

Undernourished and overlooked

A GLOBAL NUTRITION CRISIS IN
ADOLESCENT GIRLS AND WOMEN



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for every child

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FOREWORD

A mother finishes preparing a meal and places it in front of her children. She has saved the freshest, tastiest foods and the largest portions for them. On days like today, when money is tight and food is in short supply, she eats less or skips meals entirely to ensure that the rest of her family has enough.

This is what mealtime looks like for millions of women around the world, and for many, the situation is getting worse.

Today, we are facing a food and nutrition crisis of global proportions – one exacerbated by poverty, conflict and climate change. It is also a crisis in which adolescent girls, women and their children are bearing the brunt of its consequences.

In the 12 hardest-hit countries, the number of pregnant and breastfeeding women and adolescent girls suffering from acute malnutrition has soared from 5.5 million to 6.9 million – or 25 per cent – since 2020. And according to data presented in this report, *'Undernourished and Overlooked'*, more than 1 billion adolescent girls and women worldwide suffer from undernutrition – including underweight and short height, micronutrient deficiencies, and anaemia.

Maternal malnutrition has dire consequences for women and their children. Malnourished women are more likely to die, face complications during pregnancy and childbirth, and have children born too small, too thin and vulnerable to undernutrition, illness and death. As this report shows, about half of all stunting in early childhood originates during pregnancy or in the first six months of life – a time when children are entirely dependent on their mothers for nutrition. This finding makes clear that global efforts to end malnutrition in children cannot be achieved without improving the nutrition of their mothers.

But the rights of women to food and nutrition are indelible and are not dependent on motherhood. Women are rights-holders, leaders, healers, teachers and innovators. Access to nutritious foods and essential nutrition services is critical to ensuring the wellbeing and dignity of all women.

The launch of this report coincides with International Women's Day: a day to take stock of the inequalities that continue to undermine women's rights and needs, including the right to nutrition. It also stands as an opportunity to take bold and collective action to break the intergenerational cycle of malnutrition and gender inequality.

As detailed in the report, UNICEF is calling on governments, as well as development and humanitarian partners, to prioritize access to nutritious and affordable diets for adolescent girls and women. This includes fortified foods, and free access to essential nutrition services before and during pregnancy and while breastfeeding. UNICEF is also calling for the protection of adolescent girls and women from nutrient-poor, ultra-processed foods, and for the elimination of discriminatory gender and social norms that undermine women and girls' access to nutritious diets, nutrition services and nutrition care.

Women's right to nutrition has been overlooked and undervalued for far too long. It is high time we put the nutrition of women and girls at the centre of the global development agenda, backed by political commitment and resources. Let us join together to chart a route out of this crisis, protect the next generation of children from malnutrition, and build a more equitable future for girls and women everywhere.



Catherine Russell
UNICEF Executive Director



EXECUTIVE SUMMARY

There has been important progress for the rights of adolescent girls and women in recent decades, yet millions still struggle to access the nutritious diets, essential nutrition services and nutrition and care practices they need to prevent malnutrition.

Undernutrition, micronutrient deficiencies and anaemia amplify gender inequalities by lowering learning potential, wages and life opportunities for adolescent girls and women, weakening their immunity to infections, and increasing their risk of life-threatening complications during pregnancy and childbirth.

Poor maternal nutrition can also have debilitating and even lethal consequences for infants and young children. Maternal undernutrition, micronutrient deficiencies and anaemia increase the risk of stillbirth, newborn death and preterm delivery and impair foetal development, with lifelong consequences for children's nutrition, growth, learning and future earning capacity.

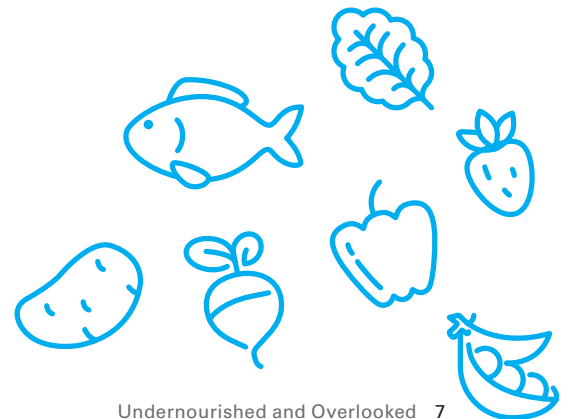
OUR RESEARCH

The case for prioritizing adolescent girls' and women's nutrition now

This global report examines the current status, trends and inequities in the nutritional status of adolescent girls and women of reproductive age (15–49 years), and the barriers they face in accessing nutritious diets, utilizing essential nutrition services and benefiting from positive nutrition and care practices.

Our analysis focuses on undernutrition, micronutrient deficiencies and anaemia because these forms of malnutrition affect the most vulnerable adolescent girls and women in low- and middle-income countries, especially in the context of the ongoing global food and nutrition crisis. The impacts of this crisis – the largest in modern history – are falling hardest on countries already grappling with poverty, conflict and climate change.

We analysed data on underweight and anaemia for more than 190 countries and territories, representing more than 90 per cent of adolescent girls and women globally. Inequities in underweight, short height and anaemia, dietary diversity and access to essential nutrition services in adolescent girls and women are examined using data from national surveys. We also analysed data from four regional reviews and NutriDash – UNICEF's global online monitoring platform for maternal and child nutrition – on the status of nutrition policies and programmes for adolescent girls and women. In addition, the report shares data and evidence on the impact of current crises on the nutrition of adolescent girls and women.



OUR FINDINGS

The global crisis of nutrition in adolescent girls and women

Our findings reveal the slow progress on nutrition in adolescent girls and women, and the multiple, interacting drivers that underlie this global crisis.

Progress on adolescent girls' and women's nutrition is too slow and under threat. More than one billion adolescent girls and women suffer from undernutrition (including underweight and short height), deficiencies in essential micronutrients and anaemia, with devastating consequences for their lives and wellbeing. Since 2000, there has been no change in the prevalence of underweight in adolescent girls (8 per cent) and only a small decline in the prevalence of underweight in women (from 12 to 10 per cent). The prevalence of anaemia remains high and unabated (30 per cent), and more than two-thirds of girls and women (69 per cent) suffer from micronutrient deficiencies.

No region is on track to meet the 2030 global targets to reduce anaemia in adolescent girls and women by half and low birthweight in newborns by 30 per cent. The current global food and nutrition crisis could slow progress even further; we estimate that the number of acutely malnourished pregnant and breastfeeding women increased by 25 per cent between 2020 (5.5 million) and 2022 (6.9 million) in 12 countries that are hard hit by the current food and nutrition crisis.

Poorer regions and disadvantaged adolescent girls and women bear the brunt of undernutrition and anaemia. South Asia and sub-Saharan Africa are home to 68 per cent of adolescent girls and women with underweight and 60 per cent of adolescent girls and women with anaemia; however, there is considerable variation in prevalence among countries within the same region and among subnational regions within the same country.

Less educated girls and women and those living in rural areas or belonging to poorer households are more likely to be underweight, too short and/or anaemic. For example, the prevalence of underweight among adolescent girls and women belonging to the poorest households is double the prevalence in the wealthiest households (14 per cent versus 7 per cent).

Poor nutrition is passed down through generations.

Maternal underweight, maternal short height and low birthweight are consistent predictors of stunting and wasting in early childhood, which explains why child undernutrition is concentrated in the same regions as maternal undernutrition: 73 per cent of all low birthweight infants and 74 per cent of all children suffering from stunting live in South Asia and sub-Saharan Africa.

Globally, 51 million children under 2 years are stunted. We estimate that about half of these children become stunted during pregnancy and the first six months of life, when a child is fully dependent on the mother for nutrition.

The global food crisis is deepening the nutrition crisis for adolescent girls and women. The gender gap in food insecurity more than doubled between 2019 (49 million) and 2021 (126 million), as girls and women across the world found themselves disproportionately hit by the impact of the COVID-19 pandemic on livelihoods, income and access to nutritious food. Our research in Eastern and Southern Africa found that up to four in five pregnant and breastfeeding women were food insecure following the pandemic, and more than two-thirds reduced their consumption of foods from at least one food group during this time.

Adolescent girls and women are also disproportionately affected by conflict, climate change, poverty and other economic shocks. The compounding impacts of global and local crises are set to further deteriorate the nutrition situation of adolescent girls and women in 2023.

Adolescent girls and women struggle to access nutritious diets. The low diversity of adolescent girls' and women's diets is troubling, especially in fragile countries. Fewer than one in three adolescent girls and women have diets meeting the minimum dietary diversity in the Sudan (10 per cent), Burundi (12 per cent), Burkina Faso (17 per cent) and Afghanistan (26 per cent). In Niger, the percentage of women accessing a minimally diverse diet fell from 53 per cent to 37 per cent between 2020 and 2022.

With rising poverty and inequities in low- and middle-income countries, there is concern that millions of girls and women will turn to cheap ultra-processed unhealthy foods that are low in essential nutrients and high in salt, sugar, and unhealthy fats.

Harmful social and gender norms and practices block progress on nutrition. Discriminatory norms and practices limit access to nutritious diets, essential nutrition services and nutrition care for adolescent girls and women by restricting their autonomy to take decisions, denying their access to productive resources (e.g., education, land, financing and social networks), increasing their domestic work burden and constraining employment opportunities. These entrenched gender inequalities tend to be most pronounced in times of food and nutrition crisis.

Child marriage and adolescent pregnancy are egregious violations of children’s rights and have profound negative consequences for the nutrition and well-being of adolescent girls and their children. Adolescent pregnancy is falling, but 12 million children are born to girls aged 15–19 years who have not completed their own growth, the majority in South Asia and sub-Saharan Africa (66 per cent).

Nutrition services and social protection programmes are failing to meet the nutrition needs of adolescent girls and women, especially in humanitarian settings. Nutrition services are not reaching adolescent girls and women with adequate coverage and equity. For example, only two in five pregnant women (43 per cent) benefit from iron and folic acid supplementation for the prevention of maternal anaemia, and only 29 low- and middle-income countries provide antenatal multiple micronutrient supplements, which are a standard of care in high-income countries.

Humanitarian crises make it much more difficult to access nutrition services and support, at a time when adolescent girls and women are most vulnerable. In Afghanistan, for example, the nationwide programme to reach adolescent girls in schools with weekly iron and folic acid supplements was forced to close in August 2021 when girls were barred from attending school. There are also persistent gaps in the reach and adequacy of social protection coverage for women during crises – for example, only 12 per cent of social protection responses to the COVID-19 pandemic targeted women’s economic security.

Adolescent girls and women lack strong policy protection against undernutrition. Our review of eight key policies for adolescent girls’ and women’s nutrition across three systems – food, health and social protection – found that only 8 per cent of countries have all eight policies, while 39 per cent have only four or fewer policies. These missed opportunities hinder policy coherence, and multi-system and multi-sector actions to improve nutrition.

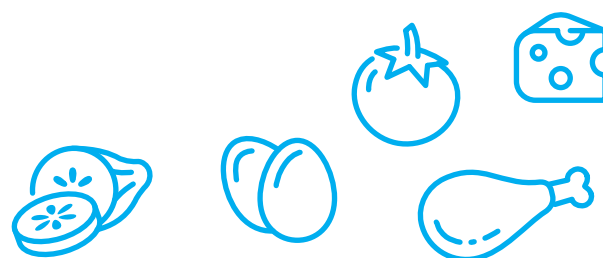
Efforts to take appropriate policy decisions, track progress and hold duty-bearers to account are constrained by the lack of data and evidence on the status and drivers of nutrition in adolescent girls and women. For example, just 60 per cent of countries are monitoring the provision of antenatal iron and folic acid supplements, and only 36 per cent are monitoring whether pregnant women receive nutrition counselling.

OUR ANALYSIS

Barriers to good nutrition in adolescent girls and women

The scale and consequences of undernutrition, micronutrient deficiencies and anaemia in adolescent girls and women are being overlooked and underrecognized – by families, by society, by governments, by development and humanitarian communities, by research and academia, by media and by the private sector. Unless decisive action is taken, we will collectively continue to fail adolescent girls and women and jeopardize the survival, growth and development of their children.

Our analysis shows that the nutritional status of adolescent girls and women is influenced by an array of factors that vary according to context. In low- and middle-income countries, economic disadvantage interacts with harmful gender and social norms and practices, inadequate policy protection and discriminatory laws, and poorly funded and implemented nutrition programmes and services, depriving girls and women of the nutritious diets, essential nutrition services and nutrition and care practices they need to thrive and live a life with dignity.



The world is failing to respond with policies, programmes and actions that make the right to good nutrition a reality for all adolescent girls and women. The support of multiple systems – particularly the food, health and social protection systems – is crucial to deliver nutritious and affordable diets, essential nutrition services and positive nutrition and care practices to all adolescent girls and women, while catering to the unique nutritional needs of pregnancy and breastfeeding and prioritizing the most vulnerable.

The immediate outlook for adolescent girls' and women's nutrition – and that of their children – is deeply concerning because the challenges girls and women face keep escalating. Rising food and fuel prices, conflict and instability, and extreme weather events induced by climate change and environmental degradation, including the devastating droughts in the Horn of Africa and the Sahel, and floods in Pakistan, are making it even more difficult for millions of adolescent girls and women to meet their nutrition needs.

With the mounting pressures on food and nutrition security and the rapidly approaching deadlines for the global nutrition targets, governments and their development and humanitarian partners – national and international – must take the lead in bringing about much faster progress for adolescent girls' and women's nutrition.

OUR RECOMMENDATIONS

The route out of the nutrition crisis

The route out of the nutrition crisis for adolescent girls and women is clear. Governments – together with development and humanitarian partners, national and international civil society organizations, media, research and academia and the private sector – must act now to strengthen nutrition governance, activate the food, health and social protection systems, and transform harmful social and gender norms to deliver nutritious and affordable diets, essential nutrition services and positive nutrition and care practices for adolescent girls and women everywhere. The following ten key actions are critical to drive change:

Nutrition governance for adolescent girls and women

- **Build bolder leadership to mobilize institutions, leverage resources and galvanize actions for adolescent girls' and women's nutrition more effectively.** Leaders must promote much greater recognition of the urgent need to improve girls' and women's nutrition, and mobilize institutions, stakeholders and resources to close gaps in policies, programmes and services.
- **Harness data and evidence to inform policy and programme decisions and strengthen accountability for adolescent girls' and women's nutrition.** Governments and their partners must invest in surveys, research and evaluations to determine how to improve diets, nutrition services and nutrition and care practices for adolescent girls and women, and track progress.

Food systems and nutritious diets

- **Improve access to affordable nutritious foods – including fruits, vegetables, eggs, fish, meat and fortified foods – for all adolescent girls and women.** Governments must provide incentives and subsidies to enhance the supply and affordability of nutritious foods and enact and enforce mandatory food fortification of staple foods where nutrient deficiencies are common.
- **Implement policies and mandatory legal measures to protect adolescent girls and women from nutrient-poor and unhealthy ultra-processed foods and beverages.** Governments must use a combination of policies and legal measures to create healthy food environments, including compulsory front-of-pack labelling, marketing restrictions, and taxation of unhealthy ultra-processed foods and beverages.

Nutrition services and social protection programmes

- **Improve access to essential nutrition services for adolescent girls and women before and during pregnancy and while breastfeeding, including in humanitarian crises.** Governments and partners must expand coverage, including through community- and school-based delivery platforms, and provide free access to multiple micronutrient supplements during pregnancy.

- **Expand access to social transfer programmes for adolescent girls and women, including in fragile settings and humanitarian crises.**

Governments and partners must use social transfer programmes – including cash, vouchers and/or in-kind transfers – to improve the access of adolescent girls and women to nutritious and diverse diets.

Nutrition and care practices

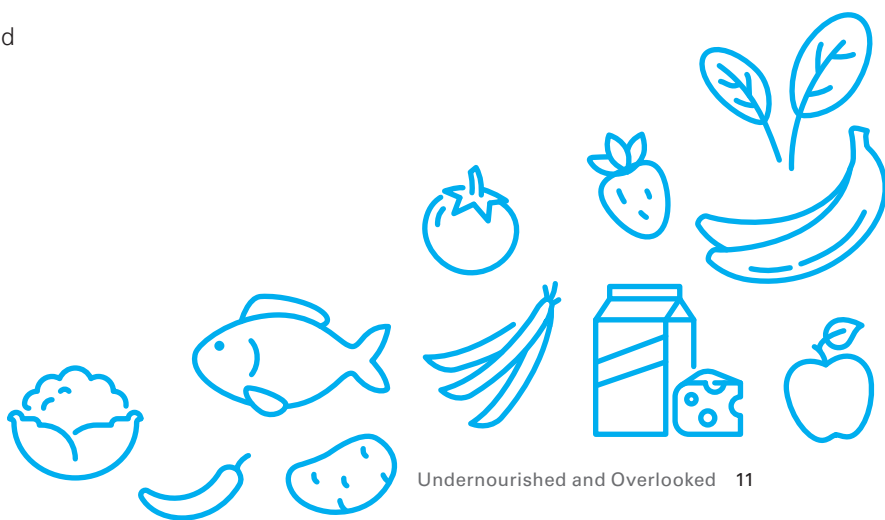
- **Use multiple communication channels (print, broadcast, social and digital media) to reach adolescent girls, women and the general public with advice on nutrition and care practices.**

Governments and partners must intensify efforts to communicate the vital importance of nutritious diets and micronutrient supplements and increase the desirability of nutritious foods.

- **Strengthen the coverage and quality of counselling to help adolescent girls, women, and their family members make decisions and take action to improve nutrition.** Governments and partners must invest in the recruitment, training and supervision of community-based workers to deliver quality counselling and support to girls, women and influential family members.

Social and economic empowerment

- **Implement gender-transformative policies and legal measures that strengthen the social and economic empowerment of adolescent girls and women.** Governments must ensure that girls and women are legally protected from child marriage, have equal rights to inheritance and asset ownership, and are able to benefit from maternity protection and family-friendly policies.
- **Accelerate the elimination of discriminatory gender and social norms to enable adolescent girls and women to realize their rights to food and nutrition.** Governments and partners must join forces to promote equitable social norms, including an end to child marriage and equitable sharing of food, household resources and domestic and care work.



1 | OUR RESEARCH

THE CASE FOR PRIORITIZING ADOLESCENT GIRLS' AND WOMEN'S NUTRITION NOW





This chapter explains why the nutrition of adolescent girls and women needs greater attention – and what this would mean for their well-being and dignity, for the growth and development of their children, and for social and economic progress. We outline the analysis and research that UNICEF has undertaken to bring visibility to the status and drivers of poor nutrition in adolescent girls and women, and to inform solutions that can truly transform their nutrition and well-being.

In recent decades, there has been important progress for girls and women: the gender gap in education is closing, millions more women have joined the workforce, the number of women in positions of leadership has increased, child marriage is falling, and fewer women are dying in childbirth.^{1,2}

Nutrition is both an input to and an outcome of this progress. Well-nourished girls perform better in school, and more educated women are less likely to be undernourished.^{3,4} Well-nourished women have higher earnings, and this income gives women greater control over decisions that affect their nutrition and the nutrition of their children.^{5,6} Girls who are not married or pregnant

during adolescence go on to have fewer pregnancies and better nutrition.^{7,8} And well-nourished women enjoy healthier pregnancies and are less likely to die in childbirth.^{9,10}

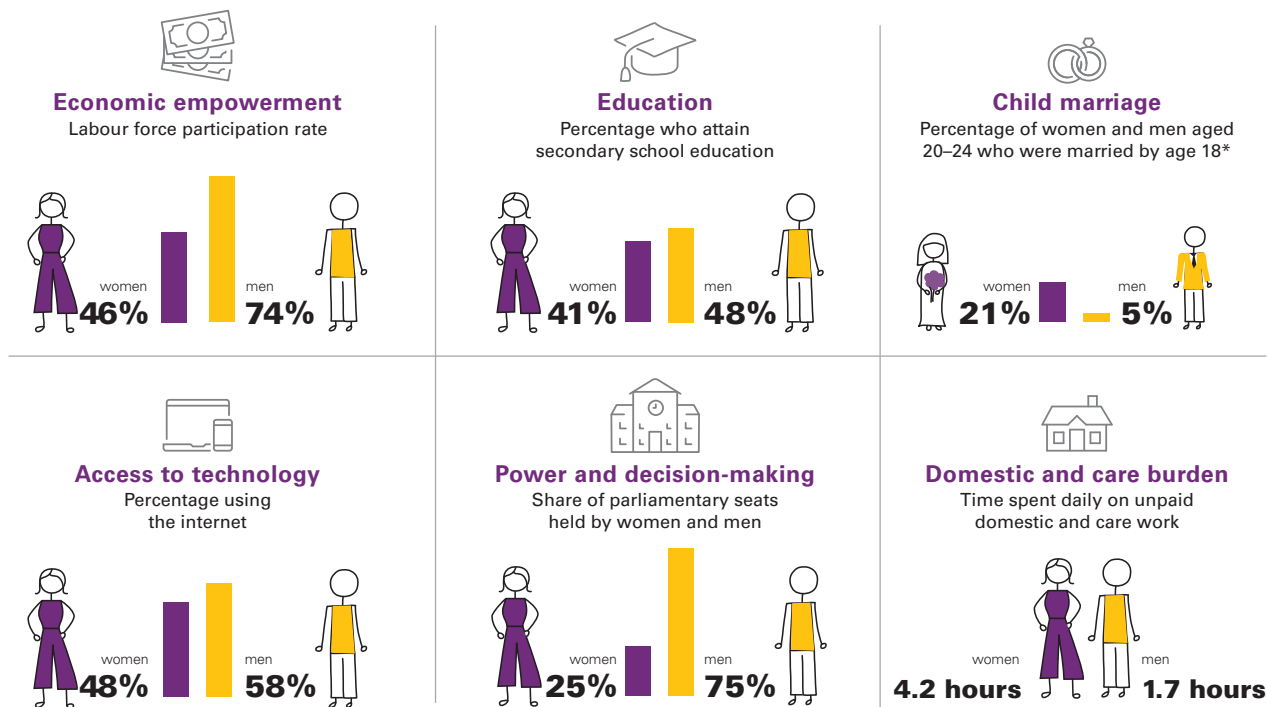
But adolescent girls and women continue to face inequalities across every sphere – from education and the economy to power and decision-making (see Focus 1). And in today's world, millions of adolescent girls and women still struggle to access the nutritious diets and care they need for good nutrition.

Why does the nutrition of adolescent girls and women matter?

Nutritional status is a powerful barometer of well-being. A well-nourished girl or woman has a strong immune system to fight infections and is less likely to suffer poor mental health.¹¹⁻¹³ She is able to participate actively in family and public life and stands a better chance of earning a decent income.⁵ If and when she chooses to become a mother, she will enter pregnancy with nutritional reserves to help meet the demands of pregnancy.¹⁴ Her children are more likely to be well-nourished at birth and to join her on a path to well-being and prosperity.¹⁰

FOCUS 1

DISPARITIES BETWEEN WOMEN AND MEN IN TODAY'S WORLD



Source: United Nations Statistics Division, Department of Economic and Social Affairs. *The World's Women 2020 Trends and Statistics*. <https://worlds-women-2020-data-undesa.hub.arcgis.com/>. * Gaston et al. (2019). Child marriage among boys: a global overview of available data. *Vulnerable Children and Youth Studies*, 14(3), 219-228.

This is not the reality that many adolescent girls and women experience. As this report will reveal, the threats of undernutrition (short height and underweight), micronutrient deficiencies and anaemia are affecting millions of adolescent girls and women across the world (see Focus 2).

Undernutrition signals that an adolescent girl or woman has been deprived of nutrients during crucial growth periods in childhood or during adulthood, leading to short height and/or underweight. These markers of undernutrition amplify gender inequalities by lowering learning potential, work productivity and wages in women.^{5, 10, 15} They also increase the risk of pregnancy complications, such as obstructed and prolonged labour, which can be life-threatening.^{9, 10, 16}

Micronutrient deficiencies – known as ‘hidden hunger’ – are deficiencies in essential vitamins and minerals. They have a range of adverse consequences for adolescent girls and women, including weakened immunity to infection, visual impairment, fatigue and lower work productivity.¹⁷ Some micronutrient deficiencies can have serious consequences during pregnancy, such as life-threatening hypertensive disorders (e.g., calcium deficiency) and severe anaemia (e.g., iron deficiency).^{18, 19}

Iron deficiency is the leading cause of anaemia, but there are other important causes, including deficiencies of vitamin A, folate or vitamin B12; diseases such as hookworm infection, HIV, malaria or tuberculosis; and inherited blood disorders. The consequences of anaemia in adolescent girls and women include fatigue, reduced work productivity and increased risk of postpartum haemorrhage and maternal mortality.^{20, 21}

Poor maternal nutrition can have debilitating and even lethal consequences for children. Maternal undernutrition, micronutrient deficiencies and anaemia increase the risk of stillbirths and of newborn death within the first 28 days of birth.^{9, 10, 20–22} They also increase the risk of preterm delivery, impair foetal growth and contribute to low birthweight – an outcome affecting 20 million infants every year.²³ Infants born with low birthweight are more likely to suffer poor growth and cognitive deficits in childhood, which lower productivity and income in adulthood.^{5, 24, 25} They are also at greater risk of diet-related non-communicable diseases in later life, such as heart disease and diabetes.²⁶ Daughters of undernourished mothers are more likely to become undernourished mothers themselves, rotating the cycle of malnutrition to the next generation of children.²⁷

Some micronutrient deficiencies harm foetal brain development (e.g., iodine deficiency) or cause congenital birth defects (e.g., folate deficiency) that severely limit lifelong opportunities.^{17–19} Nearly 19 million infants are at risk of permanent brain damage and reduced cognition every year because their pregnant mothers do not have access to iodized salt to protect against iodine deficiency.²⁸ Due to folate deficiency during the early weeks of pregnancy, more than 250,000 infants are born with neural tube defects every year, many of which are fatal or cause permanent learning disabilities and paralysis.²⁹

FOCUS 2

MULTIPLE FORMS OF UNDERNUTRITION IN ADOLESCENT GIRLS AND WOMEN

Underweight refers to a woman who is too thin for her height. It is defined using body mass index, which is adjusted for age and sex in adolescent girls. Adolescent girls and women become underweight when they lose weight (or fail to gain sufficient weight) due to inadequate dietary intake or disease.

Short height refers to a woman who is too short and is defined with height cut-offs ranging from less than 145 cm to less than 155 cm. Short height results from poor nutrition in utero and poor nutrient intake and/or disease in childhood and adolescence.

Micronutrient deficiencies, also known as hidden hunger, occur when an adolescent girl or woman lacks adequate quantities of essential micronutrients (vitamins and minerals) for vital body functions.

Anaemia is a condition in which the number of red blood cells or haemoglobin concentration within these cells is too low for healthy living. It has several causes, including inadequate dietary intake of iron and other micronutrients, infections and haemoglobin disorders.

When is good nutrition most important for adolescent girls and women?

Adolescent girls and women have the right to food and nutrition throughout their lives, a right that is enshrined in multiple international human rights instruments³⁰ (see *Focus 3*) and is at the core of the UNICEF Nutrition Strategy 2020–2030.³¹ Poor nutrition harms all adolescent girls and women of reproductive age, regardless of their age or physiological status. However, there are periods in life when the risks to their health and well-being, and that of their children, are particularly high.

Undernutrition, micronutrient deficiencies and anaemia carry the highest risk of adverse consequences for a pregnant mother and her unborn child, including life-threatening complications and irreversible damage to foetal growth and development.

Pregnancy presents significant risks for adolescent girls because their own growth and development have not yet finished, meaning their bodies are forced to compete with the growing foetus for nutrients.³² Pregnant adolescent girls are also at higher risk of life-threatening pregnancy complications than women, including obstructed labour, hypertensive disorders and haemorrhage,³³ which are all associated with poor nutrition. In addition, infants of adolescent mothers are more likely to be born prematurely, have a low birthweight and become stunted (short for age) in childhood. They are also less likely to complete secondary education.^{10, 34}

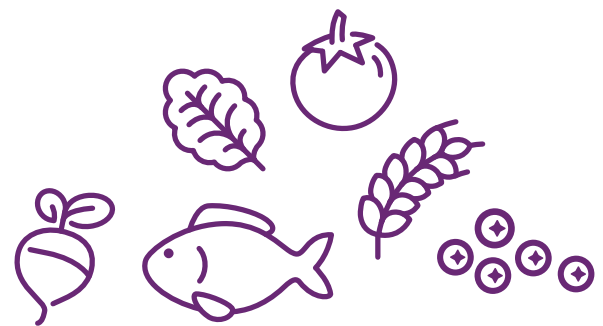
Adolescent girls and women stand a better chance of having a healthy pregnancy and newborn if they are well-nourished before they become pregnant. There is not always enough time to correct poor nutrition during pregnancy, especially if an adolescent girl or woman is undernourished before she becomes pregnant and receives antenatal care too late in pregnancy or too infrequently.³⁵ Furthermore, some micronutrient deficiencies, including folate deficiency, can have severe consequences on foetal development very early in pregnancy, before an adolescent girl or woman seeks antenatal care or even realizes she is pregnant.

Good nutrition is also vital during the postpartum period. Mothers need diverse, nutritious diets and nutrient supplements to replenish body nutrient stores following pregnancy and meet the nutritional demands of breastfeeding. This is particularly important for those who are underweight, suffering from micronutrient deficiencies and/or anaemic.³⁶

What influences the nutrition of adolescent girls and women?

Nutritional status is determined by the adequacy of diets, nutrition services, and nutrition and care practices.³⁷ In countries throughout the world, adolescent girls and women struggle to access a nutritious, safe, affordable and sustainable diet. Too often, they are unable to reach or utilize quality services to prevent and treat malnutrition. And they bear the brunt of harmful norms and sociocultural practices that reinforce inequalities and constrain access to nutritious diets and essential nutrition services. These drivers are powered by a disabling environment in which political, financial, social and cultural conditions do not provide the governance, resources and norms needed to support good nutrition.

The influences on nutrition vary within and between countries and are evolving with time. During the last two decades, globalization, urbanization, conflict, climate change and economic crises have shaped the world in which we live, posing challenges and opportunities to realizing the right to food and nutrition for adolescent girls and women.



Well-nourished girls perform better in school and well-nourished women have higher earnings

Income gives women greater control over decisions that affect their nutrition and the nutrition of their children



FOCUS 3

HUMAN RIGHTS INSTRUMENTS AND ADOLESCENT GIRLS' AND WOMEN'S NUTRITION

The progressive realization of the right of all people, including adolescent girls and women, to adequate food and nutrition is enshrined in the following international human rights instruments.

Universal Declaration of Human Rights (1948): "Everyone has the right to a standard of living adequate for the health and well-being of [self and] family, including food, clothing, housing and medical care and necessary social services... Motherhood and childhood are entitled to special care and assistance..." [Article 25]

International Covenant on Economic, Social and Cultural Rights (1966): "The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for [self and] family, including adequate food, clothing and housing, and to the continuous improvement of living conditions." [Article 11]

Universal Declaration on the Eradication of Hunger and Malnutrition (1974): "Every man, woman and child has the inalienable right to be free from hunger and malnutrition in order to develop fully and maintain their physical and mental faculties." [Article 1]

Convention on the Elimination of all Forms of Discrimination Against Women (1979): "Parties shall ensure to women appropriate services in connection with pregnancy, confinement and the postnatal period, granting free services where necessary, as well as adequate nutrition during pregnancy and lactation." [Article 12]

Convention on the Rights of the Child (1989): "State Parties ... shall take appropriate measures ... to combat disease and malnutrition, including within the framework of primary health care, through ... the provision of adequate nutritious foods and clean drinking-water..." [Article 24]

Globalization and urbanization have increased access to diverse foods and health and nutrition services for those who can afford them. They have also created work opportunities that have allowed more women to enter paid employment and achieve greater financial independence.^{38,39} However, the most vulnerable adolescent girls and women are unable to benefit fully. The poorest urban girls and women lack financial access to nutritious food and health and nutrition care and live in overcrowded and unsanitary conditions. Globalization has led to a rapid rise in the sale of ultra-processed foods, which is undermining traditional and often healthier dietary practices and diminishing the quality of diets. Meanwhile, women tend to be concentrated in the lowest paid jobs, with greater job insecurity and limited access to social protection because of entrenched gender inequalities.³⁹

At the same time, the largest global food and nutrition crisis in modern history is unfolding.⁴⁰ The lingering socioeconomic consequences of the COVID-19 pandemic, combined with the ramifications of the war in Ukraine, are pushing food and fuel prices to record levels. The impacts are falling hardest on the most vulnerable girls and women – many of whom live in countries already grappling with malnutrition, conflict, instability and climate change. Adolescent girls and women struggle most to pull themselves and their families out of food and nutrition crises because they lack resources, social capital and bargaining power.^{41,42} And they are often the first to cut back on their food and self-care when their families are struggling.

What does this report aim to contribute?

Bold and progressive targets of the World Health Assembly and Sustainable Development Goals (SDGs) have been set to reduce the prevalence of anaemia in adolescents and women of reproductive age (15–49 years) by half and the prevalence of low birthweight by 30 per cent by 2030.

Yet efforts to improve the nutrition of adolescent girls and women have been greatly constrained by the lack of data and information to bring visibility to the issue, guide decisions and build accountability. There are considerable gaps in what we know about the nutrition of adolescent girls and women within today's changing world, the progress being made and, crucially, the barriers that persist.

In 2022, UNICEF set out to answer three questions to close these gaps:

1. What is the current status of undernutrition, micronutrient deficiencies and anaemia in adolescent girls and women, and have there been improvements since 2000?
2. What are the barriers that prevent adolescent girls and women from accessing nutritious diets, utilizing essential nutrition services and adopting nutrition practices that will safeguard their well-being?
3. How can we transform systems – particularly the food, health and social protection systems – to remove these barriers and better support adolescent girls and women in realizing their right to food and nutrition?

Our analysis focuses on undernutrition, micronutrient deficiencies and anaemia because these forms of malnutrition affect the most vulnerable adolescent girls and women in low- and middle-income countries, especially in the context of the ongoing global food and nutrition crisis. However, it is important to recognize that overweight and obesity also harm the health and well-being of adolescent girls and women and that these forms of malnutrition are rising in prevalence across the world.^{9,43}

Our main focus is adolescent girls and women of reproductive age (15–49 years). A full analysis of the barriers and drivers of adolescent girls' nutrition is beyond the scope of this report; however, we give attention to the specific constraints experienced by adolescent girls who become pregnant.

To answer our three questions, we used the following sources of data, information and evidence:

1. **Quantitative data on nutritional status:** Estimates of nutritional status for more than 190 countries and territories, representing more than 90 per cent of adolescent girls and women globally, were obtained from the Non-Communicable Disease Risk Factor Collaboration (NCD-RisC) (for underweight) and the World Health Organization (WHO) (for anaemia). UNICEF analysed the data to produce global and regional estimates of the prevalence and burden of underweight in adolescent girls aged 10–19 years⁴⁴ and women aged 20–49 years from 2000 to 2016, and anaemia in adolescent girls and women aged 15–49 years from 2000 to 2019. UNICEF compiled these quantitative data to publish the first-ever **global database** on women's nutrition. In addition,

UNICEF analysed available data from Demographic and Health Surveys (DHS) conducted in 39 countries between 2014 and 2020 to examine inequities in underweight, short height and anaemia by education status, residence (urban or rural) and household wealth quintile.

- 2. Quantitative data on access to diverse diets and nutrition services:** UNICEF compiled data from nationally representative surveys conducted in the last decade on the dietary diversity of adolescent girls and women in 20 countries and territories and on their access to nutrition services during antenatal care (using iron and folic acid supplementation during pregnancy as an example) in 44 countries and territories. These data were analysed to identify inequities in minimum dietary diversity and access to nutrition services by education status, residence (urban or rural) and household wealth quintile.
- 3. Global and regional reviews and monitoring data on the status of national policies and programmes on the nutrition of adolescent girls and women:** In 2021, UNICEF analysed data from four regional reviews on the status of nutrition policies and programmes related to the WHO 2016 recommendations on the nutritional care of women during antenatal care⁴⁵ in Asia and Africa. Additional information on relevant policies and programmes was extracted from NutriDash⁴⁶ (UNICEF's online platform for tracking country policies and programmes on essential nutrition interventions) and UNICEF's internal Strategic Monitoring Questions (which are used to annually track progress against the results and targets in the UNICEF Strategic Plan).
- 4. Research on the impact of food and nutrition crises on adolescent girls and women:** In 2020 and 2021, UNICEF introduced a COVID-19 monitoring system to track the situation of children and women during the COVID-19 pandemic, including the impact on access to nutrition services during antenatal care.⁴⁷ In addition, UNICEF investigated the impact of the pandemic and other humanitarian crises on the diets and nutritional status of adolescent girls and women through primary data collection and synthesis of data from other surveys and studies.^{48–50}

- 5. Review of global literature:** To complement the above sources, we conducted a literature review to synthesize information and evidence on the barriers to adequate diets, nutrition services and nutrition practices for adolescent girls and women, including on social and gender norms and practices. This included peer-reviewed articles and major publications, such as the Progress of the World's Women, the State of the World's Children, the State of Food and Nutrition Security in the World, and the Global Report on Food Crises.^{2, 38, 51, 52}

The following chapters present the findings of our synthesis of data, information and evidence from these five sources. In Chapter 2, we share eight key findings on the status, inequities and trends in the nutritional status of adolescent girls and women, and barriers to progress in improving their diets, nutrition services and practices. In Chapter 3, we further explore and discuss findings and their implications, and in Chapter 4, we conclude with a set of recommended actions to elevate the nutrition and well-being of adolescent girls and women and deliver on the 2030 Agenda for Sustainable Development.

2 | OUR FINDINGS

THE GLOBAL CRISIS OF NUTRITION IN ADOLESCENT GIRLS AND WOMEN



This chapter describes the findings of our analysis of quantitative data and qualitative evidence on the status, trends, inequities and drivers of nutrition in adolescent girls and women. We find that undernutrition and anaemia have barely fallen since 2000 and are concentrated in poorer regions and among the most disadvantaged girls and women. Inadequate diets, nutrition services and care practices – powered by harmful social and gender norms, insufficient policy protection and humanitarian and economic crises – are driving poor nutrition among adolescent girls and women in all contexts.

FINDING 1

Progress on adolescent girls' and women's nutrition is too slow and under threat

Malnutrition is exerting a heavy toll on the well-being of adolescent girls and women throughout the world. Our analysis finds that the prevalence of underweight has declined slightly since 2000 in women – but not among adolescent girls – while the prevalence of anaemia for adolescent girls and women has remained unacceptably high. The situation stands to worsen as the global food and nutrition crisis makes it even more difficult for the most vulnerable adolescent girls and women to access the nutritious diets, services and care they need.

At least two-thirds of adolescent girls and women are affected by undernutrition, anaemia and/or micronutrient deficiencies

Globally, 8 per cent of adolescent girls (49 million) and 10 per cent of women (154 million) suffer from underweight (see Figure 1), a sign that they are unable to consume sufficient food to maintain a healthy body weight.⁵³

There is a scarcity of data to determine the global prevalence of short height in women. Our analysis of available data finds that more than one-third of adolescent girls and women (35 per cent; 171 million) are shorter than 150 cm in South Asia, compared with 10 per cent (15 million) in Eastern and Southern Africa and 7 per cent (9 million) in West and Central Africa (see Spotlight 1).

Data on the prevalence of micronutrient deficiencies are also scarce. A recent study, based on data from 19 countries, estimated that more than two-thirds of non-pregnant adolescent girls and women (69 per cent; 1.2 billion) are deficient in iron, zinc and/or folate.⁵⁴ As this analysis considers only three micronutrients, it may underestimate the true extent of micronutrient deficiencies.

Globally, almost one in three adolescent girls and women (30 per cent; 571 million) are living with the debilitating effects of anaemia (see Figure 1). The most common cause of anaemia is deficiencies of essential

Underweight and anaemia in adolescent girls and women worldwide

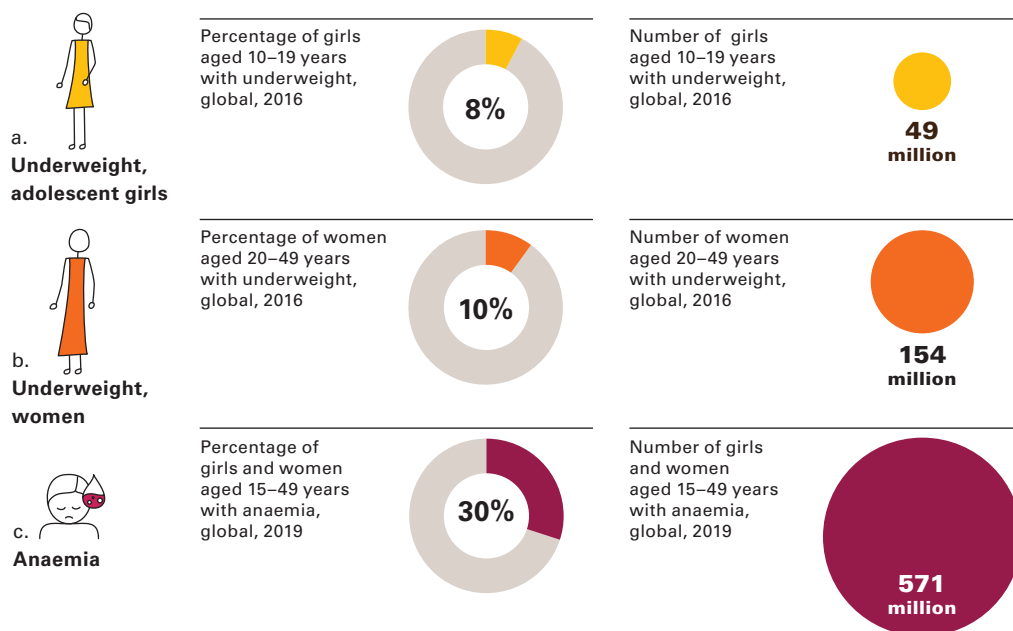


FIGURE 1: Global prevalence of (a) underweight in adolescent girls, (b) underweight in women, and (c) anaemia in adolescent girls and women, and numbers affected (in millions)

Source: UNICEF analysis of data from NCD-RisC on underweight and Global Health Observatory on anaemia

SPOTLIGHT 1

SHORT HEIGHT IN WOMEN

Short height is an indicator of intergenerational and chronic undernutrition. Unlike underweight and anaemia, there is no globally recommended indicator of short height in women; instead, it is usually defined with height cut-offs ranging between 145 cm and 155 cm.¹⁰ A height of less than 145 cm carries the highest risk of adverse outcomes at birth and in early childhood, including preterm birth, small-for-gestational age infants and child stunting; however, higher height categories are also associated with an increased risk of adverse outcomes.^{16, 55}

We assessed short height in adolescent girls and women aged 15–49 years in 37 low- and middle-income countries using data from nationally representative household surveys (Demographic and Health Surveys) conducted between 2014 and 2020.

With the available data, we were able to determine estimates for the three regions: Eastern and Southern Africa, South Asia and West and Central Africa.

The estimates of the prevalence of short height increase with the height cut-off (see Figure 2). For example, in South Asia, 11 per cent of adolescent girls and women are shorter than 145 cm, 35 per cent are shorter than 150 cm and 69 per cent are shorter than 155 cm. The estimates also vary by region: the percentage of adolescent girls and women shorter than 150 cm ranges from 7 per cent (9 million) in West and Central Africa to 10 per cent (15 million) in Eastern and Southern Africa and 35 per cent (171 million) in South Asia.

While there are insufficient data to determine estimates of short height for adolescent girls

and women in other regions, national data show that women in several countries outside South Asia and sub-Saharan Africa are considerably affected. For example, more than one in three adolescent girls and women in Timor-Leste (37 per cent) and more than one in two in Guatemala (56 per cent) are shorter than 150 cm.

The absence of a globally recommended indicator on short height in adolescent girls and women means that it is difficult to track and compare progress across countries, regions and time periods. There is a need for a standard indicator for assessing short height to ensure that countries report on this crucial indicator of undernutrition in a systematic way.

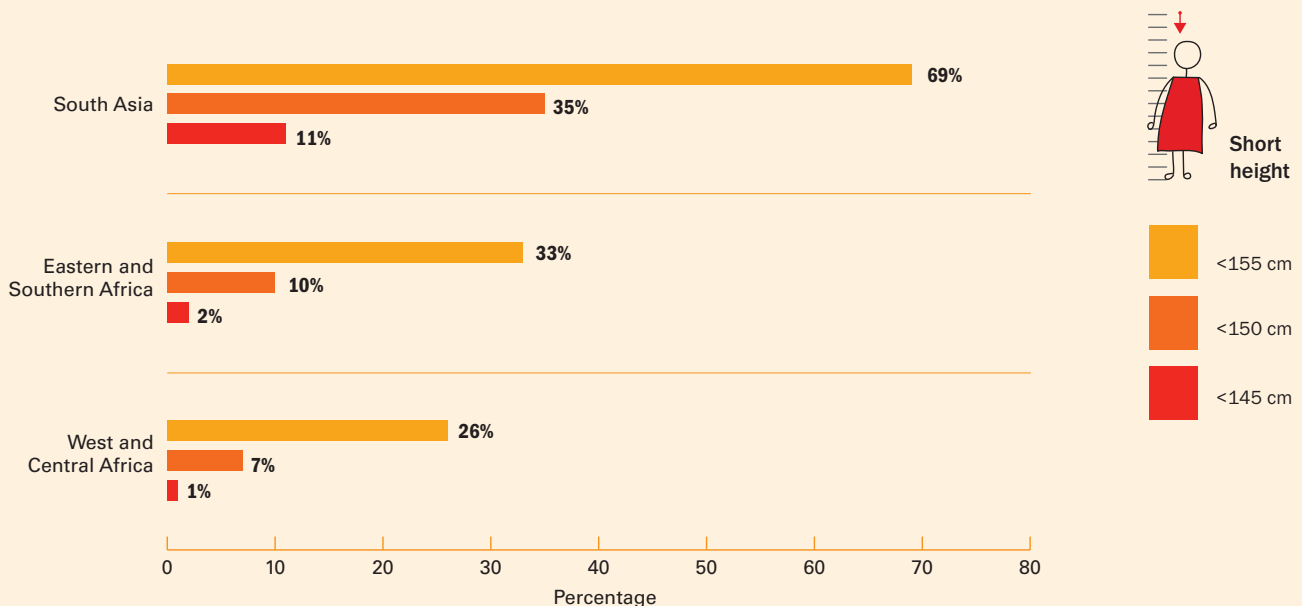


FIGURE 2: Percentage of adolescent girls and women aged 15–49 years with short height, by UNICEF region, 2020

Source: UNICEF analysis based on Demographic and Health Surveys

micronutrients (iron, folate, vitamin B12 and vitamin A); however, anaemia is also caused by infectious diseases, such as malaria, parasitic infections and HIV, and by haemoglobin disorders.

Country-level estimates can be found in the companion **data tables** available online.

Progress on undernutrition and anaemia has been limited – and may be derailed further by the global food and nutrition crisis

Globally, the prevalence of underweight in women fell slightly from 12 per cent in 2000 to 10 per cent in 2016 (see Figure 3); the prevalence declined in almost all regions, with South Asia recording the largest fall (from 27 per cent to 22 per cent). In contrast, the

global prevalence of underweight in adolescent girls did not change between 2000 and 2016 (8 per cent). Meanwhile, the global prevalence of anaemia also remained virtually the same between 2000 (31 per cent) and 2019 (30 per cent) and no region has recorded a significant reduction.

Given the current trends, it is highly unlikely that any region will achieve the 2030 World Health Assembly and SDG targets to reduce the prevalence of anaemia by half and to reduce low birthweight by 30 per cent.⁵¹

These trends pre-date the escalating global food and nutrition crisis, which threatens to unravel the progress on underweight and raise the prevalence of micronutrient deficiencies and anaemia in adolescent girls and women.

How has the nutritional status of adolescent girls and women changed since 2000?

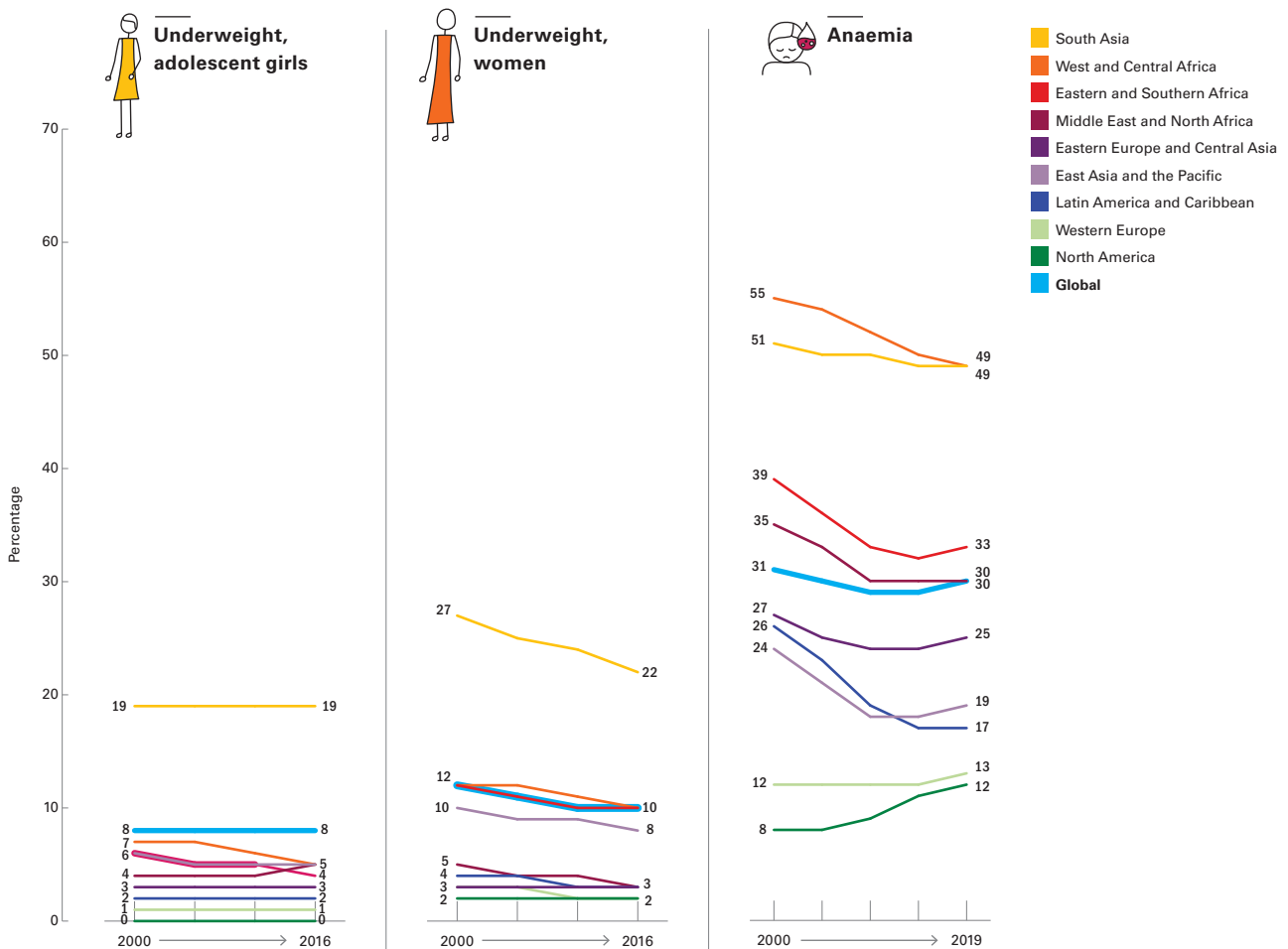


FIGURE 3: Trends in the prevalence of underweight in adolescent girls aged 10–19 years and women aged 20–49 years and anaemia in adolescent girls and women aged 15–49 years, by UNICEF region

Source: UNICEF analysis of data from NCD-RisC on underweight and Global Health Observatory on anaemia

SPOTLIGHT 2

THE NUTRITION OF ADOLESCENT GIRLS AND WOMEN IN HUMANITARIAN CRISES

The scale and complexity of humanitarian crises across the world has risen to unprecedented levels, and the world is now experiencing the largest global food and nutrition crisis in modern history. In just three years since the onset of the COVID-19 pandemic, the number of people requiring humanitarian assistance has doubled from 168 million to 339 million.^{40, 56}

Humanitarian crises are becoming more intense, disruptive and longer lasting than ever before. Many countries are grappling with multiple interacting crises: conflict, insecurity or instability; extreme weather events including prolonged drought or severe

flooding; and health epidemics, such as cholera. These local or regional crises have been aggravated by the socioeconomic consequences of the global COVID-19 pandemic and the impact of the war in Ukraine on food and fuel prices.

All crises take an immense toll on adolescent girls and women because they intensify the challenges in finding, accessing and affording nutritious foods and nutrition services and adopting and maintaining positive nutrition practices.^{52, 57}

UNICEF has been tracking the nutritional status of pregnant and breastfeeding adolescent girls and women in the most affected

countries in the Horn of Africa, central Sahel and other countries in crisis.

Most of these countries assess the number of acutely malnourished pregnant and breastfeeding women in need of treatment at least once a year, usually based on survey estimates of the percentage with low mid-upper arm circumference. We find that the estimated number of acutely malnourished pregnant and breastfeeding adolescent girls and women increased by 25 per cent between 2020 (5.5 million) and 2022 (6.9 million) (see Figure 4).



FIGURE 4: Number of acutely malnourished pregnant and breastfeeding women in 12 countries affected by the food and nutrition crisis, 2020 and 2022

Source: Integrated Food Security Phase Classification Acute Malnutrition reports; Humanitarian Needs Overview reports; Humanitarian Response Plans; Standardized Monitoring and Assessment of Relief and Transitions surveys; and nutrition and food security surveillance.

While the effects of the crisis are not yet fully understood, a study predicted that up to 3 million more pregnant women could become anaemic and up to 4.8 million more infants could be born to women with underweight by 2022 due to the impact of the COVID-19 pandemic alone.⁵⁸ These predictions do not take into account the impact of the war in Ukraine, which has pushed global food and fuel prices to record levels and deepened the food and nutrition crisis for adolescent girls, women and their families.⁵⁹ Indeed, the number of acutely malnourished pregnant and breastfeeding women increased by 25 per cent between 2020 and 2022 in 12 countries severely affected by the global food and nutrition crisis (*see Spotlight 2*). All these countries are experiencing conflict, instability and/or climate emergencies, the effects of which are being made worse by spiralling food and fuel prices.

FINDING 2

Poorer regions and disadvantaged adolescent girls and women bear the brunt of undernutrition and anaemia

Our analysis of quantitative data reveals wide inequalities in underweight and anaemia among regions, between countries within the same region, and within countries. Adolescent girls and women in three regions – Eastern and Southern Africa, South Asia and West and Central Africa – are most affected. Those belonging to poorer households, living in rural areas and with lower education status are more likely to be underweight, short and/or anaemic.

Poorer regions have a disproportionate share of adolescent girls and women with underweight and anaemia

South Asia, West and Central Africa and Eastern and Southern Africa rank in the top three regions for the highest prevalence of underweight in women (22 per cent, 10 per cent and 10 per cent, respectively) and anaemia in adolescent girls and women (49 per cent, 49 per cent and 33 per cent, respectively) (*see Figure 5*). In fact, these regions are home to two in three women with underweight globally (100 million out of 154 million) and three in five adolescent girls and women with anaemia globally (343 million out of 571 million).

We found wide variations in the prevalence of anaemia among countries within the same region, including in regions with a relatively low prevalence. For example, less than 20 per cent of adolescent girls and women in Latin America and the Caribbean suffer from anaemia, yet at least one in four are affected in three countries within the region – Dominican Republic (26 per cent), Guyana (32 per cent) and Haiti (48 per cent).

The prevalence of micronutrient deficiencies (iron, zinc and/or folate) is highest in South Asia (72 per cent, 307 million) and sub-Saharan Africa (80 per cent, 161 million); however, one in two adolescent girls and women in high-income countries are also affected (48 per cent, 126 million).⁵⁴

Undernutrition and anaemia are more prevalent among disadvantaged adolescent girls and women

We analysed data from national Demographic and Health Surveys in 39 low- and middle-income countries to examine inequities in the nutritional status of adolescent girls and women.

First, we examined how the percentage of adolescent girls and women affected by underweight, short height (<150 cm) and anaemia varies among subnational areas within each country (*see Figure 6*). The gap between the best and worst performing areas of a country ranges considerably from 1 percentage point in Egypt to 38 percentage points in Chad for underweight; from 2 percentage points in Malawi to 33 percentage points in Guatemala for low height; and from 3 percentage points in Rwanda to 67 percentage points in India for anaemia.

Second, we assessed how the percentage of adolescent girls and women affected by underweight, short height and anaemia varies by indicators of socioeconomic status (household wealth and women's education level) and rural or urban residence (*see Figure 7*).

The inequities in underweight, short height and anaemia are greatest for household wealth. For example, the prevalence of underweight among adolescent girls and women belonging to the poorest households (14 per cent) is double the prevalence in the wealthiest households (7 per cent).

Inequities by education status are greatest for short height (17 per cent among adolescent girls and women with no education or primary education versus 12 per cent among those with secondary or higher education). There was a small difference in the prevalence of anaemia between those with lower and higher education status (41 per cent versus 38 per cent), but virtually no difference in underweight (10 per cent versus 9 per cent).

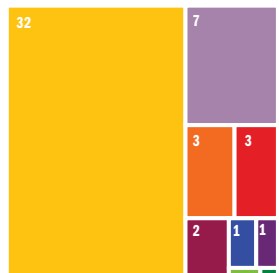
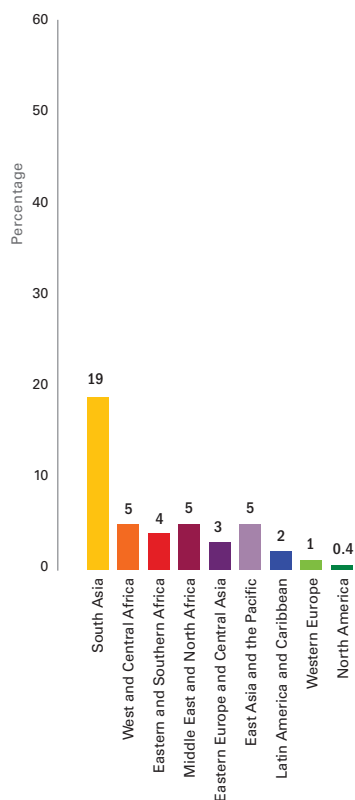
Compared with women living in urban areas, women in rural areas have a higher prevalence of underweight (8 per cent versus 11 per cent), short height (13 per cent versus 15 per cent) and anaemia (38 per cent versus 41 per cent).

Adolescent girls' and women's nutrition is poor across all regions – but some regions are more affected than others



Underweight, adolescent girls

Percentage of girls aged 10–19 years with underweight, by region, 2016

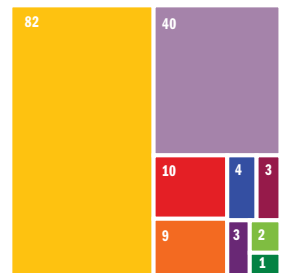
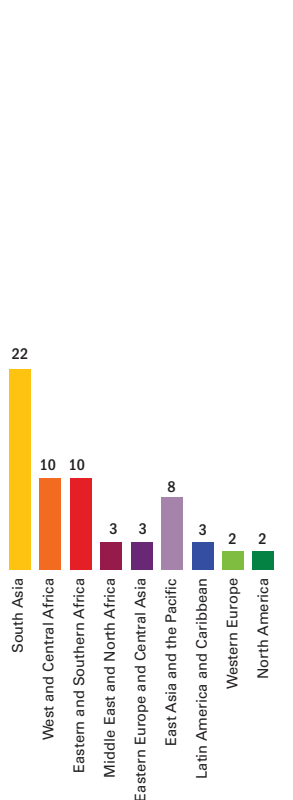


Numbers affected (in millions) by underweight in girls aged 10–19 years, by region



Underweight, women

Percentage of women aged 20–49 years with underweight, by region, 2016

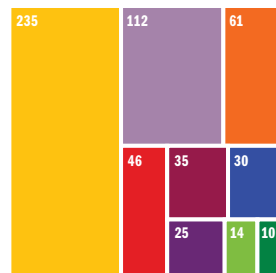
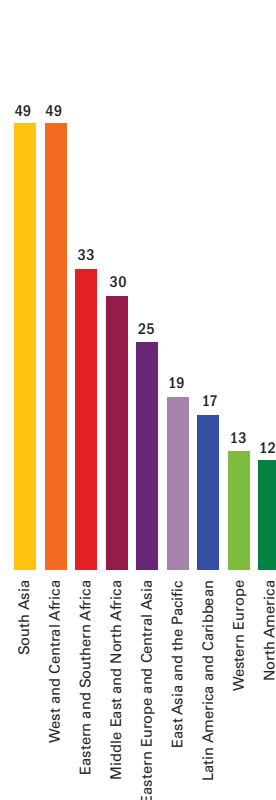


Numbers affected (in millions) by underweight in women aged 20–49 years, by region



Anaemia

Percentage of girls and women aged 15–49 years with anaemia, by region, 2019



Numbers affected (in millions) by anaemia in girls and women aged 15–49 years, by region

FIGURE 5: Prevalence of underweight in adolescent girls aged 10–19 years and women aged 20–49 years and anaemia in adolescent girls and women aged 15–49 years and numbers affected (in millions), by UNICEF region

Source: UNICEF analysis of data from NCD-RisC on underweight and Global Health Observatory on anaemia

National averages mask variations in the nutrition of adolescent girls and women within countries

● Sub-region with highest value
 ■ Sub-region with lowest value

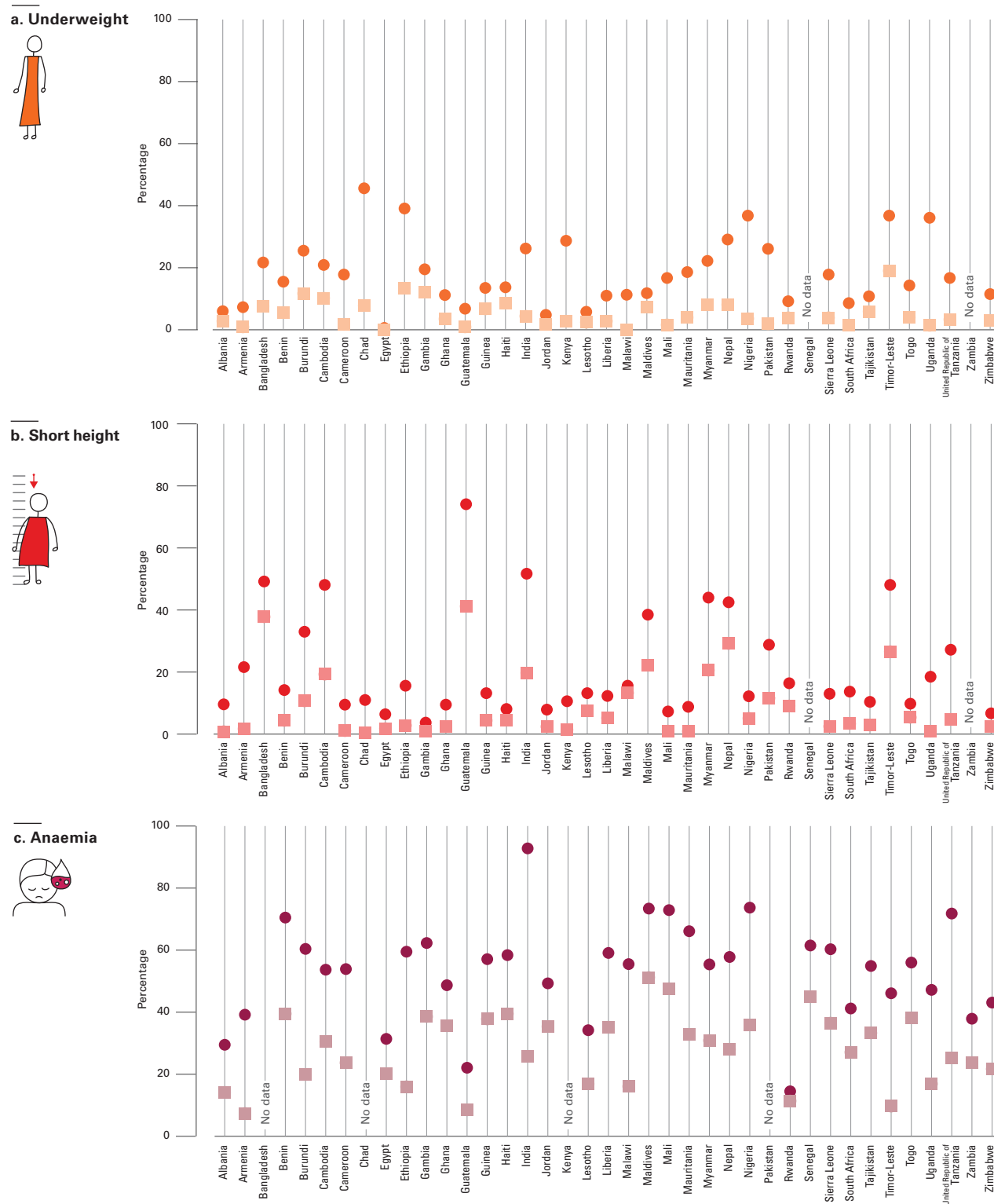


FIGURE 6: Percentage of adolescent girls and women aged 15-49 years with (a) underweight, (b) short height (<150 cm), and (c) anaemia, by subnational region of a country, 2020

Source: UNICEF analysis based on Demographic and Health Surveys

Inequities in adolescent girls' and women's nutrition persist



Residence

- Rural
- Urban



Educational status

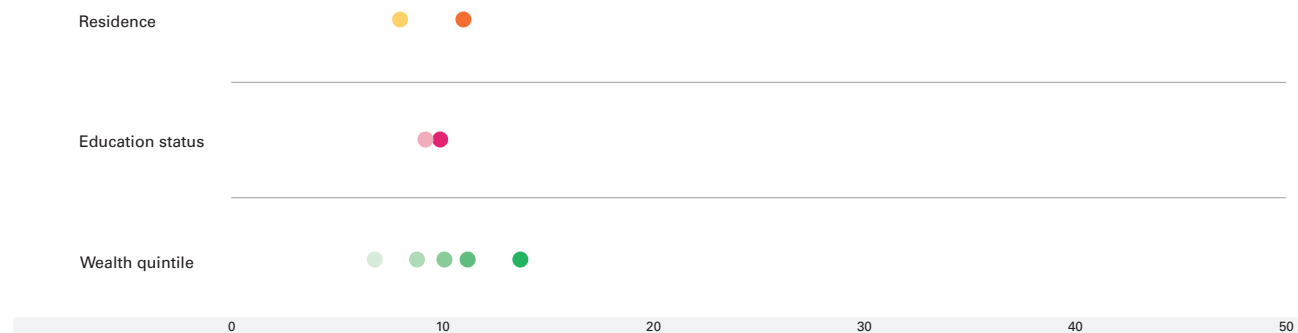
- None or primary
- Secondary or higher



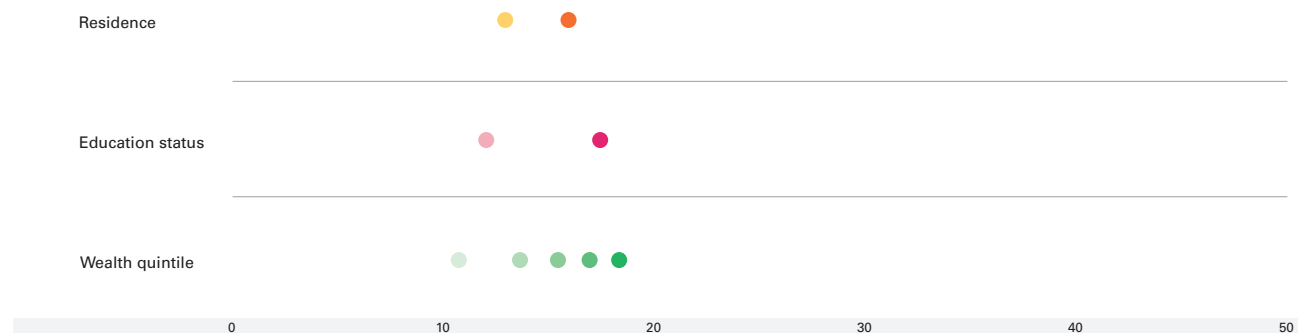
Wealth quintile

- Q1 (poorest)
- Q2
- Q3
- Q4
- Q5 (richest)

a. Underweight



b. Short height



c. Anaemia

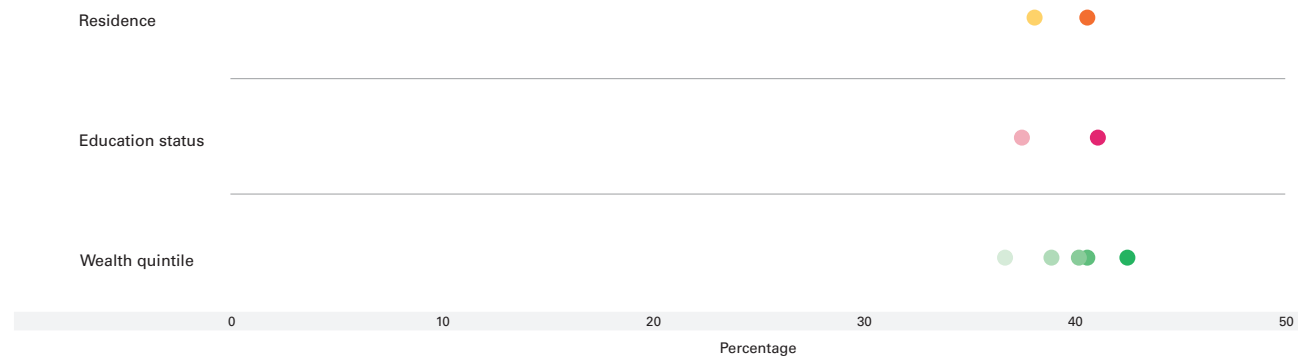


FIGURE 7: Percentage of adolescent girls and women aged 15-49 years with (a) underweight, (b) short height (<150 cm), and (c) anaemia, by place of residence, adolescent girls' and women's educational status and household wealth quintile, 2020

Source: UNICEF analysis based on Demographic and Health Surveys

FINDING 3
Poor nutrition is passed down through generations

Undernutrition and micronutrient deficiencies cause immense suffering and poor health for adolescent girls and women. If they become pregnant, there may also be harmful consequences for their children. We synthesize the evidence that links poor nutrition in adolescent girls and women to poor nutrition in their children, including the geographical co-location of undernutrition, research on the predictors of child stunting and wasting, and the timing of growth faltering in young children.

Maternal underweight, low birthweight and child undernutrition are concentrated in the same regions

The regions of Eastern and Southern Africa, South Asia and West and Central Africa have a higher prevalence of

underweight in women (≥ 10 per cent), low birthweight (> 10 per cent) and child stunting (> 30 per cent) than all other regions (see Figure 8). In fact, these three regions are home to 65 per cent of all women with underweight, 73 per cent of all low birthweight infants and 74 per cent of all children suffering from stunting.^{23, 60} Conversely, Eastern Europe and Central Asia, North America and Western Europe all have a low prevalence of underweight in women (≤ 3 per cent), low birthweight (< 10 per cent) and child stunting (< 10 per cent). The congruence in the regional prevalence of underweight, low birthweight and child stunting suggests that these conditions are linked.

South Asia stands out among all regions because of the very high prevalence of underweight in adolescent girls (19 per cent) and women (22 per cent) and short height in adolescent girls and women (35 per cent with a height < 150 cm), as well as low birthweight (27 per cent).²³ Our research reveals that poor maternal

FIGURE 8a: Prevalence of underweight in women aged 20–49 years and low birthweight, by UNICEF region

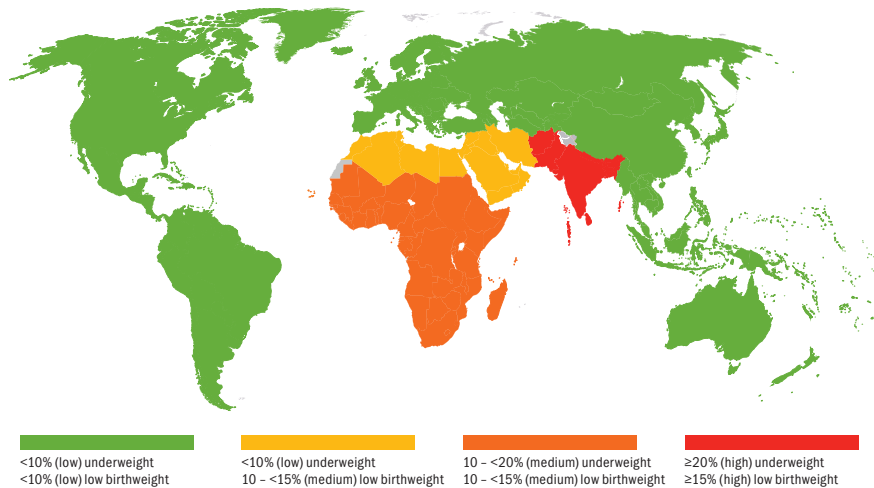
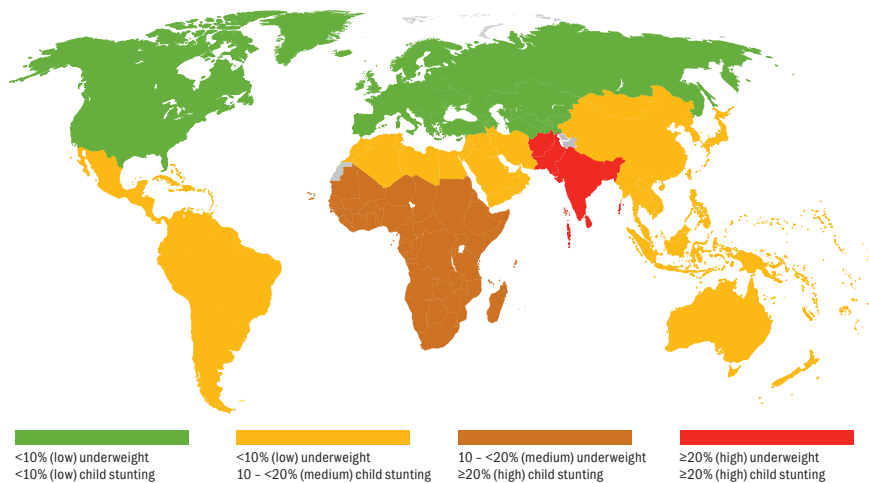


FIGURE 8b: Prevalence of underweight in women aged 20–49 years and stunting in children aged 0–59 months, by UNICEF region



Source: UNICEF analysis of data from NCD-RisC on underweight; United Nations Children’s Fund (UNICEF), World Health Organization. UNICEF-WHO Low birthweight estimates: Levels and trends 2000–2015; United Nations Children’s Fund (UNICEF), World Health Organization, International Bank for Reconstruction and Development/ The World Bank. Levels and trends in child malnutrition: key findings of the 2021 edition of the joint child malnutrition estimates. Note: The map shows only regional prevalence of underweight in women, low birthweight and child stunting and not country level prevalence. For further details see the Annex.

nutrition explains why the prevalence of child stunting and wasting is so high in South Asia, despite relatively good performance on economic growth and other indicators of child well-being (see *Spotlight 3*). Maternal underweight and short height increase the risk of low birthweight and are strong predictors of child stunting and wasting in South Asia^{61, 62} and elsewhere.^{9, 10, 24, 55, 63, 64}

About half of the global burden of stunting in early childhood originates during the 500 days between conception and 6 months of age

Globally, 51 million children under 2 years are stunted.⁶⁵ Recent research has shed light on the timing of growth faltering in these young children.⁶⁶ Reanalysis of longitudinal growth data from Africa and South Asia, the regions with the highest prevalence and burden of child stunting, reveal that one in four children (26 per cent) who experienced stunting by 2 years of age were stunted at birth or within the first week of birth and one in three

(34 per cent) became stunted between 8 days and six months of age (see *Figure 9*).⁶⁷

This evidence is crucial because it demonstrates that growth faltering during the 500 days between conception and 6 months of age contributes to about half of the total burden of stunting in early childhood. Infants are dependent on their mothers for nutrition during this period, which spans the duration of pregnancy and the recommended six months of exclusive breastfeeding.

Stunting at birth or within the first 8 days of birth accounts for a higher percentage of children who became stunted by 2 years of age in South Asia (31 per cent) than Africa (15 per cent), reflecting the relative contribution of prenatal and postnatal determinants of stunting in the two regions.

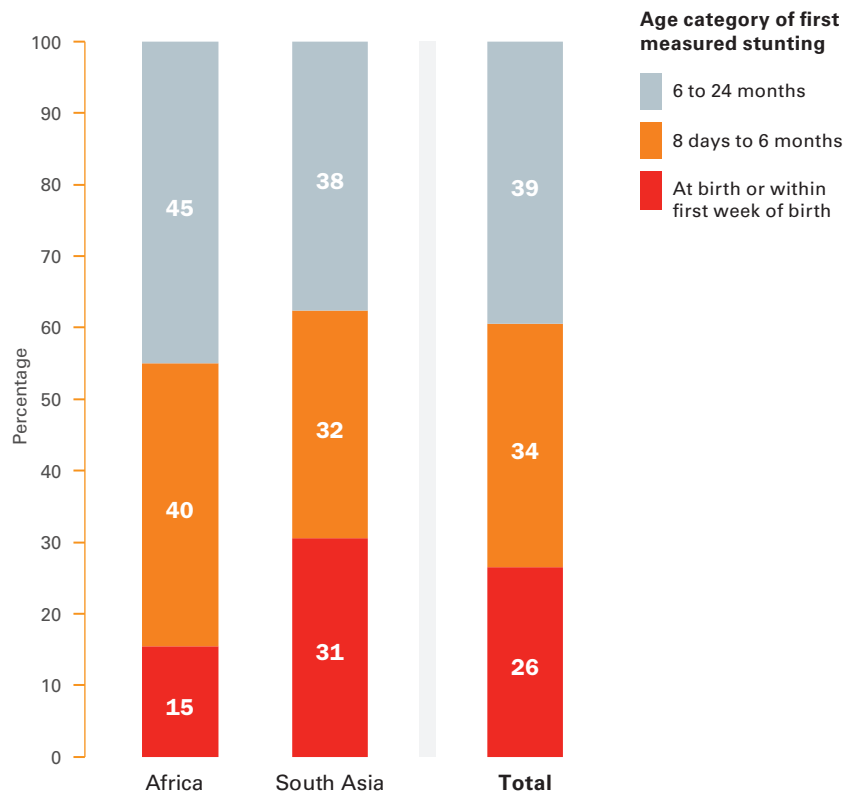


FIGURE 9: Age of stunting onset among children stunted before 2 years of age
 Source: Reanalysis of estimates in: Benjamin-Chung et al. (2020). Early childhood linear growth failure in low- and middle-income countries. medRxiv; published online 11 June 2020 (preprint). <https://doi.org/10.1101/2020.06.09.20127001>

SPOTLIGHT 3

SOLVING THE ENIGMA OF CHILD UNDERNUTRITION IN SOUTH ASIA

The South Asia region has been a global epicentre of child stunting and child wasting for decades. While there has been remarkable success in reducing the prevalence of stunting from 49 per cent to 32 per cent since 2000, the eight countries of South Asia account for 36 per cent of the global burden of children with stunting.⁶⁰ Even more striking, the prevalence of child wasting (15 per cent) remains very high, and more than half the world's children with wasting live in the region. In comparison, sub-Saharan Africa has a similar prevalence of stunting (32 per cent) but a much lower prevalence of child wasting (6 per cent).

These numbers are puzzling because in other respects South Asia has been developing relatively well. Prior to the onset of the COVID-19 pandemic, economic growth was comparatively strong, and all countries, with the exception of Afghanistan, are classified as middle-income. The region is affected by humanitarian crises but has not faced the extreme levels of food insecurity seen in some parts of sub-Saharan Africa; in fact, the great majority of undernourished children in South Asia live in non-humanitarian settings. Furthermore, the region has consistently outperformed sub-Saharan Africa on many indicators of child well-being: under-five survival, immunization, treatment of childhood illnesses, water, sanitation and hygiene, and education.⁶⁸ Why, then, is child undernutrition so pervasive?

The answer to this “South Asian enigma” is rooted in gender inequality. Many adolescent girls and women in South Asia face much greater difficulties than their peers in sub-Saharan Africa in accessing the nutritious diets and nutrition care they need to grow to their potential in childhood and to meet their nutritional needs in adulthood, largely because of discriminatory social and gender norms that deny them the power to take decisions and access resources to meet their nutritional needs. As a result, compared to sub-Saharan Africa, adolescent girls and women in South Asia have a much higher prevalence of underweight (10 per cent versus 22 per cent), short height (<150 cm) (9 per cent versus 35 per cent) and their infants are more likely to be born with low birthweight (14 per cent versus 27 per cent).²³

Gender inequality undermines the nutritional status of both mothers and their children. Our research in South Asia examined the links between the nutritional status and empowerment (child marriage and maternal education) of adolescent girls and women aged 15–49 years and the nutritional status of their children in early childhood.

First, we examined the determinants of stunting in children aged 6–23 months in four South Asian countries that account for more than 95 per cent of the region's population (Bangladesh, India, Nepal and Pakistan). We found that four maternal factors are significantly associated with child stunting: maternal short height, underweight, child marriage and lack of education (see *Figure 10*).⁶¹

Second, we examined determinants of wasting in children aged 0–59 months using pooled national survey data from six South Asian countries (Afghanistan, Bangladesh, India, Maldives, Nepal and Pakistan). Children who are reported to have had a low birthweight – a marker of poor maternal nutritional status – are significantly more likely to be wasted and severely wasted than other children.⁶² In addition, low birthweight is a predictor of being simultaneously wasted and stunted.

Third, in both Bangladesh and Pakistan, we found that maternal anaemia is a determinant of anaemia in children (aged 6–59 months).⁶⁹

The consistency in findings across forms of undernutrition and countries in South Asia provides powerful evidence of a relationship between maternal and child nutrition.

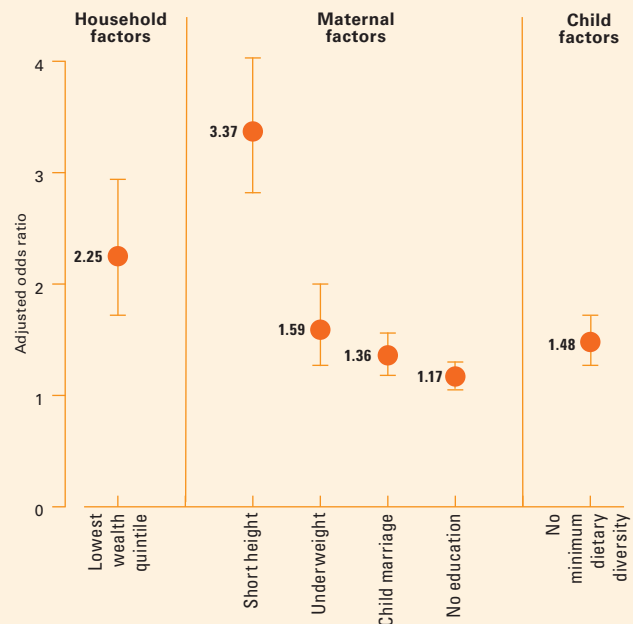


FIGURE 10: Significant determinants of stunting in children aged 6–23 months in Bangladesh, India, Pakistan and Nepal. Figure shows adjusted odds ratios and 95 per cent confidence intervals of risk factors.

Source: Kim, R. et al. (2017). Relative importance of 13 correlates of child stunting in South Asia: Insights from nationally representative data from Afghanistan, Bangladesh, India, Nepal, and Pakistan. *Social Science & Medicine*, 187, 144–154.

FINDING 4

The global food crisis is deepening for adolescent girls and women

Adolescent girls and women play vital roles in producing, processing, purchasing and preparing food for consumption in low- and middle-income countries. But our research, the global literature, and evidence from the voices of adolescent girls and women show that they continue to experience inequalities in securing the nutritious foods they need for themselves and their families, especially when confronted with conflict, climatic shocks and economic crises.

Gender gaps in food insecurity persist

Throughout the world, adolescent girls and women play a leading role in sourcing food for their communities and families. The migration of men from rural areas for work has increased the farming responsibilities of adolescent girls and women in lower income countries – the so-called “feminization of agriculture”.⁷⁰ With increased participation in the informal and formal workforce, many

adolescent girls and women are also crucial players in food processing and retail.⁷¹ In addition, they remain primarily responsible for preparing household meals.

Yet, adolescent girls and women face obstacles to accessing a nutritious diet. We asked mothers of young children in 18 low-, middle- and high-income countries about these challenges. The cost of nutritious foods was the most common limiting factor (79 per cent of mothers), followed by pressures on their time (62 per cent) and difficulties in finding nutritious foods (30 per cent).⁷²

A new tool, the Food Insecurity Experience Scale, has made it possible to examine whether women and men experience food insecurity equally.^{73,74} Data collected on the Food Insecurity Experience Scale in more than 140 countries show that the prevalence of moderate and severe food insecurity was higher in women than in men in every region from 2015 to 2021 (see Figure 11).⁷⁵ This indicates that women face greater difficulties than men in accessing nutritious food for an active and healthy life.

The gender gap in food insecurity

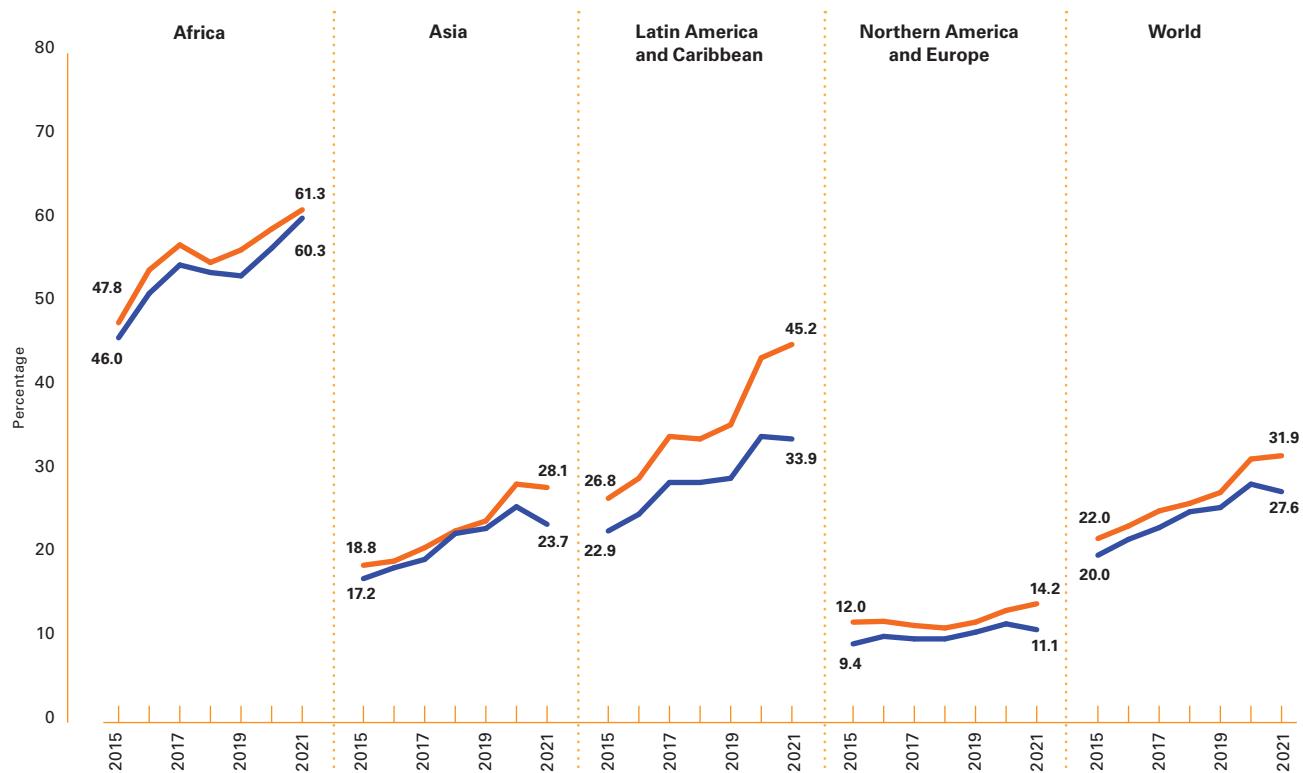
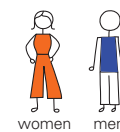


FIGURE 11: Prevalence of moderate or severe food insecurity in women and men

Source: Food and Agriculture Organization, International Fund for Agricultural Development, United Nations Children’s Fund, et al. (2022). The State of Food Security and Nutrition in the World 2022: Repurposing Food and Agricultural Policies to Make Healthy Diets More Affordable. FAO, Rome

A recent study found that differences in educational attainment, employment status, household income and social networks between women and men explain most of the gender gap in food insecurity.⁷⁶ While the global gender gap in education is closing,¹ nearly 2.4 billion women of working age live in countries where they do not enjoy the same social and economic rights as men (see Finding 8).⁷⁷ As a result, women earn 23 per cent less than men globally,⁷⁸ and this impacts their ability to afford nutritious diets.

In South Asia, there are gender gaps in food insecurity among the unemployed and poor, which suggest that other factors besides income make access to food more difficult for women.^{51, 76} As we explore further in Finding 6, discriminatory norms may explain these gaps, including gender inequalities in how nutritious food is allocated between male and female members of households.

Conflict, climate change and economic shocks are intensifying the food crisis for adolescent girls and women

Adolescent girls and women are disproportionately affected by conflict, climatic-related disasters and economic shocks.^{75, 79} They have fewer options than boys and men for coping with threats to food security because of the constraints they face in accessing resources, and their lower social capital, greater domestic and child-caring burdens and weaker bargaining power.^{75, 79}

Women across the world have been particularly hard hit by the impact of the COVID-19 pandemic on livelihoods and access to nutritious food.^{52, 75, 80–82} As schools and childcare facilities closed, women took on considerably greater child-care burdens, impacting their ability to work.^{75, 82–85} They also tend to be more engaged in economic sectors that were affected by job and income

losses, such as retail and hospitality.^{39, 52, 82} This explains why the gender gap in the percentage of men and women experiencing food insecurity widened between 2019 and 2021 (see Figure 11). In fact, 126 million more women than men experienced food insecurity in 2021, compared with 49 million more women than men in 2019.⁸⁶

UNICEF investigated how the COVID-19 pandemic affected the food security and diets of women in countries around the world (see Spotlight 4). In Eastern and Southern Africa, where up to four in five pregnant and breastfeeding women reported food insecurity following the onset of the pandemic, more than two-thirds reduced their consumption of foods from at least one food group.⁴⁸ Women in Indonesia also reported a degradation in their diets as households reduced purchases of nutritious foods to cope with falling income.⁴⁹

Climate change is a growing threat to food insecurity⁸⁷ and has disproportionate impacts on women.^{88, 89} In 2022, extreme weather events, such as the prolonged drought in the Horn of Africa and central Sahel, and severe floods in Nigeria and Pakistan, have increased the risk of food insecurity by causing crop failure, killing livestock and ruining livelihoods.

And now the war in Ukraine has further intensified the challenges to food security by pushing the prices of food, fuel and farming supplies to record levels.^{52, 75} By the end of 2022, the number of people facing acute food insecurity exceeded 222 million people – higher than ever before.⁹⁰ The impacts are being felt on a global scale, and more so by the most vulnerable adolescent girls and women living in countries already marred by conflict, instability and/or climate change.^{41, 42, 59}



SPOTLIGHT 4

IMPACT OF THE COVID-19 PANDEMIC ON WOMEN’S FOOD SECURITY AND DIETS

Across the world, the COVID-19 pandemic has amplified pre-existing inequalities between men and women.⁹¹ Measures to contain the virus have had gender-differentiated impacts on all dimensions of food and nutrition security through reduced food production and distribution capacities, decreased incomes and diminished physical and financial access to nutritious food.⁹²

In **Eastern and Southern Africa**, UNICEF’s research showed that the diets of pregnant and breastfeeding women deteriorated under the shadow of COVID-19.⁴⁸ Half of pregnant and breastfeeding women in Botswana and more than two-thirds in Eswatini, Kenya, Lesotho, Malawi and Uganda reported moderate or severe food insecurity in 2021 (see Figure 12).

At least two-thirds of women in Botswana and Malawi and over 90 per cent of women in Eswatini, Kenya, Lesotho and Uganda reduced their consumption of at least one food group since the start of the pandemic.

In **Indonesia**, a survey conducted by UNICEF and partners in urban slums in Jakarta found that 81 per cent of urban poor households experienced a fall in income after the onset of COVID-19 containment measures and 66 per cent were worried about not having enough to eat.⁴⁹ Financial difficulties forced many urban poor households to reduce, stop or replace their purchases of nutritious foods (see Figure 13). Alongside the changes in food purchases, 48 per cent of women reduced their consumption of fish, poultry and/or meat; 22 per cent reduced their consumption of dairy; 18 per cent reduced their

consumption of eggs; and 11 per cent reduced their consumption of beans, pulses and/or tofu.

In **Myanmar**, the combined shocks of the COVID-19 pandemic (from 2020) and political unrest (from early 2021) severely impacted food security in poor urban communities in Yangon. Surveys conducted by UNICEF and partners found that the percentage of women whose diets met the minimum dietary diversity declined from 62 per cent in 2018 (pre-COVID) to 34 per cent in 2021, as urban poor communities struggled to meet their dietary needs.⁵⁰ A high percentage of women reported that they reduced their consumption of nutritious foods, including meat (46 per cent), fish and seafood (42 per cent), poultry (41 per cent), eggs (39 per cent) and legumes (26 per cent).

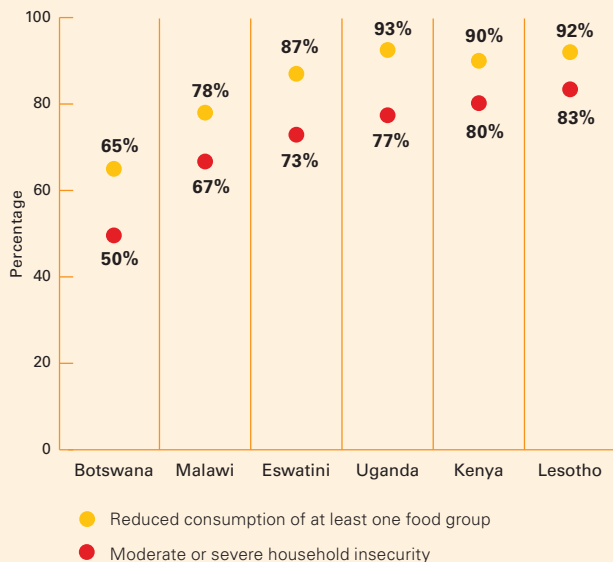


FIGURE 12: Percentage of pregnant and breastfeeding women reporting moderate or severe food insecurity and a reduction in consumption of at least one food group in six countries in Eastern and Southern Africa, 2021

Source: UNICEF (2022). *Impacts of the COVID-19 Pandemic on Diets, Practices and Nutrition Services in UNICEF’s Eastern and Southern Africa region: Evidence from Remote Surveys*. UNICEF Eastern and Southern Africa Regional Office, Nairobi.

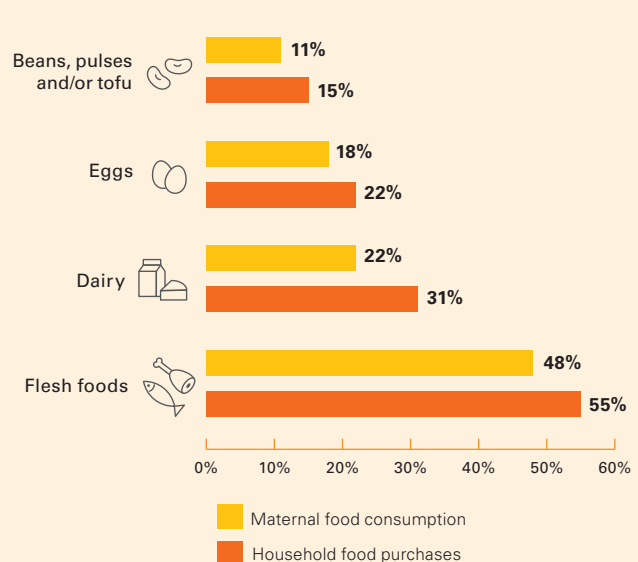


FIGURE 13: Percentage of urban poor households reporting reduced purchases of nutritious foods and percentage of urban poor women reporting reduced consumption of nutritious foods due to affordability constraints, Jakarta, 2020

Source: UNICEF et al. (2021). *Food Security and Nutrition in Urban Indonesia: Evidence From a Remote COVID-19 Survey*. UNICEF, FAO, WFP and WHO, Jakarta

FINDING 5

Adolescent girls and women struggle to access nutritious diets

Our analysis of data on dietary diversity finds that many adolescent girls and women, especially those belonging to poorer households and living in rural areas, are not consuming the variety of foods they need for adequate nutrition. As the escalating food and nutrition crisis makes it even more difficult for adolescent girls and women to find and afford nutritious and diverse foods, the widespread availability of cheap, nutrition-poor ultra-processed foods is emerging as a threat to good nutrition.

Adolescent girls and women are unable to consume the variety of foods they need

Adolescent girls and women need a variety of foods from different food groups to increase the likelihood that they consume adequate amounts of all the nutrients needed for their nutrition and well-being. Those who consume foods from at least five out of 10 recommended food groups are considered to have the minimum dietary diversity for women (MDD-W), which is a measure of the micronutrient adequacy of diets.⁹³

Household surveys have only recently started to assess MDD-W so there are insufficient data to generate regional or global estimates. However, our analysis of data from 20 national household surveys (Demographic and Health Surveys and national nutrition surveys) shows that there is considerable variation in the diversity of diets among countries (see *Figure 14*). The percentage of adolescent girls and women meeting MDD-W is extremely low in countries affected by conflict or institutional and social fragility: the Sudan (10 per cent) Burundi (12 per cent), Burkina Faso (17 per cent) and Afghanistan (26 per cent). Only three countries have an MDD-W of 70 per cent or higher: the Gambia, Mongolia and Tajikistan. Overall, less than half (47 per cent) of adolescent girls and women in the 20 countries have diets that meet the MDD-W.

Dietary diversity varies considerably by place of residence (rural or urban) and household wealth quintile (see *Figures 15 and 16*). In all seven countries with data by place of residence and household wealth quintile, the prevalence of MDD-W in adolescent girls and women is lower among those residing in rural areas than among those living in urban areas, and the prevalence in those belonging to the wealthiest households is about double the prevalence in those belonging to the poorest households.

These findings indicate that adolescent girls and women residing in poorer and rural households struggle more to find and/or afford a range of foods for a diverse diet than those in wealthier and urban households. Many non-staple foods, including fruits, vegetables and animal-source foods, are simply too expensive to eat daily, indicating that affordability may be a major barrier to diet diversity in women.^{94, 95}

Since we completed our analysis, the Global Diet Quality Project released the findings of dietary surveys conducted in 37 low- and middle-income countries in 2021. They also found a wide range in the prevalence of MDD-W across countries (36 per cent to 89 per cent); the prevalence of MDD-W was significantly higher in women belonging to urban households than rural households in nine countries, and in households that reported they had enough money for food compared with those who had insufficient money for food in 15 countries.⁹⁶

The struggle to access diverse diets is magnified for adolescent girls and women living through conflict, instability, extreme weather events and economic shocks. Our data on the impact of the COVID-19 pandemic (see *Spotlight 4*) show that when faced with adversity, mothers often turn to extreme coping strategies, such as reducing the quantity, frequency or diversity of their food intake to make more food available for other family members, especially children and men.^{79, 97}

While the impact of the escalating food and nutrition crisis on adolescent girls' and women's diets is not yet fully understood, there are already signs of worrying trends.^{41, 42} For example, the prevalence of MDD-W in the Niger, one of the countries facing severe food and nutrition crisis, fell significantly from 53 per cent in September 2020 to 37 per cent in September 2022.^{98, 99}

Ultra-processed foods and beverages are a mounting concern

Dietary diversity is a key measure of dietary quality but not the only one. There is a growing set of metrics that examine other aspects, such as adequacy in the intake of foods that promote nutrition and well-being (e.g., fruits, vegetables and whole grains), and moderation in the intake of foods and beverages that should be consumed with restraint (e.g., foods and beverages high in salt, free sugars and fat).⁹⁶

Ultra-processed foods and beverages have become a descriptor of unhealthy diets.¹⁰⁰ Produced through industrial processes (hence "ultra-processed"),

The dietary diversity of adolescent girls' and women's diets is too low, particularly in rural areas and poor households

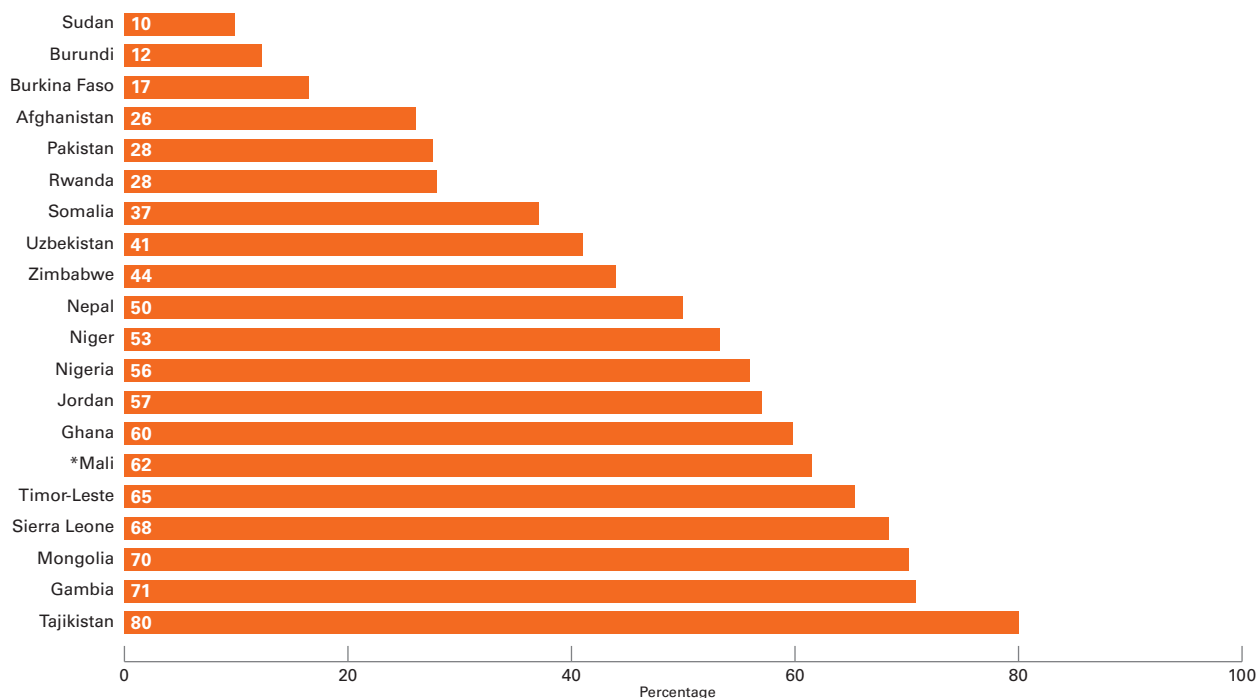


FIGURE 14: Percentage of adolescent girls and women aged 15-49 years consuming the minimum dietary diversity, by country
 Source: Demographic and Health Surveys and other national nutrition surveys. * Estimate based on adolescent girls and women aged 10-49 years.

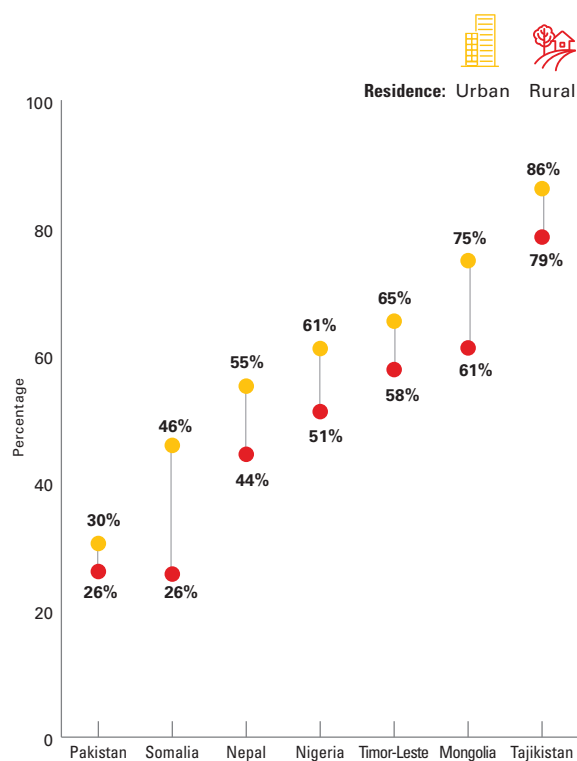


FIGURE 15: Percentage of adolescent girls and women aged 15-49 years consuming the minimum dietary diversity, by country and place of residence

Source: Demographic and Health Surveys and other national nutrition surveys.

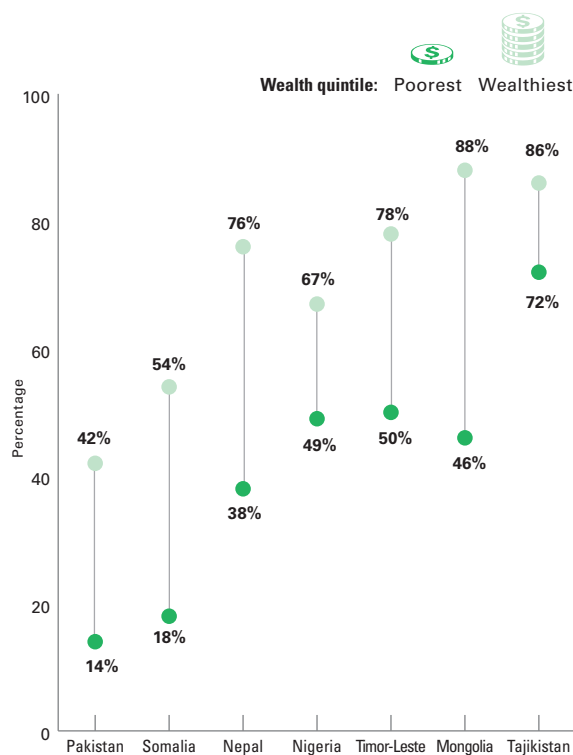


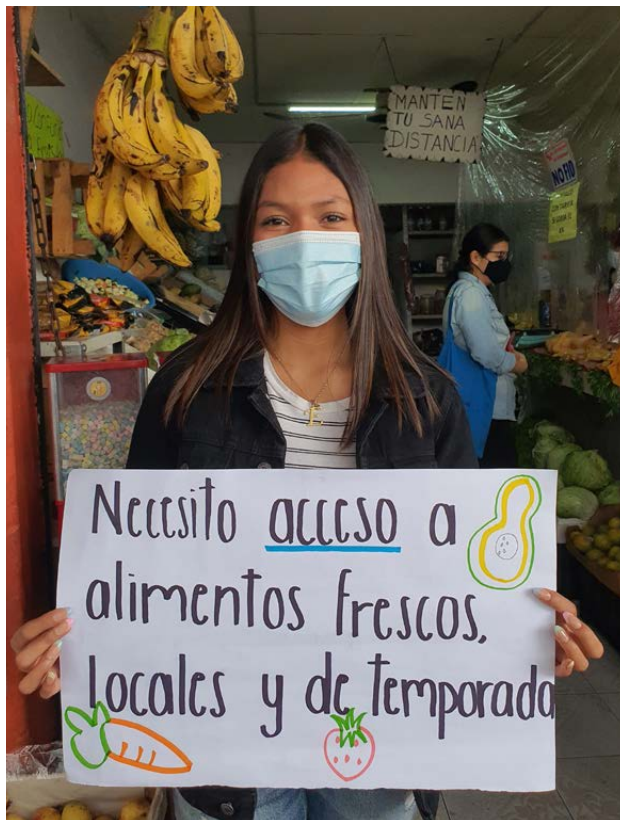
FIGURE 16: Percentage of adolescent girls and women aged 15-49 years consuming the minimum dietary diversity, by country and household wealth quintile

Source: Demographic and Health Surveys and other national nutrition surveys.

these products are typically high in salt, free sugars, and unhealthy fats. They include sweet and savoury snacks, processed meats, ready-made meals and sugar-sweetened beverages. While high consumption is a risk factor for overweight, obesity and diet-related non-communicable diseases (diabetes, heart disease and cancer),¹⁰⁰ ultra-processed products also tend to be low in essential micronutrients. High intake of these ultra-processed products is associated with low micronutrient intake, including among pregnant women.^{101–104}

Globalization, urbanization and the industrialization of food systems have led to rapidly growing sales of ultra-processed foods and beverages across the world. Sales are highest in North America and Europe but have fallen slightly in recent years and are now rising most rapidly in Africa, Asia, Latin America and the Middle East^{105–106} where micronutrient deficiencies and anaemia are already rife.

Our qualitative research with adolescents and mothers in 18 countries found that ultra-processed products are favoured, even though they are known to be unhealthy, because they are cheap, easy to find, quick to prepare and tasty.^{72, 107} As inflation and the cost of living escalate throughout the world, there are serious concerns that low-income households will be forced to rely increasingly on ultra-processed foods as a cheap source of calories that fill stomachs but do not meet the nutritional needs of adolescent girls and women.



FINDING 6

Harmful social and gender norms block progress on nutrition

Harmful social and gender norms have far-reaching consequences for the nutrition and well-being of adolescent girls and women. Our research and the global literature find that discriminatory norms reduce access to nutritious diets, essential nutrition services and positive nutrition practices, elevating the risk of undernutrition, micronutrient deficiencies and anaemia in adolescent girls and women, especially in resource-poor and crisis settings. Child marriage and adolescent pregnancy violate children's rights and have profound implications for nutrition and well-being across the life cycle.

Harmful norms and practices perpetuate inequities in access to nutritious diets and care

The dietary practices of adolescent girls and women are influenced by their knowledge about a nutritious diet and the foods they can access, both physically and financially. However, accurate knowledge and access do not always result in appropriate dietary practices if discriminatory norms and practices deny adolescent girls and women the freedom to take decisions about the foods they eat, or the time and support to prepare nutritious meals for themselves.

Our formative research in low- and middle-income countries has found that unequal power relations between adolescent girls/women and other household members, particularly men and mothers-in-law, continue to affect their autonomy to make food decisions and the quality of their diets.^{72, 107} Comparable data on the dietary diversity of women and men is lacking; however, studies in India and Pakistan have shown that adolescent girls have lower dietary diversity than boys.^{108, 109} In addition, there is clear evidence that women with lower decision-making power have less diverse diets than those with greater agency.^{110, 111} In parts of Asia and Africa, women are unable to take decisions on household food purchases, and some also live by socially accepted rules that male household members eat first and/or receive a greater share and quality of food.^{112–115} These entrenched gender inequalities in food allocation tend to be most pronounced in times of food and nutrition crisis.^{41, 42}

Imbalanced gender roles and responsibilities mean that globally, women do three times as much unpaid domestic and care work as men.² This care burden can make it challenging to prepare nutritious meals: in

our interviews with mothers in 18 low-, middle- and high-income countries, we learned that 62 per cent struggle to find time to prepare nutritious meals for themselves and their families.⁷² Some mothers sacrifice the quality of their own diets to ensure their children's dietary needs are met. As a mother living in an urban area of Indonesia told us, *"Since I am a working mother, I do not have much time and, as a consequence, I often buy food which sometimes is not healthy but is quick."*

These heavy work burdens are often compounded by discriminatory norms and policies that limit women's employment opportunities, especially in low- and middle-income countries. As a result, women tend to be concentrated in lower-paid and more insecure jobs than men, with little or no access to social insurance schemes, such as maternity benefits.^{1,39,116} Women farmers face additional hurdles: patriarchal norms and policies restrict their rights to land and productive resources, as well as social networks.^{79,117,118} This matters because studies have suggested a link between women's economic empowerment, their ability to negotiate access to food and other resources, and improved dietary diversity for themselves.¹¹⁹⁻¹²²

Harmful sociocultural practices include the deliberate restriction of food intake during pregnancy to prevent a large newborn and a difficult delivery, as well as prohibitions on eating certain nutritious foods during pregnancy to avoid perceived risks of poor pregnancy outcomes.^{112, 123-125} These practices are associated with less diverse diets in women;¹²⁶ however, there are signs that they are becoming less common, particularly in populations with better access to information and health care.^{114, 127, 128}

Adolescent girls and women who lack decision-making power may also depend on their husbands or elder female relatives to access nutrition services. But these family members may not have the necessary knowledge to take informed decisions or be willing to spend money on women's health care needs.¹²⁹

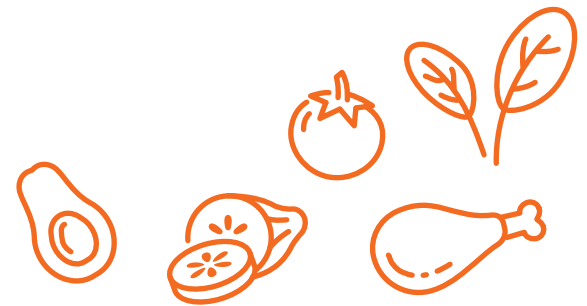
Harmful gender norms and gender inequalities that give men power over women are also associated with an increased risk of gender-based violence, including intimate partner violence. A review of evidence commissioned by UNICEF found that women who were exposed to intimate partner violence, either prior to or during pregnancy, were more likely to have infants with low birthweight.¹³⁰

Child marriage and adolescent pregnancy have profound implications for adolescent, maternal and child nutrition

Girls who marry and/or have their first child in adolescence experience some of the most damaging impacts of gender inequality and harmful gender norms on their nutrition and well-being. Child marriage and adolescent pregnancy are egregious violations of children's rights; they are outcomes of harmful gender norms and impinge on many of the conditions needed for good nutrition.^{2, 7, 32, 131}

Child marriage has declined but still affects about one in five girls globally (21 per cent), compared with 1 in 20 boys (5 per cent).¹³³ It is particularly high in South Asia (30 per cent), Eastern and Southern Africa (35 per cent), and West and Central Africa (41 per cent). Children forced into marriage tend to come from families living in poverty; and because their education and work opportunities are curtailed by marriage, they are more likely to remain in poverty. They are often isolated from family, friends and community support, lack financial independence, and have limited autonomy to influence decisions that affect their lives, including decisions to delay childbearing.

These hardships are compounded when adolescent girls become pregnant. Adolescent pregnancy is falling, but 12 million children are born each year to girls aged 15-19 years who have not completed their own growth, the majority in South Asia and sub-Saharan Africa (66 per cent).¹³⁴



Girls who marry and/or have their first child in adolescence experience some of the most damaging impacts of gender inequality and harmful gender norms on their nutrition and well-being

These births are concentrated among the poorest, least educated and least empowered girls.^{135, 136} Those who are married are often reliant on their husbands or elder household members for access to health care – especially in South Asia.^{137, 138} Meanwhile, unmarried girls experience social stigma in contexts where pregnancy outside marriage is shunned, and are discouraged from seeking antenatal care by the disrespectful attitudes of health care providers.^{32, 139}

Our recent research in West and Central Africa highlights the consequences of child marriage and adolescent pregnancy on adolescent girls and their children (*see Spotlight 5*). Pregnancy can harm the nutritional status of adolescent girls by curtailing their linear growth and increasing the risks of underweight and anaemia during a crucial time in their development.^{140–142} The biological risks of adolescent pregnancy are superimposed on layers of social and

financial disadvantage that adolescent girls experience in accessing nutritious diets and nutrition services to meet their elevated nutrition needs. These effects can have lasting impacts on their children: infants of adolescent mothers are more likely to be born prematurely and with low birthweight than adult mothers, setting them on a trajectory of poor growth and development.^{34, 143–145}

The risk of child marriage increases when adolescent girls and families experience financial hardship. UNICEF estimates that over the next decade, up to 10 million more adolescent girls are at risk of becoming child brides as a result of the COVID-19 pandemic alone.¹⁴⁶ This estimate does not include the potential impact of the mounting global food and nutrition crisis, which threatens to push millions more families into financial difficulty and increase the risk of child marriage as a survival strategy in desperate times.

SPOTLIGHT 5

CONSEQUENCES OF CHILD MARRIAGE AND MATERNITY HIT THE YOUNGEST ADOLESCENT GIRLS THE HARDEST IN WEST AND CENTRAL AFRICA

Adolescence provides a window of nutrition opportunity for adolescent girls – a chance to make up for missed growth in early childhood, to set a course for good health and nutrition in adulthood, and to break the intergenerational cycle of malnutrition. However, in many contexts around the world, adolescent girls suffer from harmful social and gender norms that increase their vulnerability to poor nutrition.

The expectation that girls should marry in adolescence is one of the most damaging norms in some low- and middle-income countries. Adolescent childbirth often follows child marriage – more than 90 per cent of the world's births to adolescent mothers occur within a marriage or union in low- and middle-income countries.¹⁴⁷ However, child marriage may also follow adolescent pregnancy, particularly in contexts where sex outside marriage is shunned.

UNICEF commissioned a series of research papers to examine the trends and consequences of child marriage and maternity in West and Central Africa,^{148–151} the region with the highest rates of child marriage in the world. We found that both child marriage and adolescent maternity rates fell between 1986 and 2017 in all but three countries, a positive sign of changing norms.¹⁴⁸ However, rates remain high, with 25 per cent of adolescent girls married and 26 per cent of them pregnant or already a mother. Countries with a higher income level and higher standards of legal protection of young girls performed consistently better in reducing child marriage and maternity.¹⁴⁸

The consequences of early marriage and maternity hit adolescent girls and their infants hard, especially among the youngest mothers, both immediately and in the long-term. Compared with older mothers,

adolescent mothers have multiple overlapping vulnerabilities, including significantly lower access to maternal health services, lower education attainment and lower household wealth.¹⁵⁰ Infants of adolescent mothers have a significantly higher probability of low birthweight (<2.5 kg) than infants of older mothers,¹⁴⁹ increasing their risk of poor growth and development.

These vulnerabilities persist well into adulthood: women who marry or give birth in adolescence are more likely to have lower educational attainment and wealth status and more children. The effects are most pronounced for those who marry before 15 years of age.¹⁵¹ These poor socioeconomic characteristics trap adolescent girls and women in poverty and make it much harder for them to access the necessary conditions for good nutrition – including nutritious diets and nutrition services.

FINDING 7

Nutrition services and social protection programmes are failing to meet nutrition needs, especially in humanitarian crises

Adolescent girls and women throughout the world need nutrition services and support to address the barriers to nutritious diets and to fill nutrient gaps in dietary intake. The health system leads the delivery of nutrition services to meet these needs, and social protection programmes help to alleviate social and economic vulnerabilities. However, our findings show that nutrition services and social protection programmes are not reaching adolescent girls and women with adequate coverage and equity.

Nutrition services do not reach the adolescent girls and women who need them most

The health system is responsible for reaching adolescent girls and women with nutrition interventions to prevent, detect and treat malnutrition, predominantly through antenatal and postnatal care services. Nutrition interventions include nutrition screening, counselling on dietary practices and physical activity, weight gain monitoring, early detection of anaemia, micronutrient supplementation (iron, folic acid, vitamin A, calcium and multiple micronutrients) and balanced energy and protein supplementation.^{45, 152}

Daily iron and folic acid supplementation is recommended for all pregnant girls and women worldwide and is one of the longest running nutrition interventions.¹⁵³ Yet most pregnant girls and women do not consume enough of these supplements during pregnancy. Our analysis shows that only two in five pregnant girls and women (43 per cent) take iron supplements for at least 90 days, and this drops to about one in three pregnant girls and women in the poorest households (32 per cent), who are at greater risk of anaemia (see *Spotlight 6*).

Iron and folic acid supplementation during pregnancy is the only health system intervention for adolescent girls and women for which we have population-based coverage estimates. Data on the coverage of other interventions are scarce, though service provision assessment surveys conducted in Haiti, Malawi, Nepal, Senegal and the United Republic of Tanzania found that only 33 per cent to 48 per cent of pregnant girls and women receive counselling on nutrition during antenatal care.¹⁵⁴ Further, only 29 low- and middle-income countries have been able to introduce multiple micronutrient supplements for pregnant women,¹⁵⁵ despite evidence they are more effective in reducing low birthweight than iron and folic acid supplementation (see *Spotlight 7*).



Substantial bottlenecks stand in the way of reaching adolescent girls and women with nutrition interventions during pregnancy, starting with infrequent utilization of antenatal care services.^{112, 156} More than one in three (36 per cent) adolescent girls and women in low- and middle-income countries attend fewer than four antenatal visits, and therefore miss opportunities to receive essential nutrition interventions. Pregnant girls face greater difficulties than pregnant women in accessing nutrition services in sub-Saharan Africa and South Asia; they tend to seek antenatal care later in pregnancy, receive fewer antenatal and postnatal care visits and receive fewer components of antenatal care than adult pregnant women, including nutrition interventions.^{137, 157–159}

Geographic access to health facilities providing antenatal care is often problematic, especially in rural and remote communities. Community-based workers have the potential to bring services to adolescent girls and women in their communities, but too few countries have invested in community workforces: according to UNICEF data, only 32 per cent of low- and middle-income countries deliver iron and folic acid supplements to pregnant girls and women through community-based platforms.¹⁶⁰

Some bottlenecks vary according to the type of intervention. Supply bottlenecks are most common among interventions involving supplements.¹⁶¹ For example, one in five low- and middle-income countries (19 per cent) reported that they had stock-outs of iron and folic acid supplements,¹⁶⁰ meaning that some adolescent girls and women may receive inadequate supplements even if they attend all the recommended antenatal care visits. Counselling requires time and skills, and our research has found that deficits in the availability, training, supervision and motivation of the health workforce affect the coverage, quality and effectiveness of interventions to counsel adolescent girls and women on dietary intake.^{161–163} A lack of funding may underpin these gaps: government funding was allocated to iron and folic acid supplementation programmes in only 66 per cent of low- and middle-income countries, and to nutrition counselling in only 40 per cent of countries in 2021, which suggests that adolescent girls' and women's nutrition is not prioritized in funding allocation decisions.¹⁶⁰

Humanitarian crises make it much more difficult for adolescent girls and women to access health and nutrition services, at a time when they are most vulnerable. During crises, the aim should be to maintain and, where applicable, expand nutrition services for adolescent girls and women, especially during pregnancy and breastfeeding.

SPOTLIGHT 6

OPPORTUNITY GAPS IN REACHING PREGNANT GIRLS AND WOMEN WITH IRON SUPPLEMENTS

WHO recommends that all adolescent girls and women throughout the world take daily iron and folic acid supplements during pregnancy to prevent anaemia.⁴⁵ Yet, there are considerable gaps in the coverage of iron and folic acid supplementation.

We analysed nationally representative data from Demographic and Health Surveys in 44 low and middle-income countries to explore inequities in the coverage of antenatal iron supplementation. These surveys collect data on iron supplementation; however, in most countries the supplements also contain folic acid.

We found that only two in five pregnant girls and women (43 per cent) take iron supplements for at least 90 days, with regional coverage ranging from only 25 per cent in Eastern and Southern Africa to 49 per cent in South Asia (*see Figure 17*).

The coverage of iron supplementation for at least 90 days is particularly low among pregnant girls and women who are disadvantaged and at higher risk of poor diets and anaemia, including those belonging to the poorest households (32 per cent), without secondary education (33 per cent) and living in rural areas (39 per cent). Yet coverage is also too low in more privileged groups. For example, only 56 per cent of pregnant girls and women in the wealthiest households take iron supplements for at least 90 days.

Adolescent girls and women can only consume adequate iron and folic acid supplements during pregnancy if a number of conditions are met: (1) they are able to attend sufficient antenatal care visits to receive the recommended number of iron supplements; (2) iron supplements are available at the antenatal care facility and consistently administered in adequate quantities; (3) pregnant girls and women understand why it is important to take the iron supplements and know how to minimize or manage side effects; and (4) pregnant girls and women are motivated and encouraged to consume them.

Our findings from the 44 countries show that nearly two in three pregnant girls and women (62 per cent) attend at least four antenatal care visits. Yet, there are considerable gaps between

the percentage of adolescent girls and women with at least four antenatal care visits and the percentage consuming iron supplements for at least 90 days (see Figure 18). This gap exceeds 20 percentage points in 29 countries, while the percentage consuming iron supplements for at least 90 days is the same as or exceeds the percentage with at least four

antenatal care in only six countries (Cambodia, Bangladesh, Myanmar, Nepal, Senegal and Zambia). These findings suggest that vital opportunities are being missed to give iron supplements to pregnant girls and women during antenatal care visits and/or to effectively counsel them to consume the supplements.

FIGURE 17:
Percentage of adolescent girls and women aged 15–49 years who consumed iron supplements for at least 90 days during their most recent pregnancy, by UNICEF region, wealth quintile, place of residence and adolescent girls’ and women’s education status, 2020

Source: UNICEF analysis based on Demographic and Health Surveys. * To meet sufficient population coverage, estimate for East Asia and the Pacific excludes China.

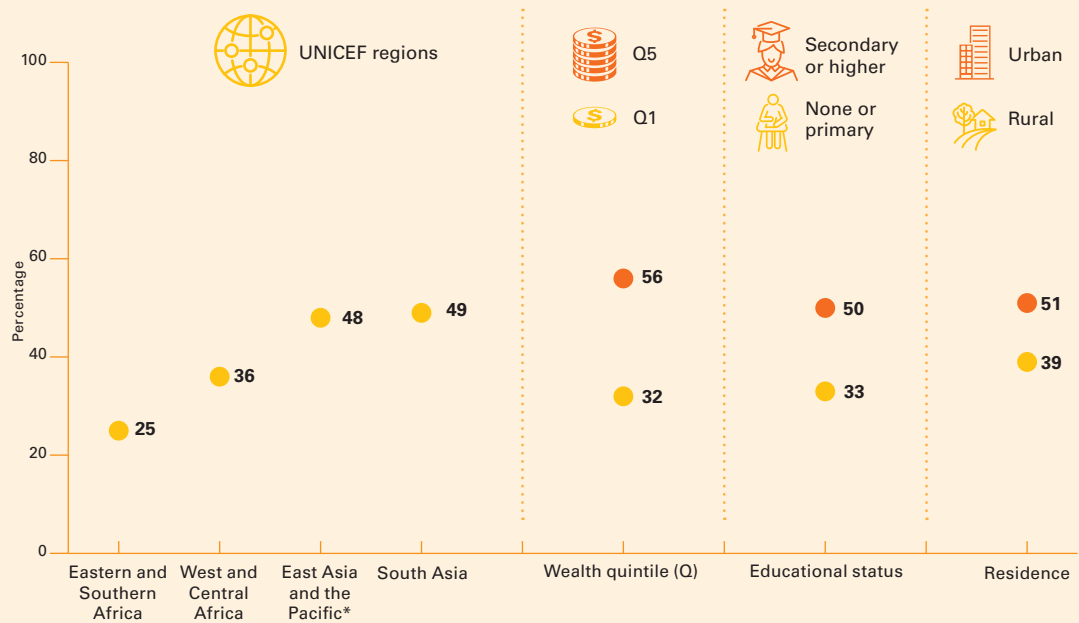
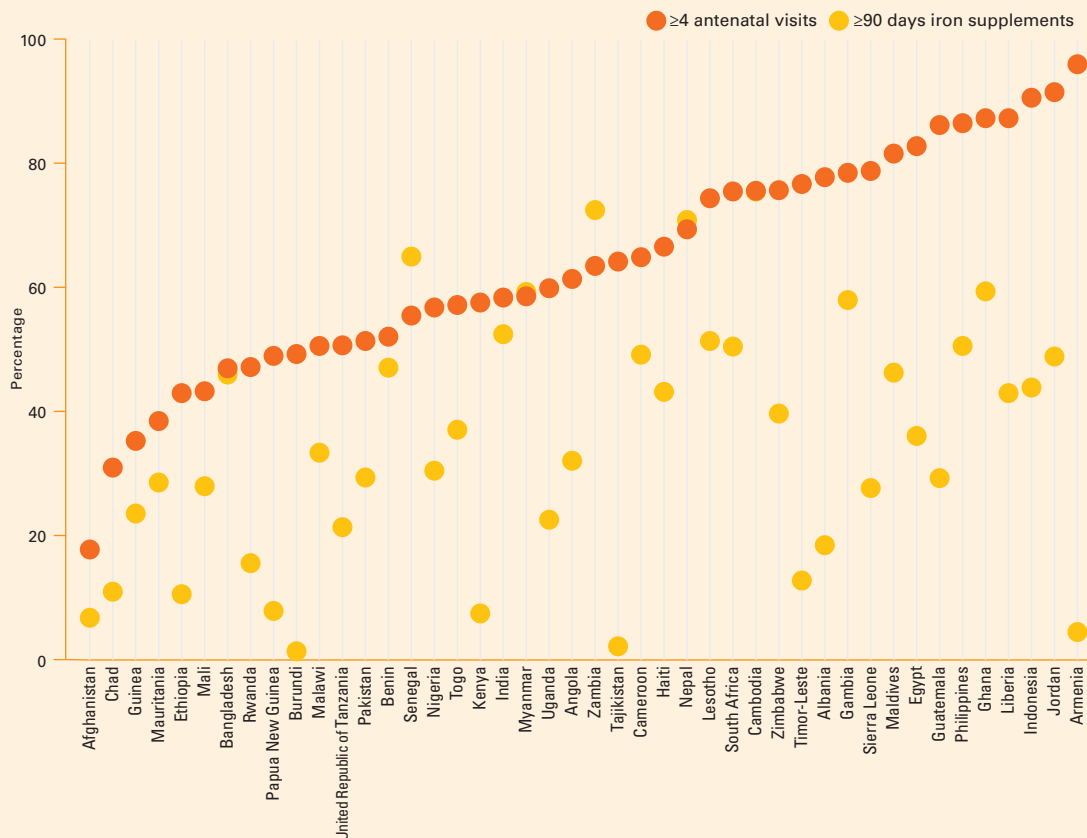


FIGURE 18:
Opportunity gaps between the percentage of adolescent girls and women aged 15–49 years who had at least four antenatal care visits and took iron supplements for at least 90 days during their most recent pregnancy, 2020

Source: Demographic and Health Surveys



SPOTLIGHT 7

MULTIPLE MICRONUTRIENT SUPPLEMENTS ARE AN UNTAPPED OPPORTUNITY

Adolescent girls and women are rarely deficient in a single micronutrient. Diets that are lacking in diversity and nutritious foods (e.g., meat, poultry, vegetables, fruits and fortified foods) are often low in multiple micronutrients, and so adolescent girls and women with poor diets are at risk of multiple micronutrient deficiencies. Yet, in most low- and middle-income countries, pregnant girls and women are offered only iron and folic acid supplements during pregnancy.

Multiple micronutrient supplements containing 15 essential micronutrients are a safe and effective way to improve dietary intake during pregnancy. These supplements are more effective than iron and folic acid supplements in reducing low birthweight, particularly among pregnant women who are anaemic or underweight. They also reduce anaemia, maternal mortality and stillbirths.^{164–166} When delivered at scale, they have the potential to drive country-level progress towards global targets to reduce anaemia, low birthweight and child undernutrition.

Multiple micronutrient supplements are also good value for money. Cost benefit analyses in Bangladesh, India and Pakistan, show that multiple micronutrient supplements can avert 2–3 times more disability-adjusted life years than iron and folic acid supplements, and have a higher return on investment, ranging from a few hundred to a few thousand dollars.^{167, 168}



Multiple micronutrient supplements were added to WHO's list of essential medicines in 2021 and are currently recommended for programmes in the context of implementation research, as well as during emergencies.^{169, 170}

These recommendations have enabled 29 low- and middle-income countries to introduce programmes to provide multiple micronutrient supplements to pregnant women and to further build the evidence base on acceptability, feasibility, sustainability, equity and cost-effectiveness, relative to iron and folic acid supplements.¹⁵⁵ For example, in Bangladesh and Ethiopia, two models of delivery are currently being tested: pro-poor free distribution through the public sector, and a market-based model through pharmacy outlets.

Despite their clear benefits, multiple micronutrient supplements are not available to millions of pregnant women in low- and middle-income countries. In contrast, multiple micronutrients are often a routine component of antenatal care in high-income countries and are increasingly available to affluent women in low- and middle-income countries who have the financial resources to purchase them.

Making multiple micronutrient supplements available to all pregnant women free of cost in low- and middle-income countries can improve equity and act as a social equalizer by offering all women the same standard of care.

However, these services are often neglected in humanitarian crises, partly due to inadequate data and evidence and gaps in guidance that make it more difficult to argue for resources in the face of competing priorities (*see Spotlight 8*).

Evidence from the response to the COVID-19 pandemic shows how the health system was able to overcome difficulties in reaching adolescent girls and women with nutrition services with the right support (*see Spotlight 9*). And there are examples of extraordinary success in fragile contexts: when adolescent girls in Afghanistan were barred from schools in August 2021, UNICEF worked with partners to transform the school-based iron and folic acid supplementation programme to community-based delivery. Coverage is still lower than it was (0.7 million versus 1.6 million adolescent girls), however, there are plans to scale-up community-based delivery of iron and folic acid supplements to adolescent girls in all provinces in 2023.

As donor funding is diverted to the Ukraine conflict and refugee crisis and the scale of humanitarian crises worldwide continue to escalate, humanitarian resources will be more thinly stretched throughout 2023 and beyond.⁴²

Adolescent girls and women are not adequately shielded from poverty

Globally, there were 388 million adolescent girls and women living in extreme poverty in 2022, the vast majority in South Asia and sub-Saharan Africa.¹⁷¹ Social protection covers a range of policies and programmes needed to prevent or protect against poverty, vulnerability and social exclusion, including non-contributory social transfers (cash, vouchers and in-kind assistance), social insurance, social care services and labour market programmes.³⁸ These policies and programmes can help improve nutrition in contexts where financial or social constraints limit a person's ability to consume nutritious diets, access essential services and adopt positive nutrition practices.^{172, 173}

Recent research by UNICEF found that social protection programmes are more effective when delivered to women because women are more likely than men to save, invest and share the benefit from social protection programmes with their families.¹⁷⁴ Yet there are persistent gaps in the reach and adequacy of social protection coverage for women,¹¹⁶ even during economic crises: for example, only 12 per cent of social protection responses to the COVID-19 pandemic targeted women's economic security.¹⁷⁵

Adolescent girls and women are often excluded from social insurance schemes, including maternity benefits, because domestic and childcare responsibilities mean they are less likely to have formal employment. Fewer than one in two adolescent girls and women (45 per cent) giving birth worldwide receive maternity cash benefits, despite their importance in ensuring the nutrition and well-being of themselves and their infants. There are also wide disparities in the distribution of benefits to adolescent girls and women by country income level, with only 11 per cent of adolescent girls and women benefiting in low-income countries and 86 per cent in high-income countries.¹¹⁶

Social care services remain out of reach for many families in need. Mothers carry the burden of unpaid childcare, and a global shortage of childcare services is holding them back from paid employment. In 2018, 606 million working age women considered themselves to be unavailable for employment or not seeking a job because of unpaid care work, compared with only 41 million men.¹⁷⁶ UNICEF's survey on the workplace policies of businesses in high-, middle- and low-income countries and territories found that only 24 per cent of businesses provide support to employees to access childcare support.^{177, 178} This childcare crisis is one of the factors that underlie the inequalities in income and food security between men and women.

Labour market programmes can provide vital income support but run the risk of aggravating undernutrition if they do not pay attention to the vulnerabilities of women at different stages in life. For example, public works programmes often involve the exchange of manual labour for cash or food and may pose a risk to pregnant and breastfeeding adolescent girls and women if they are not exempted or assigned less physically demanding work.¹⁷⁹

Social assistance programmes, usually in the form of cash, food or voucher transfers, offer a crucial lifeline for adolescent girls and women in the poorest households. Yet only 21 per cent of the poorest receive social transfers in low-income countries, compared with 73 per cent in high-income countries.¹⁸⁰ This matters because social transfers have been shown to improve women's dietary diversity and their consumption of nutritious foods.¹⁸¹⁻¹⁸⁴

SPOTLIGHT 8

THE NEGLECT OF WOMEN'S NUTRITION IN HUMANITARIAN PROGRAMMING

Active conflict, climatic shocks and disease outbreaks can severely impair the access of adolescent girls and women to nutrition services. Health facilities may become damaged, destroyed or overwhelmed; adolescent girls and women may struggle to reach functioning services due to insecurity or disruption to transportation; and the quality of services is often compromised by a lack of trained health workers and supplies.^{57, 185, 186} In Afghanistan, the Syrian Arab Republic and Yemen, access has been crippled by the virtual collapse of the public health systems.⁵²

In these contexts, it is vital that the nutrition needs of adolescent girls and women are prioritized. In practice, nutrition programming in humanitarian contexts too often neglects adolescent girls and women. Recent reviews have reported the following barriers.^{57, 185, 187}

Adolescent girls and women – especially those who are neither pregnant or breastfeeding – are under-represented in studies and research on nutrition in humanitarian contexts.^{185, 188} For example, a recent review found that the percentage of publications that included adolescent girls and women (4 per cent) and pregnant and breastfeeding girls or women (30 per cent) was considerably lower than children under 5 (64 per cent).¹⁸⁵ In particular, there is a crucial lack of evidence on the approaches needed to improve the coverage and effectiveness of nutrition interventions for adolescent girls and women in these settings.

There are insufficient data to track the status of adolescent girls' and women's nutrition and the coverage of interventions in humanitarian contexts. Some surveys and rapid assessments in humanitarian contexts screen pregnant and breastfeeding girls and women for acute malnutrition, but often exclude those who are neither pregnant nor breastfeeding.⁵⁷ In addition, there is need for field-friendly approaches to assess dietary sufficiency and agreement on a minimum set of nutrition interventions to include in monitoring systems.⁵⁷ Without these data, it is challenging for governments and humanitarian actors to advocate for resources to improve adolescent girls' and women's nutrition in humanitarian contexts.

There are gaps in the global recommendations and operational guidance on interventions to prevent and treat malnutrition in adolescent girls and women.⁵⁷

For example, there are currently no internationally agreed criteria to admit (and discharge) pregnant and breastfeeding girls and women to programmes to treat underweight. In addition, there is a lack of guidance on which specialized nutrition products should be used to treat underweight, in which contexts and through what platforms. These gaps are problematic because national policies and guidelines will often only include interventions that are in global guidance.

Funding for adolescent girls' and women's nutrition in humanitarian contexts is constrained. In the face of competing demands for humanitarian resources, the lack of evidence and data on adolescent girls' and women's nutrition and gaps in global guidance and national policies discourage governments and humanitarian actors from mobilizing funds and taking action to deliver nutrition services. As a result, nutrition programming in humanitarian contexts is focused on children under 5 years of age, and where programmes do include adolescent girls and women, they tend only to include those who are pregnant or breastfeeding.

As crises become increasingly protracted, prolonged dependency on humanitarian assistance could have profound implications for adolescent girls and women if programming does not adequately meet their needs.⁵⁷

In 2020, UNICEF updated its Core Commitments for Children in Humanitarian Action to comprehensively address the nutrition needs of adolescent girls and women in humanitarian contexts.¹⁸⁹ These commitments now include nutrition interventions for adolescent girls and women (iron and folic acid/multiple micronutrient supplementation, deworming prophylaxis, nutrition counselling, pregnancy weight monitoring and balanced energy protein supplementation, according to context). It is crucial that, where possible, systems are in place to deliver nutrition services to adolescent girls and women to prevent malnutrition before a humanitarian crisis takes place.

SPOTLIGHT 9

REACHING PREGNANT AND BREASTFEEDING GIRLS AND WOMEN WITH NUTRITION SERVICES DURING THE COVID-19 PANDEMIC

The impact of the COVID-19 pandemic on health and nutrition services was especially severe in low- and middle-income countries, where health, nutrition and social protection system infrastructure is weak.¹⁹⁰ The pandemic placed immense strain on health systems, and in many countries, financial resources and the health workforce were reallocated from routine services to manage the response.

UNICEF has monitored how the COVID-19 pandemic affected nutrition services in low- and middle-income countries, including nutrition services provided through antenatal care platforms for pregnant and breastfeeding girls and women.¹⁹¹

In September 2020, 54 per cent of countries reported a fall in coverage of nutrition services

for pregnant and breastfeeding girls and women, revealing the disruption to health systems six months after the onset of the global pandemic. The most common cause of disruption was the fear of COVID-19 infection among adolescent girls and women (59 per cent of countries), followed by difficulties in accessing services due to mobility and transportation restrictions (52 per cent of countries) and the closure or postponement of facilities/services (28 per cent of countries). By April 2021, there was some recovery in nutrition services, but two in five countries (39 per cent of countries) were still reporting disruptions.

Health systems around the world stepped up to the unique challenges created by the COVID-19 pandemic and made adaptations to enable continuity in

the delivery of nutrition services for pregnant and breastfeeding women (see Figure 19). In September 2020, these adaptations included physical distancing at clinics (83 per cent of countries), delivery of services through community platforms (44 per cent of countries), dispensing larger quantities of iron and folic acid supplements to reduce the frequency of visits and possible exposure to infection (23 per cent of countries) and repositioning of supplies closer to communities or facilities (15 per cent of countries). A similar percentage of countries were still using these adaptations in April 2021; however, only 11 per cent of countries were still dispensing larger quantities of supplements, perhaps because the frequency of antenatal visits was returning to normal.

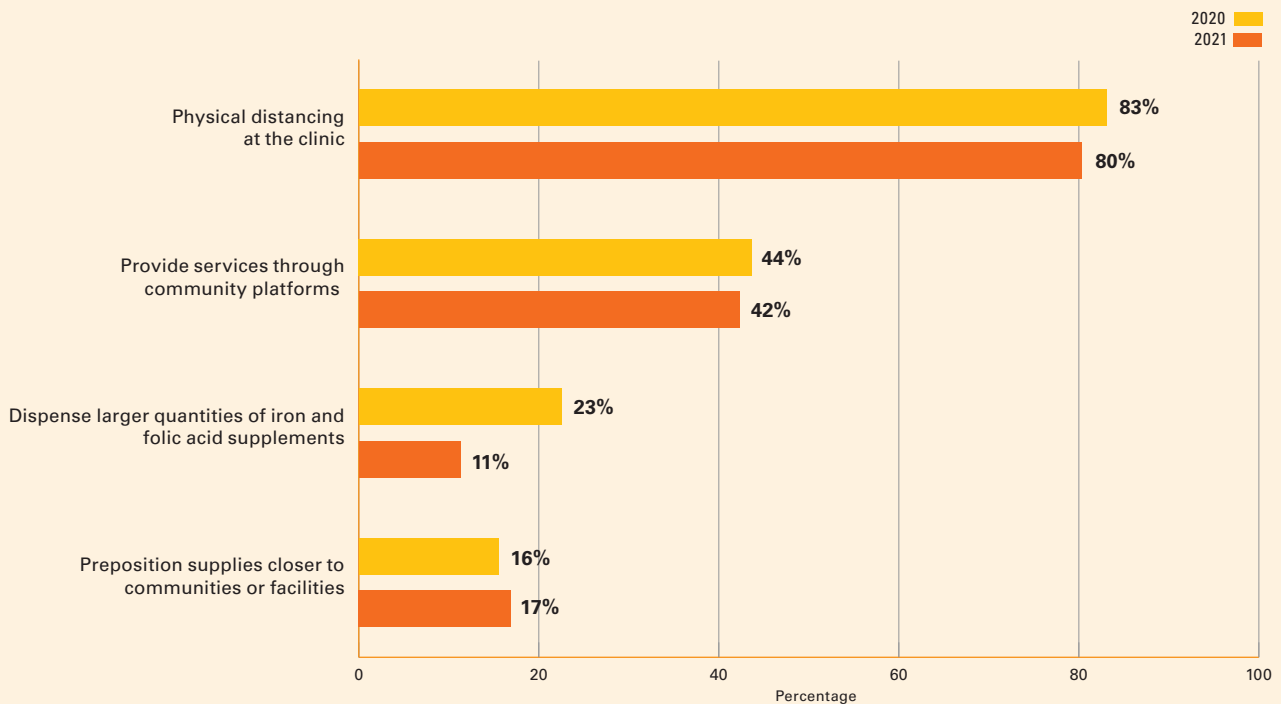


FIGURE 19: Percentage of countries reporting adaptations to support the continuity of nutrition services for pregnant and breastfeeding mothers during the COVID-19 pandemic in September 2020 and April 2021

Source: UNICEF COVID-19 reporting systems to track the situation of women and children during the COVID-19 pandemic. Includes data from 71 low- and middle-income countries. Each country reported the top three causes of disruption.

FINDING 8

Adolescent girls and women lack strong policy protection against undernutrition

There is global consensus that adolescent girls and women of reproductive age are vulnerable to poor nutrition, and global recommendations exist on how to prevent and treat malnutrition. Yet our review of government policies reveals that the policy protection for adolescent girls' and women's nutrition is far from optimal. Gaps in the data, information and evidence on the status and drivers of nutrition in adolescent girls and women make it challenging to take appropriate policy decisions, track progress and hold duty-bearers to account.

Few countries have a comprehensive set of policies to protect adolescent girls' and women's nutrition

The nutritional status of adolescent girls and women cannot be fully protected without government policies that commit to actions and unlock resources to resolve the barriers to nutritious diets and essential nutrition services. To address the array of factors that influence nutrition, these policies need to leverage the potential of multiple systems.

We examine the policy environment of three key systems – food, health and social protection – using a set of eight illustrative policies, strategies or plans (hereafter 'policies') (see Figure 20). Only 8 per cent of countries have all eight policies (Bhutan, Ecuador, El Salvador, Ethiopia, the Federated States of Micronesia, Georgia, Mexico, and the Republic of the Marshall Islands) and 39 per cent have four or fewer policies. These missed opportunities hinder policy coherence and multi-system action to support women's nutrition.

The health system has historically led efforts to improve women's nutrition, especially during pregnancy. More than 90 per cent of countries have policies that include nutrition counselling and iron and folic acid supplementation, which are universally recommended by WHO for all pregnant women. However, 26 per cent of countries have yet to fully adopt all relevant recommendations of the 2016 WHO antenatal care guidelines.

Within the food system, we examine mandatory fortification of staple foods. Too few countries have mandated the fortification of wheat flour (45 per cent) and vegetable oil (24 per cent), even though fortification provides one of the most cost-effective

Most countries have policies reflecting the WHO nutrition recommendations that are universally recommended for all pregnant women – but major policy gaps exist

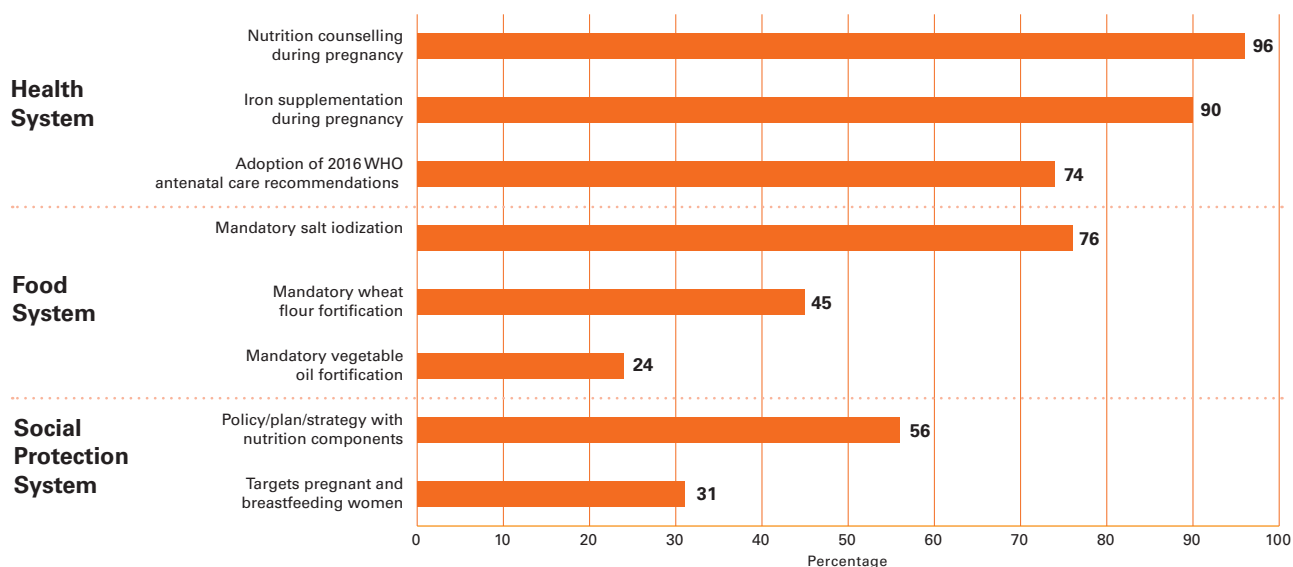


FIGURE 20: Percentage of countries with a policy, plan or strategy by system, 2020

Source: NutriDash, UNICEF's online platform to track country policies and programmes on essential nutrition interventions, 100 countries

means of reaching adolescent girls and women with essential micronutrients,¹⁹² particularly non-pregnant girls and women who are often deficient in essential micronutrients but rarely access nutrition services. A higher percentage of countries have policies for mandatory salt iodization (76 per cent); however, nearly 19 million infants are at risk of permanent brain damage and reduced cognition every year because their pregnant mothers do not have access to iodized salt.²⁸

Finally, only half of countries (56 per cent) have a social protection policy that includes nutrition components, and even fewer (31 per cent) target pregnant or breastfeeding women, despite the considerable economic challenges that women face in accessing nutritious diets.

Other evidence from the global literature shows that policies to protect women's income are particularly weak, leaving women vulnerable to economic hardship and less able to afford nutritious diets and essential nutrition services. Patriarchal policies and gender norms in low- and middle-income countries restrict the rights of women farmers to land, productive resources and paid work, and limit their access to social networks.^{79, 117, 118} Women face legal barriers to their freedom of movement in 56 countries, lack legal protection in the workplace in 70 countries, and are not entitled to equal remuneration for work of equal value in 95 countries.⁷⁷ These are violations of women's rights that undermine their economic empowerment, while constraining adolescent girls' access to nutritious and affordable diets, essential services and positive practices.

Maternity protection helps ensure women's equal access to employment, protects them from discrimination, and safeguards the nutrition and health of women and their infants during pregnancy and postpartum. Yet fewer than one-third of countries (32 per cent) provide at least 14 weeks' paid maternity leave (per the standards set in International Labour Organization Convention No. 183 on maternity protection), just 23 per cent provide maternity benefits for at least 18 weeks (as advised by Recommendation No. 191) and only 9 per cent provide leave entitlements for fathers or the second parent.¹¹⁶

A lack of data and evidence holds back policy decisions, actions and accountability

Beyond the policy environment, our search of the global literature found very limited evidence on the status of governance for women's nutrition. A handful of countries have shared information on specific components of nutrition governance, such as financing or coordination.^{114, 193, 194} However, it is not possible to gauge how countries or regions are performing, and evidence on other elements of nutrition governance, such as political commitment, leadership and accountability mechanisms for women's nutrition, are missing.

There is also insufficient attention to monitoring, researching and evaluating progress on women's nutrition, despite calls for greater investments.^{195, 196} This translates into governments not responding with effective policies, strategies and programmes; it also compromises efforts to assess progress and hold relevant authorities to account.¹⁹⁷

Our analysis found that countries lack the crucial data needed on women's nutritional status and dietary intake to make informed decisions on whether to adopt context-specific WHO recommendations (*see Spotlight 10*).¹⁹⁸ Efforts are underway to expand the number of countries with information on MDD-W, but countries often struggle to update data on the micronutrient status of adolescent girls and women because of the high cost to conduct surveys involving the collection and laboratory analysis of blood samples. In addition, data on the coverage of maternal nutrition interventions are not collected in a standardized way in national household surveys, which precludes comparability across countries.¹⁹⁹

Only the health system monitors nutrition services for adolescent girls and women through routine information systems,²⁰⁰ and even then, not in all countries. Just 60 per cent of countries have an indicator to monitor the provision of iron or iron and folic acid supplements to pregnant women in the national health or nutrition information system, and only 36 per cent have an indicator on nutrition counselling.¹⁶⁰



SPOTLIGHT 10

NATIONAL POLICIES FOR ADOLESCENT GIRLS' AND WOMEN'S NUTRITION ARE FALLING SHORT OF GLOBAL RECOMMENDATIONS

Antenatal care provides a vital platform for reaching pregnant girls and women with nutrition interventions to prevent and control malnutrition. In 2016, WHO released its guideline, "Recommendations on Antenatal Care for a Positive Pregnancy Experience for Women" to provide countries with a consolidated set of health and nutrition recommendations on antenatal care.⁴⁵ The guideline recommends two nutrition interventions for all countries and six interventions in contexts where women are at higher risk of specific forms of malnutrition (see Box 1).

Subsequent updates to the guideline covered multiple micronutrient supplementation (2020) and zinc supplementation (2021) during antenatal care, both of which are context-specific recommendations.^{169, 201} In addition, WHO has issued guidance on postpartum care, which includes context-specific recommendations on iron and folic acid supplementation.³⁶

Recommendations applicable in all countries

- Counselling about healthy eating and keeping physically active
- Daily iron (30–60 mg) and folic acid (400 µg) supplementation

Context-specific recommendations

- Nutrition education to increase energy and protein intake
- Balanced energy and protein dietary supplementation
- Weekly iron (120 mg) and folic acid (2,800 µg) supplementation
- Daily calcium (1.5–2.0 g) supplementation
- Vitamin A supplementation, either daily (up to 10,000 IU) or weekly (up to 25,000 IU)
- Lowering caffeine intake during pregnancy
- Multiple micronutrient supplementation
- Zinc supplementation

BOX 1: **Recommended nutrition interventions during antenatal care**^{45, 169, 201}

In 2018, UNICEF reviewed the status of national policies and programmes for recommended nutrition interventions in the 2016 WHO antenatal care guideline in 51 countries in the four regions with the highest percentage of women affected by underweight and child stunting and wasting: East Asia and the Pacific, Eastern and Southern Africa, South Asia, and West and Central Africa.¹⁹⁸

The review found that all countries had national policies on the two recommendations that are applicable in all contexts: counselling on healthy eating and physical activity (96 per cent of countries); and daily iron and folic acid supplementation (92 per cent of countries). In addition, all five countries that met the context-specific criteria for nutrition education to increase energy and protein intake and for balanced energy and protein supplementation had national policies in place.

These encouraging findings show that countries have made positive progress in adopting relevant WHO recommendations on maternal nutrition. However, relatively recent WHO recommendations were less likely to be adopted, including calcium supplementation (42 per cent of applicable countries) and intermittent iron and folic acid supplementation (none of the applicable countries).

In addition, we found that a substantial number of countries had policies that were not applicable to their country context. For example, 85 per cent of countries with a national policy to educate or counsel women on increasing energy and protein intake did not meet the context-specific criterion for this recommendation (an underweight prevalence of at least 20 per cent in women). While this criterion may have been applicable in the past, national policies do not appear to be keeping pace with changes in the nutritional status of women.

Indeed, countries lack crucial information on the nutritional status and dietary intake of women to make informed decisions on whether to adopt the context-specific WHO recommendations on maternal nutrition interventions. The percentage of countries lacking information on the applicability of recommendations was greatest for vitamin A supplementation (57 per cent) and caffeine restriction (98 per cent).

BARRIERS TO GOOD NUTRITION IN ADOLESCENT GIRLS AND WOMEN





The state of nutrition in adolescent girls and women is deeply troubling.

Undernutrition, micronutrient deficiencies and anaemia persist because adolescent girls and women struggle to access nutritious diets, essential nutrition services and positive nutrition and care practices – especially those living under the shadow of poverty, harmful norms and discriminatory laws.

Our analysis finds that the world is failing to respond with policies and programmes that make the right to good nutrition a reality for all adolescent girls and women. Unless decisive action is taken, we run the risk of deepening gender inequalities even further and failing not just adolescent girls and women, but also the growth, development and well-being of their children.

More than a billion undernourished adolescent girls and women

Globally, more than a billion adolescent girls and women suffer from undernutrition, micronutrient deficiencies and/or anaemia. These numbers are staggering, but what is also striking is just how little progress has been made. Since 2000, there has been no change in the prevalence of underweight in adolescent girls (8 per cent), only a small decline in the prevalence of underweight in women (from 12 to 10 per cent), more than two-thirds of adolescent girls and women suffer from micronutrient deficiencies (69 per cent), and the prevalence of anaemia remains high and unabated (30 per cent).



Globally, more than a billion adolescent girls and women suffer from undernutrition, micronutrient deficiencies and/or anaemia

The world is failing to respond with policies, programmes and services that make the right to good nutrition a reality for millions of adolescent girls and women

Undernutrition, micronutrient deficiencies and anaemia are concentrated in the poorer regions and countries of South Asia and sub-Saharan Africa, where poverty and discriminatory norms, combined with conflict, extreme weather events and economic shocks, create extremely challenging conditions for adolescent girls and women to access the diets, services and care they need for good nutrition. These regions are home to 68 per cent of adolescent girls and women with underweight, 39 per cent of adolescent girls and women with micronutrient deficiencies, and 60 per cent of adolescent girls and women with anaemia.⁵⁴

The consequences of poor nutrition can endure throughout the course of adolescent girls' and women's lives, increasing their susceptibility to infections, mental health problems and diet-related chronic diseases, and reducing their ability to earn income and live a life with dignity.^{5, 10, 11, 13} These consequences reinforce gender inequalities by making it much more difficult for adolescent girls and women to escape poverty and build a better future. The most vulnerable adolescent girls and women – those who are less educated, belong to poor households and live in rural areas – are most likely to be undernourished and least able to cope with the consequences.

Undernourished girls and women who become pregnant face the greatest risks to their health and survival, and have a higher likelihood of giving birth to small infants with low body nutrient reserves, who suffer from wasting and stunting during the crucial early years of life.^{9, 10} No wonder, therefore, that South Asia and sub-Saharan Africa are also the global epicentre of low birthweight and child undernutrition: more than 70 per cent of all infants born with low birthweight and children suffering from stunting and wasting in early childhood live in these regions.^{23, 60}

No region in the world is on course to meet the 2030 World Health Assembly and SDG targets to reduce the prevalence of anaemia in adolescent girls and women by half and to reduce low birthweight by 30 per cent.⁵¹ This inertia is in turn delaying progress towards multiple inter-connected SDGs – ending poverty (SDG 1), ending hunger and child malnutrition (SDG 2), ensuring healthy lives (SDG 3) and ensuring gender equality (SDG 5).

Faster progress depends on a better understanding of the barriers to adequate diets, services and practices for adolescent girls' and women's nutrition, and how they should be removed. We also need to confront the uncomfortable truth of why adolescent girls and women, and their nutrition needs, continue to be overlooked.

Overlooked and undervalued

Our analysis shows that the nutritional status of adolescent girls and women in low- and middle-income countries is influenced by a complex array of factors that are evolving over time and vary according to the contexts in which they live. Some of the most damaging impacts on nutrition are caused by economic disadvantage interacting with harmful social and gender norms and practices, which limit access to nutritious diets, essential nutrition services and positive nutrition and care practices.

Dietary diversity is important for nutrition because diets that contain a narrow range of food groups are less likely to be adequate in nutrient content²⁰²⁻²⁰⁴ and are associated with lower body mass index, underweight and anaemia in adolescent girls and women.²⁰⁵⁻²⁰⁷

Our analysis of data from 20 countries found that fewer than one in two adolescent girls and women (47 per cent) have diets that meet the MDD-W. Adolescent girls and women belonging to the poorest households have less diverse diets than those in the wealthiest households: nutritious foods, such as fruits, vegetables, dairy, eggs and meat are simply too costly for low-income households.^{72, 94, 95, 107, 112}

In some parts of Africa and Asia, adolescent girls and women are not in control of decisions that influence what and how much they eat, including during the nutritionally vulnerable periods of pregnancy and breastfeeding. Repressive gender norms may restrict their mobility outside the home, preventing them from making food purchase decisions, or may govern the allocation of food within the household, with larger portions and more costly nutritious foods reserved for male household members.¹¹²⁻¹¹⁵

Women who earn their own income usually have greater financial autonomy, better control over household food and other resources, and more diverse diets.^{119-122, 208} Globalization and urbanization have also enabled more women to enter paid employment,^{38, 39} but many women are not benefiting from these opportunities.

Deep-seated gender norms mean that many adolescent girls and women still carry the full burden of responsibility for domestic and child-caring duties. Some mothers are unable to seek paid employment because they lack family support to care for their children or access to affordable and quality child-care services.¹⁷⁷ Those who are employed are often restricted to informal, lower-paid and more insecure jobs than men, which offer more flexibility to working mothers but provide little or no access to maternity benefits and other social insurance benefits.^{1, 39, 116}



Women still lack legal protection in the workplace in 70 countries and are not entitled to equal remuneration for work of equal value in 95 countries.⁷⁷ These gender inequalities in access to domestic responsibilities, employment, income protection and decision-making power underlie the gender gap in food insecurity between women and men.^{75, 76}

Child marriage is becoming less prevalent, a positive sign of changing attitudes towards this discriminatory norm; however, it remains a persistent obstacle to the nutritional status of adolescent girls and women, especially in South Asia and West and Central Africa. Child marriage undervalues girls, curbs their education and income-earning opportunities, isolates them from support networks, and often leads to childbearing in adolescence.^{131, 140–142} Our recent analysis of data from West and Central Africa show that adolescent mothers have less education, poorer access to maternal health services and lower household wealth than adult mothers. Moreover, their infants are more likely to start life with a low birthweight.^{149, 151}

Left behind in policies and programmes

The advent of the Scaling Up Nutrition Movement in 2010, the nutrition targets of the World Health Assembly (2012–2025), the United Nations Decade of Action for Nutrition (2016–2025) and the Sustainable Development Agenda (2015–2030) have placed nutrition at the centre of discourse on national development and galvanized stakeholders at all levels, from local governments to global leaders. The prevalence of child stunting has declined by one-third since 2000 and the number of children with stunting has fallen by more than 50 million, despite population growth.⁶⁰ But adolescent girls and women are being left behind in this remarkable global momentum.



Actions to lower child undernutrition have been directed more to the child than to the mother, particularly within the health system

Current programming on nutrition emphasizes the first 1,000 days between conception and a child's second birthday, because restrictions in the growth of a child during this period can have lifelong consequences on nutrition, growth, development, learning and livelihoods.^{9, 153, 209} For 500 of these 1,000 days – the duration of pregnancy and the recommended six months of exclusive breastfeeding – an infant depends entirely on her or his mother for nutrition.²¹⁰ We estimate that about half of the global burden of stunting in early childhood originates during these 500 days. Yet, actions to lower child undernutrition have been directed more to the child than to the mother, particularly within the health system.²¹⁰

The only health system intervention for improving adolescent girls' and women's nutrition that has achieved notable coverage is iron and folic acid supplementation during pregnancy. Even so, our analysis shows that in countries with data, less than half of adolescent girls and women (43 per cent) take adequate supplements during pregnancy. In addition, considerable inequities in coverage persist because of disparities in access to antenatal care, shortages of supplements, and inadequate counselling to encourage adherence.^{161, 162, 194, 210, 211} Our research in South Asia has revealed how community-based workers can bring nutrition services to women in their communities and close equity gaps in the coverage of iron and folic acid supplementation during pregnancy (see *Spotlight 11*).^{156, 212} Yet only a third of countries (32 per cent) are delivering supplements through community platforms.¹⁶⁰

Countries have been unable to deliver other essential nutrition services for pregnant girls and women at scale through the health system due to gaps or weaknesses in global guidance, national policies, supply systems, the health system workforce and/or monitoring data.^{198, 200} And there are virtually no data to assess if, and to what extent, adolescent girls and women are able to access essential nutrition interventions during the postpartum period.

There are even greater gaps when we look beyond the first 1,000 days to adolescent girls and women who are neither pregnant nor breastfeeding, including those who could yet become pregnant.²¹³ Besides 31 countries that have iron supplementation programmes for adolescent girls,¹⁶⁰ we were unable to find evidence of nationwide essential nutrition services for adolescent girls and women before or between pregnancies in low- and middle-income countries. Improving adolescent girls' and women's nutrition before they become pregnant is crucial, because interventions are sometimes delivered too late in pregnancy to prevent harm to the mother or her infant.

SPOTLIGHT 11

CLOSING THE EQUITY GAP IN IRON AND FOLIC ACID SUPPLEMENTATION DURING PREGNANCY IN NEPAL THROUGH COMMUNITY-BASED SERVICES

Nepal has one of the highest coverage levels for the adequate intake of iron and folic acid supplements during pregnancy. However, this has not always been the case: in 2001, only 6 per cent of pregnant women took these supplements for at least 90 days, considerably lower than the percentage of women who benefited from at least four antenatal care visits (16 per cent). UNICEF has examined the factors that led to the extraordinary increase in the coverage of iron and folic acid supplements in Nepal.²¹²

In the early 2000s, iron and folic acid supplements were only available to pregnant Nepali women who attended antenatal care at health facilities or health posts. But women faced significant difficulties in accessing antenatal care: 67 per cent of women needed more than one

hour to reach the nearest health facility or health post, and 10 per cent needed at least three hours.²¹² In addition, there was low demand for iron and folic acid supplements among women because of poor knowledge and awareness of the benefits.

To address these barriers, the government of Nepal successfully engaged a network of more than 50,000 Female Community Health Volunteers to reach pregnant women with iron and folic acid supplements at community level. As trusted and respected members of the community, these volunteers counselled pregnant women to make frequent antenatal care visits and consume the supplements.

They also involved other family members, such as husbands and mothers-in-law, to encourage and remind pregnant women to take

supplements. The initiative began in five districts in 2003 and was scaled up to the entire country over the course of 11 years.

By 2006, the opportunity gap between the coverage of at least four antenatal care visits and consumption of iron and folic acid supplements for at least 90 days had closed (*see Figure 21*). Both access to antenatal care and consumption of supplements continued to rise over the subsequent 10 years, reaching 65 per cent and 71 per cent, respectively, in 2016. In addition, the equity gap in the consumption of supplements between women in the poorest and wealthiest households halved from 37 percentage points in 2006 to 17 percentage points in 2016 (*see Figure 22*).

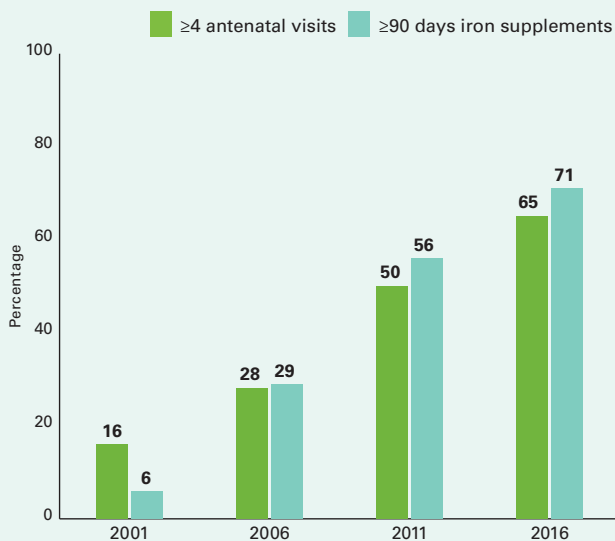


FIGURE 21: Percentage of women who received at least four antenatal visits and consumed iron and folic acid supplements for at least 90 days in Nepal, 2001 to 2016

Source: Nepal Demographic and Health Surveys, 2001–2016



FIGURE 22: Percentage of women who consumed iron and folic acid supplements for at least 90 days in Nepal by poorest and wealthiest wealth quintile, 2006 and 2016

Source: Nepal Demographic and Health Surveys, 2001–2016

But nutritional status should not matter only because of motherhood. While the stakes are higher for those who become pregnant, all adolescent girls and women have a fundamental human right to good nutrition throughout the life-course, regardless of whether they become mothers.^{213, 214}

The support of multiple systems – particularly the food, health, education and social protection systems – is needed to collectively deliver nutritious and affordable diets, essential nutrition services and positive nutrition and care practices for all adolescent girls and women, while catering to the unique nutritional needs of pregnancy and breastfeeding and prioritizing the most vulnerable.^{31, 215}

Within the food system, fortified foods have the capacity to reach entire populations, including adolescent girls and women, with vital micronutrients to close nutrient gaps in dietary intake (see *Spotlight 12*). However, in our sample of 100 low- and middle-income countries, we found that one in four countries did not have legislation for mandatory salt iodization (24 per cent) and more than half did not have mandatory wheat flour (55 per cent) or vegetable oil (76 per cent) fortification. Even where fortification is mandatory, the effectiveness of fortification programmes is sometimes compromised due to weak monitoring of compliance and inadequate enforcement and inequitable access to fortified products.^{216, 217}

While governments take steps to increase access to adequately fortified foods, they must also strengthen food systems to supply other nutritious foods at affordable prices, including fruits and vegetables, pulses, and animal-source foods (dairy, eggs, poultry, meat and fish). At the same time, it is crucial to stem the rise in the marketing and consumption of ultra-processed foods, which are often low in micronutrients and high in unhealthy content (salt, free sugars and fat), but are inexpensive and offer convenience for time-strapped mothers.⁷² Intensive marketing by a powerful transnational food industry, combined with the lack of legal and fiscal measures to discourage consumption, has led to rapidly growing sales of ultra-processed foods in Africa, Asia, Latin America and the Middle East^{105, 106, 218} – regions that can least afford to contend with malnutrition.

The education system has a key role to play in keeping adolescent girls in school as long as possible so they are better able to participate in the decisions that most affect their lives, earn higher incomes, and build better futures for themselves and their families. In addition, schools can provide a platform to reach adolescent

girls – and boys – with nutritious school meals, essential nutrition services, such as iron and folic acid/multiple micronutrient supplementation and deworming prophylaxis to prevent anaemia, and can help build a new generation of nutrition-literate girls and boys.³¹

Poverty, vulnerability and social exclusion lie at the core of poor diets and make it harder for adolescent girls and women to access essential nutrition services and adopt positive practices – which is why social protection is so crucial.¹⁷² Yet, there are substantial gaps in the adequacy and coverage of social protection policies and programmes, especially in low-income countries. Fewer than one-third of countries (31 per cent) provide adequate maternity leave; less than half of adolescent girls and women (45 per cent) giving birth receive maternity benefits; and less than a quarter of businesses surveyed by UNICEF (24 per cent) provide support to employees to access childcare.^{116, 177} Social assistance programmes only reach 21 per cent of the poorest households in low-income countries, compared with 73 per cent in high-income settings,¹⁸⁰ despite the growing evidence that these programmes can improve women's dietary diversity and their consumption of nutritious foods.^{181–184}



While the stakes are higher for those who become pregnant, all adolescent girls and women have a fundamental human right to good nutrition throughout the life-course, regardless of whether they become mothers

SPOTLIGHT 12

THE FOOD INDUSTRY AS AN ESSENTIAL PROVIDER OF FORTIFIED FOODS FOR ADOLESCENT GIRLS AND WOMEN

Micronutrient deficiencies are highly prevalent in low- and middle-income countries. They affect more than two in three women and one in three children under 5 years, largely because nutritious diets are not available, affordable or accessible.⁵⁴

Large-scale food fortification (LSFF) is a food system approach used in many countries throughout the world to prevent micronutrient deficiencies. It involves the addition of essential micronutrients to staple foods and condiments during processing, such as iodine to salt, iron and folic acid to cereal flours and vitamin A to vegetable oil.

The advantage of LSFF is that it has the potential to reach entire populations. It helps improve pre-conception nutrition in adolescent girls and women, which is crucial because up to half of pregnancies are unplanned. However, fortified foods may not supply adequate quantities of all micronutrients for those with high micronutrient needs, such as pregnant women and young children, and in most contexts, they should be used in combination with other food-based strategies and multiple micronutrient supplementation.

LSFF has been used safely and effectively in high-income countries since the early twentieth century and is becoming increasingly relevant in low- and middle-income countries, especially where a high proportion of households rely on centrally processed foods.

A recent systematic review and meta-analysis examined the real-world impact of LSFF on improving micronutrient status and functional

health outcomes in low- and middle-income countries.²¹⁹ It found that LSFF increases blood concentrations of essential micronutrients and has a positive impact on several functional outcomes including a 34 per cent reduction in anaemia from improved iron stores in adolescent girls and women of reproductive age, and a 41 per cent decrease in the odds of neural tube defects due to reductions of folate deficiency in adolescent girls and women of reproductive age. In addition, UNICEF's analysis has shown that salt iodization has reduced the number of newborns suffering from iodine deficiency during foetal development by a remarkable 20.5 million annually.²²⁰

However, the coverage and quality of LSFF is uneven in low- and middle-income countries.^{216, 217} UNICEF has amassed considerable experience in understanding the factors and approaches that increase the likelihood of effective LSFF.

Through its work in Europe and Central Asia, UNICEF has uncovered the success factors for engaging the salt industry in reducing iodine

deficiency.²²² UNICEF involved all segments of the salt industry, from producers, importers, wholesalers, retailers to processed food companies, and positioned them as central players in national iodization efforts. Understanding how these various segments operate and what governs their decision-making has been vital to effective engagement. Mandatory government legislation on salt iodization created a "level playing field" that encouraged the compliance of salt producers. Salt iodization equipment and supplies were initially provided free of charge. While this was helpful in kick-starting salt iodization, the responsibility for purchasing equipment and supplies was later transferred to the salt industry to encourage greater ownership and sustainability. Dialogue between the government and salt industry players allowed challenges to be identified and worked through, and where possible, the role of the salt industry was publicly acknowledged to encourage others to join the national efforts towards universal salt iodization.



The evidence on what works to make social protection policies and programmes more responsive to the needs of adolescent girls and women is growing, including how they can be linked with the systems and services that are relevant to nutrition.^{200, 223, 224} In *Spotlight 13*, we share three examples from sub-Saharan Africa, including a public works programme in Ethiopia that accommodates the nutritional needs of pregnant and breastfeeding women; a cash transfer programme in Ghana that provides pregnant women and mothers of children under one year of age with access to free health insurance; and a social insurance scheme in South Africa that is available to domestic workers and other informal workers, many of whom are women.

It is essential that social protection programmes are responsive to escalating needs during humanitarian and financial crises by having the capacity to increase coverage (reaching more adolescent girls and women in need), ensure adequacy (achieving greater levels of financial protection) and expand the comprehensiveness of assistance (linking with a greater range of benefits or services such as food assistance, nutrition supplements, and nutrition counselling).

Policies and programmes need to act in synergy across systems because the impact of positive actions in one system may be negated by a lack of action in other systems. For example, interventions to counsel women on dietary practices (health system) may have little or no impact unless women also have physical access to nutritious foods throughout the year (food system) and are able to afford these foods (food and social protection systems). These linkages highlight why it is so important that countries purposively engage multiple systems to improve women's nutrition: yet our analysis of eight policies across the food, health, and social protection systems found that only 8 per cent of countries have all policies.

The nutrition governance system of a country plays a crucial role in defining the policy and programme actions that each system needs to take to address the context-specific barriers to women's nutrition, to leverage the resources and actors needed to implement the actions, to coordinate the response, and to track progress. Initiatives such as the Scaling Up Nutrition Movement have been instrumental in supporting countries to strengthen nutrition governance. But this report shows that there is a clear and urgent need to bring adolescent girls' and women's nutrition to the forefront within country mechanisms for priority setting, resource mobilization, coordination, monitoring and evaluation, and accountability mechanisms across systems.

Compounding crisis upon crisis

The COVID-19 pandemic, followed by the war in Ukraine, have greatly intensified the challenges that families are facing in meeting their food and nutrition needs, especially those living in countries already grappling with conflict, instability and climate change.^{52, 75} These intersecting crises are driving food and fuel prices to new levels, overwhelming household coping strategies and pushing families deeper into poverty and food insecurity.^{52, 59, 75, 225}

The alarm bell has already been sounded for child nutrition. Recent analysis predicts that a 5 per cent increase in the real price of food will increase the risk of wasting in children under 5 years by 9 per cent;²²⁶ and in the 15 countries most affected by the food and nutrition crisis, UNICEF estimates that one child becomes severely wasted every 60 seconds.²²⁷ These shocking statistics demand worldwide attention and action. But we must not lose sight of the fact that behind every child with wasting, there is a mother whose nutritional status is inextricably linked to that of the child.

As the global food and nutrition crisis continues to unfold, our findings from countries affected by conflict, instability, climate change and the COVID-19 pandemic show that there are reasons to be greatly concerned about the outlook for adolescent girls' and women's nutrition.^{41, 42, 59}

First, adolescent girls and women were already struggling to access nutritious diets before the onset of the pandemic and the war in Ukraine. For example, fewer than one in three girls and women have diets meeting MDD-W in fragile countries, including Afghanistan, Burkina Faso, Burundi and the Sudan; and globally, underweight and anaemia were barely falling in women.

Second, adolescent girls and women experience greater hardship during crises than boys and men due to discriminatory gender norms. They lack resources, social capital and bargaining power to cope with shocks, and are weighed down by domestic and child-caring burdens.^{75, 79} They are also more likely to sacrifice their own food intake to make more food available for other family members.⁹⁷

In the year following the onset of the COVID-19 pandemic, the gender gap in food insecurity more than doubled,⁷⁵ confirming predictions that the pandemic has hit women much harder than men.⁹¹ Our research in Botswana, Eswatini, Kenya, Indonesia, Lesotho, Malawi, Myanmar and Uganda found that the quality of women's

diets degraded as they struggled to cope with falling income during the pandemic and were exposed to greater food insecurity.^{48–50} More recent evidence from the Niger shows that women’s dietary diversity has fallen substantially since 2020.

Third, nutrition programming in humanitarian contexts focuses on children under 5 years of age; where programmes do include adolescent girls and women, they tend to only include those who are pregnant or breastfeeding. Gaps in data on the scale of undernutrition in adolescent girls and women and in global guidance and national policies discourage governments and humanitarian actors from mobilizing funds and taking action to deliver nutrition services to adolescent girls and women, especially when there are many competing priorities.

And fourth, we have evidence that acute malnutrition is on the rise among the most vulnerable girls and women. The 25 per cent increase in the estimated number of acutely malnourished pregnant and breastfeeding women since 2020 in 12 countries that are hard hit by the current food and nutrition crisis is the signal that we must act now.

Data and evidence gaps

Important progress has been made to strengthen the availability of data on adolescent girls’ and women’s nutrition. WHO has an online tracking tool that allows stakeholders to monitor progress towards the two World Health Assembly targets on women’s nutrition (anaemia and low birthweight). UNICEF has developed the first global database on women’s nutrition, which compiles data on nutrition outcomes, including underweight and anaemia, and allows regional and global estimates and trends to be generated. The ongoing Demographic and Health Survey Phase 8 includes several new indicators on adolescent girls’ and women’s nutrition, including MDD-W, consumption of sugar-sweetened beverages and unhealthy foods, and the coverage of nutrition counselling during pregnancy.²²⁹ NutriDash, UNICEF’s online platform to track the status of policies and programmes to improve the nutrition of children, adolescents and women in more than 100 low- and middle-income countries, is now in its fifth year.

Despite these positive developments, our findings show that countries still lack crucial data on the current status of adolescent girls’ and women’s nutrition, their dietary intake, the coverage of essential nutrition services and the uptake of positive nutrition and care practices.¹⁹⁸ The lack of a globally recommended indicator on short

height explains why there are insufficient data on this form of undernutrition, and a recent synthesis of data on micronutrient deficiencies in adolescent girls and women was only able to use data from 19 countries.⁵⁴

More than one in three countries are not monitoring the coverage of nutrition counselling (36 per cent) and iron supplementation (60 per cent) through routine information systems; and there are important gaps in our understanding of how to improve women’s diets, nutrition services and dietary practices at scale, with quality and equity.^{190, 200} Most high-quality evaluations and implementation research on the impact of adolescent girls’ and women’s nutrition services and interventions are based on small-scale programmes, examine outcomes for children and not mothers, or focus only on those who are pregnant or breastfeeding.^{213 194, 197, 213, 230}

Data and evidence are vital for progress on adolescent girls’ and women’s nutrition. Without data and evidence, we cannot bring visibility to the true scale of the nutrition problem and generate demand for faster and more effective action. We cannot uncover the context-specific barriers that persist or identify effective ways to improve access to nutritious diets and services and improve practices. And we cannot monitor progress to hold responsible parties to account and take remedial action where progress is not on track. As we take actions to transform systems to reduce malnutrition among women, we must also invest in data, studies, research and evaluations to help design, implement and assess the policy and programme response as one of the pathways to faster progress on adolescent girls’ and women’s nutrition.



We must not lose sight of the fact that behind every child with wasting, there is a mother whose nutritional status is inextricably linked to that of the child



SPOTLIGHT 13

MAKING SOCIAL PROTECTION PROGRAMMES RESPONSIVE TO WOMEN'S NUTRITION NEEDS

Most social protection programmes include some form of income transfer to vulnerable individuals or households. While these programmes can help improve nutrition in contexts where poverty limits access to nutritious diets, they may not impact women's nutrition unless women are a specific focus of the programme and women's nutrition needs are met.²³¹ These three country case studies from Ethiopia, Ghana and South Africa examine how social protection programmes have been intentionally designed to improve outcomes for women.

Ethiopia
Making public works deliver for women

The Rural Productive Safety Net Programme V (2021–2026) is Ethiopia's largest national social safety net programme. It currently targets 8 million extremely poor rural households with regular cash or food assistance. Households with labour capacity receive this assistance in exchange for public works, such as the construction of roads or bridges.

Design elements have been included in the programme to improve nutrition outcomes for participating women.²³² First, work conditions have been adapted to

meet women's needs, including a reduction in the physical workload. If women enrolled in the programme become pregnant, they are excused from public works until their child's first birthday, while continuing to receive the cash or food transfers. This provision aims to support a healthy pregnancy and positive birth outcomes by reducing the physical burden on pregnant women. It also frees their time during the first year following delivery to care for themselves and their infants.

Second, with support from the World Bank and UNICEF, makeshift childcare centres are being established at public

works sites to care for preschool children, once mothers return to work. The childcare centres are staffed by participating mothers (as their contribution to public works) and aim to provide a daily nutritious meal and early childhood education.

Third, some women are identified as 'nutrition champions' and assist government Health Extension Workers as their contribution to public works. They provide nutrition advice and support to community members – a role which helps to develop the capacity of the women themselves.

Ghana

Cash transfers, health insurance and decision-making power for improved nutrition

Established in 2008, the Livelihood Empowerment Against Poverty (LEAP) Programme is Ghana's flagship social cash transfer programme to alleviate short-term poverty and encourage long-term human development among poor and vulnerable households.²³³

The programme initially targeted poor households with orphans, vulnerable children, the elderly and people with disabilities. Recognizing that early childhood is a key development window with long-term implications for health and well-being, the Government introduced a new component in 2015, "LEAP-1000", to reach poor households with pregnant women and children under 12 months of age.

Under LEAP-1000, women receive cash payments every two months. By putting cash directly in the hands of women and making these transfers unconditional, the programme recognizes that women take rational decisions on how to use resources to improve nutrition and care outcomes for their children and themselves. Women and their households are also entitled to free health insurance through the National Health Insurance Scheme, which gives them access to outpatient and inpatient services, including maternal health services, and frees up cash that would otherwise be used to cover health expenses.

An evaluation of LEAP-1000 found that households were better able to diversify their diet and eat more meals per day than comparison households.²³⁴ Women also felt better able to procure food and feed their families, and they experienced less stress related to food. In addition, the programme increased the likelihood of pregnant women receiving antenatal care by 11 percentage points.

South Africa

Social insurance to protect informal workers

Informal workers are often not eligible for social insurance schemes, even though they tend to be more economically and socially vulnerable than formal workers. To address this problem, the Government of South Africa established a contributory Unemployment Insurance Fund

to provide income protection to those who work more than 24 hours per month, including informal workers who would otherwise be excluded from social insurance.²³⁵ Both employer and employee each contribute 1 per cent of the salary. Contributors can claim unemployment benefits, maternity, paternity and adoption benefits and illness benefits.

The Fund is innovative because it permits multiple employer contributions for a single employee, which has allowed part-time domestic workers with several employers to access the scheme. Many of these domestic workers are women, who, for the first time, are able to gain access to social insurance benefits to help balance paid work and unpaid care work responsibilities, and access financial support in times of maternity, illness or unemployment.



4 | OUR RECOMMENDATIONS

THE ROUTE OUT OF THE NUTRITION CRISIS





The global crisis of nutrition in adolescent girls and women has been overlooked for far too long.

This lack of attention has undermined efforts to end child malnutrition, achieve gender equality and well-being for all girls and women, and secure their right to live with dignity. With the mounting pressures on food and nutrition security, governments and their development and humanitarian partners – national and international – must take the lead in bringing about much faster progress for adolescent girls’ and women’s nutrition.

Undernutrition, micronutrient deficiencies and anaemia are not inevitable and can be prevented, even among girls and women living in the most challenging circumstances.

National and subnational governments – together with civil society organizations, development and humanitarian partners, media, research and academia and the private sector – must act now to leverage the policies, programmes, resources and actors of the food, health and social protection systems to deliver nutritious and affordable diets, essential nutrition services and positive nutrition and care practices for adolescent girls and women everywhere.^{31, 215}

And, as this report makes clear, they must also build the social and economic empowerment of adolescent girls and women to tackle the deep-seated inequalities and inequities that perpetuate poor nutrition for millions of girls and women across the world.²³⁶

Nutrition governance for adolescent girls and women

Nutrition governance refers to the political, financial, social and public and private sector actions needed to respect, protect and fulfil adolescent girls’ and women’s right to nutrition. Progress on nutrition is seen in contexts where there is strong and effective leadership – combined with evidence and data – to build commitment for policies and programmes, mobilize financial resources, track progress and hold governments and other duty-bearers to account. Two actions are crucial to strengthen nutrition governance:

- **Build bolder leadership to mobilize institutions, leverage resources and galvanize actions for adolescent girls’ and women’s nutrition more effectively.** Governments and their partners must identify leaders with the mandate, motivation and resources to act for adolescent girls’ and women’s

nutrition. These leaders must work collaboratively to build much greater recognition of the urgent need to improve girls’ and women’s nutrition, and mobilize institutions, stakeholders and resources to close gaps in policies, programmes and services.

- **Harness data and evidence to inform policy and programme decisions and strengthen accountability for adolescent girls’ and women’s nutrition.** Governments and their partners must invest in surveys, research and evaluations to determine how to improve diets, nutrition services, and nutrition and care practices for adolescent girls and women, especially the most vulnerable. They must also set targets and track progress on these diets, services and practices, as well as nutrition outcomes, in girls and women.

Food systems and nutritious diets

With global attention on the challenge of ensuring food and nutrition security for all, it is vital that the nutrition rights of adolescent girls and women are not left behind. We must transform global and local food systems in ways that respond to the dietary needs of adolescent girls and women. Two actions are crucial to leveraging the food system to better protect, promote and support adolescent girls’ and women’s right to adequate food and nutrition:

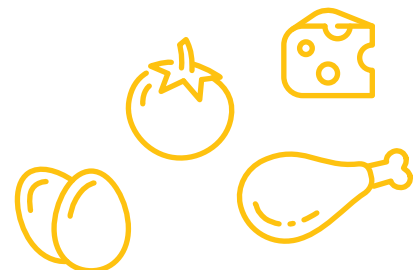
- **Improve access to affordable and nutritious foods – including fruits, vegetables, eggs, fish, meat and fortified foods – for all adolescent girls and women.** Governments must provide incentives and subsidies to encourage farmers, the food industry and retailers to enhance the supply and affordability of nutritious foods. Governments must also enact and enforce mandatory fortification of staple foods and condiments – including cereal flours, rice, cooking oil and salt – with iron, iodine, vitamin A and other micronutrients in all contexts where nutrient deficiencies are common among girls and women.²³⁷
- **Implement policies and mandatory legal measures to protect adolescent girls and women from nutrient-poor and unhealthy ultra-processed foods and beverages.** Governments must use a combination of policies and legal measures – including marketing restrictions, compulsory front-of-pack labelling and taxation – to compel the food industry to reduce the salt, sugar and fat content of foods and beverages and to dissuade adolescent girls and women from purchasing and consuming nutrient-poor ultra-processed foods.²³⁸



Nutrition services and social protection programmes

Health, education and social protection systems play a lead role in delivering services to improve adolescent girls' and women's nutrition. These systems must ensure that systemic barriers to delivering services at scale and with equity are addressed, particularly among the most disadvantaged girls and women. Two actions are crucial to mobilize the full potential of the health and social protection systems to improve adolescent girls' and women's nutrition:

- **Improve access to essential nutrition services for girls and women before and during pregnancy and while breastfeeding, including in humanitarian crises.** Governments must improve the coverage of and equity in women's access to essential nutrition services by expanding delivery platforms, including through community- and school-based services. Free access to multiple micronutrient supplementation programmes for the prevention of anaemia in women – particularly the most nutritionally vulnerable – is paramount, including in humanitarian settings.
- **Expand access to social transfer programmes for adolescent girls and women, including in fragile settings and humanitarian crises.** Governments and partners must use social transfer programmes (cash, vouchers and/or in-kind transfers) to improve the access of adolescent girls and women to nutritious and diverse diets, including in fragile and humanitarian settings. These programmes must have the capacity to increase coverage and financial protection among the most vulnerable, while improving nutrition agency among girls and women.



Nutrition and care practices

Adolescent girls and women need access to accurate information, counselling and support to take decisions and actions to improve their nutrition. This includes advice on the types, diversity and amounts of food they should eat to meet their dietary requirements; appropriate levels of physical activity; and why and how to take dietary supplements. Two actions are crucial to support adolescent girls, women and their family members on improving nutrition and care practices:

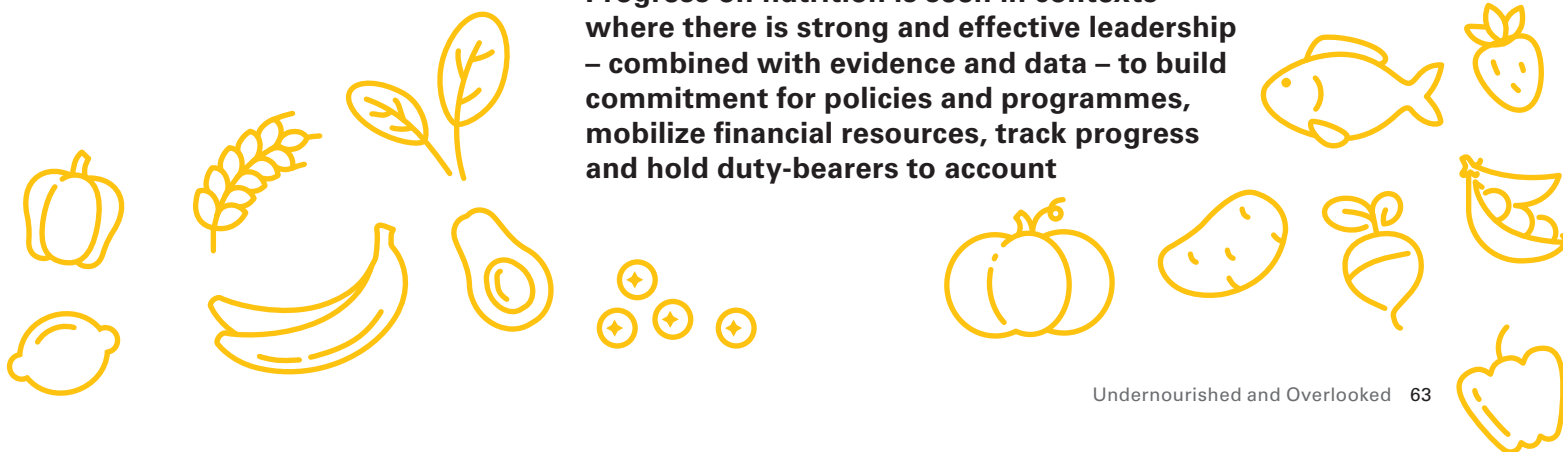
- **Use multiple communication channels (print, broadcast, social and digital media) to reach adolescent girls, women and the general public with advice on nutrition and care practices.** Governments, development partners, the media and the private sector must intensify efforts to communicate the vital importance of nutritious diets and micronutrient supplements for adolescent girls and women and increase the desirability of nutritious foods. Public sector-led communication strategies must strongly discourage the consumption of nutrient-poor ultra-processed foods.
- **Strengthen the coverage and quality of counselling to help adolescent girls, women and their family members to make decisions and take action to improve nutrition.** Governments and their partners must invest in the recruitment, training, motivation and supervision of community-based workers to deliver quality counselling to improve adolescent girls' and women's diets and encourage the utilization of nutrition services.²³⁹ Programmes must engage with influential family members, including men, to shift underlying harmful norms and practices that impact on nutrition.

Social and economic empowerment

When adolescent girls and women have the power to make decisions affecting their lives and have adequate access to economic resources, they are more empowered to access the nutritious diets, services and care they need. Policies and programmes are important to protect nutrition rights but must be combined with actions to address underlying discriminatory social and gender norms. Two actions are crucial to transform the social and economic empowerment of adolescent girls and women:

- **Implement gender-transformative policies and legal measures that strengthen the social and economic empowerment of adolescent girls and women.** Governments must ensure that adolescent girls and women are legally protected from child marriage and have equal rights to inheritance and asset ownership as boys and men. Government and businesses must eliminate gender discrimination in the workplace and implement maternity protection and family-friendly policies that help both women and men to manage paid work and child-caring responsibilities.^{240–242}
- **Accelerate the elimination of discriminatory gender and social norms to enable adolescent girls and women to realize their rights to food and nutrition.** Governments, development partners, civil society organizations, academia, media and the private sector must join forces to promote equitable social norms, including an end to child marriage; the promotion of adolescent girls' and women's agency and autonomy to take decisions that affect their nutrition and the nutrition of their children; and the equitable sharing of food, household resources and domestic and care work among women and men.

Progress on nutrition is seen in contexts where there is strong and effective leadership – combined with evidence and data – to build commitment for policies and programmes, mobilize financial resources, track progress and hold duty-bearers to account



Annex

Notes on figures

Population weighted global and regional estimates

All regional and global population weighted estimates were weighted using the annual population of females by age interpolated datasets from the United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects (UNPD-WPP): The 2019 Revision.

Depending on the indicator, population weighted averages for any given region were generated by (a) multiplying the estimates of an indicator for each country with available data in a specific time period by the number of adolescent girls and women in that country in the age range associated with the indicator; (b) summing all of the country-specific products; and (c) dividing the sum of the products by the total population of adolescent girls and women in the respective age range in all countries with data in the specific time period.

The population coverage (i.e., the share of the population for which an estimate is available in the UNICEF global database) was calculated by dividing the population of adolescent girls and women in a given age range in countries with data by the total population of adolescent girls and women in that age range in each respective region. The standard used for minimum population coverage (i.e., minimum population coverage required to include a regional estimate in the UNICEF global database) is 50 per cent.

Notes on individual figures

Figure 2: Percentage of adolescent girls and women aged 15–49 years with short height, by UNICEF region, 2020

Estimates are population-weighted and based on a subset of 37 countries with a recent Demographic and Health Survey conducted between 2014 and 2020.

Figure 7: Percentage of adolescent girls and women aged 15-49 years with (a) underweight, (b) short height (<150 cm), and (c) anaemia, by place of residence, adolescent girls' and women's educational status and household wealth quintile, 2020

The figure presents unweighted aggregates of the various background characteristics. Estimates are based on a subset of 39 countries with a recent Demographic and Health Survey conducted between 2014 and 2020.

Figures 8a and 8b: Prevalence of underweight in women aged 20–49 years, low birthweight and stunting in children aged 0–59 months, by UNICEF region

Prevalence thresholds used for this figure are provided below.

Labels	Underweight in women	Low birthweight	Child stunting
Low	<10%	<10%	<10%
Medium	10–<20%	10–<15%	10–<20%
High	≥20%	≥15%	≥20%

For the purpose of this figure, the prevalence threshold categories of “very low” and “low” have been combined and presented as “low”. Similarly, the categories of “high” and “very high” are combined and presented as “high”.

Figure 9: Age of stunting onset among children stunted before 2 years of age

Earlier analysis by the Knowledge Integration Child Growth Consortium measured the percentage of children experiencing incident stunting at birth and in 3-month age categories for children aged 0–24 months.⁶⁶ UNICEF and the Knowledge Integration Child Growth Consortium reanalysed the dataset to only include children with length measurements available for all three age periods of interest (at birth or within 7 days of birth; between 8 days and <6 months of age; from 6 to 24 months of age). The final dataset comprised growth data on 12,335 children from 14 longitudinal cohort studies in four countries in South Asia (Bangladesh, India, Nepal and Pakistan) and four countries in Africa (the Gambia, the United Republic of Tanzania, South Africa and Zimbabwe). To determine the timing of stunting onset, a child was classified as

a new incident case if her or his length-for-age z-score dropped below -2 standard deviations for the first time within a specified age period. Incidence proportion was determined for the three age periods.

The included studies and countries were not inclusive of all countries in the two regions. However, the consistency between the estimates of incidence proportion and the prevalence of low birthweight and child stunting in the two regions suggest that our results have reasonably good external validity.

Figure 10: Significant determinants of stunting in children aged 6-23 months in Bangladesh, India, Pakistan and Nepal

The figure presents adjusted odds ratios and 95 per cent confidence intervals of risk factors for stunting in children aged 6–23 months. The analysis used data from a pooled sample of children living in Bangladesh, India, Pakistan and Nepal. The reference groups for the adjusted odds ratios are as follows:

- Household wealth quintile: highest wealth quintile
- Mother's height: height ≥ 155 cm
- Mother's body mass index: body mass index ≥ 25 kg/m²
- Mother's age at marriage: age ≥ 18 years
- Maternal education: secondary or higher education
- Child's dietary diversity: minimum dietary diversity

Figure 17: Percentage of adolescent girls and women aged 15–49 years who consumed iron supplements for at least 90 days during their most recent pregnancy, by UNICEF region, wealth quintile, place of residence and adolescent girls' and women's education status, 2020

Estimates are population-weighted and based on a subset of 44 countries with a recent Demographic and Health Survey conducted between 2014 and 2020. To meet adequate population coverage, estimates for East Asia and the Pacific exclude China.

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