Chapter 9

ADOLESCENTS IN SOUTH ASIAN AGRIFOOD SYSTEMS

Roles and Aspirations

Samuel Scott, Suman Chakrabarti, Sharvari Patwardhan, Rohini Mukherjee, and Radhika Yelkur

Samuel Scott is a research fellow, International Food Policy Research Institute (IFPRI), Washington, DC. **Suman Chakrabarti** is an associate research fellow, and **Sharvari Patwardhan** is a former research analyst, IFPRI, New Delhi. **Rohini Mukherjee** is head of Global Partnerships and Strategy and **Radhika Yelkur** is a development sector professional and former national head of Project Nanhi Kali, Naandi Foundation, India.

KEY MESSAGES

- Adolescents play multiple roles in agrifood systems, from production to sale, acquisition, preparation, and consumption of food.
- Though surveys increasingly include adolescents, data gaps exist on their diets, food choice behaviors, and aspirations for the future, all of which have implications for agrifood systems.
- Fewer than 1 in 10 adolescents wish to engage in farming in the future, according to findings of a 2023 survey of 4,000 adolescents in rural Bangladesh, India, and Nepal.
- The same survey found that adolescent males and females participated equally in agricultural tasks, but that food and domestic tasks were primarily done by adolescent females.
- Recent data show that adolescents have access to and frequently consume unhealthy foods, and are largely missed by school meal programs, which typically only cover children.
- The Eat Well, Live Well social media campaign and follow-on activities in Bangladesh offer an example of innovative approaches to encourage adolescents to make better food choices.

Adolescents are both actors in and beneficiaries of agrifood systems, playing important roles in the production, sale, acquisition, preparation, and consumption of food. In South Asia, one in every five (over 350 million) individuals living in South Asia is an adolescent (defined as ages 10 to 19 years), making this region home to the largest adolescent population globally (UNICEF 2021). Importantly, this age group brings new perspectives and is quick to adopt innovations that both benefit them and can help drive agrifood systems toward greater efficiency and sustainability (Dolislager et al. 2021; Piselli et al. 2019). As the world becomes increasingly connected, adolescents have access to unprecedented amounts of information through social media and the internet that shape their decisions and aspirations about how to act and what to do. Adolescent females are also entering childbearing years, and two-thirds of females in Bangladesh, half of females in Nepal, and 35 to 40 percent of females in India and Pakistan marry before their 18th birthday and have a child before turning 20 (Scott et al. 2021). Understanding adolescents' roles in agrifood systems is therefore critical for the next generation, whose health and well-being depend on choices adolescents make today.

In this chapter, we describe evidence on adolescents in South Asia — their roles, consumption behavior, and aspirations — through an agrifood system lens. Specifically, we examine their involvement in food-related tasks spanning farms to markets to households. We then examine what they eat and the information that may affect their consumption patterns. Finally, having presented evidence on what they do, we examine what they want to do, whether these aspirations align with their parent's expectations, and potential implications of their future work preferences for agrifood systems. Throughout the chapter, we draw heavily on a rural agrifood systems assessment conducted in 2023 that collected data from 4,000 adolescent males and females living in rural areas in five districts across Bangladesh (Rajshahi, Rangpur), India (Nalanda), and Nepal (Banke, Surkhet) (Gupta et al. 2022). We refer to this as "the TAFSSA survey" as it was conducted as part of the CGIAR Research Initiative on Transforming Agrifood Systems in South Asia (TAFSSA).

WHAT DATA EXIST ON ADOLESCENTS IN SOUTH ASIA?

As the importance of adolescents for economies and as a vulnerable group from a social and health perspective has become more widely recognized, the number of surveys focused on this demographic group has increased over the past decade. Examples include the National Youth Health Survey (Sri Lanka, Family Health Bureau 2015) in Sri Lanka; Improving Adolescent Lives in Pakistan (UNICEF Pakistan 2021); Bangladesh Adolescent Health and Wellbeing Survey (NIPORT et al. 2021); Multiple Indicator Cluster Survey (Nepal, Central Bureau of Statistics and UNICEF Nepal 2020) in Nepal; Comprehensive National Nutrition Survey (India, MoHFW et al. 2019), Teen Age Girls survey (Naandi Foundation 2018), and Understanding the Lives of Adolescents and Young Adults (Anthya et al. 2017) in India; and the Young People's Perspectives on Food Environments and Food Choices survey conducted in multiple South Asian countries (UNICEF 2024). Using varied tools, these surveys assessed a broad range of topics including nutritional status, education, media exposure, diets, mental health, social networks, experiences of violence, gender norms, and sexual health. Key areas relevant to agrifood systems such as food preferences, nutrition knowledge, social media engagement, roles, and aspirations remained undermeasured, leaving gaps in understanding about how adolescents engage with agrifood systems in the region. The TAFSSA survey was designed with these gaps in mind.

WHAT ARE ADOLESCENTS DOING IN RURAL HOUSEHOLDS?

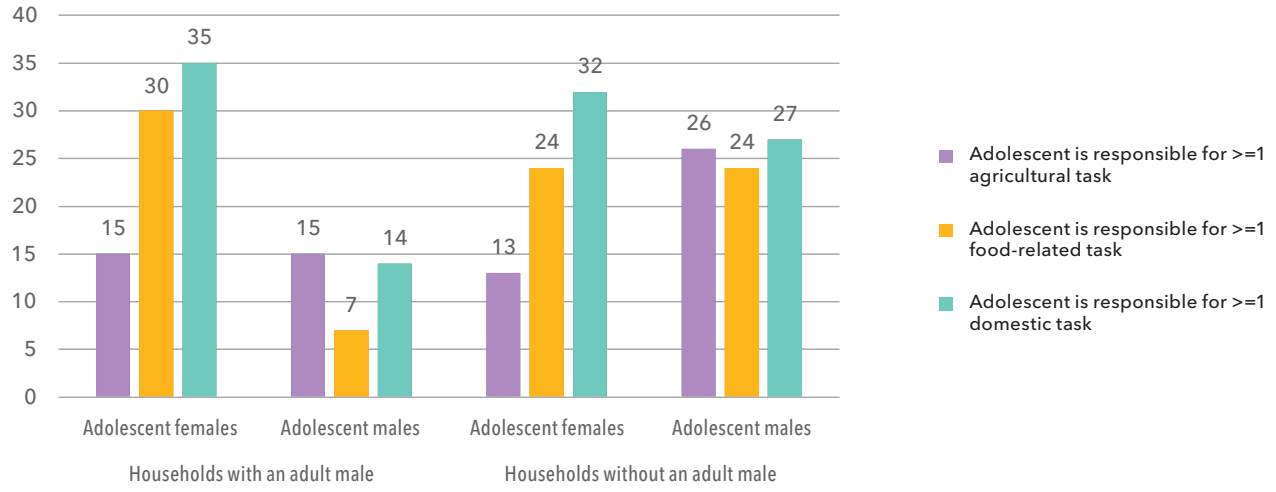
The TAFSSA survey, representative at the district level of rural households with an adolescent living at home, used a novel tool to measure

intrahousehold task allocation (see Chapter 8). Linked to the household roster, this module asked an adult respondent to identify which household members were responsible for performing more than 40 different tasks related to agricultural production (such as preparing land, harvesting food, and caring for livestock), food acquisition and preparation (purchasing food, fetching water, cleaning food before cooking, dealing with leftovers, and so on), and domestic work (such as house repairs, feeding young children, and caring for elderly). We found that adolescents were the primary or secondary person responsible for at least one agriculture task in 15 percent of households in Bangladesh, 17 percent of households in India, and 25 percent in Nepal. Female adolescents carried more burden than male adolescents, except in households where male adults were absent (common in the region due to migration for work). In such households, which comprised 18 percent of the sample, male adolescents stepped in to help. For example, in Bangladesh, male adolescents were responsible for agricultural tasks in 15 percent of households with male adults present but 26 percent of households where male adults were absent (Figure 9.1).

Male adolescents were far less involved in tasks related to food and domestic work compared with female adolescents. In India, female adolescents were responsible for at least one food-related task in 60 percent of households, while male adolescents were responsible for these tasks in 20 percent of households. Female adolescents were responsible for tasks such as cleaning food for cooking, making tea, cooking food, serving food, dishwashing, cleaning floors, and washing clothes in around 50 percent of households, while male adolescents were responsible for these tasks in only 1 to 2 percent of households.

These sobering facts show that gender inequities start early in rural South Asia, with much of the work burden related to food production, preparation, and domestic chores falling on young females, possibly at the expense of educational or skill-building activities (16 percent of adolescent girls in the sample were out of school) that might help them secure a better future. It is common in the region for girls to be married as teenagers, with marriage frequently

FIGURE 9.1 Task responsibilities of adolescents in Bangladesh in households with and without adult males



Source: Data from TAFSSA agrifood systems assessment conducted in 2023 in Rajshahi and Rangpur districts, Bangladesh

Note: n=2000 households

followed by childbearing and school dropout (Scott et al. 2021). Nearly 100,000 young people enter the job market daily in the region, but 93 million children and adolescents are out of school and may miss the opportunity to develop the skills needed to secure higher-paying jobs (Farivar 2024). Agrifood systems require a skilled workforce at all levels, from food production to marketing and food policy and industry leadership. Thus, for well-functioning agrifood systems, it is important to ensure that adolescents are on the right path and have the general education and skills needed to contribute as productive citizens later in their lives. Nutrition is tied into many factors that affect adolescents and their ability to learn and thrive, so we next examine what adolescents are eating.

WHAT ARE ADOLESCENTS EATING?

Although data on diets are inconsistently collected across countries, surveys indicate that diets of adolescents are far from current recommendations. One common finding is a trend of rising consumption of unhealthy and ultra-processed foods — that is, foods high in calories, fat, salt, and/or sugar and low in nutrients that promote health. In India, 36 percent of adolescents reported consuming fried foods and 10 percent consumed sugary beverages in a typical week, while less than half consumed fruits in a typical week (India, MoHFW et al. 2019). In the TAFSSA survey, more than 80 percent of adolescents in Bangladesh and 63 to 75 percent in India and Nepal reported consuming biscuits or baked goods in the previous week. A higher proportion of younger adolescents (ages 10–14 years) consumed biscuits and baked goods and chips, compared with older adolescents (ages 14–19 years). Consumption of deep-fried foods was higher among male than female adolescents in all locations except Nepal.

In the TAFSSA survey, we found that staple grains (rice and wheat) are ubiquitous and consumed at nearly all meals. Other food groups, however, were consumed less frequently, with some notable differences by location and gender. A slightly higher percentage of female than male adolescents consumed green leafy vegetables in Bangladesh (67 versus 61 percent) and India (57 versus 56 percent), but the reverse was true for Nepal (70 percent of females versus 76 percent of males). Apart from the regularly consumed rice and staple vegetables (such as potatoes, tomatoes, onions, and some green leafy vegetables), adolescents' diets typically consisted of dal and processed foods. More than 80 percent adolescents in Nepal and India and more than 60 percent adolescents in Bangladesh had consumed lentils in the previous week. Animal-source foods were less commonly consumed, especially in India. Egg consumption in the prior week was higher among male than female adolescents across locations (85 percent versus 81 percent in Bangladesh; 37 percent versus 24 percent in India; 53 percent versus 46 percent in Nepal). Adolescence marks a stage of high nutrient requirements due to rapid growth, and animal-source food consumption can make an important contribution toward these requirements (IFPRI 2024).

Adolescents get their food from multiple sources, including school and retailers on their path to school. In a UNICEF youth survey on food environments (UNICEF 2024), 48 percent of school-going respondents (ages 13–19 years) reported the presence of food service facilities at their schools (highest for Bhutan and Sri Lanka at around 70 percent and lowest for Afghanistan and Bangladesh at around 30 percent), but only 17 percent indicated that cooked meals were provided. When hungry at school, most adolescents opted for freshly cooked meals (38 percent), followed by fast foods (17 percent) and packaged snacks (11 percent). The main barrier to eating when hungry at school was insufficient money, reported by 35 percent of respondents. The availability of unhealthy foods near schools was high, with 76 percent noting the presence of packaged snacks, 62 percent reporting sugar-sweetened beverages, and 55 percent reporting fast foods. These statistics suggest that sub-optimal diets

reflect both affordability constraints and unhealthy food environments.

Adolescents' food environments and the type of information they are exposed to can impact their consumption behavior (UNICEF 2024). In the TAFSSA survey, around 50 percent of adolescents had seen or heard advertisements about foods or drinks in the past 30 days. Adolescents were most frequently exposed to advertisements for soft drinks (31 to 48 percent, depending on location) followed by salty packaged snacks in India (35 percent) and Nepal (17 percent), and baked sweets (24 percent) in Bangladesh. Mass media was the source for most advertisements, followed by shop signs or displays. Media exposure is made possible by mobile phones, which have spread rapidly in recent years. The TAG Survey, conducted in 2018 in India, found that 15 percent of adolescents ages 13 to 15 and 30 percent of those ages 16 to 19 had access to a mobile phone. Post COVID-19, mobile phone usage increased in India due to the adoption of remote learning, and the 2023 Annual State of Education Report found that close to 90 percent of adolescents ages 14 to 18 had access to a mobile phone in

BOX 9.1 A case from Bangladesh: Empowering youth and transforming Bangladesh's food systems through collective action

Contributed by Mehedi Hasan Bappy, Project Coordinator, Youth and Adolescent Nutrition, GAIN & Focal, SUN Youth Network Bangladesh

The Global Alliance for Improved Nutrition (GAIN) has been working with adolescents and youth as key stakeholders to combat malnutrition and strengthen food systems in Bangladesh. From 2017 to 2021, GAIN's Bhalo Khabo Bhalo Thakbo (Eat Well, Live Well) campaign inspired more than 1 million adolescents to pledge to spend their pocket money on nutritious foods, using a narrative that resonated with their motivations (Barnett et al. 2021). This success laid the foundation for further youth-focused initiatives.

In 2024, GAIN, in collaboration with the Ministry of Health and Family Welfare, launched the Scaling Up Nutrition (SUN) Youth Network Bangladesh, a national platform to mobilize youth and adolescents to advocate for healthier diets and improved nutrition outcomes. The network empowers young people with the skills, knowledge, and networks to engage in decision-making and co-create solutions for food and nutrition systems. GAIN's Youth Leadership Initiative further supports this by fostering collective action and policy dialogue.

From January 2024 to July 2025, GAIN trained more than 500 youth (ages 18 to 25) through its Food Systems Youth Leadership Training, equipping them to identify and address existing food systems-related issues through designing and implementing community-based action projects. After completing the training, the participants have been supporting nutrition awareness campaigns, school meals, food safety, and homestead and vertical gardening in flood-prone areas. These efforts aim to promote healthier diets and climate-smart food systems. For example, Minhajul Islam Bappi, a training participant, launched the Nutritious Khichuri for 10 Bangladeshi taka (US$0.08) initiative, providing affordable meals to more than 3,000 students and teachers across four schools daily.

> *"The training was an eye-opener. I learned so much about the importance of proper nutrition and how local actions can create big changes. It made me realize that true leadership isn't just about big ideas, but about identifying and solving the problems right in front of you, in your own community."* — Minhajul Islam Bappi

GAIN also facilitates youth–government collaboration, ensuring young voices shape national and global dialogues, such as the UN Food Systems Summit, Nutrition for Growth, and Conference of Youth negotiations. By institutionalizing youth leadership through the SUN Youth Network, GAIN is nurturing a generation of nutrition champions driving systemic change for a healthier, more resilient food system in Bangladesh.

the household (ASER Centre 2024). Moreover, close to 80 percent of these adolescents reported using a mobile phone for entertainment, indicating a high possibility of exposure to ads promoting unhealthy food options. A closer look at the food environment-diet association can be found in Chapter 4.

WHAT DO ADOLESCENT ASPIRE TO FOR THE FUTURE?

Earlier in this chapter, we described the tasks performed by adolescents in rural South Asia. In the TAFSSA survey, we also asked adolescents what they would like to do in the future to earn money. Fewer than 1 in 10 adolescents wanted to take up farming as their future primary occupation. Around half of adolescents aspired to be salaried public sector employees (that is, government workers) and 20 to 30 percent wanted to be highly skilled independent professionals. We separately asked their parents what kind of work they want their adolescent child to do in the future. Parents' expectations for male adolescents aligned with the adolescents' aspirations, but the same was not true for parents' expectations for female adolescents, except in Nepal. In one-third of cases in Bangladesh and India, parents preferred that their female adolescent children become housewives. These differences likely reflect differing gender norms, with girls expected to marry earlier than boys in many South Asian contexts. In the 2020 BAHWS, 42 percent of adolescent females and 54 percent of males believed 18 was the ideal age for girls to marry. The TAG survey in India found that over 70 percent of adolescent girls preferred not to marry before 21 and aspired to careers such as teaching, tailoring, medicine, and the military (Naandi Foundation 2018). However, nearly half of the surveyed girls felt that boys had more educational opportunities. Similar to the TAFSSA survey, the TAG survey found adolescents did not aspire to farming, a finding that may have implications for the future of agrifood systems, especially in low-income countries that practice labor-intensive traditional agriculture.

LOOKING AHEAD: YOUTHS AS CHANGE AGENTS FOR AGRIFOOD SYSTEM TRANSFORMATION

South Asia, relative to other regions, is home to the largest and youngest workforce in the world today (UNICEF 2021). Investment in youth — starting with adolescents and encompassing their health and well-being, education and skills, productivity, economic potential, and leadership — should be a key focus area for policymakers. Educational material on diets and food systems and on roles and opportunities should be made available to adolescents at no cost, either through school curriculums or online. In Bangladesh, efforts by the Global Alliance for Improved Nutrition (GAIN) to involve adolescents in agrifood systems are noteworthy (Box 9.1). Adolescents want to be part of the changes required to improve agrifood systems. In 2021, a team of researchers conducted workshops with adolescents in 16 countries across South Asia, Southeast Asia, Africa, the Middle East, Europe, and Latin America (Fleming et al. 2023). These adolescents were able to draw complex maps of their agrifood systems and understood how food is produced, processed, and transported, as well as how climatic events and human damage to the environment can affect food systems. Adolescents called for four key areas of change: (1) education on sustainable eating practices, (2) spaces for adolescents to share their views and interact with decision-makers, (3) regulation of production practices that harm the environment, and (4) support for adolescents to advocate for making healthy food affordable and accessible, especially for marginalized groups such as Indigenous communities. As adolescents become increasingly educated, empowered, and knowledgeable about the world — much of which may occur through social media rather than traditional schooling — there will be trade-offs for agrifood systems, with a potential reduction in the number of individuals engaged in agriculture but a stronger collective voice to demand healthy, sustainable, and equitable agrifood systems.

Acknowledgments

We would like to thank the editors and Sunny Kim for constructive feedback and helpful suggestions, which have strengthened this chapter.

REFERENCES

Anthya, K.G., Rajib Acharya, Neelanjana Pandey, *et al.* 2017. *Understanding the Lives of Adolescents and Young Adults (UDAYA) in Bihar, India*. Population Council. https://knowledgecommons.popcouncil.org/departments_sbsr-pgy/544/.

ASER Centre. 2024. *Annual Status of Education Report (Rural) 2023: Beyond Basics.* ASER Centre. https://asercentre.org/wp-content/uploads/2022/12/ASER-2023-Report-1.pdf.

Barnett, Inka, Wendy Gonzalez, Moniruzzaman Bipul, *et al.* 2021. "Improving Adolescents' Food Choices: Learnings from the Bhalo Khabo Bhalo Thakbo ('Eat Well, Live Well') Campaign in Bangladesh." *ENN Online*, October 28, 2021. www.ennonline.net/fex/66/en/improving-adolescents-food-choices-learnings-bhalo-khabo-bhalo-thakbo-eat-well-live-well.

Dolislager, Michael, Thomas Reardon, Aslihan Arslan, *et al.* 2021. "Youth and Adult Agrifood System Employment in Developing Regions: Rural (Peri-Urban to Hinterland) vs. Urban." *The Journal of Development Studies* 57 (4): 571–93. https://doi.org/10.1080/00220388.2020.1808198.

Farivar, Masood. 2024. "International Youth Day Puts South Asia's Skills Gap in Sharp Focus." *VOA News*, August 13, 2024. www.voanews.com/a/international-youth-day-puts-south-asia-s-skills-gap-in-sharp-focus/7741154.html.

Fleming, Catharine A.K., Deepika Sharma, Kaitlyn Brunacci, *et al.* 2023. "Fix My Food: An Urgent Call to Action from Adolescents on How They Experience and Want to See Change in Their Food Systems." *Journal of Human Nutrition and Dietetics* 36 (6): 2295–309. https://doi.org/10.1111/jhn.13228.

Gupta, Manavi, Avinash Kishore, Samuel Scott *et al.* 2022. "Understanding Local Food Systems in South Asia: An Assessment Approach and Design." TAFSSA Methods Note No. 1. IFPRI. https://hdl.handle.net/10568/127434.

IFPRI (International Food Policy Research Institute). 2024. *Global Food Policy Report 2024: Food Systems for Healthy Diets and Nutrition*. IFPRI. https://hdl.handle.net/10568/141760.

India, MoHFW (Ministry of Health and Family Welfare), Government of India, UNICEF, and Population Council. 2019. *Comprehensive National Nutrition Survey (CNNS) National Report: 2016-2018*. MoHFW. www.nhm.gov.in/index1.php?lang=1&level=2&sublinkid=1332&lid=713.

Naandi Foundation. 2018. *The Teenage Girls Report 2018*. Naandi Foundation. www.nanhikali.org/pdf/TAG-Report.pdf.

Nepal, Central Bureau of Statistics, and UNICEF Nepal. 2020. *Nepal Multiple Indicator Cluster Survey 2019: Survey Findings Report*. Central Bureau of Statistics and UNICEF Nepal. https://www.unicef.org/nepal/reports/multiple-indicator-cluster-survey-final-report-2019.

NIPORT (National Institute of Population Research), icddr,b (International Centre for Diarrhoeal Disease Research, Bangladesh), and Data for Impact. 2021. *Bangladesh Adolescent Health and Wellbeing Survey 2019-20: Final Report*. NIPORT, icddr,b, and Data for Impact. www.data4impactproject.org/publications/bangladesh-adolescent-health-and-wellbeing-survey-2019-20-final-report/.

Piselli, Dario, Siamak Sam Loni, Kayla Colyard, and Sienna Nordquist. 2019. "The Role of Youth in Achieving the SDGs: Supporting Youth-Led Solution." In *Achieving the Sustainable Development Goals Through Sustainable Food Systems*, eds. R. Valentini, J.L. Sievenpiper, M. Antonelli, and K. Dembska, 229–245. Springer. https://doi.org/10.1007/978-3-030-23969-5_13.

Scott, Samuel, Phuong Hong Nguyen, Sumanta Neupane, *et al.* 2021. "Early Marriage and Early Childbearing in South Asia: Trends, Inequalities, and Drivers from 2005 to 2018." *Annals of the New York Academy of Sciences* 1491 (1): 60–73. https://doi.org/10.1111/nyas.14531.

Sri Lanka, Family Health Bureau. 2015. *National Youth Health Survey 2012/2013: Sri Lanka*. Family Health Bureau. https://srilanka.unfpa.org/sites/default/files/pub-pdf/Youth%20Health%20Survey.pdf.

UNICEF. 2021. "Adolescents in South Asia." Accessed November 14, 2024. www.unicef.org/rosa/what-we-do/adolescents#:~:text=South%20Asia%20is%20home%20to,still%20largely%20invisible%20and%20voiceless.

UNICEF. 2024. *Young People's Perspectives on Food Environments and Food Choices in South Asia*. UNICEF Regional Office for South Asia. www.unicef.org/rosa/reports/young-peoples-perspectives-food-environments-and-food-choices.

UNICEF Pakistan. 2021. *Improving Adolescent Lives in Pakistan (2015-2019): An Impact Evaluation*. UNICEF Pakistan. www.unicef.org/pakistan/documents/improving-adolescent-lives-pakistan-2015-2019.