



COMMUNITY-BASED PLATFORMS FOR DELIVERING NUTRITION INTERVENTIONS TO SCHOOL-AGED CHILDREN AND ADOLESCENTS BEYOND SCHOOLS

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BACKGROUND

Middle childhood and adolescence (5–19 years) are transformative life stages involving profound physiological and social development. Nutritious diets and essential nutrition services are crucial for development during these life stages, supporting pubertal maturation, neurodevelopment, and linear growth (1,2). Globally, school meal programmes are one of the largest and most widespread social safety nets for these age groups, and are one component of school health and nutrition programmes (SHN) (3). While SHN programmes are widely recommended, and school meals are widely implemented, the nutritional quality of school meals is not always guaranteed and the global coverage of schools with comprehensive packages of interventions is still low (4). Additionally, barriers to school attendance such as lack of inclusive education or high opportunity costs means that a large number of 5–19 year olds are not at school and therefore do not benefit from SHN programmes (5,6). Hence, it is important for both school-going children and adolescents, as well as out-of-school children and adolescents, that there are other effective delivery platforms for reaching this age group with nutrition services.

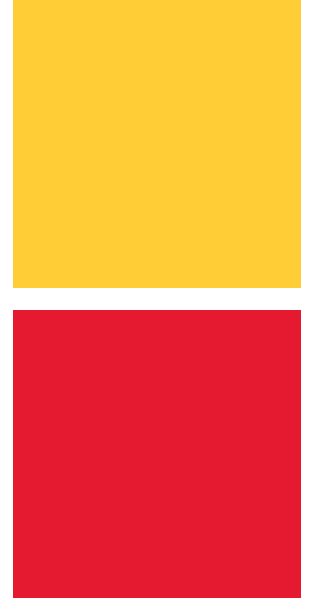
The 2023 Global Education Monitoring (GEM) Report revealed that, in 2022, 250 million children and adolescents were out of school. It also highlighted that school completion rates drop significantly with age, from nearly 90% in primary education to around 60% in secondary, meaning that the older end of the age range is especially lacking access to services (7). Sub-Saharan Africa alone represents nearly 30% of the global out-of-school population, with Central and Southern Asia following at 20% (7). Out-of-school children and adolescents are often marginalised from the health system and are likely to live in resource-poor settings, leaving them particularly vulnerable to malnutrition (8,9). Many factors differentially affect girls' school attendance: in Sub-Saharan Africa, for every 100 young men completing secondary school, only 79 young women do (7). Societal and socio-economic disparities – including early marriage, pregnancy, poverty, violence, and traditional roles – hinder girls' education and increase their vulnerability to poor health and nutrition (10). Ensuring these girls, as well as other out-of-school children and adolescents, receive health and nutrition interventions via safe, accessible platforms is crucial.

Currently, nutrition interventions beyond schools are rare: in a review of interventions in low- and middle-income countries, only four out of 103 were outside educational settings (11). The *2021 Lancet Series on Adolescent Nutrition* identified a critical need for new approaches to reach those who rarely attend or never attend school, in order to improve nutrition literacy, ensure food and nutrition security, and address specific nutrition issues (12). Community-based ‘beyond school’ approaches can offer a potential avenue to engage hard-to-reach school-aged children and adolescents. Community-based platforms, as outlined by Patton *et al.*, typically involve cooperation among local government, families, youth-focused organisations, and religious groups, with the goal of nurturing positive youth development by promoting vital life skills, empowerment, social and emotional skills, and proficient problem-solving capabilities (1).

School-aged children and adolescents often face challenges in accessing health services and lack financial resources, making them particularly vulnerable to nutrition and health issues. However, there is a lack of evidence on effective and context-specific community-based interventions. The necessity for this evidence is underscored by the Emergency Nutrition Network’s (ENN) research prioritisation exercise, which identified the investigation of ‘optimal delivery platforms for effective uptake of nutrition interventions, considering scale, sustainability, and youth engagement’ as a top priority by stakeholders for improving adolescent nutrition (13). Following this exercise, a research roadmap was developed that highlighted the need to explore the role of community-based platforms in the delivery of nutrition interventions for children and adolescents beyond schools (14).

Aim

This report aims to showcase effective community-based strategies for providing nutrition interventions to school-aged children and adolescents outside of school settings, highlighting a selection of innovative approaches via diverse case studies.



METHODS

A scoping review was conducted to collate relevant resources using online databases of peer-reviewed articles and grey literature. Search terms were developed to identify health/nutrition/social protection interventions for school-age children and adolescents that were delivered beyond the school setting. Additionally, resources published in ENN's [Field Exchange](#) publications were explored. The [Global Adolescent Nutrition Network](#) core group members were also contacted to share relevant resources and documented experiences regarding community-based programming for school-aged children and adolescents. Cross referencing was carried out to ensure that studies cited within reviews were captured. The data were analysed thematically, resulting in the emergence of five categories of delivery platform: technology and media-based platforms, community workers, facilities and spaces (health and non-health), groups and organisations, and peer educators.

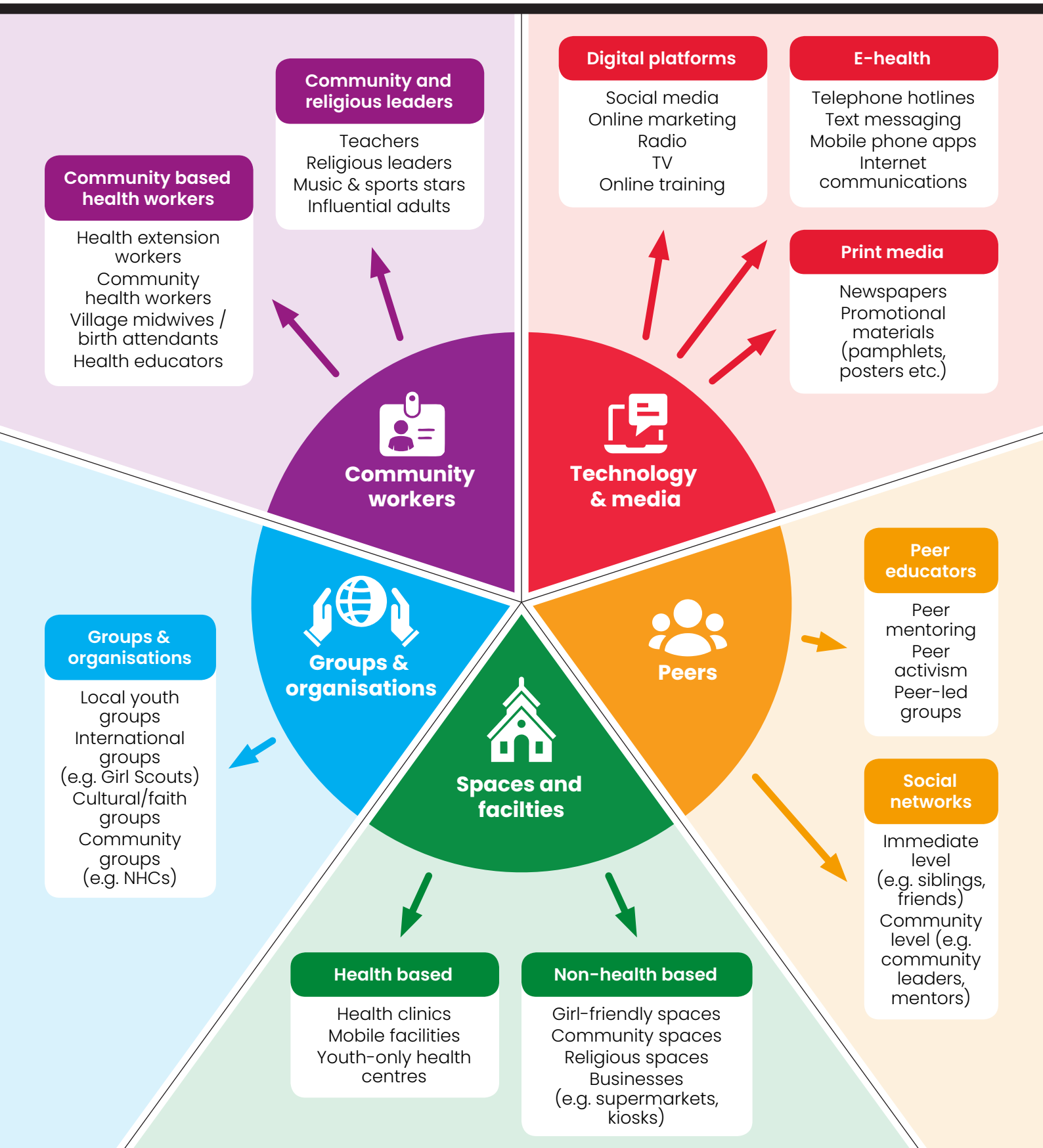
These categories include community-based platforms beyond school settings. However, it is often difficult to determine how many beneficiaries of beyond-school platforms are out-of-school children and adolescents. For example, while members of the Girl Guides may participate in community-based programmes, many of these participants may also be enrolled in school. Thus, while this analysis covers interventions outside of school, distinguishing between in-school and out-of-school beneficiaries is not always possible.

Consequently, case studies were identified for each category and key informants were contacted to provide information. In some instances, interviews were conducted using a structured, open-ended discussion guide to inform the development of each case study.

The following categories and case studies are used in this report:

1	Technology- and media-based platforms: The Bhalo Khabo Bhalo Thakbo – BKB (‘Eat Well, Live Well’ campaign in Bangladesh)
2	Community workers: Community resource persons and the Swabhimaan Programme in India
3	Facilities and spaces (health and non-health): Strong for the Future project in Senegal
4	Groups and organisations: Girl Scouts of the Philippines
5	Peer educators: The Heroínas game in Mozambique

Community based platforms for delivering nutrition interventions to children and adolescents beyond schools



Case studies

- Swabhimaan Programme in India
- Heroínas game in Mozambique
- The Bhalo Khabo Bhalo Thakbo ("Eat Well, Live Well") campaign in Bangladesh
- Strong for the Future project in Senegal
- Girl Scouts of the Philippines



Theme 1: Technology- and media-based platforms

Technology and media-based platforms have revolutionised outreach to diverse audiences, including school-aged children and adolescents, with social media emerging as a powerful tool for accessing information and changing behaviours. In Senegal, social media has been used to share messages on both nutrition and sexual and reproductive health (SRH) (8). In Indonesia, marginalised and vulnerable girls are connected via a mobile platform that shares age-appropriate content on nutrition (15). Today's school-aged children and adolescents are early adopters of mobile phones, instant messaging, the internet, and social media worldwide (1). In 2017, UNICEF reported that 71% of young people worldwide use the internet, a figure that continues to grow (16,17). While social media can sometimes reinforce harmful nutrition outcomes, such promoting unhealthy foods and spreading nutrition misinformation, it also connects young people beyond their immediate communities and benefits those with limited mobility (12). Due to its extensive use, social media can provide an effective way for school-aged children and adolescents to actively connect with their peers, motivate each other, and access information through online communities on nutrition-related topics.

Beyond social media, other platforms such as TV shows, DVDs, radio, printed media, and phone-based interventions have proven effective. For example, in Ghana text messaging has been used as a way to provide health information through the dissemination of quizzes (18). A cluster-randomised controlled trial found that, from a control baseline of 26, reproductive health knowledge increased by 11 percentage points (95% CI = 7, 15) in the group that received only text messages and by 24 percentage points (95% CI = 19, 28) in the group that received both text messages and quizzes over three months (19). Such platforms can also reach a wide audience; for instance, a TV show in Mexico aimed at raising adolescents' awareness about obesity reached 30 million viewers weekly (20). Virtual platforms have also been used to provide health messaging in the form of internet-based programmes and games that aim to support adolescents on health topics such as mental health (21). While these technologies have been successful in raising awareness and promoting campaigns, they are not suitable for all interventions, such as providing supplements or conducting health checks, which require direct, hands-on approaches. They may also only be suitable for the older ages within the 5–19 years range.

Case study: The Bhalo Khabo Bhalo Thakbo – BKBT ('Eat Well, Live Well') campaign in Bangladesh

The BKBT campaign in Bangladesh was co-designed with adolescents and used learnings and experiences to build a social movement via the use of social media and e-learning in addition to school-based activities (14). It aimed to activate adolescents' agency and trigger both individual and collective action toward improved food choices. The campaign was built around two fundamental insights generated from formative research: (a) adolescents have dreams for their lives but find it difficult to 'untangle' their dreams from the more restrictive ambitions that their parents have for them; and (b) adolescents recognise that in order to achieve their dreams they need powerful bodies and minds 'nourished' by nutritious food. Furthermore, the formative research revealed only limited availability of nutritious foods for adolescents and a proliferation of unhealthy foods and beverages, especially around schools. Popular snacks are high in sugar, salt and fat, such as packaged biscuits and cakes, chocolate, crisps, and foods prepared by street vendors such as deep-fried puri (deep-fried bread), singhara (deep-fried potato pockets), and jhalmuri (puffed rice with fried vegetables and spices). The BKBT campaign consisted of key phases: the catalyst 'my dream, my decision' phase, the pledge ('I will use my pocket money to buy nutritious snacks'), and the pledge in action. It used social media and school-based activities to implement the campaign.

The baseline survey found that only few adolescents (16%) had access to the internet and even fewer (5%) regularly looked at Facebook. However, when the COVID-19 pandemic hit, they were forced to use internet-based activities only. Despite poor access to the internet prior to the pandemic, an internet-based intervention proved to be an effective strategy to target this group since usage had increased dramatically. An external evaluation found that, through social media, the campaign reached 6,981,91 people, while the e-learning platform received 15,000 visitors, of which 836 registered and 589 completed full courses (22). The qualitative endline survey suggested that adolescents who engaged with the campaign had improved awareness of the importance of eating nutritious foods to stay healthy, consuming more home cooked foods and avoiding snacks and foods from outside the home (22). By building a narrative that tapped into adolescents' motivations, the BKBT campaign was able to spark the interest and engagement of adolescents for improving their consumption of nutritious foods.



Theme 2: Community workers

Community workers are integral to many global health initiatives; while their main focus is usually on children under five years and pregnant women, they can be mobilised to support the nutrition of school-aged children and adolescents. Often serving as volunteers or part-time workers, community workers play a vital role in promoting a wide range of health and nutrition programmes within their communities. In Ethiopia, health extension workers educate adolescent girls and parents on nutrition (23), while India employs Anganwadi workers to promote menstrual hygiene (24). Zambia utilises community health workers and Neighbourhood Health Committees (NHCs) for health service delivery and monitoring (25). Amidst COVID-19, countries like Ethiopia, Kenya, and India distributed iron and folic acid (IFA) tablets through community channels to school-aged and adolescent girls, engaging local champions, such as village midwives, teachers, health workers, and youth groups, for counselling and monitoring (8). In various Asian countries, lady health workers are used to elevate demand for health services by increasing awareness and reducing stigma associated with accessing services (26).

It has been demonstrated that community workers can build trust in and enhance the effectiveness of programmes due to their deep understanding of the local context and close connection with the community. Their often voluntary or part-time status also makes them more cost-effective compared to full-time healthcare professionals. However, this approach comes with challenges, such as the need for substantial training and resources, potential issues with sustainability and consistency due to reliance on volunteers, and limitations in their expertise in complex medical tasks that require professional healthcare providers. Concerns over heavy workload and overburdening community workers with too many tasks also represent a major limitation in engaging them for delivering nutrition interventions to school-aged children and adolescents. Despite these challenges, community health workers remain essential in delivering nutrition interventions via community platforms to school-aged children and adolescents.



Case study: Community resource persons and the Swabhimaan Programme in India

The Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) is the Indian government's flagship poverty alleviation programme aimed at breaking intergenerational cycles of poverty by economically empowering vulnerable women and families. A 2016 scoping study highlighted that Women's Collectives—self-help groups owned and led by women under DAY-NRLM—could effectively deliver essential nutrition services to adolescent girls and women, provided they receive proper training, supervision, and protection against exploitation and violence (27). This led to the design and implementation of the large-scale demonstration programme named Swabhimaan. Swabhimaan was a five-year initiative launched by DAY-NRLM in partnership with UNICEF India. It was implemented in three states with high undernutrition rates: Bihar, Chhattisgarh, and Odisha. The initiative employed Poshan Sakhis (community resource persons) and leveraged Women's Collectives to engage four primary groups: adolescent girls, newlywed women, pregnant women, and mothers of children under two years.

Each Women's Collective developed a nutrition micro plan that identified key nutrition-related issues in their community, outlined an annual activity plan, and set a budget. A nominated community resource person facilitated the micro plan, provided home-based counselling, conducted food demonstrations, and supported household nutrition gardens. Community resource persons underwent three days of training on nutrition microplanning, mid-upper arm circumference (MUAC) measurements for screening children for acute malnutrition, and participatory learning and action techniques for monthly meetings with women and adolescent girls (28). Adolescent girls were engaged through Kishori adolescent girls groups, which held fortnightly meetings facilitated by community resource persons. The groups were divided by age into two groups (11–14 and 15–19 years) to discuss age-appropriate topics, aiming to enhance their agency and decision-making and reduce nutrition risks. Interventions focused on delaying early marriage and pregnancy, kitchen garden interventions, access to adolescent nutrition services, sensitisation on water-sanitation-hygiene (WASH) and menstrual hygiene management, and follow-up for nutritionally at-risk adolescent girls. The initiative also worked to strengthen systems by collaborating with government departments to improve access and use of services.

After five years, the endline evaluation revealed significant improvements in the intervention areas. Minimum dietary diversity among adolescents increased from 17.8% at baseline to 38% at endline. Additionally, the percentage of adolescent girls consuming four or more IFA tablets per month rose from 8.9% to 22.4%. Nutritional status also improved, with the prevalence of BMI <18.5 decreasing from 17.5% at baseline to 10.5% at endline among those enrolled in programme activities. In 2021, institutional structures and job aids were created to integrate the successful elements of this programme into the NRLM broader strategy, including strategies for reaching newlywed women, engaging men, and gendered aspects of nutrition.



Theme 3: Facilities and spaces (health and non-health)

Facilities and spaces within communities serve as crucial resources for engaging children and adolescents in various initiatives worldwide. Commonly used health spaces include pharmacies, health centres, and clinics, while non-health spaces often involve vocational schools, religious buildings, community centres, girl-friendly spaces, and shops, though they are not limited to these. Innovative approaches, such as Adolescent-Friendly Child Services, have utilised diverse health spaces including pharmacies in Vietnam and workplace satellite clinics in Ghana (29). In Zambia, the RISE intervention used health centres to deliver and monitor health services in communities, for example via parent meetings, promoting supportive social norms and contraceptive education (25). Non-health-based spaces also play a significant role in community nutrition interventions.

In Egypt, the Ishraq programme created girl-friendly spaces in youth centres and schools where girls could meet, learn, and play, offering literacy classes, life skills programmes, and sports to empower them and change their self-perception (30). Originally targeting 50 girls per village, the programme expanded to accommodate 277 girls, who met in groups of about 25, four times a week for 30 months, with locally trained female secondary school graduates serving as teachers and advocates (30). In Ecuador, low-income households were provided with food vouchers that were redeemable at local supermarkets for nutritious foods from a pre-approved list (26). Utilising diverse facilities and spaces to deliver nutrition interventions to school-aged children and adolescents offers safe and accessible environments beyond school. Familiar settings can boost participation, but widely used spaces may have variable availability – potentially leading to inconsistent services. As staff and other resources are also required, integrating with other key services can improve the efficiency and cost-effectiveness of interventions.

Case study: Strong for the Future project in Senegal

The 'Fort pour le Futur' (FPF) (Strong for the Future) project in Senegal showcases the strategic use of non-school facilities and spaces to deliver essential health and nutrition services to school-aged children and adolescents. Developed by Nutrition International in collaboration with the Senegalese government, the project aligns with the Senegal National Plan for Health and Social Development 2019–2028, which prioritises strengthening adolescent health services and improving access to health information (31). FPF provides a comprehensive package of interventions focusing on adolescent nutrition, SRH, rights services, and education in the city of Thiès. The project's first phase, spanning from May 2019 to April 2022, involved collaboration with key stakeholders including the City of Thiès, the Ministry of Health, the Ministry of Youth, the Ministry of Education, and the Youth Population and Development Network of Senegal.

Initially, the project relied on school-based approaches to deliver these services. However, after low engagement from out-of-school children and adolescents it became evident that alternative delivery platforms were necessary to reach school-aged children and adolescents outside the school environment. This need was amplified during the COVID-19 pandemic, which resulted in prolonged school closures. To overcome these challenges, FPF established several community-based platforms that were used for the delivery of essential health and nutrition services, including adolescent counselling centres and adolescent health corners. In addition to these centres, three mobile health units were deployed to bring health services directly to the neighbourhoods in Thiès. These units, staffed by trained health workers, conducted outreach activities such as nutrition and SRH education, distribution of IFA supplements, and provision of washable menstrual health products to adolescent girls. The mobile health units and fixed centres also functioned as referral mechanisms, connecting adolescents to local health facilities for additional services as needed. Over the first phase, these initiatives reached over 6,900 adolescents through 300 outreach activities, significantly expanding the reach of traditional health and nutrition services.

Building on the success of the initial phase, a second phase is now being implemented. Known as Healthy Cities for Adolescents II or HCAII, this phase aims to enhance the wellbeing of urban youth in Pikine, Thiès, and Tivaouane. The focus is on making these cities safer and healthier environments where urban adolescents can actively participate and contribute to their communities. The use of non-school facilities and spaces, including mobile health units, continues to be a central strategy in delivering these essential services.



Theme 4: Groups and organisations

Groups and organisations have been pivotal in driving grassroots nutrition initiatives and empowering communities globally. Youth groups, particularly active in Ethiopia, Kenya, Tanzania, Senegal, Indonesia, Ghana, Mozambique, Cameroon, and India, provide platforms for engagement, leadership, and advocacy, addressing the unique challenges faced by young people (8,29). In Bangladesh, theatre groups and adolescent girl power groups spread awareness of nutrition and gender equality through community outreach, fostering unity and support (32). In Zambia, mentor-led girls' groups focus on adolescent empowerment through health, life skills, and financial education while NHCs support health service delivery and monitoring, including SRH services (25).

Groups and organisations are an effective way of spreading knowledge and encouraging community engagement. They are also able to provide tailored support and education for school-aged children and adolescents in the community. Challenges include the need for sustained funding and resources, ensuring the scalability and sustainability of programmes, and the need for facilitators to provide some interventions. However, leveraging groups and organisations has been shown to be an effective way to deliver nutrition interventions to school-aged children and adolescents, contributing to health promotion and community development.



Case study: Girl Scouts of the Philippines

The Girl Scouts of the Philippines (GSP) is the national association dedicated to empowering girls and young women across the country, with a strong focus on health and wellbeing. All ten of GSP's educational programmes emphasise the importance of a balanced, healthy lifestyle, aiming to educate girls and equip them with the skills to become advocates for change at local, national, and global levels (33). The Girl Powered Nutrition (GPN) Programme stands as a notable example of a community-based platform addressing malnutrition in school-aged and adolescent girls in the Philippines. Developed with technical and financial backing from Nutrition International, the initiative was implemented in partnership with the World Association of Girl Guides and Girl Scouts (WAGGGS). Utilising a non-formal education methodology, the programme introduced a nutrition badge curriculum co-created by girls, aimed at empowering them to make informed choices. This participatory curriculum featured creative activities celebrating diverse cultures and was tailored for three distinct age groups: 6–10, 11–15, and 16+ years. Additionally, resources were provided to support the adult members working with these girls. By addressing malnutrition through both education and practical interventions, the GPN Programme effectively promotes better health practices within communities (34). With the combined efforts of Nutrition International and WAGGGS, it is estimated that over 170,000 community members have been positively impacted by this initiative.

Other programmes run by GSP include the Eight-Point Challenge, a programme unique to the Philippines that encourages health-promoting activities fostering holistic development, the Chief Girl Scout Medal Scheme, and the Pilar Hidalgo Troop Achievement Award, which allow girls to choose focus areas such as Ecology, Health, Livelihood, or Cultural Heritage for their projects. According to key informants, projects range from supporting feeding programmes for malnourished children to setting up handwashing facilities, addressing both nutrition-specific and nutrition-sensitive needs. Additionally, the Scouts Entrepreneurial Endeavours for Development Programme helps girls develop business skills to manage small enterprises, with profits funding their troop's initiatives, including Chief Girl Scout Projects. Troops, consisting of eight to 40 girls led by a troop leader, often collaborate with community leaders and officials to promote nutrition-focused projects and foster a ripple effect of change. Projects undergo evaluation at local, regional, and national levels to ensure continuous improvement.

Through these efforts, GSP not only enhances individual health and wellbeing but also cultivates a generation of young women dedicated to fostering healthier communities. The GSP's programmes effectively engage school-aged and adolescent girls who are both in and out of school, using a rewards system to maintain motivation. By integrating education, entrepreneurial skills, and community projects, it addresses malnutrition's root causes and empowers girls to lead positive community changes.



Theme 5: Peer educators

Peer educators are used in the delivery of diverse nutrition interventions for school-aged children and adolescents in many low- and middle-income countries. A systematic review found that peer-facilitated interventions for adolescent health were effective in non-school settings and that offering leadership roles for out-of-school youth improved equity with their in-school peers (35). In South Africa, the *“My body, my health: my wealth”* campaign was created by young UNICEF volunteers to raise awareness about healthy lifestyles and advocate for changes to food systems; they are delivering their messages through social media and youth clubs. In India, peer educators known as Sathiyas were trained to reach out to their adolescent peers in the community with health and nutrition messages. They utilised posters, pamphlets, and interactive games during community meetings and events to engage and maintain the interest of adolescents (24). Similarly, in Paraguay and Zimbabwe peer-educator platforms have used creative ways to reach out-of-school youth through street drama and the distribution of promotional items (36). Peer mentoring programmes, such as those in Nicaragua, have also mentored adolescents to help them build decision-making competence related to SRH and referred and accompanied them to health services when needed (35).

Peer facilitators are often considered more effective than adults at reaching and communicating with school-aged children and adolescents, as they are perceived as more credible sources of information (35). Additionally, like community workers, engaging peer facilitators with proper training and supervision can be a cost-effective method for scaling up programmes. Peers, however, are limited in their responsibilities and cannot deliver health services directly such as assessments and supplementation.



Case study: The Heroínas game in Mozambique

The Heroínas game, created by GAIN and partners using human-centred design principles, aims to improve dietary habits among low-income school-aged children and adolescent girls in Nampula Province, Mozambique. Developed in 2017 with formative studies to understand the habits and influences on girls from low-income households, it utilises an interactive, peer-educator approach (37). Workshops with girls and their families identified key dietary challenges, leading to four primary behavioural goals: increasing the consumption of breakfast, fruit intake, dark green leafy vegetables, and beans. Prototypes were co-designed and tested, of which the Heroínas game was one of two ideas selected to be developed into an intervention. The Heroínas game is non-digital and is packaged in a box. It is designed to be accessible without electricity or internet, and is played weekly over 16 weeks. It involves 'food-related missions', including the purchase, preparation, and growing of food as well as cooking recipes with fruits, vegetables, and beans. Completing missions earns rewards in the form of charms for bracelets, with progression through levels leading to becoming one of three 'Heroínas' and the opportunity to become a girl leader.

Since 2019 GAIN has implemented the game in 12 districts, reaching approximately 30,000 girls, and since 2024 has adapted the game for delivery in Zambezia province. The game is facilitated in girls' clubs, each consisting of 25 girls, including two facilitators or 'girl leaders', who are older girls mentored by a literate adult from the community. The game has seen high attendance and enthusiasm, with girls diligently completing missions. The rewards system was well received and girls frequently involved their parents, who often supported them by purchasing the necessary ingredients. Key lessons from the initiative include the necessity for locally procurable game materials and the importance of language adaptability, as the game is currently only available in Portuguese. To expand its reach, the game needs modifications to appeal to older adolescents (15–19 years) and to consider the interest shown by boys, though the girl-only aspect is valued. Evaluating changes in knowledge and behaviour, as well as enhancing support for girl leaders and mentors, are crucial for future improvements.



CONCLUSION

This report has explored the use of diverse and innovative community-based platforms for delivering nutrition interventions to school-aged children and adolescents. Platforms that were seen to be effective were tailored to the specific needs and motivations of school-aged children and adolescents by including them in the design, development, and delivery of interventions. The case studies demonstrate that leveraging existing structures such as community spaces, groups, and peer networks can enhance the effectiveness and sustainability of interventions. The integration of nutrition with other common community services for school-aged children and adolescents, such as SRH and mental health, is also recommended to improve the coverage and effectiveness of interventions. The inclusion of appropriate training, supervision, incentives, and resources were found to be crucial elements of delivery, and sometime limiting factors. Engaging parents, peers, and religious/community leaders was also shown to create a supportive environment and encouraged community acceptance.

Overall, the interventions explored in this report provide insight into potential delivery platforms for reaching school-aged children and adolescents beyond school. While five themes were chosen, it is important to note that programmes often employed multiple delivery platforms, meaning programmes may overlap across several of the categories. For example, 'peer educators' are often combined with 'groups and organisations' and housed within 'facilities and spaces'. In addition, it was observed that many of the health interventions provided to school-aged children and adolescents were focused on SRH, making that a key ally for nutrition interventions. It was also apparent that a high number of interventions were focused only on girls, which neglects vulnerable adolescent boys. In addition, impact data on the interventions was often limited. Continued investment in and adaptation of community-based platforms for effective and sustainable nutrition interventions for this group are essential, as well as better documentation of examples and effectiveness.

References

- Patton GC. Our future: a Lancet commission on adolescent health and wellbeing. The Lancet [Internet]. [cited 31 May 2024]. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00579-1/abstract](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00579-1/abstract)
- Norris SA, Frongillo EA, Black MM, Dong Y, Fall C, Lampl M, et al. Nutrition in adolescent growth and development. The Lancet. 2022 Jan 8;399(10320):172–84.
- The State of School Feeding Worldwide 2022. World Food Programme [Internet]. [cited 31 May 2024]. Available from: <https://www.wfp.org/publications/state-school-feeding-worldwide-2022>
- UNESCO, UNICEF, WFP. Ready to learn and thrive. 2023
- Global Partnership. Leaving no one behind: Transforming education systems, equitably and inclusively [Internet]. Global Partnership for Education; 2023. Available from: <https://www.globalpartnership.org/content/leaving-no-one-behind-transforming-education-systems-equitably-and-inclusively>
- UNICEF. Operational Manual: Global Out-of-school Children Initiative [Internet]. UNICEF. Available from: <https://www.allinschool.org/media/2591/file/OOSCI-Operational-Manual-2023.pdf>
- Global Education Monitoring Report Team. SDG 4 mid-term progress review: progress since 2015 has been far too slow [Internet]. 2023 [cited 31 May 2024]. Available from: <https://unesdoc.unesco.org/ark:/48223/pf00000386852>
- Bhardwaj A, Murage L, Sharma S, Dipo D, Makena C, Arabi MR and M. Weekly iron and folic acid supplementation and nutrition education for adolescent girls in Africa and Asia. Field Exch 66. 2021 Nov 5;40.
- UNICEF. The state of the world's children 2016: A fair chance for every child. New York, NY: UNICEF; 2016. 172 p.
- Local Burden of Disease Educational Attainment Collaborators. Mapping disparities in education across low- and middle-income countries. Nature. 2020 Jan;577(7789):235–8.
- Wrottesley SV, Mates E, Brennan E, Bijalwan V, Menezes R, Ray S, et al. Nutritional status of school-age children and adolescents in low- and middle-income countries across seven global regions: a synthesis of scoping reviews. Public Health Nutr. 2023 Jan;26(1):63–95.
- Hargreaves D, Mates E, Menon P, Alderman H, Devakumar D, Fawzi W, et al. Strategies and interventions for healthy adolescent growth, nutrition, and development. Lancet Lond Engl. 2022 Jan 8;399(10320):198–210.
- Lelijveld N, Wrottesley SV, Aburmishan D, Hemler EC, Fentahun N, Ali Z, et al. Research priorities for nutrition of school-aged children and adolescents in low- and middle-income countries. PLOS ONE. 2023;18(1):e0280510.
- Barnett I, Gonzalez W, Bipul M, Chowdhury D, Djimeu Wouabe E, Kumar Deo A and Khondker R. Improving adolescents' food choices: Learnings from the Bhalo Khabo Bhalo Thakbo ("Eat Well, Live Well") campaign in Bangladesh [Internet]. Field Exchange 66, November 2021. p23; 2023. Available from: www.enonline.net/fex/66/improvingadolescentsfoodchoices
- Nutrition International. Partnering with Girl Effect's Springster Platform to Deliver Key Nutrition Information to Adolescent Girls in Indonesia [Internet]. 2019. Available from: <https://www.nutritionintl.org/wp-content/uploads/2019/05/NI-NLIFT-girl-effect-fact-sheet-web.pdf>
- UNICEF. The state of the world's children (2017): Children in a digital world. New York, NY: UNICEF; 2017. 205 p.
- Benvenuti M, Wright M, Naslund J, Miers AC. How technology use is changing adolescents' behaviors and their social, physical, and cognitive development. Curr Psychol. 2023 Jul 1;42(19):16466–9.
- Meherali S, Rehmani M, Ali S, Lassi ZS. Interventions and Strategies to Improve Sexual and Reproductive Health Outcomes among Adolescents Living in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis. Adolescents. 2021 Sep;1(3):363–90.
- Rokicki S, Cohen J, Salomon JA, Fink G. Impact of a Text-Messaging Program on Adolescent Reproductive Health: A Cluster-Randomized Trial in Ghana. Am J Public Health. 2017 Feb;107(2):298.
- Bhutta ZA, Lassi ZS, Bergeron G, Koletzko B, Salam R, Diaz A, et al. Delivering an action agenda for nutrition interventions addressing adolescent girls and young women: priorities for implementation and research. Ann N Y Acad Sci. 2017;1393(1):61–71.
- Das JK, Salam RA, Lassi ZS, Khan MN, Mahmood W, Patel V, et al. Interventions for Adolescent Mental Health: An Overview of Systematic Reviews. J Adolesc Health. 2016 Oct;59(4 Suppl):S49–60.
- Global Alliance for Improved Nutrition. Empowering Adolescents for Healthy Eating in Bangladesh [Internet]. 2022. Available from: <https://www.gainhealth.org/sites/default/files/publications/documents/15-Impact%20Stories-23Oct22.pdf>
- Alive and Thrive. Adolescent nutrition: Interventions Through School-Based and Community Platforms. Findings from a baseline survey in Ethiopia. [Internet]. 2020. Available from: <https://www.aliveandthrive.org/sites/default/files/ethiopia-adolescent-nutrition-final.pdf>

24. Nutrition International. From policy to practice. Inspiring stories in anaemia prevention [Internet]. Available from: <https://www.nutritionintl.org/wp-content/uploads/2023/05/Inspiring-Stories-in-Anaemia-Prevention.pdf>
25. Zulu JM, Goicolea I, Kinsman J, Sandøy IF, Blystad A, Mulubwa C, et al. Community based interventions for strengthening adolescent sexual reproductive health and rights: how can they be integrated and sustained? A realist evaluation protocol from Zambia. *Reprod Health*. 2018 Aug 28;15(1):145.
26. Castillo EG, Ijadi-Maghsoodi R, Shadravan S, Moore E, Mensah MO, Docherty M, et al. Community Interventions to Promote Mental Health and Social Equity. *Curr Psychiatry Rep*. 2019;21(5):35.
27. Sethi V, Bhanot A, Bhalla S, Bhattacharjee S, Daniel A, Sharma DM, et al. Partnering with women collectives for delivering essential women's nutrition interventions in tribal areas of eastern India: A scoping study. *J Health Popul Nutr*. 2017 May 22;36:20.
28. Shrivastav M, Saraswat A, Reshmi RS, Anand S, Purty A, Xaxa RS, et al. Early lessons from Swabhimaan, a multi-sector integrated health and nutrition programme for women and girls in India.
29. Hainsworth G, Engel DMC, Simon C, Rahimtoola M, Ghiron LJ. Scale-up of Adolescent Contraceptive Services: Lessons From a 5-Country Comparative Analysis. *JAIDS J Acquir Immune Defic Syndr*. 2014 Jul 1;66:S200.
30. Brady M, Assaad R, Ibrahim B, Salem A, Salem R, Zibani N. Providing new opportunities to adolescent girls in socially conservative settings: The Ishraq program in rural Upper Egypt—full report [Internet]. Population Council; 2007 [cited 8 July 2024]. Available from: https://knowledgecommons.popcouncil.org/departments_sbsr-pgy/226
31. Ministère de la Santé et de l'Action sociale. Plan National de Développement Sanitaire et Social (PNDSS) 2019-2028 [Internet]. Available from: <https://p4h.world/app/uploads/2023/02/PNDSS202019-2028.x23411.pdf>
32. O'Leary M, Sarkar AD and J. Adolescent Girl Power Groups in Bangladesh: Placing gender equality at the centre of nutrition interventions. *Field Exch* 66. 2021 Nov 5;26.
33. Girl Scouts of the Philippines [Internet]. [cited 21 June 2024]. Programs. Available from: <https://girlscouts.org.ph/programs>
34. WAGGGS [Internet]. [cited 26 June 2024]. Girl Powered Nutrition. Available from: <https://www.wagggs.org/en/what-we-do/girl-powered-nutrition/>
35. Rose-Clarke K, Bentley A, Marston C, Prost A. Peer-facilitated community-based interventions for adolescent health in low- and middle-income countries: A systematic review. Das JK, editor. *PLOS ONE*. 2019 Jan 23;14(1):e0210468.
36. Lule E, Rosen JE, Singh S, Knowles JC, Behrman JR. Adolescent Health Programs. In: Jamison DT, Breman JG, Measham AR, Alleyne G, Claeson M, Evans DB, et al., editors. *Disease Control Priorities in Developing Countries* [Internet]. 2nd ed. Washington (DC): The International Bank for Reconstruction and Development and The World Bank; 2006 [cited 8 July 2024]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK11778/>
37. LaRose E. Global Alliance for Improved Nutrition (GAIN). Understanding the nutritional behaviours of adolescent girls in Nampula province. 2018.



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