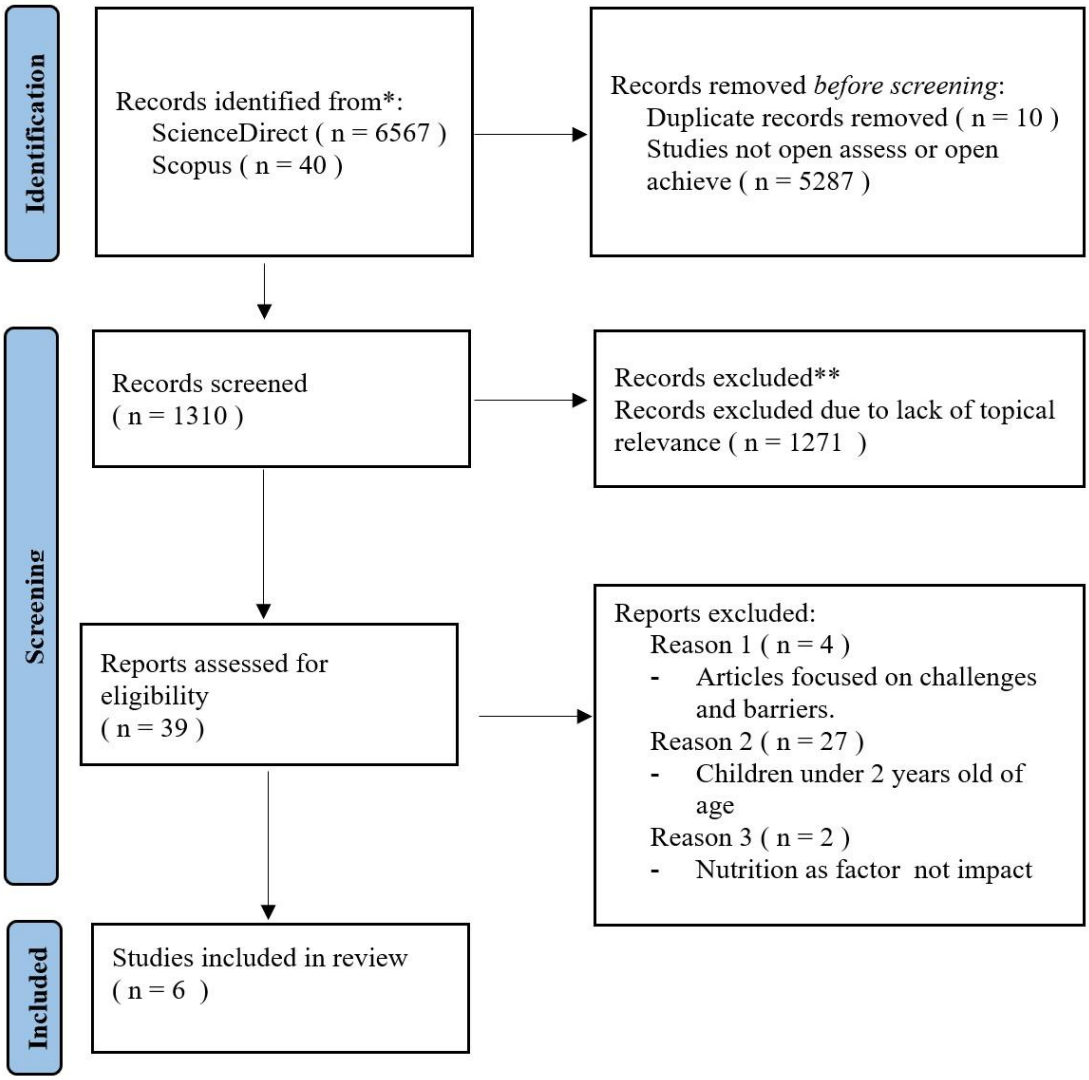

Figure 1. *PRISMA-ScR flow diagram illustrating the selection process of studies on empowerment of nutrition among school-aged children.*

Children's direct involvement in food choices

Social marketing campaign

Social marketing campaigns have demonstrated potential to improve children's nutritional knowledge and encourage the adoption of healthier dietary practices and lifestyle behaviours. One such example is the ViviSmart initiative, implemented across sixteen primary schools in four regions of Italy. The campaign employed a comprehensive marketing mix, which included: the product (educational materials and activities), the place (participating supermarkets and schools), and the promotion (delivered primarily via a dedicated website and smartphone application). The intervention lasted eight months and comprised a variety of interactive activities that engaged both students and teachers within the school setting, as well as students and their parents through in-store events and online platforms. The evaluation, conducted using a quasi-experimental pre–post design, revealed notable improvements in dietary habits. A significantly greater proportion of children in the intervention group reported increased consumption of water, cereals, and fruits/vegetables, while both groups

showed a statistically significant reduction in sweet consumption (Nosi et al., 2021). The most effective components of the campaign were its pedagogical approaches, structured educational materials, and experiential learning activities such as laboratory exercises, food-related experiments, and supervised in-store purchasing experiences. Teachers and parents generally received the campaign positively, though some noted that certain materials were challenging for younger children. Nonetheless, the initiative was considered successful, replicated in subsequent years, and made publicly accessible through a dedicated website for free download.

Co-creation of healthy food by school children

The rising global prevalence of childhood overweight and obesity necessitates the need for nutritious food alternatives that children will consciously choose. Actively involving children in the development of such food products is advantageous, as it allows innovations to be tailored to their preferences and needs. This study sought to empower school children to influence their own healthy snacking habits by engaging them in the co-creation of refreshment ideas. In addition, it aimed to evaluate a methodology for generating early-stage food product ideas through co-creation activities, with outcomes assessed in terms of engagement, content creation, and participation. A three-stage, multi-method design was implemented to promote progressive inquiry and mutual learning. The first phase, Show & Tell, involved a photovoice exercise where children captured and discussed images of snacks. The second phase, Reflect, employed a projective sorting task of snack varieties identified in the first phase, eliciting participants' perceptions, motivations, and current snacking practices. The third phase, Create, focused on generating concepts for new healthy refreshments through collaborative design activities. Post-study feedbacks from the children demonstrated that the majority of them were highly favourable. They described the experience as "working and playing", which fostered a sense of ownership and engagement, making them feel like active collaborators in the development of their own healthy food products.

Community engagement and empowerment

Community kitchen

The Healthy Kitchen, Healthy Children (HKHC) Program was a quasi-experimental study conducted among Palestinian refugees in Lebanon, which also included school children as participants. The program comprised two main components; the establishment of community kitchens operating as social enterprises, and the implementation of a school feeding program, with active involvement of women from the local community. By simultaneously increasing the availability of nutritious foods and improving the nutrition-related knowledge of children, parents, and teachers, the program aimed to promote healthier dietary practices. Participation in the school feeding program was further associated with improvements in academic performance, school attendance, and overall dietary habits among children. The week-long training program for women focused on three primary areas; entrepreneurship, food safety and hygiene, and interactive nutrition education. The nutrition education sessions emphasized the importance of incorporating iron-rich foods, fruits, and vegetables, while reducing the intake of dietary fat, sugar, and salt. Following the training, and under the facilitation of UNRWA, each community kitchen was paired with a local

intervention school to provide subsidized, healthy daily snacks for elementary school children. A nutritionist collaborated with participating women to adapt recipes in line with recommended nutrient content. Recipes were designed according to World Food Programme guidelines for a midmorning snack for children aged 6–12 years, delivering approximately 25% of daily energy, 30% of protein, and 10% of fat requirements. In addition to enhancing dietary diversity and reducing saturated fat, sugar, and sodium content, monthly monitoring of participation in the school nutrition intervention demonstrated that attendance increased as improvements were made to the quality of refreshments provided. Parental feedback was overwhelmingly positive, with 90% of parents in intervention schools expressing satisfaction with the program.

Engaging local communities and resources

The Learning Circle (LC), facilitated by a community guide, convened members with a shared interest in improving school communities' access to local, nutritious, and traditional foods. Implemented in Haida Gwaii, Uganda, the initiative focused on schools and pioneered local food pantries, combining efforts to source healthy local foods while cultivating traditional food-related skills through school-based activities. A community-based participatory research (CBPR) case study was employed, incorporating diverse methodologies and perspectives to develop an in-depth understanding of the community context. The LC concentrated on two primary areas: local food pantries and school-based initiatives. The food pantries aimed to increase year-round access to locally sourced foods by establishing centralized facilities for the procurement, processing, storage, and distribution of food to participating public institutions. Within schools, LC initiatives included the introduction of salad bars for lunch programs, breakfast smoothie initiatives, procurement of kitchen equipment, and the organization of gardening and skills-based activities. A key feature of the CBPR methodology was its emphasis on community empowerment, enabling members to shape both the evaluation and implementation processes according to their priorities and to select evaluation strategies most beneficial to their context. The LC approach represents a holistic and culturally responsive model for strengthening community engagement and promoting traditional and regional food practices among Indigenous youth in remote and rural settings.

School feeding programmes

School Nutrition Program (SNP)

In response to the elevated incidence of malnutrition among children in Malaysia, the SNP is a primary prevention initiative designed to foster a healthy lifestyle among primary school pupils. The objective of the quasi-experimental study was to compare the efficacy of the SNP before, during, and after a three-month follow-up period between the intervention and comparison groups (Teo et al., 2019). Six schools participated in this study involving pupils from Primary School Year One to Year Five. The School Nutrition Program (SNP) comprised two essential components. The first component was nutrition education, in which trained educators delivered three structured education sessions using standardized modules. These modules addressed four key themes: hygiene, physical activity, health awareness, and nutrition. The second component was the creation of a healthy school and food environment, whereby canteen food handlers were trained to provide a more nutritious menu during school hours. This

element aimed to improve the availability and accessibility of healthy food options within the school setting while also offering guidance to canteen personnel responsible for food preparation and handling. Following the SNP, the intervention group exhibited improved cognitive performance and increased frequency of breakfast, lunch, and dinner consumption, as well as morning tea consumption, in contrast to the comparison group over time. Additionally, the intervention group also demonstrated higher levels of physical activity and a lower BMI-for-age at the 3-month follow-up.

Fortification of school meal

Food for Education (FFE) initiatives are widely implemented strategies to improve both school participation and learning outcomes. According to the World Food Programme (WFP), approximately 368 million children across 169 countries benefit from school meals or take-home rations (THRs). Other than encouraging school attendance, FFE programs aim to enhance academic achievement by providing nutritious meals, often fortified with essential micronutrients. A cluster randomized controlled trial was conducted in the districts of Lira and Pader, Uganda, to evaluate the impact of an FFE program distributing micronutrient-fortified foods on anaemia levels among primary school girls, adult women, and young children. On school days, both school feeding and THR programs ensured nutrient adequacy. Each child received at adequate amount of fat, protein, and energy, in addition to two-thirds of daily vitamin and mineral requirements. Iron fortification with ferrous fumarate alone provided 99% of daily iron needs. Schoolchildren received these nutrients through a daily feeding program comprising fortified corn–soy blend porridge served midmorning and legume–maize meal or rice for lunch. In parallel, the THR program distributed monthly household rations of equal size and composition to adult female members, conditional on the child's school attendance. At baseline, anaemia prevalence among schoolgirls was 40–46%, with moderate-to-severe anaemia affecting 21–23% of them. Following program participation, the prevalence of anaemia decreased by 24 percentage points compared to the control group. Adjusted analyses further confirmed significant reductions in moderate-to-severe anaemia among schoolgirls who received fortified food through FFE programs.

Child malnutrition remains closely linked to socioeconomic disadvantage, suboptimal dietary patterns, lifestyle factors, limited access to health care services, and external influences such as media exposure and unhealthy behaviours (Rahman et al., 2023). There are various theories that explain how children learn and adapt knowledge to real-life situations. Piaget's theory of cognitive development (Malik and Marwaha, 2023) suggests that children process new experiences by balancing two mechanism; firstly the assimilation which is the integration of new information into existing mental schemas and secondly the accommodation which is the modification of those schemas in response to new information. Together, these processes enable continuous learning and adaptation. Similarly, Bandura's Social Learning Theory (Fryling et al., 2011) emphasizes that learning occurs through observation, imitation, and modelling, integrating both behavioural and cognitive components in daily activities. These theoretical frameworks provide the foundation for educational approaches that actively engage children in shaping their own dietary practices. When school children are directly involved in interactive and experiential learning activities, they tend to find the process more engaging, especially when it is connected to practical and relatable situations. Such meaningful participation not only validates their experiences but also

fosters healthy eating self-efficacy and dietary diversity, contributing to positive behavioural change both in the short and long term.

However, one of the challenges in promoting sustained change lies in children's limited autonomy over food choices. Although educational and awareness programmes can effectively enhance their nutrition knowledge, attitudes, and motivation to adopt healthier behaviours, actual food consumption often remains heavily influenced by parental purchasing decisions and household food environments. This dependency can restrict the extent to which behaviour change can be achieved. Interventions that place children at the centre of the learning process have been shown to improve their dietary knowledge, food preferences, and lifestyle behaviours (Zacarías et al., 2019). By implementing comprehensive pedagogical strategies, educators can effectively enhance children's food literacy and raise awareness of healthy eating and active living (De Villiers et al., 2016). Evidence further suggests that direct engagement fosters stronger retention of nutrition-related concepts, which may translate into sustainable behavioural changes in food choices (Nosi et al., 2021). Over time, children's openness to healthier foods can extend beyond the individual, as their preferences often influence household food purchasing. In this way, children act as agents of change, encouraging healthier dietary practices within their families and communities (Cox and Poelman, 2015). Communities often share access to essential resources such as financial means, transportation, markets, schools, and health facilities, while also being shaped by common customs, beliefs, and values (Chikhungu et al., 2014). The shared environment among communities has a significant impact in determining children's nutritional status (UNICEF, 2021). For instance, the presence of a local market has been shown to improve dietary diversity and food quality by increasing accessibility to a variety of nutritious foods (Chikhungu et al., 2014).

Local engagement in nutrition initiatives represents a powerful avenue for fostering food literacy and social cohesion within communities. Programs that leverage local networks and manpower to provide healthier food options have shown promise in enhancing both dietary diversity and nutritional outcomes. These initiatives often encourage collaboration among community members particularly women through participatory approaches that build practical skills in food preparation, nutrition awareness, and resource management (Iacovou et al., 2013; Loopstra and Tarasuk, 2013). Beyond improving nutritional intake, such community-driven efforts also cultivate social support and empowerment, helping to reduce isolation and strengthen collective responsibility for child health. By drawing on local food systems and manpower, these locally led initiatives complement other nutritional programs to mitigate food insecurity, increase dietary variety, and sustain nutrition interventions over time (Bartfeld and Ahn, 2011). Furthermore, meals that are tailored to the community's cultural and taste preferences are more likely to be accepted and consumed consistently, reinforcing positive eating behaviours and contributing to long-term nutritional well-being of the school children (Nemeth et al., 2019). Providing children with access to balanced, nutritious meals within the school setting reinforces consistent dietary habits and establishes lifelong foundations for health. Indeed, they play a key role in fostering sustainable nutrition practices as part of broader health promotion strategies (Shariff et al., 2000). Sustainability of these initiatives depends heavily on the active involvement of school stakeholders as well, including principals, teachers, and food service personnel. Their shared understanding of nutrition-related

issues and continuous engagement are essential to ensuring long-term success (Teo et al., 2021).

Regular meal consumption has been identified as an important determinant in children's growth, development and learning capacity (Argaw et al., 2022). Studies have consistently shown that skipping meals particularly breakfast is associated with suboptimal food choices, nutrient deficiencies, and a higher risk of obesity and related comorbidities (Teo et al., 2021; Teng et al., 2018; Nurul-Fadhilah et al., 2013). Conversely, consistent and balanced meal intake supports better energy regulation, cognitive function, and academic performance. In many settings, the provision of breakfast and lunch within school programmes serves as an effective strategy to serve the purpose. In addition, improving the nutritional quality of school meals through the inclusion of diverse and nutrient-rich ingredients by food fortification has been shown to effectively reduce micronutrient deficiencies, including iron deficiency anaemia (Sari et al., 2022; Adelman et al., 2019). Such enhancements to school meals are especially impactful in low-resource settings, where dietary diversity may be limited (Olson et al., 2021). By ensuring that children receive not only adequate calories but also sufficient essential nutrients, school-based meal programmes help to address the issue of hidden hunger, thereby improving both health outcomes and learning potential (Burchi et al., 2011). Ultimately, school nutrition initiatives that combine education, regular meal provision, and nutrient-dense foods provide a comprehensive, cost-effective, and sustainable approach to improving the nutritional status, academic performance, and overall well-being of school-aged children.

Nutrition initiatives should also incorporate environmental sustainability by addressing food waste, optimizing portion sizes, and encouraging the use of climate-friendly menus. Schools should ensure inclusivity by accommodating dietary restrictions related to allergies, cultural practices, or health conditions. Integration of nutrition efforts with other health-promoting programmes such as physical activity sessions, hygiene promotion, and regular deworming may amplify overall health benefits, especially in regions where infection-related malnutrition remains a concern. Additionally, the installation of adequate handwashing and sanitation facilities (WASH) is vital to prevent nutrient loss from recurrent infections and to reinforce healthy routines during mealtimes. Behavioural strategies that promote positive eating attitudes should be encouraged. Creating pleasant, inclusive mealtime experiences and avoiding negative perceptions about food can with their openness to diverse and healthy options available. Practical engagement such as gardening, cooking classes, or simple food-preparation activities can enhance food literacy and encourage children to make informed healthier food choices. Peer-led initiatives, school nutrition clubs, and student councils can further motivate behavioural change by empowering students as role models and advocates for healthy lifestyles. At the community level, partnerships with parents and local organizations remain essential to bridge school-based learning with home environments. Families should be equipped with the knowledge and resources to prepare balanced meals, manage food budgets, and support children are healthy eating habits not only at home but everywhere else. Future researches should prioritize longitudinal studies that assess the long-term impact, cost-effectiveness, and scalability of school nutrition programmes. Mixed-methods approaches are needed to understand how cultural, social, and environmental factors shape children's food choices and parental behaviours.

Conclusion

Nutrition during the school years is critically important for children's growth, development, and academic performance. School-aged children undergo rapid physical and cognitive development, and the nutrients they receive during this period provide the window opportunity for these processes. Fostering healthy eating behaviours during this period establishes lifelong habits that contribute to overall well-being and disease prevention. A comprehensive and integrated approach that unites schools, families, communities, and policymakers is important to ensure every child has access to nutritious, affordable, and culturally appropriate food. Through coordinated policy actions, educational empowerment, and sustainable practices, nations can not only improve children's nutritional status but also lay the foundation for a healthier and more resilient future generation. Ultimately, children represent the foundation of the future. Investing in their nutrition today is an investment in a healthier, more productive generation tomorrow.

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Conflict of interest

The authors have no conflicts of interest to declare.

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