

Improving Nutrition Among Adolescent Girls

Ways to reach them

Saskia de Pee

Nutrition Division, World Food Programme,
Rome, Italy and Friedman School of Nutrition Science
and Policy, Tufts University, Boston, MA, USA

Karen Chang

Johns Hopkins Bloomberg School of Public Health,
Baltimore, MD, USA

Julie Ruel-Bergeron

Johns Hopkins Bloomberg School of Public Health,
Baltimore, MD, USA

Key messages

- > Existing platforms and delivery channels that reach adolescents should be built upon to deliver nutrition-specific services and enhance their potential to have a positive impact on nutrition (also indirectly), for the benefit of the adolescent girls themselves as well as that of their future children.
- > Schools offer an obvious and very good entry point, also to delay age at first pregnancy. For out-of-school adolescents, the use of other platforms should be explored, including making health system and community nutrition services more adolescent-friendly and adding a nutrition focus to adolescent- and youth-based programming.
- > The food system, which largely affects what adolescents (choose to) eat, and mobile technology deserve further exploration as avenues through which to provide nutrition services and reinforce adolescent-specific nutrition and health messages.



Nine year-old Jhoti Rani eats a WFP fortified biscuit distributed in Amrita Bazaar Government Primary School in Jessore, Bangladesh, in August 2004

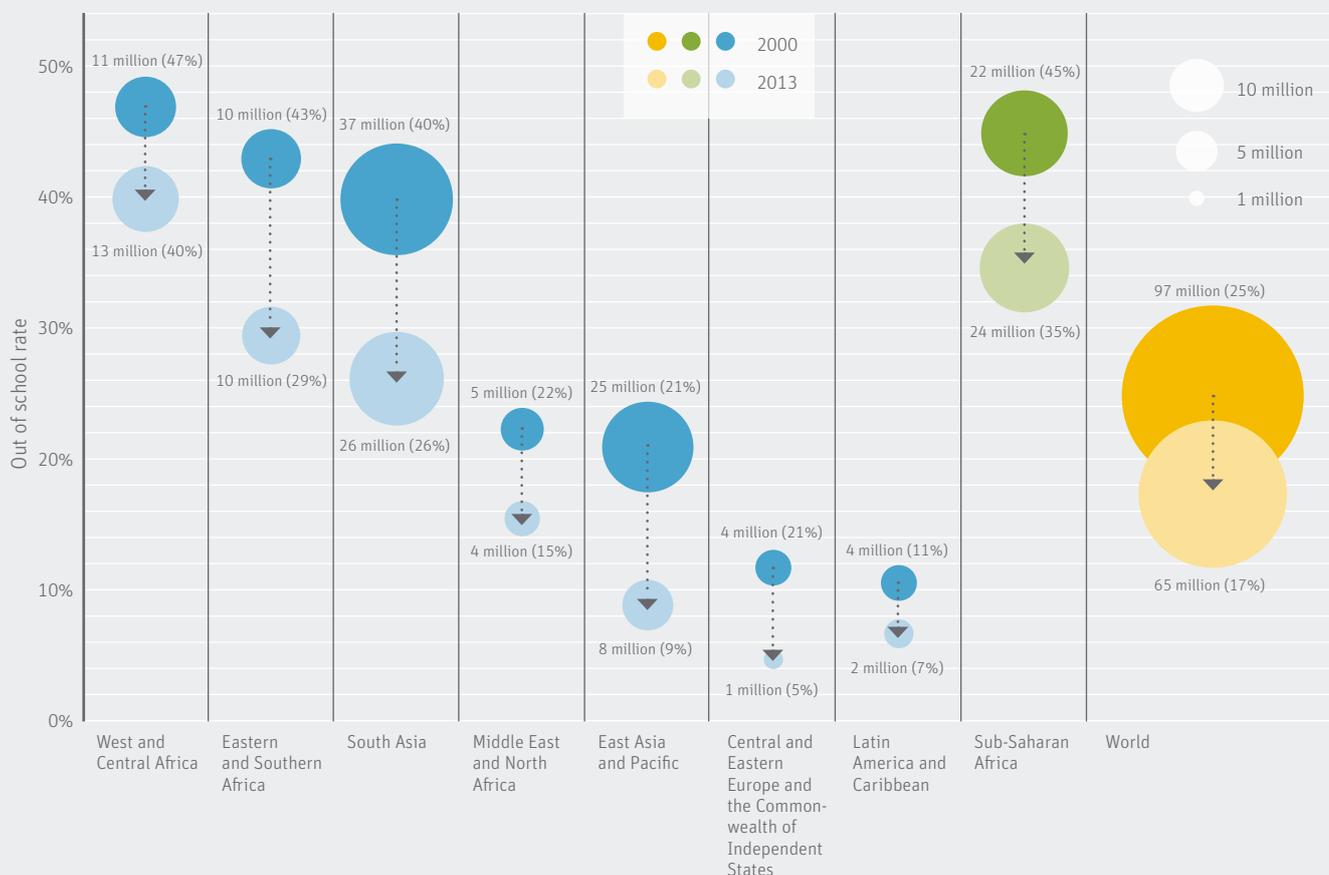
Making best use of available channels

Improving the nutrition and health of adolescent girls, for their own benefit and that of their future children, requires that they be reached with specific services that directly or indirectly improve their nutritional status.

Adolescent services typically focus on sexual and reproductive health (HIV and STIs), family planning, education (formal and non-formal) and employment, as well as increasing the agency of adolescent girls to know their rights and where to seek the services they require. While these potentially nutrition-sensitive services do not specifically address nutrition, they can indirectly have a positive impact on it. Furthermore, the delivery channels that provide these services can and should be built upon to deliver nutrition-specific services too.

Delaying age at first pregnancy

Any intervention that leads to delaying age at first pregnancy, and associated age at marriage/union, until 18 years or beyond,

FIGURE 1: In sub-Saharan Africa and South Asia, more than a quarter of lower secondary-school-age children are out of school

Source: data.unicef.org/topic/education/secondary-education

allows the adolescent girl to fully develop before childbearing, which is beneficial to both her and her offspring. However, as mentioned by Mishra and Rah in their article in this issue (pp.92–97), 22% of women aged 20–24 years in developing countries had their first child before 18 years of age, including > 30% in sub-Saharan Africa and > 25% in South Asia.

“Any intervention that leads to delaying age at first pregnancy until 18 years or beyond allows the adolescent girl to fully develop before childbearing”

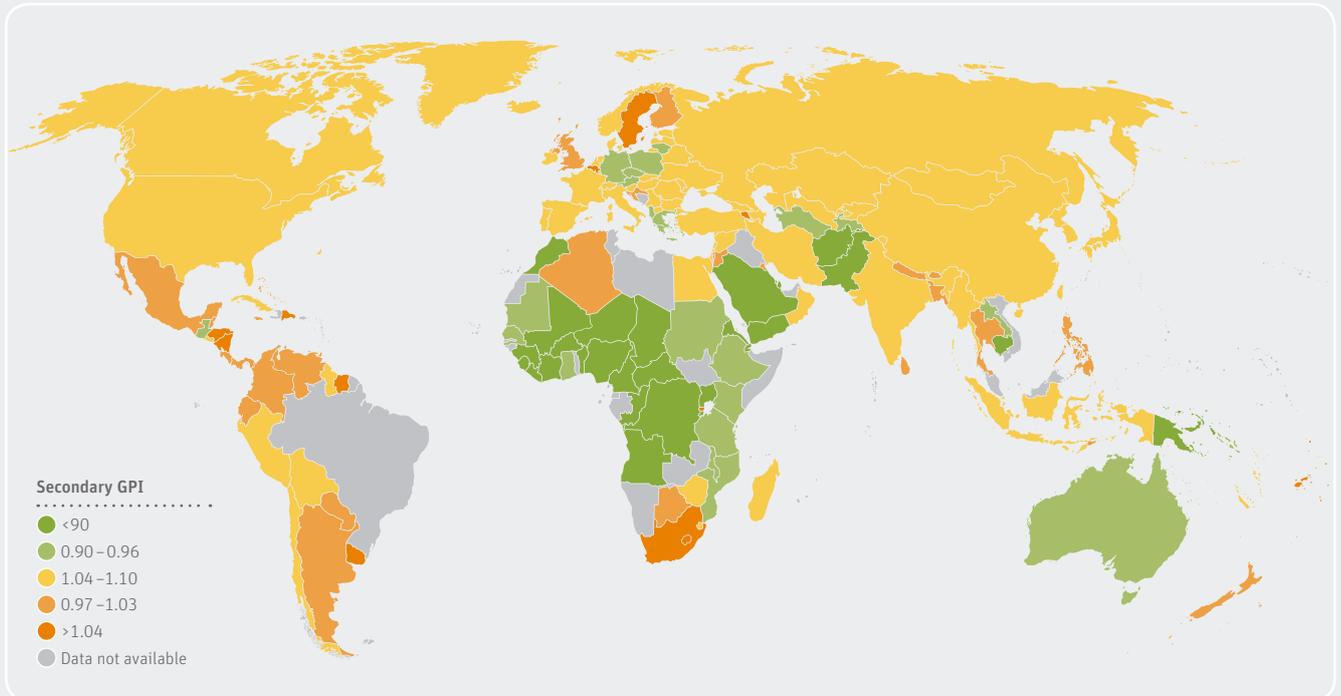
While early pregnancy may force girls to drop out of school, girls who are in school are generally less likely to become pregnant or get married. Besides efforts to keep girls in school, other interventions or situations that reduce the likelihood of girls be-

coming pregnant and/or delay marriage include those that help them find ways to contribute to the family financially (e.g., the availability of jobs in garment industry). In addition, it should be noted that marriage at an early age does not necessarily lead to a pregnancy or a discontinuation of education: cultural norms that support the use of family planning methods by young people, or young couples, and value continued or higher education for both girls and boys, can contribute to delayed pregnancy.

School enrolment

According to the latest UNICEF statistics, globally, 83% of lower secondary-school-age children are in (primary or secondary) school, and this is less than 70% in low-income countries.¹ In 2013, 65 million children of lower secondary school age and 55 million of primary school age were out of school.¹ Three quarters of those out of school at the lower secondary school age live in sub-Saharan Africa or South Asia.¹

While barriers to school attendance at the secondary level are similar to those at the primary level, they present greater challenges in the former, including the cost of secondary school-

FIGURE 2: The gender gap in secondary education is widest in West and Central Africa

GPI: Gender parity index (ratio of the number of female students enrolled in secondary school to the number of male students)

Source: data.unicef.org/topic/education/secondary-education

Nutrition-specific and nutrition-sensitive interventions: Definitions

- > Nutrition-specific interventions address the immediate determinants of nutrition, i.e., adequate food and nutrient intake, caring practices, and low burden of infectious disease.
- > Nutrition-sensitive interventions address the underlying determinants, i.e., food security, caregiving resources, access to health services, and a safe and hygienic environment. They also incorporate specific nutrition goals and actions.¹⁹

ing, which tends to be higher than for primary school, the distance from the place of education, which tends to be farther and thus requires transport or lodging, and the pressure to earn an income.¹ These challenges may be more significant for girls than boys. The starkest contrast can be found in West and Central Africa, where in addition to low secondary school enrolment (40% of children of lower secondary school age are not in school, com-

pared to 18% globally¹), there is also high gender disparity, with 79 girls enrolled in secondary school for every hundred boys (see **Figures 1 and 2**).¹

Schools as a delivery platform for nutrition-specific and nutrition-sensitive services for adolescents

Younger and older adolescents (10–14 and 15–19 years, respectively) who are in school can be reached with nutrition-specific and nutrition-sensitive interventions. Nutrition-specific interventions include those that aim to ensure adequate nutrient intake and good dietary choices and eating habits as well as those that aim to prevent disease. The following school-based nutrition-specific interventions can be distinguished:

- 1. School feeding:** School feeding programs have long been implemented in low-, middle-, and high-income countries for a range of reasons: they have a demonstrable impact on increasing school attendance, alleviating hunger and improving attention among schoolchildren in areas where many come to school with an empty stomach,²⁻⁴ and they may also be implemented to link agricultural production to consumers, and instill healthy eating habits. School feeding is implemented in almost every country

of the world, and approximately 92% of the beneficiaries are in primary school.⁴

Improving nutrition is not the primary aim of most school feeding programs, but the provision of food in a school environment offers a great opportunity, and also a moral obligation, to help address the nutritional needs of school-going children. To increase the nutritional impact of school feeding programs, improving nutritional status, in particular micronutrient status, should be included among the primary aims of school feeding activities. The use of fortified foods and/or the addition of micronutrient powders to school meals made of locally grown foods (“point-of-use fortification”), for example, are good ways to improve micronutrient intake. Furthermore, “doing no harm” in terms of overweight/obesity should also be an important consideration in school feeding, i.e., ensuring that the composition of meals and snacks is in line with food-based dietary guidelines and that it makes a good contribution to daily essential (micro- and macro-) nutrient intake. Expanding school feeding to secondary schools is also required to further extend the benefits to adolescents.

2. Nutrition education: Schools offer a good opportunity to instill awareness and knowledge of good dietary habits, including the consumption of a diverse and balanced diet, knowing which foods are healthy choices, understanding the importance of vitamins and minerals, and hygienic food preparation and storage practices. For example, education could be linked to (home-grown) school feeding and assessments of food options stocked by canteens and vendors in proximity to schools. This requires creativity in the adaptation, or development, of age-appropriate education materials and fitting these into the existing school curriculum.

3. Supplementation: Given the fact that anemia, and micronutrient deficiencies in general, are widespread, and especially so among (post-menarcheal) adolescent girls, supplementation using schools as a delivery platform is another way to try to improve the nutritional status of adolescent girls. Evidence of the impact of (weekly) supplementation, in particular of iron and folic acid, is increasing, and should be planned with a substantial awareness-raising component that is developed together with adolescents, parents, teachers and other community members, to ensure commitment and compliance from all involved.⁵ The largest-scale example of weekly iron and folic acid supplementation for adolescents, which is coupled with bi-annual deworming, is from India, where both in- and out-of-school adolescents are targeted.⁶

4. Deworming: Where helminth infections are common, providing deworming medication to pupils through schools every 4–6 months is a relatively simple and efficacious strategy, which is implemented in a number of countries, including India and Tanzania.^{6–8}

In addition to those services that are, or (in the case of school feeding) could be more nutrition-specific, schools and education benefit young people in many other ways that have the potential to positively affect nutritional status in the shorter or longer term. A higher level of parental education has, for example, been found to increase the odds of better nutritional status among their children.⁹ This is probably related to higher income earning potential, more knowledge, better ability to reflect and act upon new information, and greater self-efficacy, including negotiation skills, in general.

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“Schools and education benefit young people in many ways that have the potential to positively affect nutritional status”

Example of a school-based health and nutrition program for adolescent girls

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 India’s Saloni Swasth Kishori Yojna program (SSKY; adolescent health program) in Uttar Pradesh targets 700,000 school-going adolescent girls aged 10–19 years with weekly iron and folic acid supplements, deworming, and health check-ups.⁷ An additional sub-project of the SSKY intervened in the young adolescent group (aged 11–14) to promote a set of behaviors, including health-seeking, nutrition, reproductive health, and hygiene behaviors, through ten one-hour monthly sessions. In addition, ‘intergenerational communication’ skills were touched upon, which used role-play as a method of demonstrating how girls could initiate dialogue with their parents and other adults on topics covered by the Saloni interventions.

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 An evaluation of the Saloni model confirmed that the approach of focusing on early adolescence in the context of school-based structured activities provided an excellent opportunity for mentoring, supervision, and social support in this adolescent age group. The study further demonstrated that building self-efficacy for multiple health and nutrition behaviors among young adolescents is possible, as is increased ✨

parent-child communication on culturally sensitive issues. Lastly, despite the intervention area being an impoverished district, improvements in dietary behaviors among adolescent girls were possible, and their effects could be magnified by a well-functioning SSKY commodity and supplement distribution mechanism.⁷



A training session in a Community Nutrition Center

Health system as delivery platform for nutrition services for adolescents

Although the health system represents a logical setting for adolescents to seek sexual and reproductive health services, stigma, mistreatment, and judgment by facility-based staff often constitute an important deterrent to improved care-seeking behaviors.¹⁰ Services targeting youth and adolescents that are “acceptable and accessible to youth, conveniently located, affordable, confidential, and non-judgmental”¹¹ can help to break down some of these common barriers, and as such, comprise a promising approach to increasing the use of sexual and reproductive, health, and nutrition services among adolescents.

Food system possibilities for reaching adolescents with nutrition services

People’s access to food and their choices from what is available are determined by the characteristics of the food system to which they are exposed and how they interact with it. For example, in rural areas of low-income countries, households, including ado-

lescents, may largely depend on self-production, and may spend a substantial proportion of their income on staple foods when their own stocks have run out. In urban areas, people are further removed from food production and rely more on markets and shops, and a larger proportion of their food is processed.

Food processing provides opportunities to add value – for example, in the form of fortification with micronutrients, preservation and extending shelf-life, and improved food safety. Fortification of staple foods and condiments, for instance, offers an excellent opportunity for improving the micronutrient status of adolescents. On the other hand, the food industry also produces non-nutritious drinks and snacks with high sugar and/or high fat content, which have been linked to the current overweight/obesity epidemic and the increase of non-communicable diseases observed in many countries, affecting adults, adolescents, and children.

Thus, as adolescents become exposed to an increasingly complex food system, compared to what they were used to in their original situations, they should be provided with nutritious, safe and affordable options, and they should be made aware of good choices via schools and mass-media communications. In addition, interventions for improving the purchasing power of the poorest adolescents (or families) are required, as non-affordability is a key factor limiting consumption of a more diverse and adequately nutritious diet.^{12,13}

Example of a food assistance program that has added an emphasis on adolescent girls and women

The primary aim of the food assistance program in Niger, Sawki, is to reduce food insecurity among vulnerable populations in the country. It is implemented by Mercy Corps, Africare, and Helen Keller International (HKI), and has a special emphasis on women and adolescent girls. Adolescents receive food rations (lentils) at “Safe Spaces” and gather there weekly for discussion groups on essential nutrition actions, family planning, and life skills.¹⁴

To attract and retain adolescents in the program, Safe Spaces sessions are administered by female mentors who are selected by the communities as positive role models for girls. In parallel, the program runs radio broadcasts to sensitize communities on delayed childbirth and the health and economic benefits of girls’ education through influential male and female community members.¹⁴ The use of safe spaces to discuss sensitive issues among adolescents from the community represents a promising approach and environment in which to prioritize adolescent health and nutrition.

Other platforms for reaching adolescents with nutrition services

Social Safety Net Programming, such as conditional or unconditional cash transfers, aim to reduce poverty and, consequently, its associated effects, such as low school attendance, food insecurity, poor health, and undernutrition. Social safety nets can also lead to improvement of the health or nutrition situation of adolescents in these households. They may, for example, help adolescents to remain in school – the benefits of which have been described above. While social safety nets are not implemented for their nutritional impact, they provide an attractive means of reaching vulnerable adolescents to improve reproductive and educational objectives that influence nutrition indirectly, and opportunities for adding nutrition-specific interventions can be explored.

Youth-development programs and adolescent & youth centers are designed to address a wide range of adolescent needs that are typically not delivered through other available mechanisms, such as schools or the health system. They often focus on the development of life skills, reproductive and sexual health education, employment, and psychosocial needs. Youth development programs that are designed by, and implemented in, the community in a way that engages adolescent populations, and girls in particular, have demonstrated positive impact on various sexual and reproductive health indicators. The services may be delivered at specific adolescent and youth centers, or at existing facilities such as schools or health centers.

Adolescent and youth centers that are based in the community are not only critical for reaching out-of-school adolescents, but can also offer them a ‘safe zone’. In Hainsworth and colleagues’ assessment of the feasibility of scale-up of such centers, a number of key characteristics were emphasized, and included “privacy and confidentiality; use of trained, nonjudgmental providers; availability of a full range of [contraceptive] methods; free or subsidized services; and adolescent involvement in design, implementation, and quality improvement of services.”¹⁵ Where feasible, the potential for delivering nutrition services through these centers should be explored.

Religious structures and groups are important actors in the majority of communities worldwide; they are closely linked with local communities and reach a wide range of people.¹⁷ As such, religious groups and members hold great potential for communicating important issues to specific members of the community, including adolescents. One idea, which was tested in a study in Indonesia,¹⁸ was to refer newlywed couples to the health system for weekly iron/folic acid supplements for the woman to improve her iron and folic acid status prior to a possible pregnancy.

Example of an adolescent girls’ club

The Bangladesh Rural Advancement Committee (BRAC) designed and started a two-pronged Empowerment and Livelihood for Adolescents (ELA) program in Uganda in 2008 to improve both the cognitive and non-cognitive skills of adolescent girls. The program was funded by the Master Card foundation and operated through Adolescent Development Clubs, which represented a fixed meeting place within each targeted community.¹⁶

The Clubs were either donated by the community or the partner NGO (BRAC), and were open five afternoons per week at hours that also allowed school-going girls – aged 14–20 years – to attend. All club activities were led by a female mentor who was slightly older than the participating girls, and who provided life and vocational skills; life-skills training topics included sexual and reproductive health, pregnancy, family planning, management skills, negotiation and conflict resolution, and leadership, among others.¹⁶ Vocational skills training comprised a series of courses on income-generating activities, promoting the establishment of self-run, small-scale enterprises such as hairdressing, tailoring, computing, agriculture, livestock rearing, and operating small trades. A randomized controlled trial of the ELA showed that the intervention was successful in delaying marriage and childbirth, and in improving HIV- and pregnancy-related knowledge, which was mirrored by reductions in risky sexual behaviors.¹⁶

Messaging and sensitization platforms

Technology-based platforms hold promising, largely unexplored potential for reaching adolescents with specific health and nutrition information. Experiences with mHealth and the recently launched mNutrition – where individuals register for a service that comes to them through their mobile phone provider at no cost to the recipient – should be further investigated and applied to nutrition for adolescents where feasible and/or acceptable. (**More on this topic is available at** www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/04/M4D-mHealth-improved-nutrition_R1_web.pdf.)

Mass media communication can be useful for directing adolescents to available health and nutrition services in the community and to reinforce key messages that are also communicated through more interpersonal channels.

Community-based sensitization, especially that which com-

bines awareness-raising with building support networks and action within the community (such as through adolescent and youth centers and religious structures and groups) holds great potential to change community norms and beliefs on a given topic. Activities that have been documented for improving health and nutrition behavior, and that fall under community sensitization, also include community discussions, door-to-door visits, theatre, and mass media announcements through radio, television, newspapers, and billboards.

“Health services should become more adolescent-friendly”

Conclusion

The focus on adolescent girls as a target group for nutrition interventions is relatively new, and where possible, existing platforms and delivery channels should be adapted to reach them. While schools offer an obvious entry point, 65 million adolescents of lower-secondary school age are not in school, and that number is even higher among older adolescents (15–19 years). Making health services more adolescent-friendly and adding a nutrition focus to adolescent- and youth-based programming should be explored in order to reach out-of-school adolescents. Meanwhile, other platforms such as the food system, which largely affects what adolescents (choose to) eat, and mobile technology, deserve further exploration as avenues through which to provide nutrition services and reinforce adolescent-specific nutrition and health messages.

Correspondence: Saskia de Pee,

Senior Technical Advisor on Nutrition and Nutrition & HIV/AIDS, Nutrition Division, World Food Programme, Via Cesare Giulio Viola 68/70, 00148 Rome, Italy

Email: saskia.depee@wfp.org / depee.saskia@gmail.com

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