Ready to learn and thrive

School health and nutrition around the world

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SHORT SUMMARY

Unlocking the potential of every learner through school health and nutrition

Nearly every country around the world is investing in their children and adolescents through school health and nutrition programmes. Governments recognise that these programmes are a smart investment: they improve students' health, nutrition and learning outcomes, and deliver big development gains to their communities and countries.

This ground-breaking report brings together, for the first time, multiple data sources to provide a global overview of school health and nutrition policies and programmes, showing that these are a practical and affordable way to support learners' well-being and development. For example, more than 100 countries have school vaccination programmes, one in two primary schoolchildren receives school meals, and almost every country includes education for health and well-being in its curriculum.

Yet, many children are missing out, especially in the poorest countries. As the world is facing a global food crisis and struggling with the devastating effects of the COVID-19 pandemic, this report urges governments and development partners to put learners' health and well-being at the core of the education agenda and to improve the quality and reach of these programmes, so that all children and adolescents can learn and thrive. This requires implementing comprehensive programmes that are coordinated across sectors and sustained by increased policy and financial commitments.

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"Since wars begin in the minds of men and women it is in the minds of men and women that the defences of peace must be constructed"

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Foreword

Every child has the right to quality education, health, food and adequate nutrition. Every child has the right to thrive and realize their full potential. Further, the education, health and nutrition of young people are not only rights and ends in themselves; they are an investment in a country's future and in the capacity of its people to lead productive and fulfilling lives.

These rights are interconnected. Many boys and girls simply cannot go to school or take full advantage of educational opportunities due to ill health, hunger, poverty and marginalization. These are serious roadblocks in efforts to fulfil the fundamental right to education for all. Although substantial progress has been achieved in recent years, the challenge is bigger today than ever.

School closures in response to the COVID-19 pandemic, which affected more than 1.6 billion students in almost every country, intensified the learning crisis, with the greatest consequences for the most vulnerable. With school closures, students also lost access to critical health and nutrition support, including school meals — a sharp reminder that schools provide much more than education. Dropout has increased, along with early marriage, early pregnancy and mental health issues. And now, the unfolding global fuel and food price crises are pushing millions of children into hunger and poverty around the world.

This report shows that school health and nutrition programmes are a feasible, affordable and effective response to these unprecedented challenges. They are one of the smartest investments governments can make in the education, health and well-being of their children and in the future of their nations.

The report brings together data from more than 44 sources to give an overview of school health and nutrition policies and programmes globally. The findings clearly show a positive trajectory over the past twenty years. Governments around the world, from high- to low-income countries, are already investing in their children and young people through school health and nutrition — one of the most widely implemented public policies. The data and country examples show that there are many ways in which schools, as a system, can support learners' health and well-being. These include the provision of school meals and other health and nutrition services, such as vaccinations, deworming and psychosocial support; health education that provides the knowledge, attitudes and skills to enable learners to lead healthy lives; and safe and inclusive learning environments that promote health and well-being. This report tells us that all these elements need to be combined.

However, clearly there is a long way to go. One of the report's key messages is that countries and partners need to urgently step-up investments in school health and nutrition so that every school constantly builds its capacity to protect and promote the health and well-being of its students. Programmes must be comprehensive, implemented at scale and sustained by political and financial commitments. They also need to address equity, gender equality and inclusion and prioritize those most at risk of being left behind.

As a conclusion to the Transforming Education Summit in September 2022, the UN Secretary General's Vision statement on transforming education highlighted how critical it is to develop students' ability to lead a healthy life and to support learners' nutrition, physical and mental health, including through the expansion of school counselling and school meals. Countries and partners at the Summit committed to supporting the health, nutrition and psychosocial well-being of every teacher and child to ensure recovery and accelerate learning. We, at UNESCO, are also convinced that learners' health and well-being are a cornerstone of the renewed vision for the education that we need and must have.

The education sector cannot achieve this vision alone. Addressing learners' needs holistically requires strong partnerships and active engagement from different sectors at all government levels, as well as from students, parents and communities. Only by aligning and increasing our efforts, through shared leadership, will we be able to ensure all children and adolescents are in school and have access to the comprehensive programmes they need. This means increasing funding and support for health and nutrition along with much needed funding for education.

Future learning and well-being, and decades of economic and social gain are at stake. UNESCO and the partners behind this report are committed to supporting governments to step up school health and nutrition, together, to unlock the potential of learners — in all their diversity — to thrive.

Stefania Giannini
Assistant Director-General for Education, UNESCO

Catherine Russell
Executive Director, United Nations Children's Fund

School health and nutrition programmes can make an enormous difference in children's lives and help to transform education by increasing school enrolment and attendance, promoting inclusion and equity, and, most importantly, supporting learning. But millions of children missed out on these critical programmes during COVID-19 school closures — and millions are still missing out.

This report highlights the urgent need to improve, scale up and sustain school health and nutrition policies and programmes. These programmes are effective, cost-effective, and can be adapted in all settings to reach every child. UNICEF is working with our partners at UNESCO and others around the world to support governments to expand access to these critical programmes, and, in doing so, ensure that every child is healthy, protected, nourished and ready to learn.

David Beasley
Executive Director, World Food Programme

This inter-agency report on school health and nutrition provides critical information as the world grapples with the huge damage that COVID-19 and the global food crisis continue to inflict on our children and their education. The pandemic closed schools worldwide and deprived millions of the most vulnerable children of access to the only nutritious meal they receive each day. Now that schools have reopened, many are underfunded, overstretched and struggle to support children from homes that are poorer and more food insecure than ever. As this report highlights, school health and nutrition programmes — including school meals — are an invaluable safety net for the most vulnerable families. They urgently need to be scaled up to help protect an entire generation of children and keep them in education.

Dr Qu Dongyu
Director-General, Food and Agriculture Organization

The Food and Agriculture Organization is pleased to contribute to the first comprehensive report on the status of school health and nutrition around the world. Linking education and agrifood systems through integrated school health and nutrition programmes can advance nutrition, education and health simultaneously. The current evidence gaps and implementation challenges highlighted in this report present an opportunity for our organization to better target its country support and strengthen our normative guidance, in line with our mandate of food security and healthy diets for all schoolchildren, farmers and adolescents.

Charles North
Acting Chief Executive Officer, Global Partnership for Education

Good health and nutrition are essential for children's learning, as well as their broader well-being. School feeding can help overcome barriers that keep marginalized children out of school. That is why ensuring schools are safe, healthy and inclusive is a priority for the Global Partnership for Education. Many of our partner countries have school health and nutrition policies and programmes in place, and this report shows how important and effective they can be. These policies will be of great use to governments when considering how they can do more to promote health and nutrition in and through schools.

Dr Tedros Adhanom Ghebreyesus
Director-General, World Health Organization

The science is clear: investments in health and education deliver mutually reinforcing benefits. This report shows the progress we, as a global community, have achieved in promoting school health. It is our hope that it will facilitate a multisectoral, multisystem approach to improve children's learning outcomes through investments in health and well-being. The report provides strong evidence that an enabling environment for children and adolescents can be sustained through education systems that promote health. We are hopeful that governments will demonstrate their commitment to the health and well-being of children and adolescents by making every school a health-promoting school.

Professor Donald Bundy
Director of the Research Consortium for School Health and Nutrition

This report is an outstanding example of UNESCO's leadership on this intersectoral issue, and is the most comprehensive overview available of the current status of school health and nutrition programmes worldwide. The analysis indicates that national programmes to address health and well-being through school platforms remain fragmented and inadequate — and even more so as a result of the school closures due to the COVID-19 pandemic. But the analysis also shows that nearly every country in the world has adopted a formal policy on school health and nutrition, perhaps demonstrating that governments now recognize the vital importance of investing in the learner as well as in their learning. The analysis provides further evidence that looking after the well-being of school children and adolescents — especially of the poorest and most vulnerable — is among the most cost-effective and transformative investments to improve learning outcomes, strengthen human capital, and build resilient economies.

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Acronyms

ASFE	Annual Survey of Formal Education
AU	African Union
AUC	African Union Commission
AUDA-NEPAD	African Union Development Agency
CSE	Comprehensive sexuality education
EMIS	Education Management Information System
ESPAD	European School Survey Project on Alcohol and Other Drugs
FAO	Food and Agriculture Organization of the United Nations
FRESH	Focusing Resources on Effective School Health
GAMA	Global Action for Measurement of Adolescent Health
GCNF	Global Child Nutrition Foundation
GINA	Global Database on the Implementation of Nutrition Action
GNPR	Global Nutrition Policy Review
GPE	Global Partnership for Education
GSHS	Global School-based Student Health Survey
G-SHPPS	Global School Health Policies and Practices Survey
GYTS	Global Youth Tobacco Survey
HBSC	Health Behaviour in School-age Children Survey
HCC	Healthy Caribbean Coalition
HGSF	Home-grown school feeding
HIV	Human immunodeficiency virus
HPS	Health-promoting schools
HPV	Human papillomavirus
JRF	Joint Reporting Form on immunization
JMP	Joint Monitoring Programme
Lao PDR	Lao People's Democratic Republic
LGBTI	Lesbian, gay, bi-sexual, transgender or intersex
LSHTM	London School of Hygiene and Tropical Medicine
LTK	Learner Treatment Kit
MHM	Menstrual health management
MICS	Multiple Indicator Cluster Survey
NCPI	National Commitments and Policy Instrument
NCD	Non-communicable disease
NGO	Non-governmental organization

NHC	National Health Commission
OECD	Organisation for Economic Cooperation and Development
OREALC	Regional Bureau for Education in Latin America and the Caribbean
PAHO	Pan American Health Organization
PC	Preventive chemotherapy
PCD	Partnership for Child Development
PIASCY	Presidential Initiative on AIDS Strategy for Communication to Youth
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
QPE	Quality Physical Education
SABER	Systems Approach for Better Education Results
SBHC	School-Based Health Centre
SDG	Sustainable Development Goal
SEL	Social and emotional learning
SHE	Schools for Health in Europe
SHN	School health and nutrition
SRH	Sexual and reproductive health
SRMNCAH	Sexual, reproductive, maternal, newborn, child and adolescent health
SR4S	Star Ratings for Schools
STI	Sexually transmitted infection
STH	Soil-transmitted helminths
TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WASH	Water, sanitation and hygiene
WFP	World Food Programme
WHO	World Health Organization
YLD	Years of life lost to disability

Glossary

Dating violence

Intimate partner violence — behaviour within an intimate relationship that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours in romantically involved but unmarried adolescents (WHO, 2020d).

Double burden of malnutrition

The coexistence of undernutrition alongside overweight, obesity and diet-related non-communicable diseases. Undernutrition manifests in four broad forms: wasting, stunting, underweight, and micronutrient deficiencies.

Health

A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1946).

Healthy diet

A health-promoting and disease-preventing diet, providing adequacy without excess of nutrients and avoiding the consumption of health-harming substances. The exact make-up of a diversified, balanced and healthy diet will vary depending on individual characteristics, cultural context, locally available foods and dietary customs. Unhealthy diets consist of food and drinks with high levels of energy, salt, sugar and fats, notably industrial trans-fatty acids.

Health-promoting school

A school that consistently strengthens itself as a safe, healthy setting for teaching, learning and working. This concept also relates to a whole-school approach that extends beyond the delivery of a health curriculum or discrete health services to create a school environment that positively influences health and well-being (WHO and UNESCO, 2021).

Home-grown school feeding

A school feeding model that is designed to provide children in schools with safe, diverse and nutritious food, sourced locally from smallholders (WFP, 2020).

Malnutrition

Malnutrition refers to deficiencies or excesses in nutrient intake, imbalance of essential nutrients or impaired nutrient utilization.

Mental health and psychosocial support

A composite term agreed on by the Inter-agency Standing Committee to describe any type of local or outside support that aims to protect or promote psychosocial well-being and/or prevent or treat mental disorder (UNICEF, 2021).

Menstrual health

A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle. Achieving menstrual health implies that women, girls, and all other people who experience a menstrual cycle, throughout their life-course, are able to access information; materials, facilities, and services; diagnosis, care and treatment for discomforts and disorders; and a positive and respectful environment and that they are able to decide whether and how to participate in all spheres of life (Hennegan, Winkler et al., 2021).

Non-communicable diseases

Also known as 'chronic diseases', non-communicable diseases (NCDs) tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors. The main types of NCDs are cardiovascular diseases (such as heart attacks and strokes), cancers, chronic respiratory diseases and diabetes. Children, adults and the elderly are all vulnerable to the risk factors that contribute to NCDs, whether from unhealthy diets, physical inactivity, exposure to tobacco smoke or the harmful use of alcohol (WHO, 2021e).

Social safety net

Noncontributory intervention designed to help individuals and households cope with chronic poverty, destitution, and vulnerability. Social safety net programs provide regular and predictable support to poor and vulnerable people. Examples include unconditional and conditional cash transfers, noncontributory social pensions, food and in-kind transfers, school feeding programs, public works, and fee waivers (World Bank, 2018).

School food environment

The school food environment refers to all the spaces, infrastructure and conditions inside and around school premises where food is available, obtained, purchased and/or consumed, taking into account the nutritional content of these foods. The environment also includes all the information available, promotion (marketing, advertisements, branding, food labels, packages, promotions, etc.) and the pricing of foods and food products. Food environments shape how accessible, affordable, desirable and convenient specific foods are (FAO, 2022).

School feeding

The provision of food to children or their households through school-based programmes. Such programmes can provide meals, snacks or conditional household transfers in the form of cash, vouchers or in-kind or take-home rations (WFP, 2020).

School health services

Services provided by a health worker to students enrolled in primary or secondary education, either within school premises or in a health service situated outside the school premises that has an official agreement with the school to provide health services to the school's students (WHO, 2021b).

School violence

School violence refers to all forms of violence that take place in and around schools, are experienced by students and are perpetrated by other students, teachers and other school staff. This includes physical, psychological and sexual violence and online and offline bullying.

Substance use

Substance use is the consumption of any psychoactive substance regardless of its controlled status, including hazardous and harmful use of psychoactive substances. In addition to drug use, this includes all forms of tobacco, alcohol, inhalants and new psychoactive substances (UNODC and WHO, 2018).

Whole-school approach

A whole-school approach is an approach that goes beyond learning and teaching in the classroom to pervade all aspects of the life of a school. It includes teaching content and methods, school governance, cooperation with partners and the broader community, and school management. It is a cohesive, collective, collaborative approach taken by a school community to improve student learning, behaviour and well-being and the conditions that support them (WHO and UNESCO, 2021).

Key messages

The health, nutrition and well-being of learners are key determinants of education outcomes and an integral part of quality education

- Investing in the health and nutrition of school-age children and adolescents optimizes investment in education. Healthy, well-nourished school-age children and adolescents learn better and are more likely to become healthy and productive adults. Many learners miss school or do not learn well while at school due to preventable or treatable illness and hunger.
- School health and nutrition (SHN) programmes improve education outcomes and are instrumental to tackle the global learning crisis by improving school attendance and retention and ensuring that all girls and boys are able to learn.
- School health and nutrition programmes are a priority in education sector efforts to recover from the COVID-19 pandemic, to get all learners back to school, and to build more equitable and effective education systems that are resilient to future pandemics and other shocks.

Almost every country in the world implements school health and nutrition programmes

- Globally, 90% of countries have some form of SHN programme — SHN is one of the most widely implemented approaches to delivering health and social protection.
- Many national programmes have already implemented practical and affordable interventions at scale. For example, more than 100 countries have school-based vaccination programmes, more than 450 million school-age children are dewormed every year in schools in low- and middle-income countries, and almost every country includes education for health and well-being in its curriculum.
- School feeding programmes are the world's most extensive social safety net, providing school meals to almost one in two of all children in primary school.

School health and nutrition programmes are a cost-effective investment, feasible in all settings, and deliver significant development gains

- Schools reach millions of children and adolescents. SHN programmes are a cost-effective investment, benefiting multiple sectors in addition to education and health, including social protection and, where school meals are linked to local procurement and support to local farmers, agriculture.
- For example, school feeding programmes deliver US$9 in returns for every US$1 invested, and school programmes that address mental health can potentially provide a return on investment of US$21.5 for every US$1 invested.
- Investing in SHN delivers immediate, lifelong and intergenerational benefits for individuals and contributes to the creation of human capital and the sustainable growth of nations.
- Despite this, only US$2 billion is invested each year in addressing the health needs of school-age children and adolescents, whereas some US$210 billion is spent on educating this age group in low- and lower-middle-income countries. The allocation of resources to improve the health and well-being of school-age children and adolescents must increase substantially to maximize investment in education.

School health and nutrition programmes promote inclusion and equity in both education and health, and more needs to be done to reach those who are missing out

- Well-designed SHN programmes can deliver the greatest benefits to the most disadvantaged children. They contribute to more equitable and inclusive access to education and health services for those most likely to miss out — girls, the poor, sick and malnourished, those living with HIV, children with disabilities, and those affected by crises.
- These programmes can promote gender equality by increasing girls' access to and retention in education which, in turn, can reduce the likelihood of early marriage and early pregnancy.
- Many of the children and adolescents who could benefit most are not reached because they are not in school or because of low programme coverage.

More attention must be paid to the school environment, which is critical to health and learning

- Access to safe water, sanitation and handwashing facilities in school is essential for learners to practice hygienic behaviours, to prevent illness, to enable girls to participate in school during menstruation, and to ensure that schools remain safe during disease outbreaks.
- However, almost one in three schools in the world does not have safe drinking water; one in three does not have adequate sanitation, and almost half have no handwashing facilities with water and soap. Children and adolescents in low-income countries are the least likely to attend schools that have these basic services.
- Emerging national data show that availability of infrastructure and materials suitable for students with disabilities, including accessible toilets, is low — particularly in lower-income countries.
- There is clear evidence that children and adolescents learn better in schools that are safe and inclusive, but school violence and bullying are common in all countries — affecting both girls and boys — and coverage of school-based violence prevention programmes is low.

Strengthening coverage and impact requires school health and nutrition programmes that are comprehensive, responsive to the context, and sustained by policy and financial commitments

- Significant expansion of school feeding programmes over the last decade, with more than 90% financed by national governments, shows what political commitment can achieve. This commitment needs to be extended so that all learners can benefit from the comprehensive SHN interventions that can improve their health and their ability to make the most of their education.
- Many countries have made efforts to integrate interventions — for example, most countries deliver school feeding together with other interventions — but, relatively few have adopted comprehensive approaches that are embedded in the education system.
- Effective and sustainable SHN policies and programmes also require stronger collaboration across sectors; adequate and sustained resources for implementation at school level; strong school leadership; increased emphasis on the quality of interventions; support for teachers and other school staff; active involvement of learners and engagement with parents and communities.
- School health and nutrition programmes need to adapt to respond to emerging issues that have a significant impact on the health and well-being of learners. More attention needs to be given to addressing school violence and bullying, the needs of learners with chronic conditions and disabilities, and the rise of mental health problems and overweight and obesity.

Executive summary

Good health, nutrition and well-being are essential to maximize educational potential. Healthy, well-nourished, happy children and adolescents learn better and are more likely to lead healthy and fulfilling lives. School health and nutrition programmes are a cost-effective and feasible way to deliver on this promise.

UNESCO has developed *'Ready to learn and thrive: School health and nutrition around the world'* in partnership with the United Nations Children's Fund (UNICEF), World Food Programme (WFP), Food and Agriculture Organization of the United Nations (FAO), Global Partnership for Education (GPE), World Bank and World Health Organization (WHO), with the support of the Research Consortium for School Health and Nutrition and UN-Nutrition Secretariat. Based on the most comprehensive and up-to-date data, this report provides the first overview of the extent to which countries have school health and nutrition (SHN) policies and programmes in place. It aims to encourage efforts to improve, scale up and sustain SHN and to provide a basis for monitoring progress.

What is school health and nutrition?

School health and nutrition aims to protect and promote the physical and mental health, nutrition, well-being and development of school-age children and adolescents and the wider school community through coordinated and comprehensive strategies, activities and services that are integrated and sustained within the education system (UNESCO, GPE et al., 2020). Essential elements include:

- **Policies and laws** that provide an enabling environment at national, subnational and school levels
- **Education for health and well-being** delivered through skills-based school curricula and extracurricular activities
- **A school physical and socioemotional environment** that is safe, inclusive, and conducive to health, well-being and learning
- **SHN services and school feeding programmes** that provide simple, safe and effective health interventions and healthy school meals.

SHN policies and programmes are by nature multisectoral; they require effective collaboration between the education and health sectors, but also food and agriculture, local development, finance, social welfare and other relevant sectors. An enabling policy and institutional environment, together with full integration into the education system are essential for sustainability. Other important elements include a well-trained and supported education and health workforce; interventions that address the health and well-being of teachers and other staff; active involvement of learners, and the engagement of parents and communities.

Data sources and limitations

This report is based on the best available evidence from a variety of data sources. The Partnership for Child Development (PCD) was commissioned to undertake an initial analysis of quantitative and qualitative data from 44 global and regional data sets on SHN policies and interventions and a desk review of published and unpublished literature. This was complemented by additional analysis of quantitative and qualitative data sources; country case studies and thematic contributions from partners and experts in the field; and analysis of data and literature on the impact of COVID-19 on SHN and the education sector response to the pandemic.

There are limitations in the availability, comparability and quality of data. More information is available on policies in high-income countries than in middle- and low-income countries. There are gaps in data on programme implementation and specific aspects of SHN. Data collection systems for SHN are fragmented, and there is no commonly agreed framework or measurable set of indicators. Different data sources and surveys use various regional categories, terminology and questions. Some sources do not specify the age groups covered by interventions, who delivers them, or where they are delivered. Systematic analysis of the quality of SHN programmes is not possible as there is little data on this aspect.

Investing in school health and nutrition: an urgent need

Good health and nutrition form a foundation for learning. Investing in the health and nutrition of school-age children and adolescents delivers immediate and lifelong benefits for individuals, as well as significant development gains. SHN contributes to the education, health and gender equality Sustainable Development Goals (SDGs), and those related to poverty, hunger, water and sanitation, economic growth and peace, justice and strong institutions, and is instrumental in realizing the rights to education, health and food.

Early childhood, specifically the first 1,000 days of life, is a critical window for child development. However, for early gains to be sustained and children to achieve their full potential, it is essential to support their health, nutrition and development during the next 7,000 days of life, throughout middle childhood and adolescence (Bundy, de Silva et al., 2018).

Children in middle childhood and adolescents are affected by a range of largely preventable and treatable health problems, including unintentional injury, interpersonal violence, communicable and non-communicable diseases, malnutrition, sexual and reproductive health issues and poor mental health. Education is also undermined by hunger, school violence and bullying, and early and unintended pregnancy. Overweight and obesity are growing global problems affecting almost one in five of those aged 5–19 years (Development Initiatives, 2021). There are differences between the sexes, for physiological reasons and as a result of gender norms. Many of the risk factors and behaviours that adversely affect learning and health begin or are established in childhood and adolescence, for example, unhealthy diet, insufficient physical activity, consumption of tobacco, alcohol and other substances, and risky sexual behaviours.

Comprehensive SHN programmes tailored to country priorities and needs are a practical and cost-effective way to improve equitable education outcomes, and play a critical role in addressing the global learning crisis (Box 3, Section 2.1). Even before the COVID-19 pandemic, 260 million children and adolescents were not in school and 57% of students in low- and middle-income countries could not read a simple text with comprehension by the age of 10. This figure has been exacerbated to an estimated 70% after the pandemic (World Bank, UNESCO et al., 2022). SHN programmes can reduce absenteeism due to illness, increase school retention, and ensure that children and adolescents are able to learn. They are also effective in mitigating the impact of multiple threats to the health, well-being and education of children and adolescents, including poverty, food insecurity, conflict and climate change.

The COVID-19 pandemic and resulting school closures highlighted the critical role of SHN in protecting the health and well-being of learners. School closures not only intensified the learning crisis, with the greatest consequences for socioeconomically vulnerable children and adolescents, but also reduced access to essential support and health interventions — an estimated 370 million schoolchildren lost access to school meals, often their only meal of the day (WFP, 2020). Child poverty and malnutrition, already significant challenges, are now coupled with a global food crisis made worse by rising food prices. SHN programmes are central to education sector efforts to recover from the pandemic, including the safe reopening of schools and getting all learners back to school. Schools can take measures to reduce the risk of transmission, provide learners with vital information to protect themselves and their families, offer school meals and support to students whose physical and mental health have been adversely affected by the pandemic and other crises, and promote resilience and well-being.

SHN interventions can contribute to more equitable and inclusive access to education and health for those most at risk of missing out — the poor, sick and malnourished, those living with HIV, children with disabilities, and those affected by crises. This in turn can help to break the intergenerational cycle of poverty and malnutrition. School feeding is the most widespread safety net in the world and one of the most effective interventions for increasing school enrolment and retention, as well as for promoting equality and inclusion in education (Sandefur, 2022). Girls, especially, can gain significantly from such programmes. For example, the provision of daily meals can reduce gender disparities in access to education and improve test scores for vulnerable girls, including in emergencies (Mundy and Proulx, 2019). Where families undervalue education for girls, increasing other benefits of schooling, such as providing food or health services, has a positive impact on their attendance and enrolment (Bundy, de Silva et al., 2018).

Schools reach millions of children and adolescents, making the delivery of health and nutrition interventions through schools a cost-effective way to improve both health and learning outcomes. Screening in schools is an effective way to detect and address problems that undermine children's ability to learn, such as visual and hearing impairment. School feeding programmes

that provide healthy meals make a critical contribution to the nutrition of school-age children and adolescents and are particularly cost-effective because they deliver returns across multiple sectors, including education, health, agriculture and social protection, with US$9 in returns for every US$1 invested (Verguet, Limasalle et al., 2020). School-based programmes that address anxiety, depression and suicide can provide an average return on investment across all countries of US$21.5 for every US$1 invested over 80 years (UNICEF, 2021).

SHN programmes are a good investment for more sustainable, inclusive and peaceful futures. The interaction between health and education drives the development of human capital — the health, knowledge, skills and experience of the population — that generates prosperity. Learners who spend more years in school earn more as adults and are more productive, and this creates a substantial economic return. Failing to invest in a healthy and educated population compromises human capital and undermines sustainable growth (World Bank, 2019).

> School health and nutrition programmes are a good investment for more sustainable, inclusive and peaceful futures.

Policy intent and implementation

Supportive policy and legal frameworks are necessary for comprehensive, relevant and sustainable SHN programmes. Most countries have a policy framework for SHN, although approaches vary. Some countries integrate it within broader national education, health and nutrition policy frameworks; others have specific policies for SHN or components of it. National standards for health-promoting schools were in place in 96 of 147 countries surveyed in the period 2018–2019 (WHO, 2020b).[1]

However, policies, standards and guidelines do not always take a comprehensive approach that addresses different SHN components. A systematic review of national documents found that only 17% of documents in high-income countries and less than 3% in middle-and low-income countries referred to a comprehensive approach (WHO, 2022e). Documents were far more likely to refer to the involvement of parents and the wider community, the school physical environment and the school curriculum, than to a whole-school approach.[2]

SHN is also context-specific, and this is reflected in national policies. Issues such as sanitation and HIV prevention are mentioned more frequently in policy documents in low-income countries, while overweight and obesity, emotional well-being, peer violence and bullying and drug use are mentioned more often in high-income countries. Drawing on data from a range of global data sets, the most common themes in national policies are school nutrition (91% of 198 countries and territories) (WHO, 2022b); sexuality education (85% of 155 countries and territories) (UNESCO, UNAIDS et al., 2021); school feeding (80% of 85 countries and territories) (WFP, 2020), and physical education (79% of 117 countries and territories) (UNESCO, 2023). Available data show that 74% of 192 countries have legislation on smoke-free education environments (WHO, 2021d).

There has been a significant increase in the number of countries with a policy framework for school feeding — 80% of countries have a school feeding policy. The proportion of low-income countries with such a framework increased from 20% to 75% between 2013 and 2020 (WFP, 2020). This is reflected in a commensurate increase in domestic financing for school feeding programmes and in the number of schoolchildren covered. More than 90% of the cost of school feeding programmes now comes from domestic funds, and between 2013 and 2020, the number of children and adolescents that receive school meals grew by 9% globally and by 36% in low-income countries (WFP, 2020).

Since the launch of the Focusing Resources for Effective School Health — FRESH — initiative at the World Education Forum in 2000, SHN programmes have expanded to nearly all countries, although with varying coverage and quality. In 2018, 89% of countries (142 of 160 countries) reported that they implement a policy, programme or standard for SHN (WHO, 2018). Programmes are most commonly implemented at

1 A health-promoting school is a school that consistently strengthens itself as a safe, healthy setting for teaching, learning and working. This concept also relates to a whole-school approach that extends beyond the delivery of a health curriculum or discrete health services to create a school environment that positively influences health and well-being.

2 A whole-school approach is an approach that goes beyond learning and teaching in the classroom to pervade all aspects of the life of a school. It is a cohesive, collective, collaborative approach by a school community to improve student learning, behaviour and well-being and the conditions that support them.

primary-school level, although 62% of countries also implement programmes in secondary schools. Around 70% of low- and middle-income countries (90 of 128 countries) implement school health programmes for adolescents that cover topics including nutrition, hygiene, physical activity, sexual and reproductive health, and life skills (UNICEF, 2020a).

Country experience shows that translating policy commitments into effective programmes requires a robust analysis of school-age children and adolescents' health and nutrition status. It also depends on adequate resources for programme implementation, school leadership, student involvement, engagement of parents and communities, support for teachers, other school staff and health workers, effective collaboration between the education and health sectors and with other relevant sectors, and links with local health services.

Education for health and well-being

Middle childhood and adolescence are critical times for establishing healthy lifestyles. Schools can equip learners with the knowledge and skills to make healthy choices. Education that develops life skills, positive values and competencies such as critical thinking, risk assessment, problem solving and negotiation, can improve emotional well-being, reduce risk behaviours, address harmful gender norms, and is critical for quality education.

Health and well-being curricula, including on mental health, are packaged in different ways in different countries, with topics delivered as stand-alone subjects, integrated into a range of subjects, or both. A review of National Curriculum Frameworks from 78 countries found that almost all refer to health and well-being (International Bureau of Education-IBE, 2016). However, there are limitations in global data on the extent to which schools deliver comprehensive health and nutrition education. Most data relate to specific health or nutrition topics in the curriculum. For example, responses to the UNESCO 2020–2021 *Fourth Worldwide Survey of Physical Education* from 117 countries show that physical education is a compulsory curriculum subject in nine in ten countries (UNESCO, 2023). More than four in five (104 of 123 countries) report that sexuality education is included in the national curriculum (UNESCO, UNAIDS et al., 2021). Almost two in three (97 of 160 countries) include nutrition education in the school curriculum, with a growing focus on overweight and obesity prevention (WHO, 2018). In many countries, nutrition education is delivered through extracurricular activities or linked to school feeding programmes (FAO, 2021). More than 60% of countries report school-based provision of oral health education that focuses on nutrition, diet and sugar consumption (Petersen, 2020).

There are limited data about socioemotional learning and mental health education in schools, but there is growing recognition of its importance, particularly following COVID-19 and the impact of school closures (UNICEF, 2021). Globally, most national policies include prevention of smoking, alcohol and drug use, but there are limited data on the extent to which these topics are taught at school. The WHO Global Youth Tobacco Survey — GYTS — found that the proportion of students reporting that they are taught about smoking prevention at school ranges from 28% to 83% (WHO, 2022a).

Challenges to effective health and nutrition education include competing curriculum pressures, lack of quality learning resources and capacity development, and lack of teacher confidence in applying practical and learner-centred approaches. Efforts are also required to ensure that the curriculum is relevant and to monitor the quality and consistency of curriculum delivery — particularly for topics that may be more sensitive, such as comprehensive sexuality education (CSE). These challenges mean that while many countries have committed to delivering health and well-being-focused curricula at a policy level, implementation is lagging behind.

The school physical environment

The school physical environment plays an important role in the health and well-being of schoolchildren and adolescents and in creating a safe and welcoming space that is conducive to learning, and this clearly requires more attention. Key aspects include access to water, sanitation and hygiene (WASH) services, well-lit and well-ventilated classrooms, facilities and equipment for physical education, adapted infrastructure for students with disabilities, and a healthy school food environment (WHO and UNESCO, 2021).

A healthy school physical environment protects learners' health and supports interventions to promote healthy behaviours. For example, WASH services are essential to prevent diarrhoea, intestinal helminths and acute respiratory infections; promote healthy hygienic behaviours; support menstrual health and hygiene for female students and staff and, specifically, to allow the safe reopening of schools in the context of COVID-19.

Safe water is also essential to promote good oral hygiene and reduce consumption of sugary drinks.

Despite this, COVID-19 shone a spotlight on the poor coverage of WASH services in schools. Globally, almost one in three does not have safe drinking water and adequate sanitation, and almost half do not have handwashing facilities with water and soap. Coverage remains low in some regions and progress is slow. Coverage of water and sanitation services in schools is lowest in sub-Saharan Africa and the Pacific. Globally, coverage of basic hygiene services in schools only increased by 5% between 2015 and 2019 (UNICEF and WHO, 2020a). A key challenge is that provision of WASH services involves significant infrastructure, capital and recurrent costs.

Analysis of UNESCO Institute for Statistics (UIS) data shows that most schools in all regions, with the exception of sub-Saharan Africa, have access to electricity (UIS, 2022). In sub-Saharan Africa, less than one-third of primary schools in at least 19 countries have access to electricity. UIS data from 71 countries show that the median share of primary schools with access to adapted infrastructure and materials for students with disabilities is only 30%. Access to facilities and materials for students with disabilities is higher in high- and upper-middle-income countries, however, even in some richer countries, few schools meet the basic standards (UIS, 2022). Facilities and equipment for physical education are reported to be less than adequate in almost half of countries across the world.

There are different ways in which governments can shape school food environments to be more supportive of healthy diets and improved nutrition. These include setting and enforcing standards for nutritious and safe school meals and snacks, as well as measures to restrict the promotion and sale of unhealthy foods and beverages in and around schools and to prevent food industry sponsorship and branding. Only half of the 187 countries for which data are available have legislation, standards or guidance on foods and beverages in schools, and less than one-third of these include measures restricting marketing of foods and beverages (WHO, 2022b).

The school socioemotional environment

A school socioemotional environment that is safe, supportive, inclusive, free from violence and bullying, and fosters respect for others contributes to better learning, mental health and overall well-being. The socioemotional environment is closely linked to the school physical environment. For example, well-lit classrooms and corridors, single-sex toilets with locks and accessible buildings are crucial to reduce school violence and bullying and for the inclusion of learners with disabilities.

School violence and bullying are common and occur in all countries, affecting both boys and girls. They take many forms and can be perpetrated by both students and teachers. Children and adolescents who are perceived as 'different' are more likely to be victimized. Comprehensive approaches can reduce school violence and bullying. However, data from 150 countries show that coverage of school-based violence prevention programmes is low. For example, life and social skills education is perceived to reach all or nearly all children in 59 countries (39% of countries for which data is available); the reach of interventions to reduce bullying and prevent dating violence is lower. There is also a gap between the number of countries reporting that they support these interventions and those assigning training or resources to them (WHO, 2020d).

Children and young people with a higher sense of belonging in school perform better academically, but global and regional surveys show that a significant minority of students feel that they do not belong. For example, in 2018, the Programme for International Student Assessment — PISA — found that around one in five students felt like an outsider, out of place or lonely at school (OECD, 2019a). However, little evidence is available on education sector efforts to address this.

School health services

Schools reach most school-age children and adolescents and are well placed to provide time-sensitive, long-term and large-scale health services to this age group and to ensure that they are linked to other health services that are not provided at school (WHO, 2021b). School health services encompass a range of preventive, screening, care and support interventions. The way they are organized and delivered varies between countries. Over time, in many countries, school health services have evolved from an early focus on infection control and screening to, later, an increased emphasis on preventive care and health promotion.

Data from the WHO and UNICEF Joint Reporting Form on Immunization show that school-based vaccination programmes are implemented in more than 100 countries, more often in high- and middle-income countries than in low-income countries. Tetanus, diphtheria and human

papillomavirus (HPV) are among the most common vaccines delivered in schools. The number of countries, including low- and lower-middle-income countries, that deliver HPV vaccine in schools has increased. Around 60% of countries that include HPV in their vaccination schedule now deliver it in schools as their main strategy — or in combination with facility-based delivery (Bruni et al., 2021).

School-age children have the highest intensity of worm infection of any age group, and deworming is an intervention that can improve nutritional status, school attendance and learning outcomes. More than 450 million school-age children are dewormed each year in schools in low- and middle-income countries (WHO, 2020). Across many countries, schools are the key delivery platform for anaemia prevention programmes such as weekly iron and folic acid supplementation (WHO, 2018). Schools are also well placed to support efforts to prevent malaria infections, including intermittent preventive treatment, as the risk of infection peaks during the school-age years (WHO, 2022c). Approximately one in two children in Africa is at risk of infection. Schools also play a crucial role in providing sexual and reproductive health information and referral to services; four in five countries report that schools make referrals to health clinics (UNESCO, UNAIDS et al., 2021).

Correcting vision and hearing problems can make a significant difference to children's education and well-being, but screening has been a low priority for school health services, especially in low-income countries. Data on screening delivered together with school feeding programmes show that programmes in only one in four countries provide eye and hearing tests (GCNF, 2021). Until recently, school oral health services were mainly provided in higher-income countries, but this is changing due to growing recognition of the potential role of schools in countries where access to dental health care is limited.

The data presented in this report show that school health and nutrition services are an effective, feasible and acceptable way to link students with critical health care and support, but many gaps remain — especially in low-resource countries. In some contexts, there is a mismatch between health problems among school-age children and adolescents and the scope of school health services. A review of school health services in 2015 concluded that mental health problems, injuries and, in adolescent girls, health problems associated with pregnancy and birth were given insufficient priority (Baltag, Pachyna et al., 2015). This is supported by more recent data. For example, worldwide, suicide is the fifth most prevalent cause of death for adolescents aged 10–19 and estimates indicate that more than 13% have a mental disorder as defined by WHO (UNICEF, 2021). However, only 72 of 142 countries (51%) provide school-based mental health promotion and prevention programmes and these are more common in high-income (70%) than low-income countries (24%) (WHO, 2021).

School feeding programmes

School feeding programmes are the world's most widespread social safety net in terms of number of countries. An estimated 388 million children in 161 countries — nearly half of all children enrolled in primary school — receive school meals, with 90% of financing coming from domestic budgets (WFP, 2020). The number has increased, especially in lower-income countries. However, while programmes in high- and upper-middle-income countries reach 78% and 58% of primary-school children respectively, lower-middle-income countries reach only 45%, and the proportion falls to 20% in low-income countries. An estimated 73 million of the most vulnerable children are not reached by these programmes, undermining their ability to benefit from education (Drake, Lazrak et al., 2020). School feeding programmes can help get children into school and help them stay there; studies have shown they can increase enrolment by an average of 9% (Snilstveit, Stevenson et al., 2015). Once children are in the classroom, these programmes can contribute to their learning by enhancing cognitive abilities through hunger prevention and better nutrition (Drake, Fernandes et al., 2017).

There is a growing focus on ensuring that school meals are healthy and connect to the purchase of locally-produced, nutritious food to promote healthy and sustainable diets, and contribute to addressing both undernutrition and overweight and obesity in school-age children and adolescents worldwide (African Union Commission and African Union Development Agency, 2022; FAO, 2019; Global Panel, 2015).

School feeding is usually linked to other SHN interventions. Almost all countries implement school feeding programmes together with interventions that include, depending on the context, nutrition education, provision of drinking water, promotion of handwashing with soap, height and weight measurement, deworming treatment, eye testing and glasses provision, hearing testing, oral health care and menstrual health (GCNF, 2021).

Conclusions and the way forward

SHN programmes are one of the most widely implemented public policies across the world, and clearly governments in most countries are already investing in the health and well-being of school-age children and adolescents through them. These investments demonstrate growing recognition of the central role of the school system in the health, nutrition and well-being of children and adolescents. While there has been significant progress, more needs to be done to ensure that these programmes are comprehensive, implemented at scale to meet the needs of all learners, and sustained. Improving the quality, relevance and reach of SHN programmes offers a unique opportunity to transform education and the lives and prospects of children and adolescents. Key conclusions and priorities for action highlighted by this report are:

- **Looking after the health and well-being of learners holistically, through multisectoral approaches is one of the most transformative and cost-effective ways to improve education outcomes and make education systems more inclusive and equitable**. Realizing this potential will require a shift in thinking about the role of schools that goes beyond promoting academic outcomes to making the health and well-being of learners a core mission of education, as the consultations leading to the Transforming Education Summit in 2022 called for (UNESCO-OREALC, 2022).

- **SHN programmes are central to tackling the global learning crisis, to education sector recovery from the impact of COVID-19, and to building resilience against future pandemics and other shocks.** There is a pressing need to reopen schools safely and re-engage all learners. We must restore and scale up SHN programmes, including school meals, WASH, health and nutrition education, and services to address the adverse effects of the pandemic and other threats on learners' physical and mental health. This is essential for learning recovery. This must be a priority for countries and the international partners supporting them.

- **Investment in SHN benefits the poorest and most disadvantaged children the most.** However, the children and adolescents who could benefit most from these programmes are often those most likely to miss out. Strong country leadership and investment are required to ensure that all children and adolescents are in school and that SHN programmes reach those most in need in the poorest countries and the poorest and most marginalized households. Targeted action is needed to reach those at most risk of marginalization, poor health and malnutrition and this, in turn, requires that SHN programmes are designed to address equity, gender equality and inclusion.

- **Programmes must be comprehensive, implemented at scale and sustained by political and financial commitments from different sectors to maximize their impact.** Global data suggest that SHN programmes are not always comprehensive in scope, that coverage of essential components remains low and fragmented, particularly in low-income countries, and that interventions are not consistently implemented at both primary- and secondary-school levels. More attention needs to be paid to the quality of programme design and implementation and to monitoring and evaluating delivery and impact. Implementing and sustaining comprehensive SHN programmes at scale calls for commitment, supportive national policies, innovative approaches to financing and coordinated efforts across sectors. In many countries, this will not happen overnight, and a pragmatic and gradual approach based on a clear set of priorities, better understanding of what works in different contexts, and lessons learned from experience will be required.

- **SHN policies and programmes must be relevant and responsive to country contexts and evolving needs.** In practice, policies and programmes vary between countries, reflecting different priorities, available resources and capacity. Countries need to review and continue to adapt policy and programme design periodically to ensure that they meet the needs of school-age children and adolescents and respond to new evidence and emerging challenges, such as the impact of climate change. More attention needs to be given to mental health, promoting physical activity for all students, supporting students with disabilities, and effective approaches to address overweight and obesity.

- **Coordinated action is needed to better monitor SHN and address key evidence gaps.** The process of developing this report has highlighted the wealth of existing data but also significant gaps in knowledge. These include limited information on SHN policies and coverage, quality and fidelity of programme implementation in many countries. There is a lack of data on delivery of specific aspects of SHN and on SHN programmes in schools outside the government sector, and limited evidence about effectiveness of programmes, particularly their impact on education outcomes. Generating reliable, comparable and

timely data, disaggregated by sex and age, on policy, implementation and impact will be critical to assess progress and enhance programming. Data should also be improved on the health, nutrition and well-being of school-age children and adolescents, especially in low- income countries.

Ensuring that health and well-being are included in international and national measurement of school performance could contribute to better monitoring of SHN policy and programmes, and, ultimately, to greater investments in effective SHN. It could also incentivise implementation at the school level. More efficient monitoring will also depend on strengthening national education and health management information systems and providing adequate resources to improve collection and analysis of SHN-related indicators, including bringing together and analysing national data from different sectors.

There has been a global shift in the priority governments and partners give to SHN. Growing recognition of the central role of education in the health and well-being of children and adolescents is reflected in multisectoral initiatives, such as Making every school a health-promoting school (WHO and UNESCO, 2021) or the Conceptual Framework for Adolescent Well-being (Ross et al., 2020). More than 70 governments and 70 partner organizations have joined the School Meals Coalition as of July 2022 to massively scale up SHN programmes as cross-sectoral transformative platforms for more sustainable food systems and effective and equitable education systems. Promising initiatives have also been established to address data gaps, such as the Global Action for Measurement of Adolescent health — GAMA — project; the update of the Global School Health Policies and Practices Survey — G-SHPPS — to align with the WHO and UNESCO Global Standards for Health-promoting Schools; and the Data and Monitoring Initiative of the School Meals Coalition. The Research Consortium for School Health and Nutrition, the first initiative created by the School Meals Coalition, has been established specifically to fill evidence gaps and to inform policy in this area through a ten-year research agenda. These commitments from countries around the world offer a unique opportunity to address the learning crisis and transform education by improving the quality, relevance and reach of SHN programmes.

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This primary school is in a mountainous, impoverished area of Jinotega, Nicaragua, and many students have indigenous roots. The school buildings were affected by hurricanes, and parents have volunteered to prepare daily school meals.

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Section 1

Introduction

Background

Addressing the health, nutrition and well-being of children comprehensively in middle childhood and adolescence — when they are being educated — is essential to sustain investments in early childhood and for students to take full advantage of learning opportunities, grow and achieve their full potential. The COVID-19 pandemic has highlighted these linkages and the critical role that schools play in the physical and mental health, nutrition and well-being of children and adolescents. It has also emphasized the need to strengthen the preparedness of education systems to prevent and respond to infectious disease outbreaks and other emergencies. The Sustainable Development Goals (SDGs) will not be achieved if we do not put children and adolescents at the centre of the development agenda, and this report argues that school health and nutrition (SHN) programmes are one of the most powerful strategies to achieve this and ensure all children and adolescents can learn and thrive.

UNESCO developed this global report *'Ready to learn and thrive: School health and nutrition around the world'* in partnership with the United Nations Children's Fund (UNICEF), World Food Programme (WFP), Food and Agriculture Organization (FAO), Global Partnership for Education (GPE), World Bank and World Health Organization (WHO), with the support of the Research Consortium for School Health and Nutrition and the UN-Nutrition Secretariat. Recognizing that quality, comprehensive SHN programmes are a highly effective investment to improve education, as well as health and nutrition outcomes for school-age children and adolescents, these partners renewed their commitment in 2019 to accelerate global and country action to step up effective SHN (UNESCO, GPE et al., 2020).

Producing and disseminating more and better data on SHN to inform policy and programmes and assess progress is a priority area for joint action. To date, there has been no systematic compilation of data on SHN policies and implementation — existing surveys and reports mostly focus on specific regions or aspects of SHN. This report, the first to document the status of SHN worldwide, aims to contribute to addressing this gap by bringing together the existing evidence from a wide range of sources. By doing so, we hope it will inform national and global strategies to scale up effective and integrated programmes and contribute to evidence-based advocacy and resource mobilization efforts for SHN, including through statistics that can be monitored.

Objectives and target audience

The report aims to:

- provide an overview of the current global status of SHN policy and programme implementation, focusing primarily on national programmes implemented by governments
- identify available data and evidence gaps
- establish a baseline and framework for future data collection and monitoring of progress
- advance a common agenda and greater collaboration on SHN moving forward.

The main target audiences are policy-makers and planners in ministries of education, health and finance, UN agencies, development partners, non-governmental organizations (NGOs), research institutions and other partners supporting governments to develop, deliver, monitor, evaluate and improve the quality of SHN policies and programmes. We also hope it will be useful for education and health practitioners, the wider school community and others with an interest in improving the health, nutrition and well-being of children and adolescents.

Definitions

This report uses a definition of SHN that was agreed at an inter-agency meeting co-convened by UNESCO and WFP in July 2019 and adopted as a working definition by the Stepping Up School Health and Nutrition partnership. It emphasizes a holistic or whole-school approach to SHN that protects and promotes well-being, is integrated into the education system, and identifies essential or core components of comprehensive SHN (**Box 1**).

This definition provides the basis for the framework used in the report to assess the status of SHN policies and programmes, which has been adapted from the Focusing Resources on Effective School Health — FRESH — framework and the Global Standards for Health-promoting Schools (see **Section 2.4** for more detail on SHN frameworks). In addition to the essential components listed in **Box 1**, the framework encompasses other elements that are a prerequisite for comprehensive and sustainable SHN programmes. SHN policies and programmes are by nature multisectoral; they require effective collaboration between the education and health sectors, and also food and agriculture, local development, finance, social welfare and other relevant sectors.

An enabling policy and institutional environment, together with full integration into the education system are essential for sustainability. Other important elements include financial resources, a well-trained and supported education and health workforce; interventions that address the health and well-being of teachers and other staff; active involvement of learners, and the engagement of parents and communities.

However, it is important to recognize that, in practice, priority-setting and allocation of resources will depend on country context and needs. Many countries are implementing activities in schools to promote the health, nutrition and well-being of students, even if they are not aligned with a whole-school approach, and these efforts are also captured in this report.

The report also reflects growing attention from international partners and countries to the importance of children and young people's well-being and the contribution of SHN to its different dimensions (Baltag, Thomsen et al., 2021; Beadle, Pich et al., 2021) (**Box 2**).

Box 1

What is school health and nutrition?

School health and nutrition aims to protect and promote the physical and mental health, nutrition, well-being and development of school-age children and adolescents and the wider school community through coordinated and comprehensive strategies, activities and services that are integrated and sustained within the education system (UNESCO, GPE et al., 2020).

Essential elements include:

Policies and laws that provide an enabling environment at national, subnational and school levels.

Education for health and well-being delivered through skills-based school curricula and extracurricular activities.

A school physical and socioemotional environment that is safe, inclusive, and conducive to health, well-being and learning.

School health and nutrition services and school feeding programmes that provide simple, safe and effective health interventions and healthy school meals.

Source: Adapted from UNESCO, GPE et al., 2020.

Box 2

Adolescent well-being

Adolescents aged 10–19 years represent 16% of the world´s population and 23% of the population in low-income countries. Their well-being is fundamental to future development. A framework for adolescent well-being, developed by WHO, the Partnership for Maternal, Newborn and Child Health and other partners, identifies five interconnected domains: Good health and optimum nutrition; Connectedness, positive values and contribution to society; Safety and a supportive environment; Learning, competence, education, skills and employability; Agency and resilience. Schools and comprehensive SHN programmes have an important contribution to make to all of these domains.

Source: Based on Ross, Hinton et al., 2020; WHO, 2022d (available under CC BY-NC-SA 3.0 IGO)

Scope of the report

This report covers all regions and countries for which data are available. The SHN policies and programmes discussed focus on those that are integrated into and implemented through the formal education system in primary and lower- and upper-secondary schools (UNESCO Institute for Statistics (UIS), 2012), covering children in middle childhood aged 5–9 years and adolescents aged 10–19 years. Although it is often presumed that adolescents are in secondary school, in many countries children transition into adolescence while they are still in primary school. This is especially the case in countries where late enrolment and repeating years are common and some students are still in primary school in their early teens. As there are currently limited data, the report does not address health and nutrition programmes in non-government schools or those targeting children and adolescents who are not in school. However, we hope this data gap will be addressed so that these programmes can be included in future monitoring and reporting.

We also consider the impact of and response to COVID-19 from the perspective of the education sector and SHN. The report reviews data on the impact of the pandemic on the education, health and well-being of school-age children and adolescents, its effects on SHN programmes, and mitigation measures. Lessons learned are highlighted from the pandemic and from efforts to safely reopen schools and build more resilient education systems that protect and promote the health, nutrition and well-being of all learners.

Data sources and methodology

The best available evidence is used to understand the scope and coverage of SHN policies and programmes. As a first step, UNESCO commissioned the Partnership for Child Development (PCD) to compile, analyse and synthesise available statistical and qualitative data on SHN. The PCD review provided an overview and analysis of data on SHN policies and interventions (PCD, 2021) and is the primary data source for much of the

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information included in this report. The PCD analysis was complemented with additional quantitative data compilation and secondary analysis, review of documents and contributions from partners and experts. As a result, the report is based on a wide range of quantitative and qualitative data sources including:

- Analysis of 44 global and regional data sets and dashboards. Most of the data available from these sources have been collected within the last five years. Where different data sets covered the same topics for the same or similar timeframes, we used the most comprehensive one and, where possible, data was harmonized.
- A desk review of published and unpublished literature, including policy reviews, thematic global reports, global and regional surveys and monitoring reports, as well as secondary analysis of primary data from existing surveys.
- Thematic summaries and viewpoints provided by experts in the field that complement the global and regional data and bring new perspectives from specific countries and partners, highlighting the diversity of approaches and experiences.
- Country case studies based on contributions from experts and partner agencies, reports and published literature.
- Analysis of data and published and unpublished literature on the impact of COVID-19 on SHN programmes and how the education sector responded.

Annex 1 provides an annotated list of quantitative data sources, including dashboards and surveys; **Annex 2** provides data on selected indicators on SHN, by country.

Data limitations

There are gaps in data availability and limitations in data comparability and quality and, as such, the report does not provide a complete picture of the current status of SHN. Little information is available for some regions and countries. For example, more data are available on policy for high-income countries than for middle- and low-income countries. There are significant gaps on country implementation and coverage, which make it difficult to draw definitive conclusions about, for example, how many countries have comprehensive SHN programmes or which countries have made the most progress. Most available data on the SHN-related school physical environment concern water, sanitation and hygiene (WASH), most data on the socioemotional environment relate to school violence and bullying; there are limited data on other relevant aspects of the school physical or socioemotional environment. Specific gaps are discussed in the relevant sections of this report.

Different data sources and surveys use various terminology, age groups and questions, which makes it difficult to draw comparisons. Some sources do not clearly define or specify their scope, and much of the available data are not disaggregated by age or sex. Data on SHN services do not always specify who delivers these services or where they are delivered. A systematic analysis of the quality of SHN programmes was not possible as there are limited data on this aspect. Where there was some indication of quality of delivery in the analysis of existing data and research on implementation, it has been included, but available evidence does not provide a comprehensive picture. Finally, much of the literature the report draws on is in English; the lack of data from sources in other languages is a key limitation.

Structure of the report

The remainder of this report is organized as follows:

Section 2 provides an overview of the rationale for SHN programmes, the global context and evolution of SHN frameworks, and current approaches to monitoring SHN programmes. It also highlights examples of partnerships and initiatives to advance SHN and discusses the impact of and response to COVID-19.

Section 3 considers available evidence about the extent to which countries have policies that support comprehensive and integrated SHN — based on data from global and regional policy reviews and global surveys. It also includes data on policies related to specific components of SHN.

Section 4 seeks to understand to what extent these policies translate into practice. It draws on available data and case study examples to provide an overview of the extent to which countries are implementing SHN programmes and considers available evidence about implementation of each of the core components of SHN: education for health and well-being, the school physical environment, the school socioemotional environment, school health services and school feeding programmes.

Section 5 summarizes the main conclusions and priority actions going forward.

Purity, 12 years of age, in the hydroponics garden of her primary school in Gwembe District, Zambia.

Section 2

Global context and evolution of school health and nutrition

HIGHLIGHTS

Education, health and nutrition are closely intertwined. Education is critical to good health, and the health, nutrition and well-being of school-age children and adolescents (aged 5–19 years) are key determinants of education outcomes.

For children to achieve their full potential, it is crucial to address their physical, psychosocial and other development needs throughout middle childhood and adolescence — periods when health behaviours are established and risk behaviours are initiated. For example, unhealthy diet, insufficient physical activity, risky sexual behaviours, and consumption of tobacco, alcohol and other substances have implications for education and health in adult life. Children in this age group experience a range of largely preventable and treatable health problems that also affect their ability to participate in education and learn, including unintentional injury, sexual and reproductive health issues, communicable diseases, non-communicable diseases and poor mental health. Many countries now experience a 'double burden' of malnutrition, where undernutrition persists alongside overweight and obesity. These issues are often intertwined. Education is also undermined by hunger, school violence, bullying and early and unintended pregnancy.

The diversity of learners — particularly in terms of age, gender and socioeconomic status — calls for differentiated strategies. There are differences between the sexes for physiological reasons and as a result of gender norms, and needs evolve as children transition into adolescence. There are also important differences between country-income groups and regions. For example, children aged 5–9 years in low-income countries face a higher risk of mortality from infectious diseases, including pneumonia, diarrhoea and malaria.

Comprehensive SHN programmes tailored to country priorities are a practical and cost-effective way to address learners' needs holistically and to contribute to their well-being. SHN is a strategic investment to improve equitable education outcomes and address the learning crisis by improving both participation in education and learning. Further, education about health and nutrition can equip students to make healthy choices and lead healthy lives.

Poor health and malnutrition often intersect with other factors that affect equal access to education, such as poverty, food insecurity, conflict, gender and social norms. SHN programmes can contribute to more equitable and inclusive access to education and health by addressing several factors simultaneously and increasing the participation of those most at risk of missing out on learning — the poor, the sick, the malnourished, girls, those with disabilities, those living with HIV and those affected by humanitarian crises. School feeding programmes provide a safety net and are one of the most effective interventions for promoting equality and inclusion in education, including reducing gender inequalities. This calls for SHN programmes and allocation of related resources to prioritize the most disadvantaged school-age children and adolescents.

Investment in learners' well-being through SHN can deliver significant development gains. It brings health, education, social and economic benefits to today's children and adolescents, tomorrow's adults and future generations — with longer-term benefits for communities and countries — by developing human capital and driving inclusive prosperity. SHN programmes are cost-effective because they benefit multiple sectors in addition to education and health, including social protection and — where school meals are linked to local procurement and support to local farmers — agriculture. For example, school feeding programmes deliver US$9 in returns for every US$1 invested; and school programmes that address mental health can potentially provide a return on investment of US$21.5 for every US$1 invested. These programmes are instrumental in realizing the rights to education, health and food and contribute to the realization of multiple SDGs.

SHN policies and programmes have evolved over time, reflecting and shaping changes in thinking. There is a growing focus on the potential of the school system to promote health and well-being, with a shift to more comprehensive, integrated approaches to SHN and increased recognition that learners' health and well-being should be a core mission of education. More recently, there has been increased attention on the enabling factors that support scale and sustainability of SHN programmes, including policy frameworks and governance, reflected, for instance, in the Global Standards for Health-promoting Schools.

The need to invest in the health and well-being of children and adolescents is today more pressing than ever. The COVID-19 pandemic and resulting school closures, which affected nearly every learner across the globe, not only intensified the learning crisis, with the greatest consequences for socioeconomically vulnerable children and girls, but increased risk factors for mental health problems and reduced access to essential support and health interventions. An estimated 370 million schoolchildren lost access to school meals. Child poverty and malnutrition, already significant challenges, are now coupled with a global food crisis made worse by rising food prices. Conflict, climate change and exposure to online misinformation, and social media's negative mental health impacts are additional stressors for many learners.

The COVID-19 pandemic highlighted the important role of schools in protecting the health, nutrition and well-being of children and adolescents, as well as the need to strengthen the preparedness and response of education systems to disease outbreaks and other threats. SHN programmes are recognized as a priority in education sector efforts to recover from the COVID-19 pandemic, get all learners back to school and build more equitable and effective education systems that are resilient to future pandemics and other shocks.

Despite the synergies between education and health, and recognition of the benefits of SHN, investment in the health and nutrition of this age group has been insufficient. Consequently, the comprehensiveness, scale and quality of SHN programmes vary greatly between countries. Maximizing the potential of SHN programmes requires increased investment, an integrated approach, and effective collaboration across all relevant sectors at national and local levels.

Limited investment is mirrored in the low priority given to the health and nutrition of school-age children and adolescents in global targets, data collection efforts and research. Although partners collect data that are directly or indirectly related to SHN, and efforts to improve data have increased in recent years, these efforts remain fragmented. Commonly agreed and used indicators disaggregated by age and sex are lacking, which makes it difficult to compare data and track progress over time. Expanding existing international and national efforts to monitor the extent and causes of mortality and morbidity from birth through to 19 years of age is essential to inform effective policy and programming.

Increased recognition of the benefits of SHN has resulted in renewed partnerships and calls for action across sectors at global and regional levels. Global and regional partnerships and networks have been instrumental in mobilizing support and action, including through advocacy and provision of technical support.

School health and nutrition policies and programmes aim to protect and promote health, nutrition, well-being, and the physical, emotional and social development of students and the whole school community, and to maximize education outcomes for all learners.

Children and adolescents have the right to good health, nutrition and education. Countries have ratified International Human Rights Treaties, including the Convention on the Rights of the Child, and have binding obligations to fulfil children's right to education, to health and to adequate food.[3] SHN can be instrumental in achieving these human rights (UNSCN, 2017; WHO and UNESCO, 2021) and in the realization of the SDGs.

Education, health and nutrition are intertwined. Education is critical to good health — it is often referred to as a 'social vaccine' for a range of health conditions (Ma, Claude et al., 2017; Thompson, Leis et al., 2020) — and good physical and mental health and nutrition are critical to benefit from education opportunities. In school, students gain social, psychological and higher-order thinking skills, which are linked with improved health. Participation in quality education enhances cognitive abilities; improves mental, sexual and reproductive health; lowers risks for later-life non-communicable diseases (NCDs); increases life expectancy and offers significant intergenerational benefits (Beadle, Pich et al., 2021; Thompson, Leis et al., 2020). For girls in particular, higher educational attainment increases the age of marriage and first pregnancy (Wodon, Montenegro et al., 2018).

But participation in education is not enough. SHN programmes have the potential for leverage beyond the benefits of educational participation alone. They offer a unique opportunity to achieve multiple and interconnected benefits by developing the knowledge and life skills needed to lead healthy lives, by enabling safe, healthy and inclusive environments that promote students' health, well-being and learning, and by providing critical health and nutrition services. This idea is not new — but the approaches to SHN have evolved over time. There is growing recognition of the need for holistic approaches that address learners' needs comprehensively and for learners' health and well-being to be a core mission of education.

This section provides an overview of the rationale for investing in the health and nutrition of children in middle childhood and adolescence through SHN, and the way in which thinking about this area has evolved over time, especially in response to COVID-19 and persistent and new threats that compromise the education, health and well-being of this age group. These include conflict, climate change, the global food crisis and increasing rates of poverty. It also highlights global and regional initiatives and partnerships, how SHN efforts are monitored, and discusses existing data and data gaps.

3 Resolution adopted by the United Nations General Assembly, Convention on the Rights of the Child, A/RES/71/177, 20 November 1989. The Convention on the Rights of the Child calls on Member States to protect the best interests of children and young people and also addresses many of the risks to their mental health, including discrimination, violence and deprivation of liberty: https://www.unicef.org/child-rights-convention/convention-text

2.1 Why school health and nutrition is a smart investment

Investing in the health and nutrition of school-age children and adolescents can deliver significant development gains across multiple sectors. These include enhanced health and nutrition, and improved education outcomes, as well as social protection benefits (Bundy, de Silva et al., 2018). When school meals are linked to local procurement, they also contribute to local food systems and local development (WFP, 2020), bringing lifelong benefits to individuals, as well as to wider society and the next generation.

Learners' health, nutrition and well-being are critical determinants of education outcomes. Better physical and mental health, nutrition and well-being can increase school participation, engagement and academic performance. Children do not learn well when they are sick or hungry. Poor physical and mental health, hunger and malnutrition, infections, school violence and bullying, and early and unintended pregnancy undermine education. In contrast, healthy children and adolescents learn better and are more likely to become healthy and productive adults who lead fulfilling lives (see for instance Bundy, de Silva et al., 2018; Thompson, Leis et al., 2020 and WHO and UNESCO, 2021 for a review of the evidence).

Comprehensive SHN programmes tailored to country priorities and needs are a practical and effective way to maximize equitable education outcomes and address the global learning crisis. Participation in education has undeniably progressed due to efforts to increase primary and secondary school enrolment and close the gender gap. Globally, 85% of children complete primary school and 73% of adolescents complete lower-secondary school (UNESCO, 2021). But even before the COVID-19 pandemic, an estimated 260 million children and adolescents were not in school and 57% of students in low- and middle-income countries could not read a simple text with comprehension by the age of 10. This figure has been exacerbated to an estimated 70% after the pandemic (World Bank, UNESCO et al., 2022). SHN programmes improve education outcomes by increasing enrolment and reducing absenteeism and dropout due to preventable and treatable illnesses and malnutrition — ensuring that children are ready and able to learn (Bundy, de Silva et al., 2018) (**Box 3**). Screening in schools is a cost-effective way to detect and correct issues that affect the ability to learn, such as visual impairment (Wodon, Male et al., 2019).

Therefore, well-designed and targeted school health programmes in middle childhood and adolescence can leverage the already substantial investment in education, but the synergy between health and education is rarely optimized (Bundy, de Silva et al., 2018).

SHN can address inequalities in access to learning opportunities. Poor health and malnutrition often intersect with other factors, such as poverty, food insecurity, conflict, migration, gender inequality and social norms that affect education outcomes. SHN programmes can contribute to more equitable and inclusive access by addressing several factors simultaneously and increasing the participation of those most at risk of missing out on learning — girls, the poor, the sick, the malnourished, children and adolescents with disabilities, those living with HIV and those affected by humanitarian crises. This in turn can help to break the intergenerational cycle of poverty and malnutrition.

A UNESCO report on SDG target 4.5, which aims to eliminate gender disparities and ensure equal access to education, found that school feeding is one of the most effective interventions for promoting equality and inclusion in education, including in emergencies (Mundy and Proulx, 2019). Key elements for programmes to promote inclusion include mobilizing sustainable funding for scaling-up, paying attention to inclusive programme design, and ensuring integration with complementary strategies (Sidaner, 2022).

Comprehensive SHN programmes in countries such as Chad and Niger (**Case study 1**) have demonstrated a positive impact on girls' education, including increased enrolment, participation and learning outcomes (Sandefur, 2022; Snilstveit, Stevenson et al., 2015). The national school feeding programme in Ghana for instance has been shown to increase test scores, especially among girls and children from poorer families and in poorer regions of the country (Aurino, Gelli et al., 2018).

SHN programmes are central to education sector efforts to mitigate and recover from the impact of the COVID-19 pandemic and other shocks. The COVID-19 pandemic and resulting school closures highlighted the critical role of SHN in protecting learners' health and well-being in times of crises.

Box 3

School health and nutrition programmes deliver big education outcomes

2.5 years of additional schooling by providing school-based deworming and micronutrient supplementation where helminth infections and iron deficiency anaemia are prevalent (Bundy, 2011)

9% and 8% increases in enrolment and attendance rates respectively when introducing school meals (Snilstveit, Stevenson et al., 2015; Drake, Fernandes et al., 2017). When fortified with micronutrients, daily meals can reduce anaemia in adolescent girls by up to 20% (Adelman, Gilligan et al., 2012)

5% higher probability of passing tests in reading and mathematics when provided with free vision screening and glasses (Glewwe, Park et al., 2016)

62% reduction in absenteeism by implementing malaria prevention interventions (Fernando, de Silva et al., 2006)

21% to 61% reduction in absenteeism in low-income countries by promoting handwashing (McMichael, 2019)

Reduced girls' absence during menstruation, by improving school WASH (UNESCO, 2014)

50% fewer school days skipped by tackling school violence and bullying. Students who are frequently bullied are twice as likely to skip school than those who are not (OECD countries) (UNESCO, 2019)

Improved sexual and reproductive health by providing comprehensive sexuality education, including reducing the risk of HIV and rates of early and unintended pregnancy — a critical factor in school dropout among girls (UNESCO, 2019a)

Case study 1

Breaking barriers to girls' education in Chad and Niger through school health and nutritious meals

Author: School-Based Programmes Division, WFP

Chad and Niger face high levels of poverty and vulnerability related to political instability, armed conflict, displacement and natural catastrophes. Poverty and food insecurity, together with gender norms, early marriage and other issues, limit girls' access to education. With funding from Global Affairs Canada, the Governments of Chad and Niger, WFP, UNICEF and the United Nations Population Fund (UNFPA) are responding to these issues through a gender-transformative project — 'Breaking Barriers to Girls' Education' — that takes a 'school meal plus package' approach.

Based on evidence of the positive impact of school meals on gender equity in education, the project aims to increase access to education and to create a healthier learning environment for schoolchildren — specifically for girls — by providing school meals together with a package of gender-transformative interventions, including WASH, access to sexual and reproductive health services, gender-based violence prevention, and the provision of nutrition supplements.

Implemented over the past two years, the project is designed to ensure that adolescent girls receive additional targeted support to address their specific needs, including conditional cash incentives, mentoring and coaching, and menstrual health and hygiene services.

In Niger, the project targets areas affected by conflict and instability in the Diffa, Tahoua and Tillaberi regions, providing support to both displaced and non-displaced boys and girls in host communities. The 'plus package' builds on and complements the school feeding programme in 425 primary schools, which reaches 73,410 primary-school children, including 8,000 girls aged 10–12. In Chad, the project aims to reach an estimated 36,000 students in two crisis-affected regions, targeting both primary and secondary schools — as many adolescent girls are in primary school.

School closures not only intensified the learning crisis, with the greatest consequences for socioeconomically vulnerable children and adolescents, but, as discussed in **Section 2.3**, also deeply affected the mental health and well-being of children and reduced access to vital health interventions and school meals.

Child poverty and malnutrition, already significant challenges, are now coupled with a global food crisis made worse by rising food prices. WFP estimates that 345 million people are now facing acute food insecurity in 82 countries, an increase of almost 200 million people compared to before the COVID-19 pandemic (WFP, 2022).

Support through SHN programmes is critical to education sector's efforts to mitigate and recover from these shocks. This includes the safe reopening of schools, getting all learners back to school, and protecting and promoting their health, including their mental health and well-being. Schools can take measures to reduce the risk of transmission and provide learners with vital information to protect themselves and their families from infectious diseases. They can support learners and education community members whose physical and mental health have been adversely affected by the pandemic and other shocks, and promote resilience and well-being. Schools can also help to mitigate the impact of multiple threats to the health and well-being of children and adolescents, including poverty, food insecurity, conflict and climate change — all of which are also jeopardising their education. For example, experience from the 2008 food, fuel and financial crises demonstrated the critical role of school feeding programmes in providing a safety net to the most vulnerable, protecting access to education, and maintaining health and well-being in times of crises (Bundy, Burbano et al., 2009).

Education settings play a pivotal role in providing a safe and enabling environment and access to services that promote health and nutrition. Schools are linked to the family, embedded within the wider community, and are increasingly recognized as a key setting for promoting the health, well-being and development of children and adolescents (Beadle, Pich et al., 2021; Bundy, de Silva et al., 2018; WHO and UNESCO, 2021). At their best, schools are a safe, secure place where learners can acquire the knowledge, attitudes, behaviours and skills that prepare them to become healthy, educated and engaged citizens. Schools can help to address the social determinants of health, and their role in improving children's nutrition has been highlighted by UNSCN — the United Nations System Standing Committee on Nutrition (UNSCN, 2017).[4] They can provide access to critical, effective and time-sensitive health services that encompass multiple interventions as they can reach a significant proportion of this age group (Montgomery, Knerr et al., 2022). They are also valued by families and communities and well placed to meet the needs of disadvantaged learners as they can overcome barriers to accessing health services, such as user fees, costs associated with transport, distance and inconvenient opening times (WHO, 2021b).

Schools develop health literacy and can contribute to shaping health behaviours that track into adulthood. Beyond academic results that influence employment and income prospects — which are strong determinants of future health — life-skills health education can equip students with the knowledge, behaviours and skills to make healthy choices that will benefit them now and in adult life (Beadle, Pich et al., 2021; Jourdan, Gray et al., 2021; UNESCO, UNAIDS et al., 2021). For example, comprehensive sexuality education can contribute to improved sexual and reproductive health outcomes and develop positive gender norms and foundations for healthy relationships. Malnutrition in all its forms, harmful substance use and related NCDs are largely preventable. Although a range of social, economic and environmental factors influences people's ability to adopt healthy behaviours, schools are an important setting for promoting a healthy diet and physical activity and preventing substance use through an integrated approach that includes skills-based education (see **Section 4.2**).

Promoting health and well-being through schools is cost-effective. Schools reach hundreds of millions of children and adolescents in all countries, including those from the most disadvantaged families and communities. SHN programmes are a cost-effective way to improve both health and nutrition and learning outcomes (Bundy, de Silva et al., 2018; Schultz, Appleby et al., 2018). School feeding programmes are particularly cost-effective, yielding returns of up to US$9 for every US$1 invested, creating value across multiple sectors, including social protection and local agriculture, where school feeding programmes procure locally and support local farmers (Verguet, Limasalle et al., 2020). School-based programmes that address anxiety, depression and suicide potentially provide an average return on investment across all countries of US$21.5 for every

4 Since 2020, UNSCN has merged with the United Nations Network for Scaling Up Nutrition to become UN-Nutrition.

US$1 invested over 80 years. The greatest return on investment is in lower-middle-income countries, which showed a return of US$88.7 on every dollar invested (UNICEF, 2021).

Investing in health and nutrition of school-age children and adolescents is a sound investment in a country's future prosperity and in the capacity of its people. Learners who spend more years in school earn more as adults and are more productive, and this creates a substantial economic return to the community and the country. Failing to invest in a healthy and educated population compromises human capital — the sum of a population's health, skills, knowledge and experience — and undermines sustainable growth and poverty reduction (World Bank, 2019). Investments in SHN can also contribute to reducing the sense of marginalization and to building social cohesion (WFP, 2020).

Comprehensive SHN programmes are therefore a good investment for more sustainable, inclusive and peaceful futures. The WHO-UNICEF-Lancet Commission calls for children (defined as under 18 years of age) to be at the centre of the SDGs (Clark, Coll-Seck et al., 2020). SHN can make an important contribution to realizing this objective and to the achievement of SDGs on health, education and gender equality, as well as those related to poverty, hunger, clean water and sanitation, economic growth, reduced inequalities and peace and justice (**Figure 1**).

2.2 The health and nutrition needs of school-age children and adolescents

WHO global health estimates show that great advances have been made in improving the health and nutrition of children in recent decades. However, across the world, children and adolescents aged 5–19 experience a range of largely preventable and treatable health problems, including unintentional injury, interpersonal violence, sexual and reproductive health issues, communicable diseases, NCDs and mental health issues, as well as related risk behaviours, such as the consumption of tobacco and alcohol, unhealthy diets, physical inactivity, and risky sexual behaviours.

Investment in early childhood, in particular the first 1,000 days of life — the window from conception to two years of age — is a high priority, but it is now clear that it is equally important to promote good health and nutrition to cover the first 8,000 days of life — up to 21 years of age — to sustain early gains and for children and adolescents to achieve their full potential (Bundy, de Silva et al., 2018). The period from 5–19 years is also critical for the development of lifelong skills and behaviours that enable children and adolescents to navigate their environment effectively and safely, live a healthy life, and have positive relationships, with positive impacts into the next generation. Furthermore, the health and nutrition of adolescent girls and women before they conceive has a significant impact on pregnancy outcomes and the health of their children (Ramakrishnan, Grant et al., 2021). Specific health and development needs during this period can be categorized in three phases (Bundy, de Silva et al., 2018):

- Middle childhood growth and consolidation (age 5–9 years), when infection and malnutrition may constrain growth and mortality is higher than previously recognized
- Adolescent growth spurt (age 10–14 years), when there is a major increase in body mass requiring a good diet and health (with the potential of overcoming growth deficits from early childhood) as well as significant physiological and behavioural changes associated with puberty
- Adolescent growth and consolidation (age 15–19), when new responses are needed to support brain maturation and accompany intense social engagement and initiation of behaviours that are lifelong determinants of health.

Figure 1

School health and nutrition and the Sustainable Development Goals

- Supports students' healthy growth and development
- Increases access to basic health and nutrition services and care, particularly for children from low-income families
- Improves health literacy, attitudes and skills for healthy lifestyles, e.g. comprehensive sexuality education linked to sexual and reproductive health services, and prevention of early and unintended pregnancy

- Impacts positively on both school participation and learning outcomes
- Eliminates gender disparities in education and ensures equal access
- Builds safe, inclusive and healthy learning environments that prevent and mitigate risks and vulnerabilities to ill health and promote well-being
- Increases engagement among schools, families and communities

- Supports girls' enrolment, attendance and well-being in school
- Promotes attitudes, values and skills that support gender equality and tackle harmful gender norms, including gender-based violence
- Supports the empowerment of girls and the promotion of gender equality for all learners through health education, particularly comprehensive sexuality education

- Acts as a safety net. School feeding assists low-income families with children by transferring them the value of the food distributed

- Prevents all forms of malnutrition in learners: undernutrition, micronutrient deficiencies, and overweight and obesity
- Encourages healthy eating habits through food and nutrition education and by promoting healthy school food environments
- Stimulates agricultural diversification and production and contributes to shaping sustainable food systems when school feeding is linked with local food procurement

- Enhances equitable access to safe and affordable drinking water and adequate sanitation and hygiene

- Contributes to human capital development through improved access to education and learning and enhanced nutrition and health, which lead to increased productivity and higher incomes

- Contributes to levelling the school playfield: effects are particularly important for the most deprived children and for girls
- Develops the attitudes, values and skills for tolerant and inclusive societies

- Safe and supportive learning environments that are free from violence and discrimination provide a model for later life and instil respect for rights, diversity and equality
- Contributes to reducing the sense of marginalization and to building social cohesion and restoring state legitimacy

- Connects by definition multiple sectors and partners around common goals

Source: Adapted from UNESCO, GPE et al., 2020, p.11.

Mortality, morbidity and nutritional status

During middle childhood and adolescence, the major consequences of ill health are related to morbidity. However, mortality remains an important concern. The top contributors to mortality and morbidity change as children transition into adolescence.

WHO data for 2019 show that the top causes of death globally among boys and girls aged 5–19 years are infectious diseases and accidents (road injury, and, for boys, drowning). As **Figure 2** shows, infectious diseases are a more significant cause of death in younger males and females. In older adolescents, violence and self-harm are a significant cause of mortality in males aged 15–19 years, while maternal conditions are the second highest cause of death in girls of the same age. Road injury is consistently among the top causes for all age groups.

WHO 2019 data on years of life lost to disability (YLDs)[5] provide a picture of the top causes of morbidity (**Figure 3**). Among boys and girls aged 5–14 years, some of the main causes of YLDs include iron deficiency anaemia (indicating vulnerability to malnutrition), behavioural and mental health disorders, and skin diseases. In those aged 15–19 years, mental health and behavioural disorders predominate. In older adolescent girls, iron deficiency anaemia and gynaecological conditions are key concerns.

There is growing recognition of the prevalence and impact of mental health problems (UNICEF, 2021). Worldwide, suicide is the fourth most prevalent cause of death for adolescents aged 15–19. Almost half of all mental health conditions start before the age of 14 years (UNICEF, 2020). UNICEF also estimates that around 13% of adolescents aged 10–19 — an estimated 166 million — live with a diagnosed mental disorder.[6] Anxiety and depression account for about 40% of these disorders. The school is both an important risk and protective factor for mental health, together with the home and family, and the community. Wider determinants include conflict, disasters, poverty, and discrimination (UNICEF, 2021).

The global burden of malnutrition in all its forms is a leading cause of ill health and mortality and reflects the ongoing inequalities that hinder the realization of the right to food and the right to health. Data on nutritional status highlight the growing problem of the 'double burden' of malnutrition among school-age children and adolescents — where undernutrition persists alongside rising rates of overweight and obesity — including in low- and middle-income countries (Wrottesley, Mates et al., 2022). According to the *2021 Global Nutrition Report*, which is based on data from the NCD Risk Factor Collaboration, the prevalence of overweight and obesity in children and adolescents increased worldwide between 2010 and 2019 and now affects almost 1 in 5 of those aged 5–19 years (Development Initiatives, 2021).

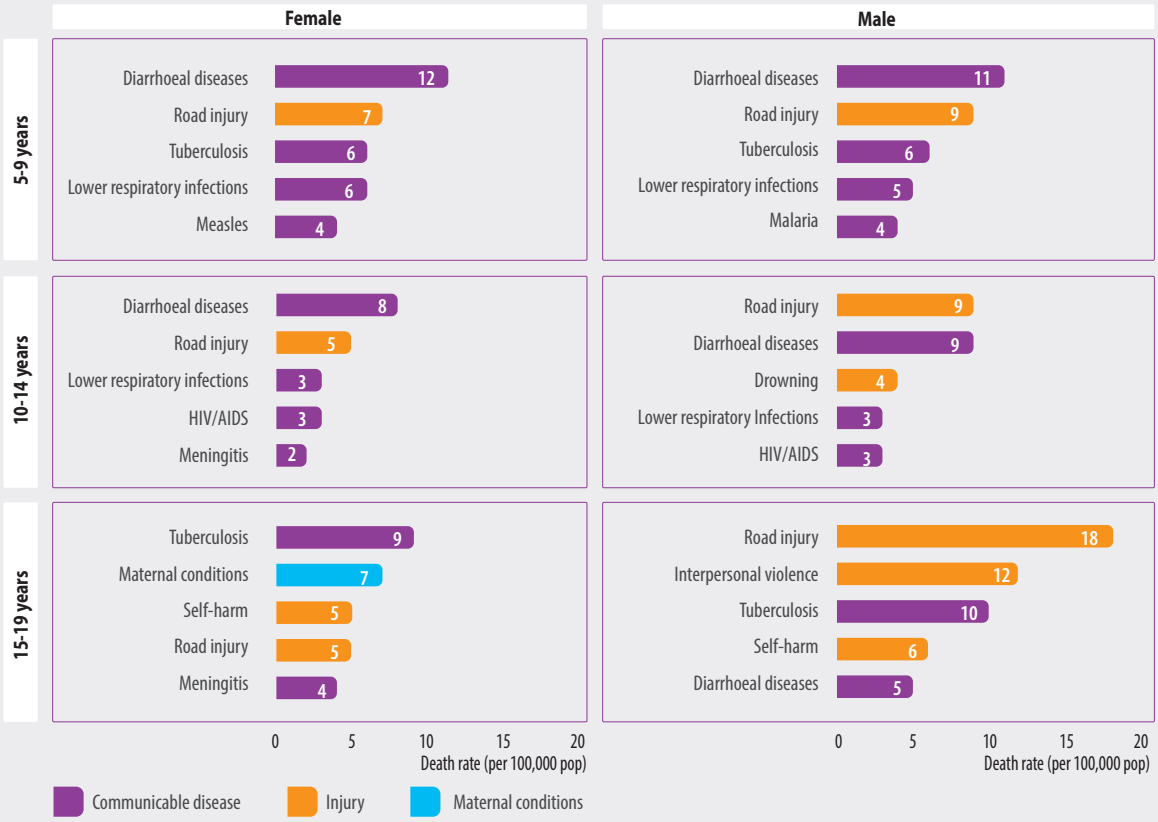
On the other hand, adolescents are especially vulnerable to undernutrition, in part because rapid physical growth and development during puberty increase their nutritional needs (Bundy, de Silva et al., 2018). Lack of adequate nutrition undermines this crucial period of growth and development. Another area of concern is micronutrient deficiencies, particularly iron and iodine, which have adverse effects on learning, grade repetition and scores in cognitive tests (Samson, Fischer et al., 2022). Iron deficiency and iron deficiency anaemia are the leading causes of YLDs among boys and girls aged 5–14 (**Figure 3**). Almost one in five adolescents globally has anaemia (Azzopardi, Hearps et al., 2019).

Physiological reasons, gender norms and other factors influence the differences in health, risks and causes of death and illness between girls and boys. At least 10 million unintended pregnancies occur annually among adolescent girls aged 15–19, often signalling the end of their formal education (Sully, Biddlecom et al., 2020); complications of pregnancy and childbirth remain among the leading causes of death for 15–19-year-old girls globally, with striking regional differences. Girls account for five in six new HIV infections among adolescents aged 15–19 years in sub-Saharan Africa (Global HIV Prevention Coalition, 2020). Adolescent girls across all regions are at higher risk of gender-based violence, psychological bullying, insufficient physical activity, and self-harm; they also have higher iron requirements because of menstruation. Compared with girls, adolescent boys have substantially higher mortality due to unintentional injury, interpersonal violence, alcohol and other psychoactive substances, suicide, and a higher prevalence of harmful drinking and tobacco smoking.

5 Number of years of healthy life lost due to disability per 100,000 population during a year, a measure that aims to capture the amount of time lived in states of less than good health.
6 These include anxiety disorders, attention deficit hyperactivity disorder, conduct disorder, depressive disorders, intellectual disability, bipolar disorder, eating disorders, autism, schizophrenia and a group of personality disorders.

Figure 2

Top five causes of death in males and females aged 5–19 years, 2019



Data source: WHO, 2022g.

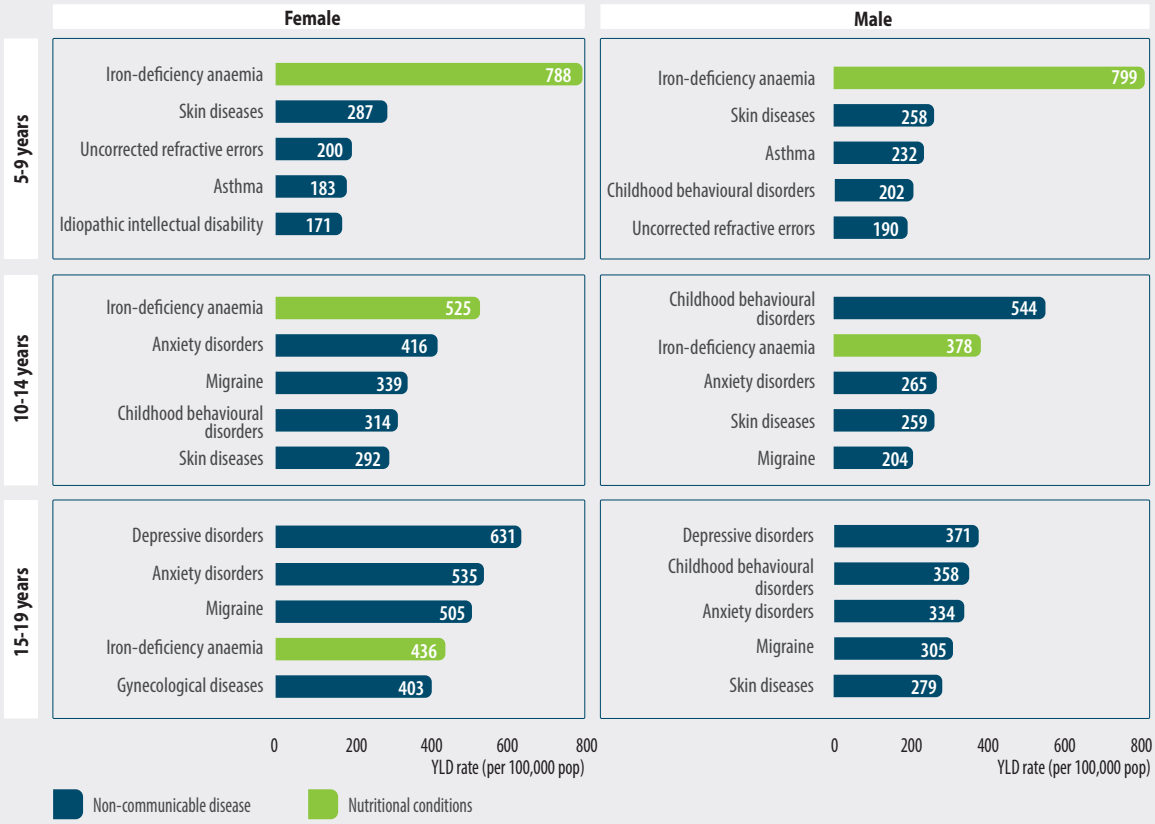
Disease burdens vary greatly between country income groups and regions. For example, children aged 5–9 years in low-income countries face a higher risk of mortality from infectious diseases, including pneumonia, diarrhoea and malaria. Some subpopulations of children are particularly vulnerable to illness and death. Children from the poorest families, those who live in poor housing and who have limited access to nutritious food and clean water and sanitation, and lower access to health services, as well as children affected by humanitarian emergencies are at elevated risk of poor health and nutrition outcomes (WHO, 2021b).

More needs to be done to improve understanding of mortality and morbidity in older children and adolescents — attention has largely focused on children under five. There is no systematic collection of morbidity data for children over five years, especially in low- and middle-income countries. The limited data available on nutrition for this age group are neither standardized nor comparable (Wrottesley, Mates, et al., 2022). WHO targets for reducing premature deaths from NCDs focus on adults aged 30 years and over. It is essential to expand existing international and national efforts to monitor and assess the extent and causes of mortality and morbidity from birth through to the age of 19 years, including collecting age- and sex-disaggregated data, to inform effective policy and programming and monitor progress.

> It is essential to expand existing international and national efforts to monitor and assess the extent and causes of mortality and morbidity from birth through to 19 years of age.

Figure 3

Top five causes of years of healthy life lost due to disability in males and females aged 5–19 years, 2019



Data source: WHO, 2022g.

Health risk behaviours and diet

Late childhood and adolescence are critical periods for establishing protective and risk behaviours that affect health and well-being and future adult health, with effects into the next generation (Frech, 2012; Langford, Bonell et al., 2015; Viner, Ozer et al., 2012). Examples include diet, physical activity, substance use and sexual behaviours. For adolescents aged 15–19, risk behaviours such as alcohol, drug and tobacco consumption, and unsafe sex are particularly pertinent. An estimated 70% of preventable deaths from NCDs in adults have been linked to health risks and behaviours established in childhood and adolescence, including unhealthy diets (Sawyer, Afifi et al., 2012). Adolescence is also a period when gender and other social norms are firmly established and negative norms can increase health risks through, for example, peer pressure (Kågesten, Gibbs et al., 2016). Most of the data on risk behaviours among adolescents are sourced from the Health Behaviour in School-age Children Survey (HBSC) and the Global School-based Student Health Survey (GSHS) (**Box 4**).

Child and adolescent health and nutrition are increasingly determined by wider factors, including climate change, globalization, urbanization, war, conflict and technical developments that are changing lifestyles and affecting health and education (Patton, Sawyer et al., 2016). SHN programmes must, therefore, recognize and respond to the intersection of environmental and behavioural factors that contribute to health and nutrition problems. For example, a study of clusters of contemporary risk and their relationship to mental well-being among 15-year-old adolescents across 37 countries identified seven clusters of risk factors for mental health, including substance use and early sex, low social support, insufficient nutrition, bullying, sugary foods and drinks, physical health risk and problematic social media use (Walsh, Sela et al., 2020). SHN programmes can contribute to addressing all seven of these clusters.

Similarly, the drivers of malnutrition and food insecurity are complex and evolving. Conflict, climate extremes and economic shocks, combined with the high cost of nutritious foods and growing inequalities, are major drivers of food insecurity, which also affect children and adolescents across the world (FAO, International Fund for Agricultural Development (IFAD) et al., 2022). Economic development, urbanization and globalization of food chains have contributed to unhealthy diets, with highly processed food of low nutritional value. School-age children and adolescents are exposed to a wide range of influences, including advertising and marketing, which affects their diets and food choices (WHO, 2022). According to UNICEF's 2019 State of the World's Children, available data suggest that children in middle childhood and adolescents around the world are eating too little nutritious food, including fruits and vegetables, and consuming too many unhealthy snacks and sweetened beverages. Many do not eat breakfast, depriving them of a meal that supports their ability to learn. The reasons vary, but for many disadvantaged children and adolescents, their families lack the resources or time to feed them in the morning (UNICEF, 2019). The same report highlights that consequences of poor diet and unmet nutritional needs not only affect school performance and children's present health and development, but also have a profound impact on their future health. Childhood obesity is linked to psychological and social problems, including low self esteem, increased risk of depression, anxiety, peer bullying, and poor school performance.

Use of alcohol, tobacco and drugs, which commonly begins in adolescence, is also associated with a wide range of negative impacts on young people's mental and physical health over the short and long term. In addition to implications for future risk of NCDs, alcohol also increases the risk of violence, road traffic injury and unintended pregnancy. Substance use has been shown to be linked to poor school engagement and performance and dropout (UNESCO, UNODC et al., 2017).

A summary of the evidence published in 2017 suggests that substance use among adolescents is prevalent across all regions, although most data are from high-income countries (UNESCO, UNODC et al., 2017). Alcohol is the most commonly used substance globally — on average, about one in four young people aged 13–15 reports having used alcohol during the last 12 months — followed by tobacco and cannabis. Harmful drinking patterns are relatively common among adolescents aged 13–19 globally, although they are more prevalent in Europe and the Americas. Tobacco use is common among adolescents in most parts of the world. Globally, one in every ten girls aged 13–15 and one in every five boys aged 13–15 uses tobacco.

WHO 2020 data show that use of electronic nicotine delivery systems among young people — some of which are called e-cigarettes — is increasing in some countries, particularly in Europe and North America. Between 2011 and 2018, youth e-cigarette use rates in the United States of America increased from 1.5% to 21% (WHO, 2021d). There is growing evidence that young people who use electronic nicotine delivery systems at least double their chance of starting to smoke cigarettes later in life. In the Americas, prevalence of cannabis use among secondary-school students was found to have increased in several countries in recent years (Inter-American Drug Abuse Control Commission and Organization of American States, 2019).

Box 4

Key findings about adolescent health and well-being from the Health Behaviour in School-age Children Survey

The 2017–2018 Health Behaviour in School-age Children — HBSC — survey collected data from 227,441 young people aged 11, 13 and 15 years in 45 countries in Europe and Canada. The responses highlight some positive findings and trends. For example, most adolescents experience positive and supportive social relationships and good overall health and well-being.

Nevertheless, challenges remain. The diets of most adolescents do not meet current nutritional recommendations. The proportion eating breakfast has declined since 2014 in around half of countries. Almost two-thirds do not eat enough fruits and vegetables, and consumption of highly processed foods is high. Levels of physical activity in most countries show little or no improvement, and fewer than one in five adolescents meets the WHO global physical activity recommendations of 60 minutes or more of moderate-to-vigorous physical activity on average per day. Risky sexual behaviour is a concern, with a quarter of sexually active 15-year-olds using neither condoms nor pills. Prevalence of multiple mental health and well-being issues has increased since 2014. The most common are nervousness, irritability and sleep difficulties.

There are gender and socioeconomic differences. At age 15, girls report poorer mental well-being than boys across almost all countries. A key overall finding is that adolescents from less well-off families experience poorer health and well-being. Adolescents from more affluent families benefit from more supportive social relationships at school and home, are more physically active, have better diets and report greater life satisfaction and better health.

Source: Adapted from WHO, 2020c. Available under CC BY-NC-SA 3.0 IGO

In Europe, the European School Survey Project on Alcohol and Other Drugs (ESPAD) has collected data on substance use and other forms of risk behaviour among 15–16-year-old students since 1995. In 2019, data from almost 100,000 students across 35 countries showed that one in five could be considered current smokers, with similar rates among boys and girls (Mokinaro, Vincente et al., 2020). One in three students had first tried an alcoholic drink at age 13 or younger. The average prevalence of lifetime use of illicit drugs was 17%, with considerable variation across countries.

2.3 Impact of COVID-19 and the education sector response

In 2020, 90% of schools worldwide closed for prolonged periods to mitigate the spread of COVID-19, disrupting the education of nearly 1.6 billion students in nearly every country. A survey on national education responses to COVID-19 (UNESCO, UNICEF et al., 2021) found that countries made very substantial efforts to cope with the crisis and have responded to school closures with a variety of learning modalities, including fully-remote learning and hybrid learning, as well as other measures.

However, the World Bank estimates that prolonged and repeated school closures will reduce the average learning that a student achieves by more than half of a school year. Learning losses and school dropout disproportionately affect the most vulnerable students, such as adolescents with disabilities and those living in or forcibly displaced from fragile contexts, disadvantaged students and girls, who are less likely to have opportunities to benefit from distance education in many settings (UNESCO, 2021a; Global Financing Facility, 2021).

School closures have also had a negative impact on the health of school-age children and adolescents, showing that education systems provide much more than education. UNICEF's 2021 State of the World's Children highlights that the pandemic has affected their mental health, with evidence of increased depressive symptoms and sadness as well as stress and anxiety, reflecting fear of infection, and uncertainty over lockdowns and school closures (UNICEF, 2021). A systematic review of the impact of school closures on children and young people's physical and mental health identified high levels of stress, anxiety and hyperactivity in younger children, and depressive symptoms in adolescents; girls reported more mental health problems than boys (UNESCO, 2021a). Lockdowns and school closures also meant less exercise, more screen time and disrupted sleep, particularly in middle- and high-income countries. When schools are closed, children are also more likely to be exposed to exploitation, violence and abuse (Bakrania, Chávez et al., 2020). The pandemic has also highlighted the role that schools play in promoting healthy behaviours, for example, through hygiene education, and the need to ensure that they have adequate water, sanitation and hygiene.

Schoolchildren and adolescents had less access to adequate food as school closures disrupted school meal programmes, with an estimated 370 million schoolchildren deprived of what was, for many, their only complete meal of the day (WFP, 2020). This was in the context of growing food insecurity fuelled by the economic impact of COVID-19 on consumer food prices. According to the State of Food Security and Nutrition in the World 2022 report, almost 1 billion people could not afford a healthy diet in 2020, up 112 million from 2019 (FAO, IFAD et al., 2022). More than 70 countries implemented mitigation measures to replace school meals with community services, such as take-home rations and cash transfers, with mixed results.

Addressing learners' and teachers' health and psychosocial well-being, including through SHN, was therefore recognized as one of the priority actions for education recovery and transformation (UNESCO, 2020; Global Financing Facility, 2021; UNESCO, UNICEF et al., 2020a). From the beginning, governments and the global community saw the continuation of health and nutrition support to learners and their families through alternative mechanisms as a priority to mitigate the effects of the pandemic and support learning continuity. As schools reopened, the priority has been to reopen safely, creating an environment that minimizes the risks of COVID-19 transmission, restores health and nutrition services, and ensures all children return to school. In the UNESCO-UNICEF-World Bank-OECD survey, almost all countries (99%) responded that their ministries of education endorsed specific health and hygiene guidelines and measures for schools, particularly those related to physical distancing and hygiene. Activities that require additional investment or coordination, such as contact tracing and testing in schools, exhibited lower rates of adoption (UNESCO, UNICEF et al., 2021).

Most low- and middle-income countries reported using at least one form of outreach measure to encourage all students to return to school, most commonly modifications to WASH facilities or community engagement. SHN interventions, particularly school meals, are seen as a powerful incentive to bring the most disadvantaged children back to school (Save Our Future, 2020). Recognizing that adolescent girls are at highest risk of not returning in some countries, plans, for example, in Ghana and Rwanda, also address gender-related barriers to school return, including support for pregnant girls and adolescent mothers. Burkina Faso raised awareness of the importance of girls' education as part of its back-to-school campaign, which included scholarships, school kits and meals for the most vulnerable students (UNESCO, UNICEF et al., 2020b).

2.4 The evolution of school health and nutrition

SHN policies and programmes have evolved over time, reflecting and shaping changes in thinking about this area of work. Initially, in many countries, school health programmes had a medical focus, with an emphasis on screening and infection control. Over time, this changed, and in many countries, schools were increasingly viewed as a useful platform to deliver a wider range of health interventions, such as deworming and micronutrient supplementation (Baltag and Saewyc, 2017). Subsequently, there has been a growing focus on the potential for schools to promote health and well-being, with a commensurate increase in focus on health promotion and preventive care.

There has also been a conceptual shift from specific SHN interventions to a more comprehensive, integrated approach in response to evidence that whole-school approaches improve learning outcomes, social and emotional well-being, and reduce health risk behaviours. For example, SHN programmes that go beyond teaching health education in classrooms, to encompass changes to the curriculum and the wider social environment as well as engagement with families and the community, are more likely to improve sexual health, reduce violence, and decrease substance use (Bundy, de Silva et al., 2018); nutrition (Wrottesley, Mates et al., 2022; WHO, 2020a) and mental health (Shinde, Weiss et al., 2018). Growing evidence of the interrelationship between health risk behaviours in adolescents also strengthens the case for a comprehensive and integrated approach rather than discrete prevention interventions.

In 1995, WHO, UNESCO and UNICEF articulated the concept of 'health-promoting schools', an approach that focuses on school social, emotional and physical environments and how health and well-being can be generated through positive day-to-day interactions between students, teachers and their communities. Appreciating the value of schools as a social community that includes students, teachers, families and the local community, this model has been shown to improve student health in both high-income and low-income settings (Jourdan, Gray et al., 2021; Langford, Bonell et al., 2015; WHO, 2022e) but has not been adopted at scale.

In 2000, the multipartner FRESH initiative was launched at the World Education Forum, during which countries committed to improving school health for better education results (UNESCO, 2000). The FRESH framework, which has since evolved, had four components and three supportive strategies (**Box 5**). Over the past two decades, many countries and development partners have used this widely-endorsed framework to inform their school health policies and strategies.

Despite differences in terminology, these conceptual frameworks share the characteristics of a whole-school approach, which goes beyond delivery of a health education curriculum or discrete health interventions to encompass the wider school curriculum, the school environment, and the engagement of parents and the community. They also highlight the importance of intersectoral collaboration, as well as vital links between schools and other services outside the school environment; for example, comprehensive sexuality education must be complemented by access to sexual and reproductive health services to improve health outcomes.

More recently, increased attention has focused on the systems that support the scale and sustainability of SHN programmes, including policy frameworks and governance mechanisms. This is reflected, for example, in UNESCO's updated strategy on education for health and well-being (UNESCO, 2022), and in the development of the Systems Approach for Better Education Results (SABER) framework for school health and school feeding (**Box 11**), and of global standards that work as a system to support implementation of health-promoting schools (WHO and UNESCO, 2021). The eight global standards are: Government policies and resources; School policies

and resources; School governance and leadership; School and community partnerships; School curriculum that supports health and well-being; School social-emotional environment; School physical environment, and School health services. The first standard on government policies and resources focuses on factors that are external to schools that are key for sustainability and implementation at scale.

As this report shows, this trend has translated into more holistic approaches in different thematic areas, such as in school food and nutrition (**Box 6**), and violence and bullying (see **Case study 18** in **Section 4.4**). There is also growing attention on the contribution SHN programmes can make to addressing environmental challenges and climate change, for example, how home-grown school feeding (HGSF)[7] programmes can support sustainable food systems by shortening supply chains, reducing food waste and promoting organic food production and local food cultures (WFP, 2020).

Despite the conceptual shift towards a more holistic and integrated approach, in practice, many countries have yet to develop or implement comprehensive school health policies and programmes, and many agencies and organizations working on SHN still focus on specific interventions. The interrelationship between education, nutrition and health calls for a more integrated systems approach to SHN and coordinated action to take comprehensive policies and programmes

> Strong education sector leadership is critical, particularly to ensure that all children and adolescents are in school — a prerequisite for schools to promote health and well-being.

to scale (UNESCO, GPE et al., 2020). Strong education sector leadership is critical, particularly to ensure that all children and adolescents are in school — a prerequisite for schools to promote health and well-being
At the same time, experience from countries highlighted in this report shows that pragmatic approaches that focus on priority strategies and interventions that are the most feasible and effective in a given country context are successful — in parallel with efforts to move towards a more comprehensive approach. It is also important to recognize that as the health and nutrition of children evolve, so policies and programmes need to be sufficiently flexible to respond to new issues and emerging trends, for example, the increase in NCDs in younger age groups and the impact of digital media on mental health.

Box 5

Focusing Resources on Effective School Health: the FRESH framework

COMPONENTS

SUPPORTIVE STRATEGIES

Partnership between education and health

Community partnerships

Student awareness and participation

Source: Based on UNICEF, WHO et al., 2001.

7 A school feeding model designed to provide children in schools with safe, diverse and nutritious food, sourced locally from smallholders.

Box 6

The role of schools in addressing all forms of malnutrition

Author: UN-Nutrition Secretariat

School-age children and adolescents face a multiple burden of malnutrition with the coexistence of overnutrition (overweight and obesity) and undernutrition (stunting and wasting). Many of them also suffer from micronutrient deficiencies.

Over the past three decades, there has been increasing momentum around the role of schools in improving nutrition using a systemic, multisectoral approach (UNSCN, 2017). The 2006 multipartner Nutrition Friendly School Initiative (NFSI) provides a framework for integrated school-based programmes that tackle all forms of malnutrition. Focus has since been placed on advancing nutrition policies that simultaneously address more than one form of malnutrition (WHO, 2018) and, in 2019, The Lancet recommended redesigning school feeding programmes to offer meals that meet the energy and nutrient needs of children and adolescents, with new nutrition guidelines to restrict unhealthy products, snacks and beverages in and around schools (Hawkes et al., 2019). The importance of comprehensive nutrition-related school policies that involve parents, implement effective nutrition and physical activity education, provide healthy school meals, create healthy school food environments and integrate nutrition into school health services through, for example, school-based monitoring of children's growth, were noted as key components of successful programmes in a review of the evidence related to NFSI (WHO, 2020a).

The evidence for a holistic approach to school food and nutrition is clear. A Community of Practice on School Nutrition[8] convened by the UN-Nutrition Secretariat has produced an inventory of UN frameworks[9], guidance, standards and resources to support government efforts to design policies and programmes to improve nutrition outcomes and to mainstream nutrition in schools (UNSCN, 2020). However, many of these resources still focus either on overnutrition or undernutrition, and it is critical that future efforts target all forms of malnutrition.

Opportunities to strengthen and promote multi-component nutrition actions in schools, for example, through HGSF[10], should be harnessed. Expanding HGSF guidance to include sustainable diets will have a positive impact on the food provided in schools, nutrition education, school gardening, marketing in schools, staff training, and food waste, as well as helping to establish lifelong dietary preferences for locally available fresh food. WHO nutrient guidelines need to be more widely applied, including integration of guidelines on dietary fats, sugars, sodium and potassium in national dietary guidelines. Public procurement for school meals can support these actions. There is a need to address gaps in guidance on school food and nutrition in areas such as food brought from home, school food standards, training of school staff, sale of food in and near school grounds, meal preparation, and linking school food and nutrition guidance to nutrition education. It is also necessary to develop and agree a set of indicators to monitor the nutritional status of children aged 5–19 years, and the quality and impact of school feeding programmes.

The school nutrition community is rising to the challenge. For example, WHO is developing evidence-informed guidelines on school food and nutrition policies; FAO and WFP are leading the development of a methodology for governments to set food systems-based nutrition standards for school meal programmes, as well as a global online knowledge hub on school food and nutrition; members of the Community of Practice are also involved in the various initiatives of the School Meals Coalition (Box 8). In line with its vision — a world without malnutrition where everyone, everywhere, enjoys the right to adequate food — UN-Nutrition will continue to address malnutrition in all its forms, including actions across the school platform that contribute to healthy, sustainable diets and improved nutrition outcomes for all.

8 Members include: Consultative Group on International Agricultural Research — CGIAR/Bioversity, FAO, IFAD, UNESCO, UNICEF, WFP, WHO, AUDA-NEPAD, PCD, LSHTM, University of Southampton, GCNF, Save the Children, U.S. Dept for Agriculture.

9 See for example FAO framework https://www.fao.org/publications/card/fr/c/CA4091EN/; UNICEF Nutrition Strategy https://www.unicef.org/reports/nutrition-strategy-2020-2030

10 See The Home-Grown School Feeding Resource Framework (WFP, FAO, IFAD, NEPAD, GCNF and PCD, 2018) https://www.fao.org/documents/card/en/c/CA0474EN

2.5 Global and regional initiatives and partnerships

Available evidence, including data cited in this report, suggests that SHN programmes have expanded to nearly all countries, but remain fragmented and inadequate, especially in the poorest countries and most marginalized communities. There has been insufficient investment in SHN, with funding for children's health almost entirely focused on those under five years and minimal investment in the health of school-age children and adolescents compared to funding for education. Low- and lower-middle-income countries spend around US$210 billion annually providing basic education – which is clearly inadequate to enable every girl and boy to receive a quality education through a full cycle of schooling. However, only an estimated US$2 billion are spent on ensuring that children aged 5–19 years are healthy and able to learn — a missed opportunity to maximize the benefits of investment in education (Bundy, de Silva et al., 2018).

Recognition that action is required to address this gap, and of the importance of coordinated action across sectors, has resulted in new and renewed partnerships and initiatives to advance comprehensive SHN policies and programmes; some key examples follow.

The FRESH partnership (**Box 5**), which initially included UNESCO, UNICEF, WFP, WHO and the World Bank, has evolved into a global network that includes civil society organizations, such as the International School Health Network, Save the Children, the Partnership for Child Development (PCD) and Education International.

Box 7

The Global Partnership for Education's work on school health and nutrition

Authors: Stuart Cameron, Equity and Inclusion Thematic Lead, and Heather Saunders, Global Advocacy Partnerships Lead, GPE

The Global Partnership for Education (GPE) aims to ensure inclusive and equitable quality education for all children. It is the largest global fund solely dedicated to transforming education in lower-income countries, and a unique, multistakeholder partnership. For nearly two decades, GPE has been delivering funds and supporting solutions to build strong and resilient education systems so that more children in lower-income countries, especially girls, get the education they need to thrive and contribute to building a more prosperous and sustainable world. GPE supports the countries with the greatest need: those with high numbers of out-of-school children and weak completion rates. It focuses on reaching the children who are most marginalized and vulnerable, including children with disabilities and those who live in countries characterized by extreme poverty or conflict.

GPE's 2025 strategy prioritizes ensuring schools are safe, healthy and inclusive. Good health and nutrition are essential for children's learning, schools are essential settings for the delivery of health services, and school feeding programmes can help address barriers that keep marginalized children out of school.

At the country level, GPE's work is driven by country priorities. It aims to mobilize coordinated action and financing to transform education systems through inclusive mechanisms such as local education groups — government-led multistakeholder bodies set up to support education planning, monitoring and implementation. In most countries, health ministries are part of the local education group, and most countries include at least one of UNFPA, WFP or WHO, helping to spur greater interest in SHN policies as part of a broader sector-wide policy framework. Many GPE partner countries include SHN in their education sector plans, and between 2016 and 2020, GPE allocated US$48m to health and nutrition in schools.

GPE funds are also supporting a nationwide programme for school-age girls, including refugees, to receive free menstrual pads and safe access to WASH facilities in Kenya, and are building on an existing WFP programme in Niger to extend school feeding to areas suffering from food shortage, natural disasters and conflict. In Ethiopia and Cambodia, GPE has helped build capacity to design comprehensive strategies linking WASH, health, nutrition and education.

At the global level, GPE is bringing partners together and highlighting the importance of nutrition in schools. In 2018, together with Disease Control Priorities and the World Bank, GPE published the report *Optimizing Education Outcomes*, which proposes a high-return package of school health investments. GPE also funded the School Health Integrated Programming — SHIP — initiative (2014–2018), which strengthened collaboration between ministries of health and education in Cambodia, Ethiopia, Ghana and Senegal, increasing awareness, capacity and the operational and technical resources to include SHN in education sector plans.

In 2020, GPE created a funding window for countries to mitigate both the immediate and long-term impacts of the COVID-19 pandemic on education, giving planning grants to 87 countries and over US$467m in accelerated grants to 66 countries. This included US$47m for hygiene programmes, US$12m for psychosocial support, and US$9m for nutrition. In several countries, these grants funded the distribution of food to vulnerable students while schools were closed, or development of school feeding programmes in the recovery phase to encourage children to return to school.

It has a focus on global information sharing and advocacy. Building on the FRESH partnership, and recognizing the need to strengthen coordinated action across sectors, UN and multilateral agencies formed an inter-agency group in 2019. This group, which includes FAO, GPE, UNESCO, UNICEF, the World Bank Group, WFP and WHO, is working together to advocate for collective action and increased investment in SHN to support better data collection and dissemination, and scale up evidence-based policies and programmes.

Global multilateral education funds, including GPE (**Box 7**) and Education Cannot Wait — a fund dedicated to education in emergencies and protracted crises — have also identified SHN, including school feeding, as funding and partnership priorities. The World Bank is one of the largest funders of SHN programmes and also provides technical and policy support, including through its Human Capital Project and the Global Financing Facility for Women, Children and Adolescents, which supports 36 low- and lower-middle-income countries. Bilateral agencies are also increasingly interested in SHN programmes, and the involvement of these agencies and of NGOs can play a critical role in increasing funding and addressing implementation challenges (**Box 13**, **Section 4.1**).

Box 8

The School Meals Coalition

Launched in September 2021 at the Food Systems Summit, in the context of the COVID-19 pandemic, the School Meals Coalition brings together more than 70 countries and is supported by more than 70 partners as of July 2022, including UN agencies, intergovernmental organizations, civil society organizations, academic institutions and the private sector.

Its goal is to ensure that every child receives a healthy nutritious daily meal in school by 2030. Its objectives are to: 1) Support all countries to re-establish effective school meal programmes and repair what was lost during the pandemic; 2) Reach the most vulnerable in low- and lower-middle-income countries that were not being reached even before, and 3) Improve the quality and efficiency of school meal programmes by facilitating a healthy food environment in schools, promoting safe, nutritious and sustainably produced food, and ensuring that school meals are linked to and integrated in health and nutrition packages.

The Coalition will focus specifically on supporting national governments to overcome identified bottlenecks and boosting actions for scaling progress through initiatives that have been or are being coordinated by some of the Coalition's partners, including:

- ***A Research Consortium for School Health and Nutrition*** **led by the London School of Hygiene and Tropical Medicine (LSHTM). A global, multisectoral partnership of academic, scientific and technical institutions and individuals that aims to promote quality research on the health, nutrition, well-being, education and development of school-age children and adolescents. (Box 12).**
- ***A Sustainable Financing Initiative for School Health and Nutrition***, **led by the Education Commission that aims to work with governments and donors to rethink the funding mechanism and implement sustainable financing solutions to expand school feeding and SHN programmes, with a particular focus on low- and lower-middle-income countries.**
- ***A data and monitoring initiative***, **led by WFP, to improve and institutionalize the availability of quality data on national school meal programmes worldwide for evidence-based decision-making and tracking of progress over time. The initiative, composed of government and intergovernmental institutions, foundations, academia, civil society and UN agencies, leads work in the following three action areas: 1) Globally agreed indicators and definitions — establishing a core set of indicators with clear methodologies to calculate and report on them, so that governments can improve consistency and comparability of data; 2) Systematic data-collection methods — agreed set of reporting processes that helps governments systematically capture and report high-quality data and avoid duplication of demands, and 3) Single, official and trusted global database as a global public good that systematically collects, stores, curates and makes accessible timely national data on school meals and SHN programmes.**
- ***A peer-to-peer community*** **of best practices, which will be launched in 2023. It will work with governments to share lessons and best practice from national and local contexts, disseminate evidence-based policy and programme standards and guidance, and support cross-sector linkages and integrated policies and programmes.**
- ***A Communications and Partner Outreach Group***, **which will identify and engage in opportunities to raise the profile of school meals and the health and nutrition of learners.**

The WFP *State of School Feeding Worldwide* publication series will serve as the reporting mechanism for the School Meals Coalition and the enhanced evidence that the Data and Monitoring Initiative will help to generate.

For more information, see: https://schoolmealscoalition.org

The United States Agency for International Development — USAID — for example, supports operational research and experience sharing on SHN through the Child Health Task Force.[11]

The COVID-19 pandemic further catalysed collective action to mitigate the impact of the pandemic on the education, health and nutrition of school-age children and adolescents and to support education recovery. This includes action by GPE (**Box 7**) and the establishment of the School Meals Coalition (**Box 8**). In response to the learning crisis that was exacerbated by COVID-19, the Save Our Future initiative, led by the Education Commission, clearly prioritized the health and well-being of learners as part of the core mandate of education, and called for greater investments in SHN, including school meals (Save our Future, 2020). The extraordinary Global Education Meeting in October 2020 marked a critical moment. Heads of State and government, together with representatives from the global education community, agreed to reinforce global cooperation and investment in education. In particular, they pledged to safely reopen schools and restore access to services, such as school meals, health, WASH and social protection, to safeguard education from the impact of COVID-19 and deliver good quality and inclusive education to the world's children (UNESCO, 2020).

Regional initiatives have sought to foster high-level engagement. For example, the African Union (AU) is currently developing its first strategy for Education for Health and Well-being, which will provide a framework for a unified approach within the education sector to ensure that all young people acquire the knowledge, attitudes and skills to lead healthy and fulfilled lives, make informed decisions about their health, and respond to local and global challenges. The AU has also driven regional efforts to establish and strengthen nationally-owned school feeding programmes. At the AU Summit in 2016, African Heads of State recognized HGSF as an important intervention to address education and hunger and, in 2017, the AU established a HGSF Cluster to strengthen coordination and partnerships. In 2022, the African Union Commission (AUC) and African Union Development Agency (AUDA-NEPAD) published new *Guidelines for the Design and Implementation of HGSF Programmes in Africa* (AUC and AUDA-NEPAD, 2022).

In South-East Asia, ministries of health and education have also committed to school health and health-promoting schools (**Box 9**). In addition, ASEAN — Association of Southeast Asian Nations — region countries, led by the Governments of Indonesia and Vietnam, are developing minimum standards and guidance for school nutrition.

Box 9

Cross-sectoral commitment to health-promoting schools in South-East Asia

Authors: Dr Suvajee Good, WHO Regional Office for South-East Asia and Jenelle Babb, UNESCO Asia and Pacific Regional Bureau for Education

In August 2021, Member States of the WHO South-East Asia Region (SEARO) — Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, the Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste — endorsed a resolution on revitalizing the school health programme and health-promoting schools in the South-East Asia region. The resolution urged countries to adopt and implement the Global Standards for Health-promoting Schools and to strengthen national policy and actions to enhance collaboration between relevant partners in implementation in all schools. The resolution also called upon Member States to take immediate steps for the safe reopening of schools and to consider innovative and intersectoral actions to revitalize health promotion, prevention, and services for school-age children and adolescents.

Building on the momentum, in October 2021, ministers of health and education of all SEARO countries (except Myanmar) participating in an interministerial meeting signed a joint Call for Action — 'Making every school a health-promoting school: scaling up the implementation of comprehensive school health programmes for promoting health and well-being of students and staff'. Within that meeting, many countries reviewed current implementation of their school health programmes and developed national plans to make them more comprehensive. The meeting discussed priority actions and recommendations for a regional road map to support country implementation and monitoring. The Call for Action also included the safe reopening and operation of schools during the pandemic.

Preceding the interministerial meeting, the Regional Directors of WHO, UNESCO, UNICEF, UNFPA and WFP released a joint statement setting out their commitment to support country implementation of comprehensive SHN programmes and safe reopening of schools. As part of this, UN partners organized subregional webinars with education and health sector officials and partners, which included exchanging country experiences and disseminating technical and operational guidance.

11 Child Health Taskforce: https://www.childhealthtaskforce.org/hubs/school-health-and-nutrition

Regional partnerships and networks have also been instrumental in mobilizing support and action, including through advocacy, technical support and guidance. One example is the Schools for Health in Europe (SHE) Network Foundation, which supports the adoption and implementation of health-promoting schools in countries in Europe and Central Asia by providing practical guidance and tools, and monitoring progress (**Box 10**).

Many thematic networks and initiatives exist. Partnerships have been established to support specific areas of work at the global and regional levels, including building commitment and promoting knowledge exchange. They include, among others, Safe to Learn, a global partnership that aims to end violence in schools (**Box 18**), and the Global Partnership Forum on comprehensive sexuality education, co-convened by UNESCO and UNFPA, which provides a platform for collaboration, sharing good practice, identifying research gaps, enhancing youth leadership and informing evidence-based policies and programmes. The latter has 60 member organizations spanning UN agencies, international civil society, youth-led organizations, academic institutions and donors with an interest in building on the growing momentum of government commitments to sexuality education.

Box 10

Schools for Health in Europe Network Foundation

Author: SHE Network Foundation

The SHE Network Foundation is an NGO with national and regional coordinators in 39 WHO Europe Member States and a research group with more than 100 researchers across the region — all committed to the vision of making every school in Europe a health-promoting school. Together with its coordinators, SHE provides support for national, regional and local development and implementation of school health-promotion policies and strategies through sharing knowledge, expertise, good practice and resources, including through the online platform www.schoolsforhealth.org.

In 2021, SHE published *European Health Promoting Schools Standards and Indicators* (SHE, 2021) to address the gap between current and optimal practice in health-promoting schools and to identify optimal practice in different countries with various health-promoting school models. SHE has also published a *School Manual* (SHE, 2019) to support national and regional SHE coordinators, policy-makers, school principals, teachers, and others interested in health-promoting schools.

School health promotion does not exist in isolation from the wider community and SHE advocates for a 'health-in-all-policies' approach where health is promoted in all environments in which children live and are engaged in daily activities. Specifically, SHE calls for intersectoral collaboration, an integrated approach that links actions at school level with actions in the local community, and collaboration between national and regional mechanisms, such as SHE and Healthy City and Healthy Region networks.

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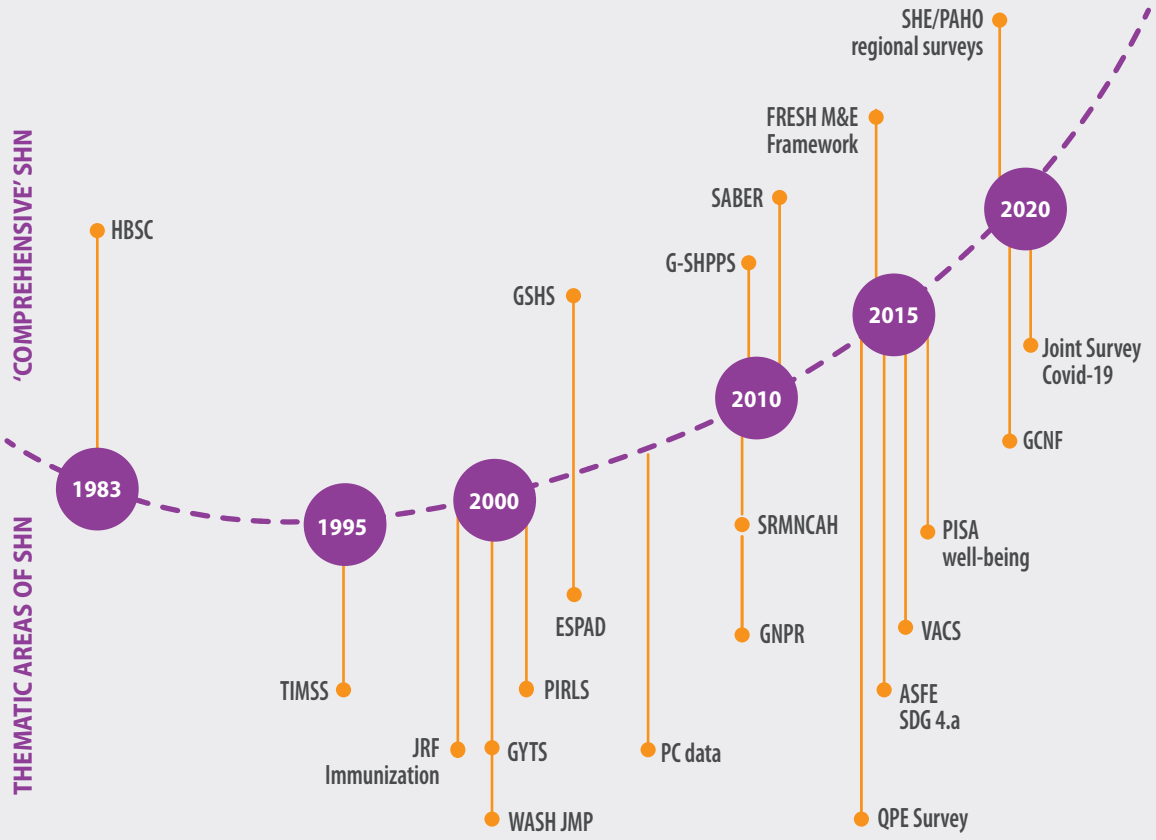
2.6 Monitoring of school health and nutrition programmes

The importance of having good data on SHN to monitor global progress and inform policy and programming is beyond question. This includes timely, relevant, disaggregated data owned by relevant stakeholders and encompassing all levels, from health outcomes and behaviours to national and school-level policies and programmes. The COVID-19 pandemic has further highlighted the need to generate and disseminate more, better, and coordinated evidence.

Globally, in the last two decades, the design and implementation of SHN monitoring and surveillance initiatives have progressed (**Figure 4**). The emergence of these data systems corresponds to the evolution of SHN programmes. School-based surveys have long been used as monitoring tools as they serve as a proxy for the broader health and well-being of the community in which children live (Schultz and Ruel-Bergeron, 2021). For instance, by the 1980s, health and nutrition programmes targeting children in middle childhood and adolescence had become universal in high-income and upper-middle-income countries. This led to the development of the Health Behaviour in School-age Children Survey (HBSC) in 1982 — a cross-national

Figure 4

Development of school health and nutrition-related data initiatives



Source: UNESCO for this report.[12]

12 See Annex 1 for more information on each of these instruments and initiatives.

study that surveys lower-secondary-school children to gain insight into their well-being, behaviours and social context, and now covers more than 50 countries and territories in Europe and North America. A year later, the WHO Regional Office for Europe adopted it as a collaborative study. Since the launch of FRESH in 2000 and the inclusion of SHN as a priority area in the Education For All action framework, it is difficult to find a country that has not adopted SHN policies and school health services at some level (Sarr, Fernandes et al., 2017). Consequently, the Global School-based Student Health Survey (GSHS) was launched in 2003. This complements the HBSC by providing additional data on key adolescent risk and protective behaviours in more than 100 countries — mostly lower-middle-income and low-income countries.

Figure 4 provides an overview of key monitoring and surveillance systems and data-collection initiatives, but is not exhaustive.[13] These have been broadly divided into two categories. There are those that collect topic-specific data on thematic areas relevant to SHN, such as the Global Youth Tobacco Survey (GYTS), the Global Child Nutrition Foundation (GCNF) Global Survey of School Meal Programs, and the Joint Monitoring Programme (JMP) for WASH, which are shown at the bottom of Figure 4. The second category includes those that aim to produce data on integrated or comprehensive SHN and that cover a range of topics, such as the Global School Health Policies and Practices Survey (G-SHPPS), created to generate scientifically credible school-level data that describe characteristics of school health policies and practices nationwide, or the Systems Approach for Better Education Results — SABER — tools for school health and school feeding developed by the World Bank and partners (**Box 11**). More recently, regional initiatives have emerged, such as the SHE Network Foundation mapping of school health promotion (**Box 9**).

These data systems, initiatives and tools differ in purpose, methodology, target groups, cycles and geographic coverage. While some generate nationally representative and scientifically credible data, such as the GSHS, HBSC or G-SHPPS, others are tools to provide an overview of the status of school-health related policies and systems in a given country to inform policy and planning, such as the SABER tools. Geographical coverage ranges from global surveys to smaller regional initiatives, such as the SHE Network mapping, the Latin America and the Caribbean national school health survey, or the ESPAD.

For some of the initiatives, data collection has been conducted in multiple cycles since the start, in some cases as early as the 1980s. For other sources, data collection has been more recent or has been undertaken at a single point in time. Depending on the purpose, surveys have a diverse range of respondents, including students, teachers and school and government officials. Importantly, many data-collection systems do not specifically focus on the education sector or school. For example, the WHO Global Nutrition Policy Review (GNPR) and the WHO Global Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey (SRMNCAH) are nutrition and health surveys with certain sections focusing on the education sector. Most of the data on delivery of comprehensive sexuality education in schools is collected through HIV/AIDS data-collection mechanisms. The National Commitments and Policy Instrument (NCPI), for example, has collected data on the integration of HIV in national education sector policies and plans, providing the foundation for monitoring mechanisms for school-based programmes. More recently, the scope has been expanded to encompass monitoring sexuality education more broadly in many countries, and UNESCO has supported countries to integrate HIV-sensitive indicators in national Education Management Information Systems (EMIS).

Box 11

A Systems Approach for Better Education Results: Country use of the SABER tool for school health and school feeding

The Systems Approach for Better Education Results (SABER) School Feeding and School Health tools are part of a series of policy tools developed by the World Bank to help countries assess school health and school feeding policy and programmes and to strengthen programme design and monitoring. To date, the tools have been used by more than 50 countries, in particular by countries planning school feeding programmes in partnership with WFP.

In 2019, the World Bank Group, together with WFP, revised the SABER to make it more comprehensive. The new version — the Healthy-SABER, which supports multiple topic-specific modules including school health, school meals and school WASH — was rolled out in Togo in 2022 and will be tested elsewhere, particularly in countries in the Economic Community of West African States — ECOWAS. The Healthy-SABER tool has also been chosen by several countries to support planning for restoring school meals following COVID-19.

Source: Based on World Bank, 2012; World Bank Deworming Africa Initiative, 2022.

13 Annex 1 provides an annotated list of data sets used in this report.

Educational success is primarily measured by how well children perform on standardized tests rather than by more holistic or inclusive measures. However, the Organisation for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA), and other learning assessment surveys, such as the Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS), now include a focus on students' well-being.

While information on health outcomes and learners' behaviours and attitudes is in relative abundance, there is a lack of comparable data on SHN policies, programmes and services. Furthermore, SHN data-collection systems are fragmented and disconnected, and there is little coordination or harmonization of data collection and analysis. There is no commonly agreed framework or measurable set of indicators for monitoring SHN policies and programmes (Schultz and Ruel-Bergeron, 2021) or validated impact indicators. Most countries collect data on their national programmes, often using different indicators, definitions and methodologies for analysis and reporting.

In response, there have been increasing efforts to improve education-health measurements globally. Global Action for Measurement of Adolescent Health (GAMA), led by WHO and the UN Technical Working Group on Adolescent Health and Well-being, aims to harmonize and prioritize adolescent health indicators (Marsh, Moller et al., 2022). The Data and Monitoring Initiative of the School Meals Coalition (**Box 8**), led by WFP in partnership with Dubai Cares, the Research Consortium for SHN, the AU, AUDA-NEPAD and others, will develop a measurement framework for school meal programmes and create a global database. UNESCO, WHO, UNICEF and other UN agencies and partners have developed global standards for health-promoting schools and have revised the G-SHPPS as a monitoring tool. The latter will potentially address the lack of comparable data on SHN policies and programmes at the school level. This momentum should be capitalized on to collectively set and agree on a core set of practical indicators and monitoring processes to be tracked at global level. In parallel, there is also increasing momentum around research and evidence, as demonstrated by the Research Consortium for School Health and Nutrition (**Box 12**).

Box 12

The Research Consortium for School Health and Nutrition

Author: The Research Consortium for School Health and Nutrition

The Research Consortium for School Health and Nutrition, an initiative of the School Meals Coalition launched in 2021, aims to generate evidence on the effectiveness of SHN programmes and provide guidance on effective policy. The Research Consortium facilitates collaboration between academic, research and development partners to address the knowledge gaps in SHN, and functions through a global network of autonomous Communities of Practice comprised of researchers and practitioners. Its work is guided by a 10-year research strategy that will be refined in response to emerging issues and requests from Coalition countries. Initial areas of focus of four Communities of Practice include:

Impact and evidence: updating a Cochrane/Campbell systematic review to assess the impact of SHN in key education metrics that are used to select 'smart buys' for the sector.

Analytics and metrics: quantifying the returns of SHN interventions across sectors through economic evaluation assessments of the value for money, return on investment and equity and gender impact of school health interventions, as well as assessing the effect of these interventions on learning outcomes.

Good examples: developing case studies to assess and showcase enabling factors in the design, implementation and financing of large-scale and long-standing national school meal programmes.

Nutrition measurement: using the Biomarkers of Nutrition for Development platform to establish a common framework of indicators to monitor the nutritional status of school-age children and adolescents.

Students in Ghana giving thumbs up in a class after eating their school meals, indicating they are ready for their science lesson.

Section 3

Status of school health and nutrition policies

HIGHLIGHTS

An enabling environment for SHN requires appropriate policies, laws and institutional frameworks. Supportive policies are a prerequisite for comprehensive, relevant and sustainable SHN programmes, and enabling legal frameworks are essential for effective policy implementation.

Global and regional reviews suggest that most countries have a policy framework for SHN. However, approaches vary: some countries integrate SHN within broader national education or health policy frameworks, while others have specific policies for SHN, or components of it. Most countries have multiple policies related to SHN, which is largely due to the multisectoral nature and the large scope of this area of work but may lead to policy fragmentation. Around two-thirds of countries have national standards on health-promoting schools, but few national policies take a comprehensive or whole-school approach. Only 17% of documents from high-income countries refer to a whole-school approach; the proportion is lower in middle-income countries (3%) and even lower in low-income countries. It is not possible to present a comprehensive picture of the status of national SHN policies as most available data relate to countries in Europe and Asia; lack of data from other regions and of comparable data is a significant gap.

Many countries have policies, standards or guidelines on specific SHN-related issues. Drawing on data from a range of global data sets, the most common themes are school nutrition (91% of 198 countries and territories); sexuality education (85% of 155 countries and territories); school feeding (80% of 85 countries and territories), and physical education (79% of 117 countries and territories). Available data also show that 74% of 192 countries have legislation on smoke-free education environments, while only 37% of 170 countries have national guidelines on prevention of alcohol-related harm in schools. There has been a significant increase in the number of countries with a policy framework for school feeding. Between 2013 and 2020, the proportion of low-income countries with such a framework increased from 20% to 75%, and a similar picture was observed in middle-income countries.

SHN is context- and country-specific and this is reflected in national policy priorities. Issues such as sanitation and HIV prevention are mentioned more frequently in policy documents in low-income countries, whereas issues such as obesity, emotional well-being, prevention of violence and drug use are more likely to be mentioned in documents from high-income countries.

Comprehensive and relevant SHN programmes are unlikely to be implemented at scale and sustained unless they are part of national policy. Systematic reviews for health-promoting schools found that the existence of a policy framework is the most critical factor determining the sustainability of health-promoting interventions in schools (WHO, 2022e; WHO, 2022f).

While policy sets out the main objectives that a government seeks to achieve, legal frameworks are essential for effective policy implementation. Legal and regulatory frameworks establish the required institutional mandates and translate political intentions into concrete obligations, providing a basis for accountability and making policy commitments sustainable in the long term (Cruz, 2020). Identifying existing legislation and assessing the impact of regulatory frameworks periodically is, therefore, essential. However, there is very limited data on legal and regulatory frameworks related to SHN.

Countries have ratified International Human Rights Treaties, including the Convention on the Rights of the Child, the International Covenant on Economic, Social and Cultural Rights, and the International Covenant on Civil and Political Rights, which include obligations to fulfil children's rights to education, health and food. To comply with those international obligations, national legal frameworks and policies should consistently support comprehensive SHN programmes and consider their links with education, health, and food and agriculture policies and systems.

This section considers available evidence on the extent to which countries have national policy and regulatory frameworks for SHN based on data from global and regional policy reviews. It is not possible to present a comprehensive global picture of the status of country policies as most evidence relates to Europe and to Asia. It is difficult to compare data from different sources due to differences in terminology, frameworks used to assess SHN policies, countries included, questions asked in surveys, and the self-reported nature of data.[14,15] There is also little information about the extent to which countries have policies and standards on SHN that are comprehensive or about policies at the subnational and school levels.

14 Terminology used also includes 'health-promoting schools', 'school health services', 'school health policies', 'school-based public health interventions', and 'school health programmes'.

15 Frameworks used to assess school health and nutrition policies in global and regional reviews include the FRESH framework, Health-promoting Schools framework, School Health and School Feeding SABER, among others.

3.1 National policies and standards

Global and regional reviews suggest that most countries have a policy framework for SHN. Policy approaches vary. Some countries integrate SHN into broader national policies, most often education or health; others have a specific SHN or health-promoting school policy. Most countries have multiple policies related to SHN, which is largely due to the multisectoral nature and the large scope of this area of work. A fragmented policy environment can however be challenging for implementation, intersectoral coordination, and monitoring and evaluation. Regional data show:

- **In Latin America and the Caribbean**, a regional assessment conducted by the Pan American Health Organization (PAHO) in 2018 asked if countries have a national school health policy, strategy or plan. Of the 18 countries that responded, eight (Argentina, Brazil, Dominican Republic, Haiti, Honduras, Mexico, Panama and Paraguay) reported that they have a specific school health policy or strategy; one reported that its policy had expired; four that they have broader national policies or strategies that encompass school health as a dedicated section; and four reported not having aschool health policy, strategy or plan at the time of theassessment, but that school health was mentioned in other policies, strategies or plans. Only one country had no policy framework for SHN (PAHO, 2022).
- **In South-East Asia**, a policy review covering seven countries (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic (PDR), Malaysia, the Philippines and Thailand) found that existing national policies supported components of SHN programmes in primary schools in all seven countries (Southeast Asian Ministers of Education Organization (SEAMEO) INNOTECH, 2016). A recent policy review of seven countries (Bangladesh, Bhutan, Myanmar, Nepal, Sri Lanka, Maldives and Thailand) by WHO concluded that the health-promoting school approach was not recognized explicitly in school health policies in these countries, with the exception of Maldives and Thailand (WHO, 2021c).
- **In sub-Saharan Africa**, analysis of education sector plans since 2000 from 25 countries using the FRESH framework showed that 32% of countries adopted a SHN-related policy between 2001 and 2007, and 28% more adopted a SHN-related policy between 2010 and 2015 (Sarr, Fernandes et al., 2017). The majority of policies during the earlier timeframe focused on the education sector response on HIV and school environments — in particular WASH. By contrast, in the second period, SHN-related policies often had a wider scope: while the SHN component of education sector plans often focused on WASH, some countries also sought to address violence and psychosocial issues through SHN, and the analysis highlights the increasing priority that governments place on SHN and its role in achieving education sector goals. The same study also analysed SABER School Health surveys from 16 countries. This showed that 80% of these countries reported having a national policy on SHN and that in many countries SHN policy is included in other national policy frameworks, for example, those of the national education sector. Importantly, 12 of the 16 countries had an education sector budget line for SHN, which is critical for scale-up and sustainability.
- **In Europe and Central Asia**, data collected in 2019 from 24 countries that are members of the SHE Network showed that 14 had a formal health-promoting school policy and 17 included policy for health-promoting schools in broader national education and health policies. Of the 24 countries, 15 incorporated school health promotion into 3 or more other national policies. In addition, 14 countries had a national process to monitor and evaluate health-promoting schools (Vilaça, Darlington et al., 2019). In almost 70% of participating countries, national policies required or recommended that schools use a whole-school approach to promote health and well-being. Scotland's education policy, for example, has an integrated approach to health and well-being at the centre (**Case study 2**).

Case study 2

Health and well-being at the centre of education policy in Scotland

In 2004, the Scottish Government introduced 'A Curriculum for Excellence' that has health and well-being at its centre to ensure all students acquire the skills for happy, healthy lives. Within the policy, health and well-being are divided into: mental, emotional, social and physical well-being; planning for choices and changes; physical education and physical activity; food and health; substance misuse; relationships, sexual health and parenthood.

The Government made available resources to ensure that students feel happy, safe, included and respected in their learning environment, and interventions in schools range from mental health support to school meals and specific well-being curricula. For example, every secondary school is expected to offer counselling services and to teach Personal and Social Education as part of the curriculum.

Source: Adapted from Beadle, Pich et al., 2021, p.13-14.

Around two-thirds of countries report having national standards on health-promoting schools. In 2018- 2019, 96 of 147 countries surveyed (65%) for the SRMNCAH reported that they had national standards in place for health-promoting schools, with important differences between regions (**Figure 5**) (WHO, 2020b). Regions with the most countries with standards are Central and Southern Asia and Northern Africa and Western Asia; regions with the fewest countries that have standards are Latin America and the Caribbean and Oceania.

Many countries have policies, standards and guidance related to school health, but few address student health and well-being through a whole-school approach. A review of 150 documents from 91 countries assessed the status of policies, standards and guidance related to health-promoting schools (WHO, 2022e). The findings showed that low-income countries were more likely than high-income countries to give priority to developing and implementing a clear and sustainable national policy or/and strategy and to intersectoral government endorsement and support — perhaps because policy frameworks are relatively less well-established. The review concluded that a comprehensive, whole-school approach to SHN was rarely demonstrated in national documents. Only 17% of documents from high-income countries referred to a whole-school approach; the proportion was lower in middle-income countries (3%) and even lower in low-income countries.

With respect to the different domains of health-promoting schools, policies, standards and guidelines are mostly likely to refer to the involvement of parents and the wider community, the school physical environment and the school curriculum — but none of these domains were covered by all documents (**Figure 6**).

The same review also concluded that there is very little reference to SHN in humanitarian situations in national policies or strategies. It found only two documents that made more than a cursory reference to school health in humanitarian situations, both of which had been developed by the United Nations Relief and Works Agency for Palestine Refugees in the Near East, which manages schools for more than 500,000 refugee children.

3.2 Themes included in school health and nutrition policies

Thematic reports and surveys provide insights on the extent to which countries have policies and legal frameworks on specific aspects of SHN. However, they do not provide information about whether these specific policies are integrated within a more comprehensive policy framework for school health or whether there is alignment between different aspects, for example, through a common approach or programme.

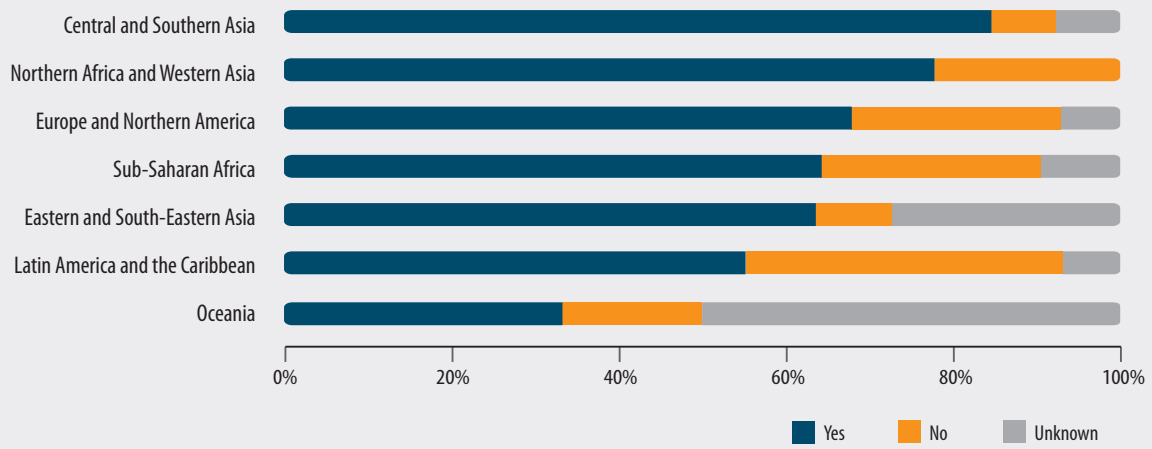
Existing reviews signal that policy priorities for SHN reflect country contexts. A review by WHO (WHO, 2022e) found that health and nutrition policy priorities and topics included in the school curriculum reflect the health and socioeconomic context of a country. For example, issues such as sanitation and HIV prevention are mentioned more frequently in policy documents in low-income countries, whereas issues such as obesity, emotional well-being, prevention of violence and drug use are more likely to be mentioned in documents from high-income countries. This is consistent with the findings of the SHE Network survey of 24 countries in Europe and Central Asia in 2019, which showed that almost all countries included at least 10 of 19 health topics in national health-promoting school policies (Vilaça, Darlington et al., 2019). Topics most likely to be included were physical activity/sports, healthy eating, mental health, smoking and alcohol, and hygiene (covered by 20 or more countries), followed by environment, safety, illicit drugs, oral health, sexuality, well-being, violence in schools, and social competencies (covered by 16 or more countries). Eating disorders, dating violence (intimate partner violence in romantically involved but unmarried adolescents) and gender equality were among topics less likely to be included.

Many countries have policies on specific SHN-related issues. Data currently available on policies related to school nutrition and school meals, sexuality education, physical education, smoking and alcohol consumption on school premises are summarized below. This summary is based on available data and does not reflect any prioritization of issues, nor does it attempt to draw conclusions about the quality or relevance of policies as insufficient information is available to allow this analysis.

Almost all countries have national policies related to school food and nutrition. Data from the WHO Global database on the Implementation of Nutrition Action (*GINA*), which is based on the review of national policy and regulatory documents from different sectors related to nutrition, show that 91% of 198 countries and territories have policy commitments on school nutrition in 2022 (WHO, 2022b).

Figure 5

Percentage of 147 countries with national standards on health-promoting schools, by region, 2018–2019



Data source: WHO, 2020b. Available under CC BY-NC-SA 3.0 IGO

Figure 6

Inclusion of health-promoting school domains in country policy and guidance documents

School policies

40% of national documents refer to the need for school-level policies.

School curriculum

Only around 60% of national documents refer to the school curriculum. Including health and life skills in the curriculum and using a variety of teaching and learning strategies were the most frequently mentioned topics.

School environment

National documents are almost twice as likely to refer to the school physical environment (60%) than the school social environment (35%). The focus of the former is on a healthy physical environment, with lower-income countries more likely to also refer to clean water supply, sanitation and safe buildings. A few countries include a reference to disability and the school physical environment. For example, in Lao PDR, there is a reference to construction standards issued by the Ministry of Education and Sports to enable access to education institutions. The main focus of the social environment is on establishing a safe space that fosters good relationships and builds self-esteem and confidence.

School health services

Almost 50% of national documents mention school health services. Low-income countries are more likely to focus on schools as a setting for health service delivery than middle- or higher-income countries, and their documents are more comprehensive in their coverage of standards, principles and guidance related to school health services.

Leadership, advocacy, resources and training

Leadership and advocacy are included in around 50% of national documents; student participation in decision-making is the aspect mentioned most frequently. More than 50% of national documents mentioned financial resources and two-thirds mentioned training for school staff related to SHN.

Parent and community involvement

This was the most frequently mentioned issue across all country income groups, featuring in 70% of national and subnational documents and with a particular emphasis on community partnerships.

Data source: WHO, 2022e.

Four in five countries have a school feeding policy. The GCNF 2019 Global Survey of School Meal Programs found that 80% of 85 countries had a national policy on school feeding. Only 11% had a policy related to the private sector, even though the private sector was reported as being involved in school meal programmes in 59% of countries. A FAO survey of 33 low- and middle-income countries found that they had different policy approaches: 3 countries had policies specific to school feeding, 8 had laws or resolutions related to school feeding, and others included school feeding in food security, nutrition and school health policies (FAO, 2019). Additional data on standards and guidelines for school meals are included in **Section 4.3** of this report.

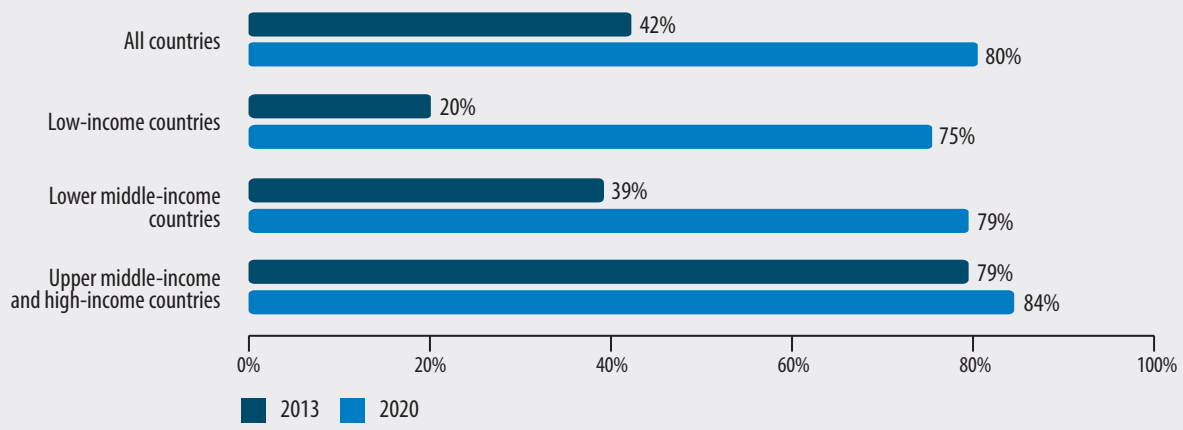
The proportion of lower-income countries with school feeding policy frameworks increased significantly between 2013 and 2020. The increase has been particularly significant in lower-middle-income and low-income countries. As **Figure 7** shows, the proportion of low-income countries with an established policy framework for school feeding increased from 20% in 2013 to 75% in 2020; in lower-middle-income countries the proportion increased from 39% to 79% (WFP, 2020). This has resulted in an increase in domestic financing for, and the number of schoolchildren covered by, school feeding programmes in these countries (see **Section 4.5**). This trend has been supported by regional commitments to school feeding, South-South cooperation and technical support from international partners. Growing evidence on return on investment in school feeding may also have contributed to increased policy commitment.

Data from thematic studies show that most countries have policies related to the delivery of health education in school and its inclusion in the curriculum. For example:

- **85% of 155 countries have policies related to sexuality education in schools.** Available data from a range of sources (UNESCO, UNAIDS et al., 2021) indicate that 132 of 155 countries (85%) have policies or laws relating to sexuality education (referred to in surveys as 'life skills-based HIV and sexuality education'). A total of 78 countries report that policies include sexuality education in both primary and secondary schools, and 30 countries report that they have policies only in secondary education. The remaining countries referred to an overall supporting legal framework, which includes laws, decrees, acts and policies. Legislation that makes sexuality education compulsory is essential to ensure it is taught in schools, as the example from England shows (**Case study 3**).
- **79% of 117 countries have policies that mandate physical education in schools.** In 2020, 93 of the 117 countries (79%) responding to the UNESCO *Fourth Worldwide Survey of Physical Education* reported having a national policy on compulsory physical education in schools (UNESCO, 2023). Almost all countries in Europe and Northern America (97%) and Northern Africa and Western Asia (93%) have such a policy. In contrast, only half or less than half of countries in Central and Southern Asia (50%) and Oceania (20%) do. Overall, high-income countries (93%) are more likely to have a national policy than low-income countries (63%).

Figure 7

Status of school feeding policy frameworks in 2013 and in 2020



Source: Adapted from WFP, 2020, p.57.

- **69% of 198 countries and territories have policies on the inclusion of nutrition education in the school curriculum** (WHO, 2022b). However, the extent to which school-based nutrition education is integrated into policies varies between regions and countries. A survey of 30 low- and middle-income countries (FAO, 2021) found that nutrition education is integrated into one or more policies covering the school setting in all countries. However, in half of these, reference to school-based nutrition education is limited. In contrast, a scoping review for school nutrition education programmes in the Pacific Islands found that few countries have policies to support school-based nutrition education (FAO, 2019a).

Globally, 74% of 192 countries have legislation supporting smoke-free educational institutions. Analysis of data from WHO show that 143 out of 192 countries have legislation on smoke-free education facilities (WHO, 2021d). High- and middle-income countries are more likely to have this legislation than low-income countries (**Figure 8**).

In contrast, only 37% of 170 countries have national guidelines on prevention of alcohol-related harm in schools. The 2016 WHO Global Survey on Alcohol and Health asked whether there are national guidelines on prevention and reduction of alcohol-related harm in schools, and 63 out of 170 countries reported having such guidelines (WHO, 2022j), signalling that overall, many countries may lack a comprehensive education sector response to substance use.

Case study 3

England introduces statutory relationship and sex education

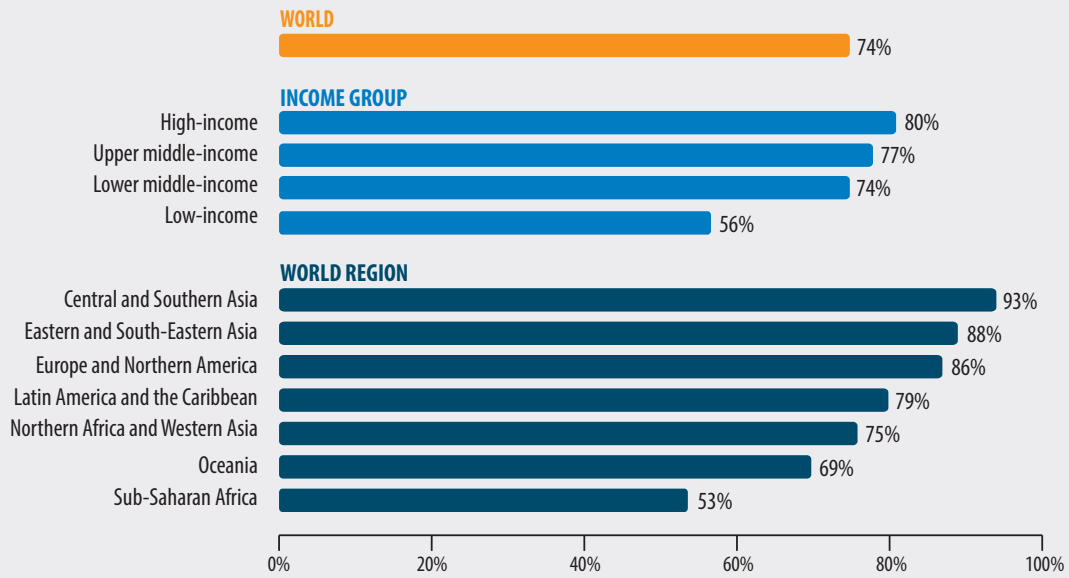
In England, statutory guidance released in 2020 makes it compulsory for all schools to teach Relationships Education at primary level and Relationships and Sex Education at secondary level. This change in policy resulted from concern about the limited attention given to the subject and the minimal guidance provided to schools, together with concerted advocacy by parents and students, and campaigning with members of parliament to change legislation.

The statutory guidance is based on the rationale that to lead a happy and successful adult life, 'pupils need knowledge that will enable them to make informed decisions about their health, well-being and relationships and to build their self-efficacy'. Schools are free to determine how to deliver the content set out in the guidance in the context of a broad and balanced curriculum, and the Department for Education has published implementation guidance.

Source: Adapted from UNESCO, UNAIDS et al., 2021, p.21. Available under CC BY-SA 3.0 IGO

Figure 8

Percentage of 192 countries with smoke-free legislation in education facilities, by country income group and region, 2020



Data source: WHO, 2021d. Annex 6.1. Available under CC BY-NC-SA 3.0 IGO
Note: Cook Islands, Niue, and the Bolivarian Republic of Venezuela are not classified by the World Bank Income groups.

The students in the Musa Bin Nusair School in Marib, Yemen, receive a daily nutritious snack of high-energy biscuits. The programme reaches schools in low-income neighbourhoods that host large numbers of internally displaced people (IDPs) and refugees.

Section 4

Status of school health and nutrition in practice

4.1 Overview of implementation of school health and nutrition programmes

HIGHLIGHTS

This section draws on available data and country examples to provide an overview of the extent to which countries are implementing comprehensive SHN programmes and to discuss different governance approaches.

Since the launch of the FRESH initiative in 2000, SHN programmes have expanded to nearly all countries with varying coverage and quality. Nine in ten countries report implementing some form of SHN programme, most commonly at primary-school level, although 62% of countries globally also implement programmes in secondary schools. Among low- and middle-income countries, around 70% have some form of school health programme for adolescents, and topics most frequently included are nutrition, hygiene and sanitation, physical activity, sexual and reproductive health and rights and life skills.

Health-promoting schools — or other whole-school approaches to SHN — appear to be most well-established in Europe; in other regions, relatively few countries are implementing the health-promoting schools approach at scale. Insufficient comparable data are available to be able to draw overall conclusions about the comprehensiveness and scope of SHN programmes.

In addition to a supportive policy framework, evidence from country experience suggests that effective school-based health and nutrition programmes depend on strong collaboration between education and health sectors and engagement of other sectors and partners. Adequate resources are also required, together with support for educators and health workers, school leadership, student participation, involvement of parents and communities, links to local health services, and a shared understanding of the value of such programmes for education outcomes. In practice, weak coordination and inadequate collaboration between different sectors and providers are common challenges.

Despite the importance of monitoring and evaluation of SHN programmes, available data suggest that it is lacking in policy, practice and research. While each monitoring system will be unique to the programmes, interventions and context, monitoring and evaluation must be strengthened to improve programme relevance, quality and impact.

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The expansion of SHN programmes: overview

Available data indicate that since 2000, SHN programmes have expanded to nearly all countries, although with varying coverage and quality. Globally, 89% of 160 countries report the implementation of SHN programmes. The 2016–2017 Global Nutrition Policy Review (GNPR) showed that 142 of 160 countries implemented SHN policies, programmes or standards (WHO, 2018), most commonly at primary-school level in all regions. However, 66% of countries implemented programmes in pre-primary schools and 62% in secondary schools. Most programmes were from 2000 or later.

Around 70% of low- and middle-income countries implement some form of school health programme for adolescents. UNICEF collects annual data from middle- and low-income countries on whether they implement school health programmes at national or subnational levels that reach adolescents aged 10–19 years in two or more intervention areas. In 2020, 90 of the 128 reporting countries were implementing a school health programme for adolescents — an increase from 79 countries in 2019. Of the 12 pre-identified intervention areas, the 5 most commonly included were nutrition (in 74 programmes), hygiene and sanitation (68), physical activity (62), sexual and reproductive health and rights (58), and life skills (51). Less well-covered issues included mental health promotion (42 countries), prevention of substance use (40), and violence and unintentional injury (39) (UNICEF, 2020a).

Implementation of whole-school approaches to health promotion appears to be most well-established in Europe, but even in European countries, coverage remains relatively low. The School Health in Europe Network, which supports countries in Europe and Central Asia to adopt and implement the health-promoting school approach, has developed European standards and indicators for health-promoting schools. An analysis by SHE shows that in 15 out of 21 reporting countries, all schools implement health-related activities at primary-school level, and this is also the case in 13 countries at secondary-school level (SHE, 2020). However, the number of countries in which schools formally work according to the health-promoting schools approach is much lower: in 10 countries, more than half of primary schools are working according to this approach, and only in 4 of them all primary schools implement it.[16]

Relatively few countries in other regions implement health-promoting schools at scale. The PAHO regional assessment in Latin America and the Caribbean found that the health-promoting school approach has more resonance in Latin America than in the Caribbean. It identified a large number of implementation studies and projects in schools, but most of these initiatives were of short duration and were not national in scope (PAHO, 2022). In Paraguay, the Healthy School Strategy has been sustained for 20 years thanks to strong policy commitment, intersectoral collaboration and community engagement, but implementation is still limited at the school level (**Case study 4**).

Similarly, a WHO review concluded that although there has been a school health programme in all Member States in the South-East Asia region for many years, and schools provide services explicitly for health, nutrition and physical activity, implementation of school health programmes in the region is not holistic or completely aligned with the health-promoting schools approach. Thailand and Maldives have the most comprehensive practices (WHO, 2021c). Other reviews have concluded that only a few countries, for example, Austria, have successfully implemented health-promoting schools at scale (WHO, 2022e). While many countries and territories have national or subnational guidance, formal legislation mandating implementation, as in Scotland, is less common (McIsaac, Hernandez et al., 2016).

In addition to a supportive policy and legal framework, evidence from countries suggests that effective implementation and sustainability of comprehensive SHN programmes depends on institutional anchoring; shared objectives and understanding of the value of whole-school approaches to health promotion in schools; strong collaboration between the education and health sectors and engagement of other sectors and partners; adequate resources; support and training for educators and health workers; school leadership; student participation; involvement of parents and communities, and links to local health services (WHO, 2022f; Herlitz, MacIntyre et al., 2020).

16 According to SHE, the formal health-promoting schools approach relates to schools that implement a structured and systematic plan for the health, well-being and the development of social capital of all pupils and of teaching and non-teaching staff. This is characterized as a 'whole-school approach' and these schools actively involve pupils, staff and parents in the decision-making and implementation of health-promoting interventions in the whole-school system. All efforts should target the following core aspects: 1) Healthy school policies, 2) The school's physical environment, 3) The school's social environment, 4) Individual health skills and action competencies, 5) Community links, and 6) Health services.

Case study 4

The Healthy School strategy in Paraguay

Paraguay has extensive experience with school health and nutrition, supported by an enabling legal and policy framework. The SHN response is grounded in the joint work of the Ministries of Health and Education and the engagement of the Government and community at all levels.

The Law on School Feeding and Health Control of 2014 is the main legal basis for SHN and aims to guarantee students' physical well-being in educational settings. The Law and the related Regulatory Decree N° 2.366 assign responsibility to the State for allocating funding for school feeding at national, regional and local levels. The Law also addresses school health services, including oral health, height and weight monitoring, vision screening and treatment, drinking water and sanitation, vaccination and health education. Specific guidelines for the systematic provision of health services in schools are under development within this Law. With support from local providers, schools are delivering regular health services to their students, especially vaccination, health screening, deworming and school feeding.

In the late 1990s, Paraguay developed a Healthy School Strategy (Estrategia Escuela Saludable), a whole-school approach to promoting health that encompasses comprehensive health education; basic health, food and nutrition services; improvement of the physical and psychosocial environment; and social and community participation. The Strategy is led by the Ministry of Health, jointly with the Ministry of Education and other ministries and institutions, and its implementation guide emphasizes intersectoral collaboration.

Resources from national and local governments contribute to implementation in each school; however, these are generally allocated to individual activities rather than to the Strategy as a whole. There is no pre-established plan but rather one adapted to each school and community. Schools and local communities lead implementation through a management team comprising representatives of the school community, the regional government, the municipality, community organizations and health professionals.

The Strategy has been implemented progressively and sustained over the past 20 years. Intersectoral cooperation has been a critical aspect and is currently being strengthened. The detailed school-level implementation guide provides a clear step-by-step process, and structures are included to ensure community participation. However, implementation is voluntary and currently only 285 schools from all regions of the country are implementing the Strategy, 96 of which have been accredited by the Ministry of Public Health and Social Welfare. Limited financial and human resources have been the main barriers. Despite the value of intersectoral action, the large number of government departments involved has proved to be challenging for efficient coordination.

Building on the country's experience, and to facilitate nationwide implementation, the Government of Paraguay is updating its national policies and guidance and further aligning them with the Global Standards for Health-promoting Schools. The process, which is aligned with the formulation of a Strategy for Educational Transformation, started with a participatory situational analysis in 2022, followed by a national consultative process to adapt and adopt the Global Standards.

Source: Based on Government of Paraguay, 2021; WHO and UNESCO, 2021a; Paraguay, 2014.

Governance and partnerships

Governance and institutional arrangements for SHN differ between regions. Data from policy and systematic reviews indicate that 90 countries report school health policies related to the governance and institutional arrangements and responsibilities for school health programmes (PCD, 2021). In most countries, both the education and health ministries are responsible for developing and implementing SHN policies, often in coordination with other relevant ministries. Reviews have shown this is the case in countries in South-East Asia (WHO, 2021c). In contrast, in Europe and Central Asia, responses to the 2019 SHE survey from 26 countries show that the majority (77%) of SHE national coordinators were appointed by the ministry of health, or by the ministry of health with the ministry of education or other organizations; only 19% were appointed by the ministry of education (Vilaça, Darlington et al., 2019).

Experience suggests that successful programmes depend on strong collaboration between the education and health sectors and engagement of other partners. This is illustrated by the experience of Paraguay (**Case study 4**) and China (**Case study 5**). SHN is by nature multisectoral, but weak coordination and inadequate collaboration between different sectors and providers, in particular, education and health, are recurring challenges in practice (Baltag, Pachyna et al., 2015; Schultz and Ruel-Bergeron, 2021; WHO, 2022f). The involvement of all stakeholders in the school community, including headteachers, teachers, other school staff, parents, students and community and religious leaders is required; and collaboration based on clear roles, responsibilities and structures tends to be more effective (WHO and UNESCO, 2021a; WHO, 2022f). There are hardly any data on students' participation in SHN policymaking and implementation, but experience suggests that student involvement in policy development is important and feasible (see **Case study 6** from Argentina and **Case study 7** on Uganda). In many countries, civil society organizations are also important partners (**Box 13**).

Case study 5

A multisectoral approach to promote students' health and well-being in China

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In 2019, China adopted a comprehensive approach to improving the health of its students through policies and systems for school health management and implementation, health education, health monitoring and disease prevention and control. In 2022, the Ministry of Education launched a National Healthy School Initiative based on *Guidance for Strengthening Comprehensive School Health*. This was jointly released in September 2021 by the Ministry of Education, the National Development and Reform Commission, the Ministry of Finance, the National Health Commission (NHC) and the State Administration for Market Regulation.

School health management and implementation: In 1990, with the approval of the State Council, the former State Education Commission and Ministry of Health promulgated the *Regulation on School Health Work*. Currently, the Department of Physical, Health and Art Education of the Ministry of Education is responsible for management of school health, and the National Bureau of Disease Control and Prevention of the NHC is responsible for management and supervision of student disease prevention and control. Implementation of school heath programmes at subnational and local levels is undertaken by the education and health sectors with support from other relevant sectors.

School health education: SHN education is supported by extensive guidance. Between 1992 and 1993, the *Basic Requirements for Health Education in Primary and Secondary Schools* stipulated the teaching content for health education. In 2008, to strengthen school health education, the Ministry of Education issued *Guidelines for Health Education in Primary and Secondary Schools* for Grades 1–12. The guidelines set out school health education goals, principles and content (e.g. healthy lifestyle, disease prevention, mental health, adolescent health care, safety and risk avoidance) and implementation methods. In 2021, the Ministry of Education made it a requirement for primary and secondary schools to provide four hours of health education each term and issued guidelines to fully integrate health education into the curriculum teaching materials.

Student disease prevention and control: National policy documents prioritize myopia, malnutrition, anaemia and the prevention and control of common diseases. These policies set out targets and the roles and responsibilities of families, schools, medical institutions and government departments. For example, in 2021, in response to COVID-19, the *Work Plan for Bright Action of Prevention and Control of Myopia in Children and Adolescents (2021–2025)* recommended actions, including reducing students' academic burden, strengthening outdoor activities and physical exercise, and regulating the use of electronic products.

In terms of obesity prevention and control, the NHC formulated the *Implementation Plan for Prevention and Control of Obesity in Children and Adolescents* in 2020, which aims to reduce the national annual increase in overweight and obesity in children and adolescents. In 2021, its *School Health and Nutrition Guidelines* stipulated basic requirements for health education, food safety, school meals, sports, student health monitoring, preparedness for public health emergency, and the school sanitary environment. The NHC and the Ministry of Education have also issued national standards related to prevention and control of infectious diseases and guidance on epidemic prevention and control as schools resume classes after COVID-19.

Student health monitoring: Since 1985, the Ministry of Education has conducted national surveys of physical fitness and health every 4–5 years, covering students in primary, secondary and tertiary education. The eighth survey in 2019 covered 374,257 students aged 6–22 years in 1,258 schools. It included 24 indicators related to: body shape (e.g. height, weight, chest circumference); physiological function (e.g. lung capacity, blood pressure, pulse); physical fitness (e.g. flexibility, strength, speed, endurance), and health status (e.g. poor vision). A questionnaire was used to collect information on lifestyle and psychological conditions. Since 2002, a network of monitoring centres and stations have recorded students' physical health status and major health problems. In 2005, the former Ministry of Health carried out the first adolescent health risk behaviour monitoring among 213,253 students aged 11–22 in 18 cities. In 2016, the NHC launched annual surveillance of common diseases and health-influencing factors among students. Since 2017, China has also monitored the school environment, in particular sanitation and safe drinking water.

These surveys and monitoring systems have strengthened understanding of the health status of children and adolescents, informed the development of policies and interventions, and provided the basis for evaluating impact. For example, steps have been taken to address the decline in physical fitness and increase in obesity and poor vision identified by successive national surveys between 1985 and 2005. According to the surveys conducted in 2010 and 2014, there has been some improvement in physical fitness and health, however, rates of obesity and poor vision are still increasing and students affected tend to be younger. In response, China re-launched the *Implementation Plan for the Comprehensive Prevention and Control of Myopia and Obesity* in 2018 and 2020 respectively.

Case study 6

Promoting student participation in policy development in Argentina

The Ministry of Health in Argentina convened a National Advisory Board on Adolescents to ensure systematic engagement of adolescent representatives in national policy. Adolescent Participation Forums enable young people to engage in developing policy to address the health challenges they face. In 2018, 13 forums were held in 4 provinces, during which 2,800 adolescents developed recommendations for tackling adolescent pregnancy, suicide and mental health challenges. The forums also serve as accountability mechanisms, providing adolescents with the opportunity to interact with the authorities and demand attention to their concerns.

Demonstrating what can be achieved by increasing adolescent participation and adolescent-led accountability mechanisms, two provinces have developed protocols to assist pregnant adolescents, particularly those below the age of 15, who currently suffer the greatest rights violations.

Source: Adapted from PMNCH and WHO, 2020, p.3. Available under CC BY-NC-SA 3.0 IGO

Box 13

Focus on the role of non-governmental organizations in school health and nutrition

A survey of 30 global and regional NGOs conducted by WFP and World Vision in 2021 showed that NGOs' focus was operational, but that they also support governments across a wide range of activities. While over 70% of NGOs that responded are involved in direct implementation of programmes, more than 50% consider advocacy, capacity strengthening and school staff training to be key activities, and around 30% also provide policy advice. NGOs often work closely with the wider community in the implementation of school health programmes. Over 70% of respondents said they implemented outreach activities for parents and communities. Work in SHN is also often part of comprehensive programmes to improve access to and quality of education, with interventions including provision of uniforms and schoolbooks and building or upgrading school infrastructure. Most of these NGOs are engaged in national, regional and global networks and partnerships.

Source: Based on WFP and World Vision International, 2021.

Monitoring and evaluation

There is scope to improve monitoring of national SHN policies and programmes. Between 2018 and 2019, only 52% of the 96 countries with national standards in place for health-promoting schools reported that they monitor the implementation of these standards (WHO, 2020b). A WHO review found that monitoring and evaluation is addressed in national policies and standards in around half of countries but only one in five of these documents included indicators (WHO, 2022e).

Furthermore, a recent paper noted that despite the ubiquity of SHN programmes, monitoring has received limited attention and support, including in research: there is surprisingly little published on how countries operationally monitor their programmes (Schultz and Ruel-Bergeron, 2021). The multisectoral nature of SHN interventions means that monitoring requires careful planning and coordination between sectors, stakeholders and information systems at both global and country levels. SHN monitoring systems may need to rely on multiple systems to collate and monitor the relevant program indicators. Given the diversity of SHN programme design and implementation, the paper proposes key principles for the design of robust and effective monitoring systems, as opposed to prescriptive guidance on specific indicators or monitoring mechanisms. These principles include: selection of indicators to adequately measure the intended final impact, and identification of appropriate data sources; simplicity and feasibility of data collection; integration of monitoring data into other sources of information; and clarity at all stages of the data collection, reporting, analysis, referral and feedback process.

Regional studies have found similar results. In the European region, only 58% of the 24 SHE Network countries surveyed reported having a national process to monitor and evaluate health-promoting school policy. In Latin America and the Caribbean, less than two-thirds of countries have mechanisms for documenting and monitoring the coverage and results of school health and health-promoting school actions (PAHO, 2022).

4.2 Education for health and well-being

HIGHLIGHTS

Childhood and adolescence are critical times for establishing healthy lifestyles. Schools are an important setting for equipping children and adolescents with the knowledge, values and skills to make healthy choices — with positive impacts throughout their lives. Education for health and well-being in the school curriculum plays a fundamental role in promoting healthy lifestyles and behaviours, such as eating a healthy diet, being physically active and maintaining good hygiene, as well as in promoting mental health and preventing substance use.

Most National Curriculum Frameworks refer to health and well-being; healthy lifestyles and physical health are more likely to be mentioned than mental health or sexual and reproductive health. Health and well-being curricula are packaged in different ways in different countries, with topics delivered as part of other subjects or as stand-alone subjects. Curriculum content also varies, reflecting country contexts and priorities.

There is limited evidence of the extent to which schools deliver comprehensive health-related education. Most available data relate to specific aspects of health and well-being covered in the curriculum. For example, physical education is a compulsory curriculum topic in nine in ten countries. Almost two in three countries include nutrition education in the school curriculum. In many countries, nutrition education is delivered through extracurricular activities and linked to school feeding programmes, and these programmes are increasingly addressing prevention of overweight and obesity. More than 60% of countries report school-based provision of oral health education that focuses on nutrition, diet and sugar consumption for younger schoolchildren in particular.

More than four in five countries report that sexuality education is included in their national curriculum — more often at secondary level than at primary level. In many countries, curricula have expanded from a narrow focus on HIV prevention and the biological aspects of sexual and reproductive health to a broader range of topics. However, in some countries, the curriculum lacks the breadth of topics needed for sexuality education to be effective; and relevant and issues such as sexual orientation, family planning and abortion are not covered.

Despite growing recognition of their importance, there are limited data on socioemotional learning and mental health education in schools, or on the extent to which promotion of mental health and well-being is included in the school curriculum. While most national school health policies include prevention of smoking, alcohol and drug use, there is also little global or regional data on the degree to which these topics are taught at school.

While national policies and curricula provide some indication of commitment to health and nutrition education, adequate resources must be allocated to these if they are to translate into practice. Other challenges to effective delivery in schools include competing curriculum pressures; lack of quality learning resources; insufficient training and support for teachers, who often lack confidence in applying participatory and learner-centred approaches; and adequate infrastructure and equipment for physical education. These challenges mean that in many contexts implementation is lagging behind policy intent.

Thematic reports suggest there needs to be more attention on the relevance, quality and consistency of curriculum delivery at the same time as not overloading the curriculum and teacher and student timetables. Available evidence also highlights the importance of listening to the perspectives of learners — seeking their views on the relevance and usefulness of the health education they receive — and of their active participation in promoting their own health and well-being.

Better data are required, for example, age and school-level disaggregated data, to fully understand the coverage of education for health and well-being in schools. More comprehensive and effective monitoring and evaluation of impact are also needed. While some efforts have been made to assess the quality of specific aspects of education for health and well-being, for example, by FAO on food and nutrition education and by UNESCO on sexuality education and physical education, a more joined-up approach is necessary. Education for health and well-being is not tracked globally as part of SDG 4 monitoring. More effective monitoring and evaluation requires clear learning objectives and indicators, student learning assessments and longer-term follow-up.

Schools provide crucial opportunities to equip children and adolescents with the knowledge, values and skills to make healthy choices and exercise their rights; skills-based health education in the school curriculum plays a critical role. Key aspects of school health education include promotion of quality physical education, mental health education and socioemotional learning, sexual and reproductive health education, nutrition education, disease prevention, and awareness and avoidance of risk and risk behaviours including, for example, injuries, road traffic accidents, sexual abuse and substance use.

Education that develops life skills, positive behaviours, values and competencies -such as critical thinking, risk assessment, problem solving and negotiation- can improve social and emotional well-being, contribute to the prevention of disease, reduce risk behaviours, and address harmful gender norms. For example, comprehensive sexuality education (CSE) can promote positive, healthy relationships and gender equality and contribute to increasing HIV knowledge and condom use, preventing poor sexual and reproductive health outcomes, such as sexually transmitted infections (STIs) and early and unintended pregnancy (Fonner, Armstrong et al., 2014; UNESCO, 2019a). This is especially important for girls, particularly in countries with high rates of HIV infection and unintended pregnancy among adolescent girls, as maternal conditions are the leading cause of mortality in girls aged 15–19 years worldwide.

EDUCATION FOR HEALTH AND WELL-BEING IS PART OF THE CURRICULUM IN MOST COUNTRIES ACROSS THE WORLD

9 in 10
include physical education as a compulsory school curriculum subject

More than 4 in 5
include sexuality education

3 in 5
include food and nutrition education

3 in 5
provide oral health education in schools

Data sources: UNESCO, 2023; UNESCO, UNAIDS et al., 2021; WHO, 2018; Petersen et al., 2020.

In addition, early pregnancy and marriage are estimated to prompt between 5% and 33% of adolescent girls to leave school early (Wodon, Male et al., 2017). CSE is also important for boys as it promotes gender equality and respect for bodily autonomy and addresses harmful gender norms relating to masculinity, including those that have an adverse impact on health (UNESCO, 2022a).

The promotion of healthy lifestyles through education has the potential to address the major risk factors for NCDs, including unhealthy diet, lack of physical activity, tobacco use and harmful use of alcohol and other substances, which also have negative impacts on education outcomes. School-based programmes are becoming an important strategy to promote healthy diets and prevent obesity. There is emerging evidence that nutrition education taught by qualified teachers can contribute to children's knowledge and dietary habits (Cotton et al., 2020). Combining nutrition education and physical activity can positively impact diet, physical activity and body mass index, and multi-component interventions that address the school environment and involve parents and families are more likely to be effective (Capper, 2022; Meiklejohn, Ryan et al., 2016; Verstraeten, Roberfroid et al., 2012; Xu, Li et al., 2020). This may be particularly important for adolescents, as fewer than one in four meets the WHO recommendation for moderate-to-vigorous daily exercise (Guthold, Stevens et al., 2020). Food and nutrition education can also be an entry point to learn about food-borne disease and the impact of food systems on health and the environment. While the evidence is mixed, health education can also contribute to tackling other NCD risk factors, including smoking and unsafe use of alcohol; again, multicomponent interventions are more effective (UNESCO, UNODC et al., 2017).

An enabling environment is critical for effective delivery of health education. For example, teaching comprehensive curricula may go hand-in-hand with the use of gender-transformative pedagogy; policies and rules that prevent violence and bullying and that ensure a healthy food environment; adequate school infrastructure; links with school feeding programmes and health services; and the engagement of parents and communities (see Sections 4.3 and 4.4). Students' active participation in learning and promoting their own health is also critical to success and can be supported by policies and guidelines, as school clubs in Uganda demonstrate (**Case study 7**).

This section presents an overview of available data on the status of education for health and well-being, including topics in school curricula and delivery of education on specific aspects of health. The latter include nutrition education, physical education, sexuality education, oral health education and, to a lesser extent, education to promote mental health and reduce risks associated with violence, sexual abuse and smoking.

Efforts to monitor health and nutrition education globally are at an early stage, although some thematic areas are more advanced than others. For example, UNESCO monitors the quality of sexuality education, and OECD and UNESCO do the same for quality physical education. No global data are available on the extent to which schools provide comprehensive health education.

Case study 7

Learners promote their own health through school health clubs in Uganda

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WHO defines health promotion as the 'process of enabling people to increase control over, and to improve, their health'. Learners are at the centre of SHN programmes and this includes empowering them to promote their own health and well-being. In Uganda, school health clubs have been used to engage learners in health promotion.

School health clubs have evolved from the Presidential Initiative on AIDS Strategy for Communication to Youth (PIASCY), originally designed to help teachers provide information about HIV and AIDS (Uganda Ministry of Education and Sports, 2004). PIASCY clubs were established in many schools across Uganda, spearheaded by learners and facilitated by science teachers and health workers who played a vital role in addressing incorrect beliefs about HIV and AIDS. School health clubs disseminate information through music, dance, drama, debates, poetry, school competitions, radio talk shows and television programmes. They continue to play an important role in health promotion among learners and communities, addressing other issues including water, sanitation and hygiene, sexual and reproductive health and rights, gender-based violence, gender equity and equality, and climate change. Recognizing the value of learner participation in promoting their own health and well-being, the Ministry of Education and Sports published *Guidelines on the Formation, Management and Strengthening of School Clubs* in 2020 (Uganda Ministry of Education and Sports, 2020).

Health education themes and delivery in national curricula

National Curriculum Frameworks in most countries refer to health and well-being; healthy lifestyles and physical health are more likely to be mentioned than mental health or sexual and reproductive health. A review of National Curriculum Frameworks and Education Sector Plans from 78 countries[17] found that almost all (96%) mentioned at least one key term from the category of 'health and well-being' (IBE, 2016). The key term 'healthy lifestyles', which encompasses a wide range of topics, was found most often and included by 92% of countries, followed by 'physical health', included by 81% of countries. Frameworks in more than half the countries mentioned 'health education', often together with 'physical education', and occasionally in combination with 'social or life-skills education'. Only half of countries mentioned mental and emotional health and well-being or awareness of substance abuse and addiction.[18]

School health education topics reflect regional and country context. The SHE Network provides an overview of the health themes that are most frequently covered in schools in 24 European and Central Asian countries. The most common topics (reported to be covered in at least 76% of schools by 40% to 45% of countries) relate to health promotion, such as physical activity and sports, healthy eating, safety and hygiene, rather than to the prevention of illness. Smoking, alcohol and drugs and substance use are also widely covered in the region. Sexuality is less well represented; only 21% of countries report coverage in more than 75% of schools (Vilaça, Darlington et al., 2019). Countries also adapt their curriculum to evolving health priorities. As an example, **Case study 8** describes how the health education curriculum in Japan has been adapted to reflect changes in children's health problems and wider society. Data on the content of nutrition education show that higher-income countries are more likely to prioritize prevention of overweight and obesity, while low-income countries give higher priority to prevention of undernutrition (**Figure 10**).

Countries use different models to deliver health education. Health-related topics can be taught as a stand-alone subject, as part of other subjects, such as science, home economics, mathematics and agriculture (see the example of substance-use prevention education in Ukraine in **Case study 14**), or as a combination of both, and is also taught through non-curricular activities. The mapping of

17 Data were only available for a few countries in Central Asia, North Africa and Western Asia.
18 Physical health also refers to physical activity, fitness, exercise; mental and emotional health and well-being also refers to psychological health and stress management; healthy lifestyles also refers to nutrition, diet, cleanliness, hygiene, sanitation, clean water, staying healthy; awareness of substance abuse and addiction also refers to addiction to smoking, drugs, alcohol; sexual and reproductive health also refers to safe sexual behaviour.

24 countries in Europe and Central Asia found that 58% of reporting countries have more than two types of curricular inclusion of health promotion (Vilaça et al., 2019). An analysis of data from 18 OECD countries and jurisdictions found that health education is mainly combined with physical education in the curriculum in 7 countries and jurisdictions (some also address it in other subjects), and is embedded across the curriculum in multiple subjects, including but not limited to physical education, in 10 of them (OECD, 2019).

Responses to the question on mode of delivery of sexuality education in the UNESCO 2019–2020 Survey on the Status of CSE, show that, at secondary school level, sexuality education is taught as part of other subjects in 75% of countries and as a stand-alone subject in 24% (UNESCO, UNAIDS et al., 2021). In some countries, mental health is included in the curriculum as a separate topic within life and social skills. In others, it is a component of the physical education curriculum; the OECD survey of physical education found this to be the case in seven countries and jurisdictions (OECD, 2019). A similar variety of approaches is found for nutrition education (FAO, 2021).

Health-related topics are not always taught, even if they are part of the curriculum. While limited data are available on the delivery and quality of school-based health education, the existing literature identifies some common factors: competing curriculum pressures; lack of quality learning resources and capacity development; lack of teacher confidence in applying practical and learner-centred approaches, and the priority given by schools and teachers to subjects that are examined. This highlights the need for accountability and monitoring mechanisms. Efforts are also required to ensure the curriculum is relevant and to monitor the quality and consistency of delivery — particularly for topics that may be more sensitive, such as CSE. These challenges mean that while many countries have committed to delivering health and well-being-focused curricula at a policy level, implementation is lagging behind.

The following discussion of specific aspects of health and well-being in school curricula reflects available data rather than priority topics.

Case study 8

Health education in Japanese schools

Schools in Japan provide comprehensive health and physical education supported by national guidelines and a national curriculum. At elementary level, the curriculum includes healthy living, physical development, mental health and prevention of disease and injury. All schools have teachers who are responsible for health education, and community health workers are also involved.

The health education curriculum is revised every ten years to take account of changes in the health issues faced by children and the wider society. Healthy lifestyle, eye health and mental health have been given more prominence in recent revisions, reflecting changes in children's and young people's lifestyles, which include more time watching TV and playing video games, reduced sleep, skipping breakfast, decreased physical activity, and the increased prevalence of mental health problems and obesity.

A review of lessons learned identified the enabling factors for comprehensive and consistent health education in Japan: a clear description of the purpose of health education; a comprehensive school health framework and clear positioning of health education, set out in laws and policies; provision of appropriate learning content and education materials; adequate time allocation; well-trained teachers responsible for provision of health education; health education specialists in higher education; regular curriculum revision; systems for screening and monitoring children's health, and collaboration with health workers, parents and the community.

Source: Based on Tomokawa, Shirakawa et al., 2021.

Nutrition education

Globally, almost two in three countries include nutrition education in the school curriculum. The *Global Nutrition Policy Review 2016–2017* (WHO, 2018) found that 97 of 160 countries (61%) include nutrition in their school curricula, most commonly at primary-school level. In Africa and South-East Asia, most countries include nutrition education in the curriculum. In contrast, this is the case in only half of the countries in Europe. Nutrition education is delivered through extracurricular activities in 29%, or 46 of 160 countries (**Figure 9**).

Nutrition education in the curriculum tends to be theoretical. Data collected by WHO from 63 countries[19] (WHO, 2018) show the most common content of nutrition education is lessons on the link between nutrition and health (83% of countries), healthy diets to prevent overweight and obesity (76%), and undernutrition (67%). Nutrition education is increasingly used to address overweight and obesity, however, differences between countries often reflect differences in the extent

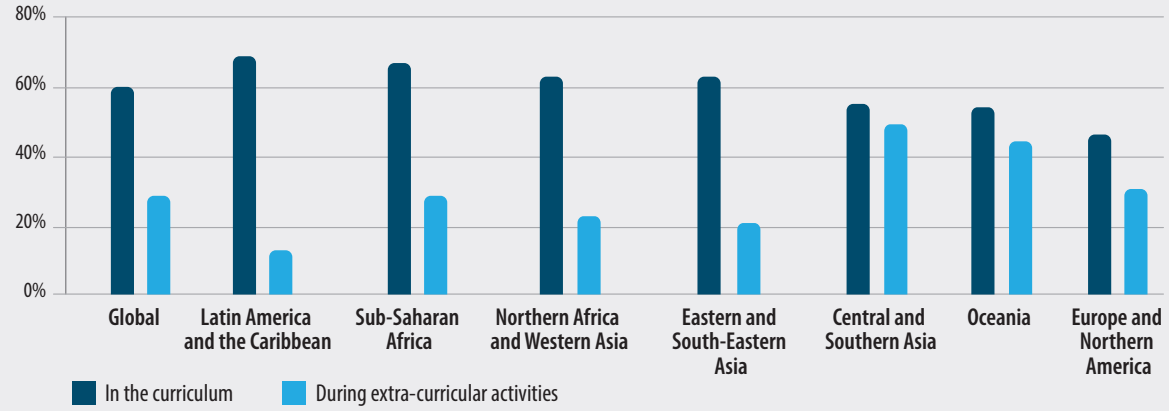
19 Nutrition education in the curriculum was reported by 97 countries, of which 63 provided detailed information. Extracurricular nutrition education was reported by 46 countries, of which 28 provided detailed information.

to which overweight and obesity or undernutrition are a problem (**Figure 10**). In most regions and across all country income groups, education that develops hands-on cooking and gardening skills is less likely to be reported.

Responses to the FAO survey on school-based nutrition education in low- and middle-income countries show a similar picture (FAO, 2021). Nutrition education in the school curriculum focuses more on increasing knowledge than on improving food and nutrition-related behaviours and skills. Further, education is seldom explicitly linked to the school food environment and to other settings where children eat and interact, and this is reflected in limited reported involvement of parents, farmers and other community actors. FAO has been working with countries and partners such as UNICEF to promote a more holistic approach to school-based food and nutrition education that emphasizes linkages between formal and informal learning opportunities and food, physical activity and environmental policies (**Case study 9**).

Figure 9

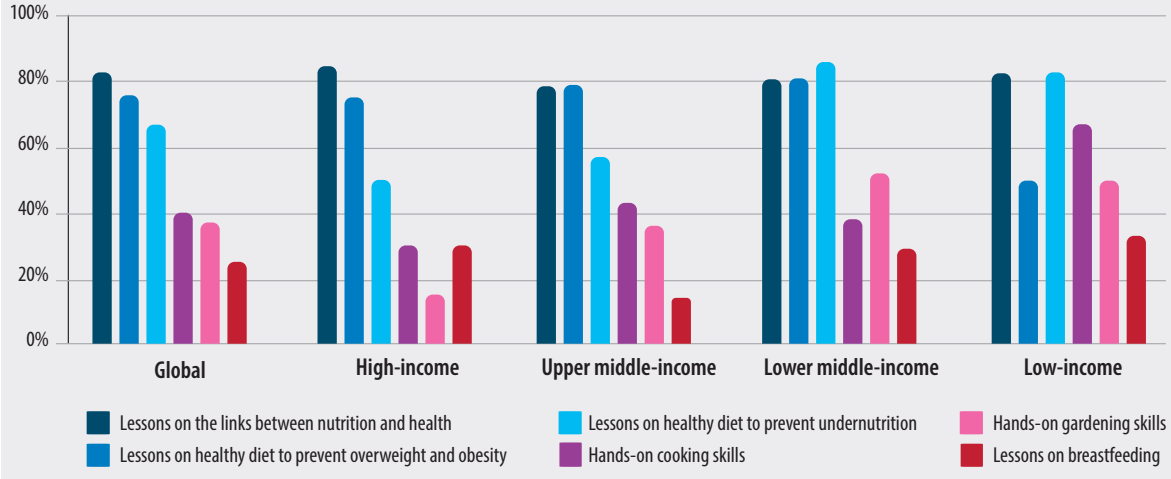
Share of 160 countries with nutrition education in the school curriculum and in extracurricular activities, by region, 2016–2017



Data source: WHO, 2018. Available under CC BY-NC-SA 3.0 IGO

Figure 10

Content of nutrition education in 63 countries, by country income group, 2016–2017



Data source: WHO, 2018. Available under CC BY-NC-SA 3.0 IGO
Note: Cook Islands and Niue are not classified by the World Bank Income groups

Case study 9

Assessing capacity for food and nutrition education in the school system — experience from Latin America

Between 2020 and 2021, the Dominican Republic, El Salvador and Ecuador embarked on a national process to assess the status of school-based food and nutrition education and related capacity. The main purpose was to develop a road map to effectively integrate food and nutrition education into the school system.

The Dominican Republic integrates school-based nutrition education into its Food and Nutrition Sovereignty and Security Law. However, implementation and monitoring are weak and there are significant gaps in systemic capacity to deliver it effectively. The following actions were therefore prioritized to address these gaps:

Enabling environment	Create an information bank in the National Office of Statistics that collates studies on schoolchildren's food consumption patterns Draft a school food and nutrition law that integrates food and nutrition education, through a wide consultative process
Organization level	Establish partnerships between academia and the National Institute of Student Well-being, which manages the school meal programme, to integrate relevant indicators within regular evaluations Ensure that the national food-based dietary guidelines update is coordinated with school food and nutrition education in terms of content and learning plans Promote the use of tools such as TV classes and parent associations to mainstream school food and nutrition education
Individual level	Mandate food and nutrition education as part of teachers' professional training, with a validated package of resources

While focused on food and nutrition education, the participatory assessment also covered other aspects of the school system, providing a platform for proposing solutions to wider issues, such as teaching methods, and ensuring robust food environment policies in education settings.

Sources: FAO, 2021a; López Hernández et al., 2021.

Challenges to teaching about nutrition in schools include lack of curriculum time and learning resources. A regional overview of national school food and nutrition programmes in 41 countries in sub-Saharan Africa (FAO, *Agência Brasileira de Cooperação* (ABC) et al., 2018) found that nutrition education is only delivered in some grades, the availability of learning materials is limited, and training is often one-off or does not always reach teachers and other front-line educators. A review of 14 Pacific Islands (FAO, 2019a) found that nutrition education is given low priority and limited time due to competing curriculum pressures and a lack of quality and context-specific learning materials. Similar findings were identified in the Latin American and Caribbean (FAO and Comunidad de Estados Latinoamericanos y Caribeños (CELAC), 2018).

In many countries, nutrition education is delivered through extracurricular activities or linked to school feeding programmes. The FAO survey of 30 low- and middle-income countries[20] (FAO, 2021) mentioned above found that nutrition education is integrated into school meal programmes in 20 countries and that school gardens are used as a learning platform for nutrition education in 18 countries. The 2019 Global Survey of School Meal Programs data show that 91% of school meal programmes include nutrition education and 78% are linked to school gardens (GCNF, 2021). However, the structure and curricula of these programmes vary widely and their impact is likely to be context-specific.

Oral health education is widely provided in schools. In a recent study of 101 countries, more than 60% reported school-based provision of oral health education that focuses on nutrition, diet and sugar consumption for schoolchildren aged 5–7 years and 12 years (Petersen, Baez et al., 2020). Provision of oral health education was lower for adolescents — reported by around 45% of countries. There were no significant differences between country income groups.

20 11 in Latin America and the Caribbean; 7 in Africa; 5 in Europe and Central Asia; 4 in the Asia-Pacific, and 3 in the Near East and North Africa.

Physical education

Physical education is compulsory at any given level in nine in ten countries. Initial analysis of data from the *UNESCO Fourth Worldwide Survey of Quality Physical Education* (UNESCO, 2023), shows that physical education is a compulsory school curriculum subject in 86% of 117 countries in primary schools, 84% in lower-secondary schools, but only 72% in upper-secondary schools (**Figure 11**).

There are differences between regions and country income groups. Europe, North America, and East and South-East Asia are the only regions where all countries responding to the survey include physical education as a compulsory subject in both primary and secondary schools. Physical education is more likely to be a compulsory curriculum subject in high-income countries (**Figure 12**).[21] Physical education is compulsory in primary schools in 93% of high-income countries compared with 78% of lower-middle-income countries and 75% of low-income countries. The differences are less marked at secondary-school level, with the exception of lower-middle-income countries — only 67% of which reported that physical education is compulsory at this level.

Inclusion is a weak aspect of physical education in schools. In the same survey, 89% of countries report that physical education is the same for girls and boys, but less than 40% monitor and enforce gender equality policies. Only 64% of education ministries have a policy requiring equal opportunities for students with disabilities to access physical education lessons. Inclusion may also be influenced by socio-economic status with, for example, learners from poorer households less likely to be able to afford sports kit and equipment, and schools in more affluent areas more likely to have facilities for physical education. Available data also suggest that comprehensive approaches that include teachers as well as students are not widely implemented. The *KaziBantu* research project in South Africa is an exception (**Case study 10**).

Case study 10

KaziBantu – comprehensive physical activity and health promotion for schoolchildren and teachers in South Africa

Authors: Professor Uwe Pühse and Doctor Ivan Müller, University of Basel

The *KaziBantu* research project is a learner- and teacher-focused, school-based intervention on physical activity and health. Based in Gqeberha, South Africa, and hosted by Nelson Mandela University and the University of Basel, Switzerland, it comprises two core elements that focus on both learners' (*KaziKidz*) and teachers' health and activity (*KaziHealth*).

Aimed at generalist teachers, the learners' component, *KaziKidz*, provides teaching resources and continued professional development programmes on quality physical education. By improving teachers' ability and confidence to conduct physical education, it aims to increase both the quality and quantity of physical education and health-and-well-being lessons to enhance learners' overall health. The teachers' component, *KaziHealth*, focuses on reducing NCD risk factors among teachers. Through an individual health assessment and lifestyle coaching sessions it aims to influence health behaviours, as well as mental health and perceived levels of stress among teachers.

Complementing the *KaziBantu* project, the *KaziPlay* aims to enhance playground and toilet facilities in disadvantaged South African schools, contributing to a health-promoting school environment.

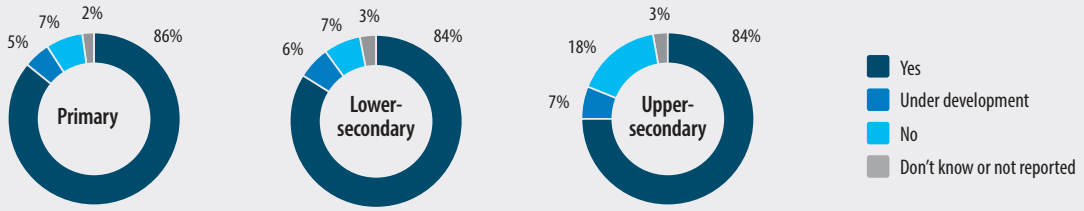
When teachers are role models, schools and learners can achieve lasting change; and this is a key aspect of continuing professional development. In South Africa, teachers have to acquire 150 continuing professional development points over 3-year cycles. The short learning programme — *KaziKidz* Foundation Phase — has been accredited by the South African Council for Educators. This programme focuses intensively on how to initiate sustainable change within the education system and contribute to quality physical education.

Sources: Based on Müller, Smith et al., 2019; Arnaiz, Adams. et al., 2021. For more information, see: www.kazibantu.org

21 Lower- and upper-secondary are combined as 'yes' if either of them had physical education as a compulsory subject.

Figure 11

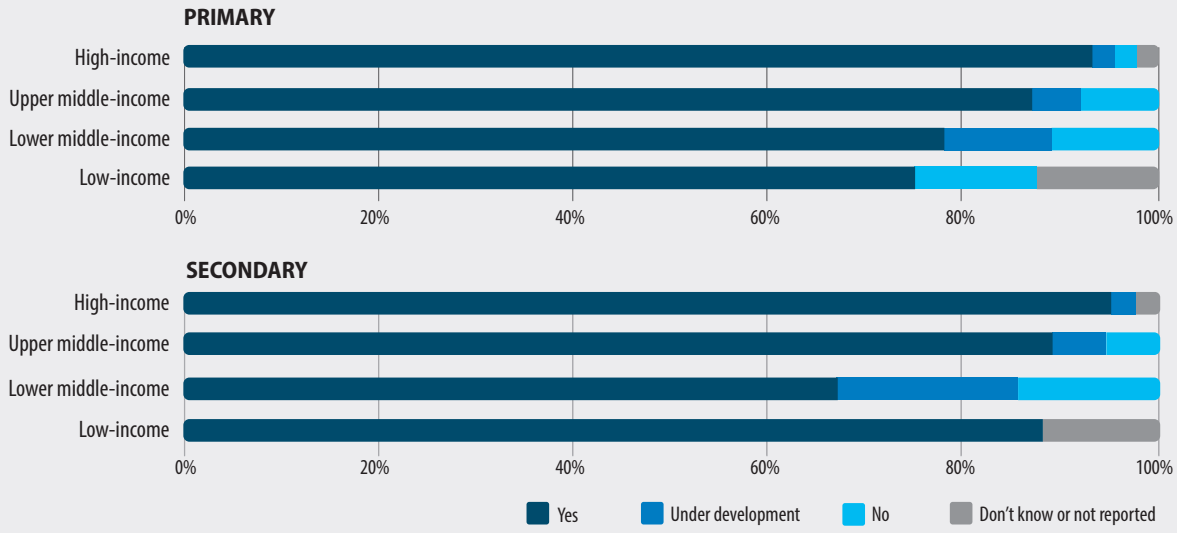
Share of 117 countries with physical education in the curriculum, by education level, 2020–2021



Data source: UNESCO, 2023.

Figure 12

Share of countries with physical education in the curriculum, by education level and country income group, 2020–2021



Data source: UNESCO, 2023.

> Only 64% of education ministries have a policy requiring equal opportunities for students with disabilities to access physical education lessons.

Sexuality education

Most countries include sexuality education in the school curriculum, but it is not delivered in all schools in all countries. The recent report on the global status of comprehensive sexuality education provides an overview of the coverage and content of sexuality education (defined as teaching about generic life skills, sexual and reproductive health and HIV prevention) based on an analysis of data from various sources (UNESCO, UNAIDS et al., 2021). Overall, 85% of 123 countries report that sexuality education topics and content are included in their national curriculum. More countries report having sexuality education curricula at secondary level than at primary level (**Figure 13**). The curricula is not necessarily delivered in every school: at primary level, 61 of 90 countries report that some form of sexuality education is provided in between 76% and 100% of schools; 71 of 110 countries report the same for secondary schools. The remaining countries reported lower levels of coverage.

In many countries, sexuality education curricula have expanded from a narrow focus on HIV prevention and the biological aspects of sexual and reproductive health to a broader range of topics taught over a number of years (Case study 11). Nevertheless, in some countries, the curriculum lacks the breadth of topics needed for sexuality education to be effective and relevant. Almost all of the 60 countries that responded to the UNESCO survey report that the sexuality education curriculum in secondary school covers STIs, including HIV; puberty; gender; pregnancy and birth, and relationships — although these topics are only addressed briefly in around 30% of countries (**Figure 14**). Issues such as contraception, sexual orientation and gender identity, and access to safe abortion services are included in the curriculum in fewer countries (UNESCO, UNAIDS et al., 2021). Research on students' perspectives also provides an indication of the relevance and quality of delivery, and shows low levels of satisfaction in most instances (**Box 14**). It is also important to recognize that sexuality education alone is not sufficient; adolescents also need access to sexual and reproductive health services (see **Section 4.5**).

Case study 11

The journey towards comprehensive sexuality education: a focus on Lao PDR and Tunisia

For many years, countries across the world have been interested in ensuring that learners have access to some form of sexuality education — referred to by different names across settings — often in response to pressing health and social problems, such as high levels of HIV or early and unintended pregnancy. In more recent years, this has developed into a more holistic subject covering a wide range of topics across a number of school years. Revised international guidance on sexuality education, including the updated UN International Technical Guidance on Sexuality Education (UNESCO, UNAIDS et al., 2018) provides guidance both on the content and delivery of comprehensive sexuality education, presenting a range of age- and developmentally-appropriate topics as learners progress. UNESCO and partners' research demonstrates that countries are at different stages on a journey towards the full delivery of quality CSE. In some countries, the journey is only beginning and much remains to be done; others have been investing in this area for many years.

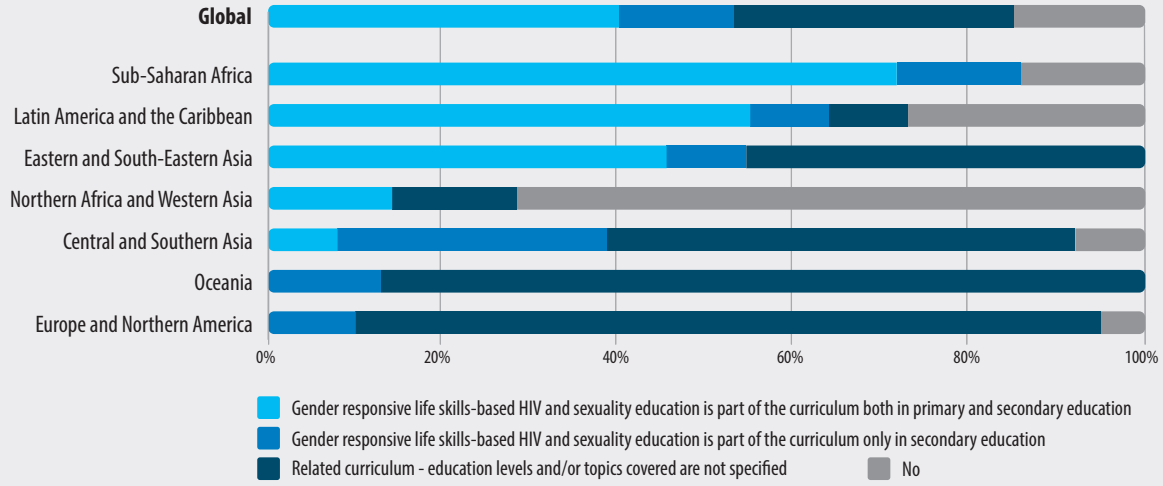
For example, in Lao PDR, sexuality education has been delivered since 2001, when it primarily focused on HIV and AIDS prevention. By 2010, it was implemented as a life-skills course in around 75% of secondary schools nationwide. More recently, the Ministry of Education and Sports has been working with UNFPA to strengthen the design and implementation of what is now called 'Life Skills Education' in primary schools, and 'Comprehensive Sexuality Education' in secondary schools, including assessing the existing curricula against the latest UN guidance. This has led to a more comprehensive curriculum alongside strengthened efforts to train teachers and build links between teachers and health staff to facilitate referral to adolescent-friendly health services.

In Tunisia, sexuality education has undergone major reform following advocacy from multiple stakeholders, including representatives from different government sectors, religious leaders and NGOs, whose engagement was central to the subject being accepted. In 2019, increasing reports of sexual harassment and violence in schools prompted the Ministry of Education to strengthen sexuality education. It released a circular mandating sexuality education for all learners aged 5–18. The Ministry developed a national sexuality education curriculum and teaching and learning resources that reflect international guidance and are sensitive to local culture and context; braille and audio adaptations are in process for learners with disabilities. However, there has been some opposition from parents and religious leaders; the Ministry, UNFPA and civil society organizations have taken steps to address misconceptions and ensure that the public understands the rationale for sexuality education.

Source: Adapted from UNESCO, UNAIDS et al., 2021. Available under CC BY-SA 3.0 IGO

Figure 13

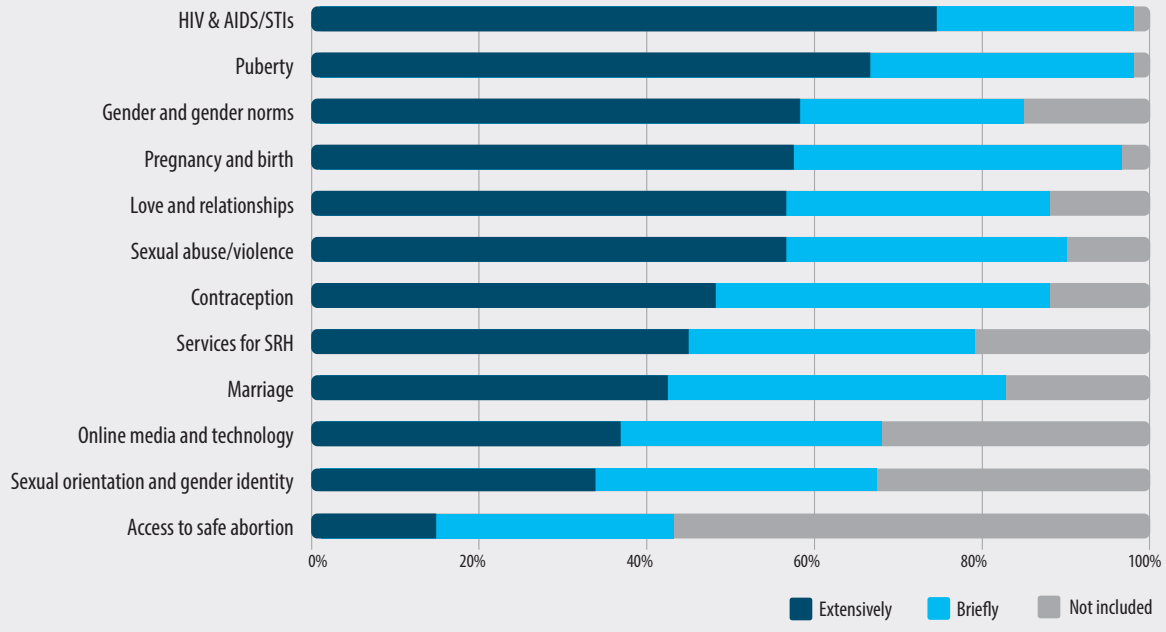
Share of 123 countries with curricula related to sexuality education, by region, 2021



Data source: UNESCO, UNAIDS et al., 2021. Available under CC-BY-SA 3.0 IGO

Figure 14

Extent of inclusion within curricula of a range of key comprehensive sexuality education topics in secondary education in 60 countries, 2019–2020



Source: UNESCO, UNAIDS et al., 2021, p.29. Available under CC-BY-SA 3.0 IGO

Box 14

Focus on young people's perspectives on sexuality education

There is growing recognition of the need to ensure that when monitoring the quality and delivery of sexuality education, we include young people's experiences and perspectives. There is evidence that engaging young people in participatory research has positive effects on the empowerment of young people, as well as on interventions that are responsive to their needs (Reeuwijk and Singh, 2018).

Although data are limited, some promising research has been carried out. For example, a survey of around 1,000 young people aged 16–17 in England in 2021 highlighted the importance of listening to the views of young people. The findings showed the extent to which sex and relationships education lessons are inconsistently delivered, often with few opportunities for pupils to ask questions. Just over one-third (35%) of young people rated the quality of their school Relationships and Sex Education as 'good' or 'very good', compared with 41% in 2019 (Sex Education Forum, 2022).

As part of an Asia-Pacific review of the status of sexuality education, over 1,400 young people aged 15–24 from 27 countries completed a survey and 83 were involved in focus group discussions (UNFPA, UNESCO et al., 2021). Fewer than one in three of the young people surveyed (28%) believed that their school taught them about sexuality 'very well' or 'somewhat well'.

In a range of other small-scale studies, mainly carried out in the Global North, young people consistently reported that sexuality education starts too late, is exclusively biological in focus, insufficiently comprehensive, negative and poorly delivered (Laverty, Noble et al., 2020; Waling, Bellamy et al., 2020).

Young people with disabilities and young people who identified as lesbian, gay, bi-sexual, transgender or intersex (LGBTI) are generally less satisfied with sexuality education than their peers. Other studies with young people who identify as LGBTI have found that sexuality education is viewed as non-inclusive and can contribute to confusion, misconceptions and distress. Specific studies with young people with disabilities have highlighted the misconception that they do not need sexuality education; they also report that sexuality education is often not adapted to their needs (UNESCO, 2021b).

Mental health

There are limited data on mental health education in schools or on the extent to which mental health is included in the curriculum. COVID-19 had a significant impact on learners' mental health, reinforcing the importance of this aspect of health and well-being (UNICEF, 2021). WHO recommends socioemotional learning as a key mental health promotion intervention (WHO, 2020e) (**Box 15**). Available evidence is limited but suggests small to moderate effects on knowledge, attitudes and behaviours, and some well-being outcomes. Country examples from Vietnam and Ireland (**Case studies 12 and 13**) illustrate different approaches to promoting student mental health, including through classroom-based programmes.

Substance-use prevention education

The extent to which students are taught at school about substance use varies between countries. Although national school health-related policies in many countries include prevention of smoking, alcohol and drug use, there are limited global and regional data on the extent to which these topics are taught at school. The main source of global data on education about smoking is the *WHO Global Youth Tobacco Survey* (GYTS), which asks students aged 13–15 years whether they are taught about the dangers of smoking at school. Data from surveys conducted in 2017 and 2018 (**Figure 15**) show that this varies considerably — ranging from 28% in Argentina to 83% in Cuba. The survey does not collect data on how this topic is taught or whether it is included in the school curriculum. The SHE Network reports that smoking, alcohol and drug use are among the top five themes covered by school health promotion in European countries, but again, there is little information about how these themes are addressed. Ukraine is one country for which some information is available (**Case study 14**).

Box 15

The case for social and emotional learning

Social and emotional learning (SEL) aims to promote social and emotional competencies, such as understanding and managing emotions, feeling and showing empathy for others, setting positive goals, establishing and maintaining positive relationships, and making responsible decisions. SEL programmes typically include a curriculum-based component, which may be part of wider school-based interventions to enhance social and emotional skills. There is clear evidence that school-based SEL interventions are effective in promoting social and emotional competencies. For example, a meta-analysis of school-based SEL programmes found that participants demonstrated significantly improved social and emotional skills, attitudes, behaviour and academic performance compared with non-participants.

While evidence linking SEL to reduced mental health problems is not available, WHO strongly recommends universal SEL programmes as a mental health promotion intervention. Features of effective SEL classroom programmes include being sequenced (a sequential set of connected activities that build on each other to foster skills development); active (active participation of learners to help them practice and master new skills); focused (specific lessons devoted to developing specific personal and social skills), and explicit (skills targeted are made clear to learners so that they know what they are working towards).

Source: Adapted from Beadle, Pich et al., 2021, p.14-15.

Case study 12

A school-based initiative to promote mental health in Vietnam

A national survey in Vietnam in 2014 concluded that around one in ten children and adolescents was affected by mental health problems that required treatment and support. Schools can potentially play an important role in promoting mental health, identifying children and adolescents with mental health problems and providing support and referral. School mental health interventions take a range of approaches, from universal prevention programmes aimed at the whole school to targeted preventive interventions for children at risk and targeted interventions for children with specific mental health problems.

Reaching Educators, Children and Parents — RECAP — is a classroom-based mental health and social skills programme for primary-school children with emotional and behavioural problems. It involves whole class, small group and individual sessions as well as working with teachers and parents. The programme was adapted for Vietnam as a universal intervention with a primary focus on improving mental health. It includes a student-centred problem-solving and social skills curriculum that is implemented twice a week as part of the school curriculum for all primary-school children over one academic year. Teachers are trained in classroom management that reinforces positive behaviours. An evaluation of impact on mental health and social skills among Grade 2 students in two cities found that it had a positive effect on mental health functioning of all learners (whether at high or low risk), but only enhanced social skills among students at low risk.

Source: Adapted from Dang, Weiss et al., 2017.

Case study 13

MindOut – social and emotional learning for adolescent well-being in Ireland

MindOut, an evidence-based social and emotional learning programme, offers an opportunity to address some of the mental health and well-being concerns that are important to young people in Ireland. The programme is offered to young people aged 15–18 in schools and youth settings and is also integrated into the Social Personal and Health Education curriculum, which is a mandatory part of school curricula. The programme features 13 sessions based on a structured manual for teachers. It uses interactive teaching strategies and focuses on helping participants to develop essential social and emotional skills, including self-awareness, self-management, social awareness, relationship management, responsible decision-making; and how to access support and reach out to peers in need. An evaluation in 32 schools found that when the programme was implemented well it improved participants' social and emotional skills and reduced stress and depression.

Source: Adapted from UNICEF, 2021, p.80.

Case study 14

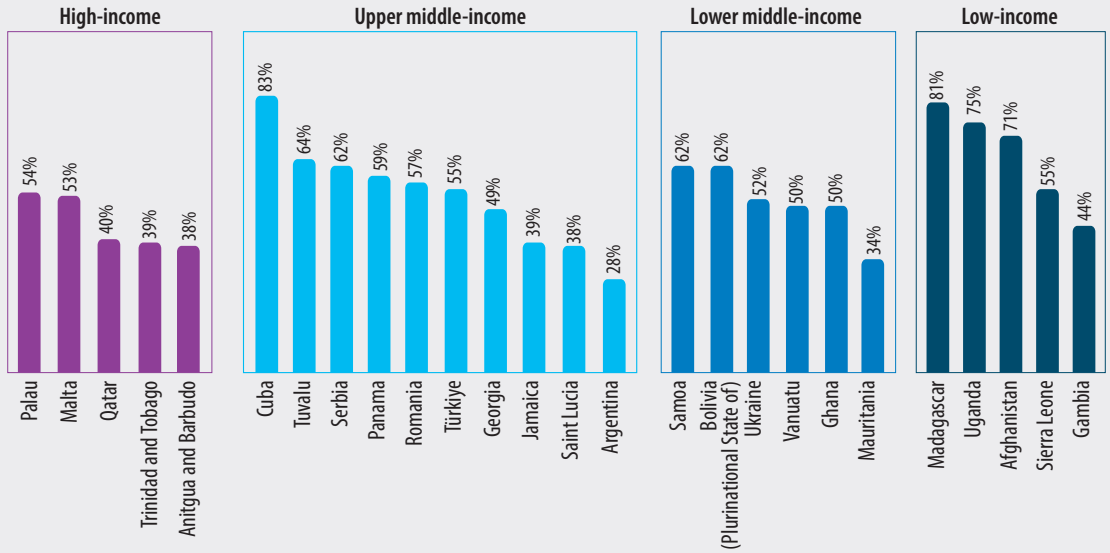
The school-based substance-use prevention curriculum in Ukraine

The State Standard for the Basic and Complete General Secondary Education in Ukraine stipulates that schools should deliver substance-use prevention and healthy lifestyle education through biology and the Basics of Health. The Basics of Health is a compulsory subject for Grades 1–9, which provides age-appropriate education about alcohol, smoking, drug use and the consequences of substance use for health and well-being. The subject takes a positive approach, developing skills for a healthy lifestyle, and data from a range of sources suggest that school-based prevention in Ukraine has had a positive impact on smoking and use of alcohol among adolescents.

Source: Adapted from WHO, 2017, p.98.

Figure 15

Percentage of students reporting being taught at school about the dangers of smoking, 2017 and 2018



Data source: WHO, 2022a.

Teacher training and support for health and nutrition education

Provision of health education is undermined by inadequate teacher training and support. Genuinely integrating transformative education into schools requires a significant investment in teacher development — not only in what to teach, but how to teach it (Beadle, Pich et al., 2021). Available data highlight this issue in relation to nutrition education, physical education and sexuality education.

For example:

- **Nutrition education** – The GNPR survey (WHO, 2018) showed that only 90 of 160 countries (56%) provide training for school staff to deliver nutrition education and related activities. In responses to the FAO survey of 30 low- and middle-income countries (FAO, 2021), only 14 reported that nutrition education is included in pre-service teacher training; 24 reported providing teachers with one-off in-service training.
- **Physical education** – Preliminary findings from the *UNESCO Fourth Worldwide Physical Education Survey 2020–2021*, based on responses from 117 countries and more than 2,000 schools, highlight teacher training as one of the key areas where improvements are needed. One in five countries has no policy requiring physical education teachers to take part in in-service training or continuing professional development.

> Genuinely integrating transformative education into schools requires a significant investment in teacher development — not only in what to teach, but how to teach it.

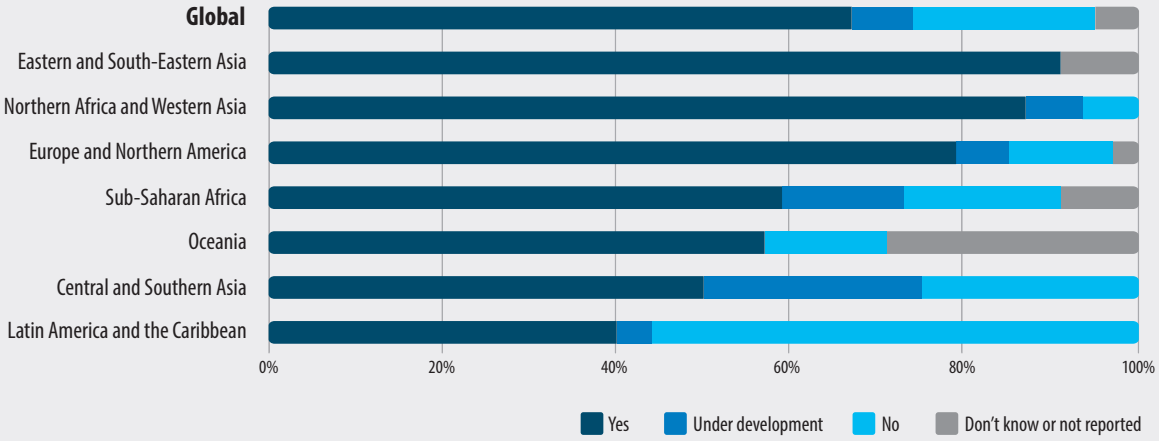
Only 2 in 5 countries (42%) have specialist physical education teachers at primary school; the proportion is higher at secondary level — around 9 in10 countries report that physical education is taught by a specialist in secondary schools. There are also regional differences. For example, while most countries in Asia and North Africa mandate the provision of in-service training and continuing professional development, more than half of countries in Latin America and the Caribbean do not have such provision (**Figure 16**). In countries where in-service teacher training is mandated,

the frequency of training varies — in one in three countries it is conducted once every two years or more. Consultations with teachers and youth sports leaders as part of the survey also highlighted the importance of developing teachers' skills to provide socioemotional support to students and to support the inclusion of vulnerable and marginalized students in physical education (UNESCO, 2023).

- **Sexuality education** — The 2019–2020 UNESCO survey on the status of CSE found that 40 of 59 responding countries reported having teacher training programmes and sexuality education curricula, and that teachers are required to have training in sexuality education before they can teach it. For example, in Namibia, schools are required to have dedicated life-skills teachers (UNESCO, UNAIDS et al., 2021). However, in practice, many teachers report they lack the training they need to deliver sexuality education to students with confidence. Other barriers affecting the quality of delivery include insufficient time allocation within the school timetable, lack of available teacher time, lack of availability of materials, negative attitudes of staff and, in some cases, fear of backlash from parents and other teaching staff.

Figure 16

Share of 117 countries requiring teachers of physical education to take part in any in-service training or continuing professional development, by region, 2020–2021



Data source: UNESCO, 2023.

4.3 School physical environment

HIGHLIGHTS

The school physical environment plays an important role in the health, nutrition and well-being of children and adolescents and in creating a safe and inclusive school that is conducive to learning, and this is an area that requires more attention. Key aspects of a healthy school physical environment include access to WASH services, safe infrastructure, well-lit classrooms, adequate space for play, facilities and equipment for physical education, adapted infrastructure and materials for students with disabilities, and a healthy school food environment.

Investing in WASH in schools can protect against diarrhoea, intestinal helminths and acute respiratory infections, which collectively cause millions of days of school absence worldwide; COVID-19 has further highlighted its importance in prevention of disease transmission. WASH in schools is essential for healthy hygienic behaviours and, specifically, for menstrual health for female students and staff. Safe drinking water is a prerequisite for promoting good oral hygiene and for reducing consumption of sugary drinks. However, globally, almost one in three schools has no drinking water from an improved source; one in three schools has no basic sanitation; almost half of schools do not have handwashing facilities with water and soap; and progress has been very slow. Children in low-income countries are less likely to attend schools that have these basic services and coverage is lowest in sub-Saharan Africa and the Pacific. A key challenge is that most WASH components involve significant infrastructure, capital and recurrent costs.

Most schools in all regions, with the exception of sub-Saharan Africa, have access to electricity. UIS data from 71 countries show that the median share of primary schools with access to adapted infrastructure and materials for students with disabilities is only 30%. Access to facilities and materials for students with disabilities is greater in high- and upper-middle-income countries; however, even in some richer countries, few schools meet the basic standards. Facilities and equipment for physical education are reported to be less than adequate in almost half of countries across the world.

A healthy school food environment fosters healthy food habits and encourages children, school staff and communities to eat nutritious and healthy foods. This includes standards for school meals, measures to restrict the marketing and sale of unhealthy foods and beverages in and around schools, and the prevention of food industry sponsorship and branding. Many countries have policy goals related to school nutrition (**Section 3**); nutrition education is widely implemented in schools (**Section 4.2**) and school meals are provided in almost every country in the world (**Section 4.5**), but standards and other measures to ensure that these interventions are supported by a healthy school food environment are still lacking in many countries. Of 93 countries with legislation, compulsory standards or guidance on school food and beverages, 90% have standards or guidance governing the food and beverages provided during school lunches and other meals. However, only 60% of these countries have standards governing food and beverages sold in school cafeterias, food stores and vending machines, and less than one in three has measures restricting marketing of food and beverages in the school setting. Providing healthy and nutritious school meals requires appropriate facilities, but globally, one in six schools does not have the facilities to cook or prepare school meals on the school premises.

The school physical environment plays a significant role in the health and well-being of children and adolescents. The SDGs recognize the importance of safe and healthy learning environments to education. SDG 4 includes targets to build and upgrade education facilities that are child, disability and gender sensitive and provide safe, inclusive and effective learning environments for all (Target 4.a). This includes ensuring all schools have access to electricity, computers, the internet, adapted infrastructure and materials for students with disabilities, and basic WASH services (Indicator 4.a.1).[22] Other key aspects of a healthy school physical environment include well-lit classrooms and corridors, adequate space for play, facilities and equipment for physical education, and a healthy school food environment. Schools must also be secure to protect the safety of learners and staff, for instance, by improving road safety near schools (see examples from United Republic of Tanzania and Brazil, **Box 16**).

A healthy school physical environment is an essential prerequisite for school-based interventions to improve health and nutrition, promote healthy lifestyles and protect the safety and well-being of the whole-school community. Poorly maintained facilities and grounds and poor waste disposal also increase health risks, for example, by providing breeding sites for mosquitoes.

A healthy school physical environment also supports a healthy socioemotional environment (see Section 4.4). Safe, well-lit school grounds, corridors and classrooms, and access to WASH services are also important for gender equality in access to education, notably by ensuring that girls have safe, separate toilets, and for menstrual health. Unsafe and poorly-lit classrooms, toilets and school grounds increase the risk of school violence and bullying and gender-based violence.

This section presents an overview of available data on the status of the physical environment in schools. This includes data on WASH services and electricity, facilities and equipment for physical education, and the school food environment. There are limited data on other aspects of the school physical environment.

Box 16

Focus on road safety

Author: Richard Clarke, Policy and evidence manager, FIA Foundation

Every year, around 220,000 children and young people die on the world's roads (WHO, 2022g), the majority in low- and middle-income countries. Adopting a 'safe system' approach can reduce risk and is a key part of the Global Plan for the Decade of Action for Road Safety 2021–2030 (WHO, 2022h). The Child Health Initiative, a collaborative partnership of experts and implementing agencies, works to ensure a 'safe and healthy journey for every child' in order to meet the Habitat III New Urban Agenda and the SDGs, including targets 3.6 and 11.2 (on road traffic injuries) and 11.6 (on air pollution).

In the United Republic of Tanzania, the NGO Amend has implemented School Areas Road Safety Assessment and Improvements — SARSAI — in a number of schools. This includes infrastructure improvements such as speed bumps, bollards, new pavements, signage and crossing points. They work with the school and local communities to understand the issues and seek practical solutions, for example, creating a new school entrance to help children avoid dangerous areas. These simple solutions, which cost about US$25,000 per school, save lives and prevent injuries. In a peer-reviewed study, schools with SARSAI experienced 26% fewer injuries and vehicle speeds in school zones dropped by as much as 60%. Amend is replicating this approach across other countries in Africa.

In Brazil, new safety interventions are being introduced around schools in a partnership between the Department of Education of the City of Rio de Janeiro and its engineering department (CET-Rio), supported by the Institute for Transportation and Development Policy Brazil. The project is using Star Ratings for Schools (SR4S) — a simple system for assessing the safety of infrastructure — and Traffic Conflict Analysis, which uses observations of driver and pedestrian behaviour to assess road safety risk. By combining these tools, the project can understand the risks and develop practical solutions to design different infrastructure. SR4S allows measurements to be made before and after the intervention to objectively assess the safety change through the difference in score. SR4S assessments have been undertaken in many countries and the simple methodology means that it can be easily rolled out — for example, it has been used in more than 50 schools in Uruguay.

Sources: Based on World Resources Institute (WRI), 2019; Poswayo, Kalolo et al., 2019; Star Rating for Schools, 2019 and https://www.childhealthinitiative.org/blog/2021/december/rio-de-janeiro-schools-journey-interventions-launched-with-itdp-brazil. For more examples see Child Health Initiative, 2022.

22 See Figure 17 for definitions of basic WASH services.

Water, sanitation and hygiene

Investing in WASH in schools can protect against diarrhoea, intestinal helminths and acute respiratory infections (McMichael, 2019), which collectively cause millions of days of school absence worldwide. As noted earlier in this report, the education response to COVID-19 has also underlined the importance of WASH, especially hygiene, for reducing the transmission of infectious diseases, and allowing a safe return to school (UNESCO, UNICEF et al., 2020a; UNESCO, UNICEF et al., 2021; UNICEF and WHO, 2020). Safe drinking water is also a prerequisite for promoting good oral hygiene, including regular teeth brushing and reducing consumption of sugary drinks, which in turn has benefits for dental health. Access to water and sanitation in school is essential for the promotion of healthy hygienic behaviours and for menstrual health for female students and teachers, as well as for safe food handling (**Case study 15**).

The WHO and UNICEF Joint Monitoring Programme (JMP) has monitored progress in the provision and quality of drinking water, sanitation facilities and hygiene in schools since 2015. The JMP uses three categories to define WASH service levels — basic service, limited service and no service (**Figure 17**). Service ladders track progress towards a basic level of service, which is the indicator used for global monitoring of SDG targets related to WASH in schools.

The JMP produces internationally-comparable estimates of progress using data from multiple sources and is considered the most comprehensive data source on WASH in schools.[23] UNICEF also uses the Three Star Approach for WASH in Schools. A recent evaluation of this approach in countries in the Pacific found it is relevant to the local context to assess, for example, WASH policy environments and changes in learner behaviour (UNICEF Pacific Multi Country Office. 2021). The following data summarize the global and regional picture based on JMP data.

Globally, almost one in three schools does not have safe drinking water. In 2019, 69% of schools globally had a basic drinking water service (defined as an improved source with water available at the time of the survey), a very slight increase from 67% in 2015; 16% had limited availability; and 15% had no drinking water (UNICEF and WHO, 2020a) (**Figure 18**). Coverage of basic water services in schools was lowest in sub-Saharan Africa (44%) and Oceania (48%), while it is universal in Europe, North America, Australia and New Zealand. Between 2015 and 2019, the proportion of schools with no drinking water declined in all regions except for Oceania and Eastern and South-East Asia, where coverage remained unchanged. In the 120 countries for which data were available in 2019, 3 in 4 secondary and 2 in 3 primary schools had a basic water service. This means that, globally, an estimated 584 million children have limited or no access to a basic drinking water service at school; 2 in 5 of these children live in sub-Saharan Africa.

Figure 17

Joint Monitoring Programme service ladders for global monitoring of WASH in schools

SERVICE LEVEL	DRINKING WATER	SANITATION	HYGIENE
Basic service	Drinking water from an improved source and water is available at the school at the time of the survey	Improved sanitation facilities at the school that are single-sex and usable (available, functional and private) at the time of the survey	Handwashing facilitites with water and soap available at the school at the time of the survey
Limited service	Drinking water from an improved source but water is unavailable at the school at the time of the survey	Improved sanitation facilities at the school that are either not single-sex or not usable at the time of the survey	Handwashing facilities with water but no soap available at the school at the time of the survey
No service	Drinking water from an unimproved source or no water source at the school	Unimproved sanitation facilities or no sanitation facilities at the school	No handwashing facilities or no water available at the school

Source: Adapted from UNICEF and WHO, 2020a, p.6.

23 Data sources include national EMIS data, the World Bank-supported Service Delivery Indicator survey, the Latin American Laboratory for Assessment of the Quality of Education regional comparative and explanatory study, and the UNESCO-UIS education survey, which requests data from participating governments.

One in three schools worldwide has no basic sanitation. In 2019, 63% of schools had basic sanitation (improved sanitation facilities that are single-sex and usable), a slight increase from 60% in 2015; 18% had limited sanitation, and 19% had no sanitation (UNICEF and WHO, 2020a). Sanitation coverage in schools was lowest in sub-Saharan Africa and Oceania (**Figure 19**). Coverage is better at secondary level: in the 117 countries for which data were available in 2019, almost 3 in 4 secondary and 3 in 5 primary schools had basic sanitation. There has been some overall improvement since 2015, when 23% of schools were without sanitation, but progress is slow. Between 2015 and 2019, the proportion of schools with no sanitation declined in all regions except Oceania. Central and Southern Asia achieved the largest reduction in the proportion of schools with no sanitation, from 24% to 16%. Some countries, for example, Togo, have made significant progress due to strong government commitment (**Case study 16**). However, globally an estimated 698 million children do not have access to basic sanitation at school; more than half of these children live in sub-Saharan Africa and Asia.

Globally, the availability of basic hygiene services in schools is low. Only 57% had basic hygiene services (defined as the availability of handwashing facilities with water and soap) in 2019, and this had only increased by 5% since 2015 (**Figure 20**) (UNICEF and WHO, 2020a). One in four schools around the world had no handwashing facilities or water available in 2019; in the least developed countries the proportion was almost one in two. Of the estimated 818 million children who do not have access to basic hygiene at school, 2 in 3 live in sub-Saharan Africa and Asia, with serious implications for the health of students and the wider school community, as well as for safe preparation and consumption of food and safe delivery of school health services and menstrual health.

Further, maintaining hygiene in schools and ensuring school safety during pandemics such as COVID-19 goes beyond access to basic hygiene services. To meet the criteria for a basic hygiene service, schools must have at least one handwashing facility with water and soap. Guidelines for preventing and controlling COVID-19 in schools highlight the importance of providing sufficient handwashing facilities in several key locations around the school — including toilets, canteens, changing rooms and playgrounds — and ensuring they are well maintained, as well as promoting changes in hygiene behaviour and practicing group handwashing at critical times (UNESCO-OREALC, 2020; UNICEF and WHO, 2020a).

Case study 15

Fit for School — a school-based WASH programme in South-East Asia

The Fit for School programme, implemented by education ministries in Cambodia, Lao PDR, the Philippines and Indonesia, integrates improved access to clean water, washing and sanitation facilities with hygiene interventions, including handwashing, teeth brushing, deworming, school feeding and menstrual hygiene management.

The programme started in the Philippines in 2008. It broadened to Cambodia, Lao PDR and Indonesia in 2011 and, under government leadership in all four countries, has expanded to cover more than 10,000 schools and 7.5 million students. In Lao PDR, the Ministry of Education and Sports has scaled it up from 22 to more than 2,000 schools. In the Philippines, the Department of Education developed the Essential Health Care Package, an integrated school health programme based on the Fit for School framework; and more than 5 million learners are attending schools with improved WASH facilities. Success factors include simple and sustainable interventions to establish good hygiene, working through the education sector, especially at subnational and school levels, to promote programme management and implementation within local structures, and partnerships with parents and communities to ensure ownership and transparency.

Findings from the Philippines showed that the programme led to a significant reduction in the prevalence of soil-transmitted helminth infections and enhanced weight gain. A longitudinal health outcome study in Cambodia, Indonesia and Lao PDR did not find these benefits but did find that the programme contributed to the prevention of dental caries in children. It also concluded that future evaluation of similar programmes should assess impact on formation of healthy hygiene behaviour, which has lifelong benefits, in addition to specific health outcomes.

Source: Based on Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), 2022; Monse, Benzian et al., 2013; Duijster, Monse et al., 2017.

Case study 16

Improving sanitation in schools in Togo

The proportion of schools in Togo with basic sanitation facilities increased from 44% in 2016 to 65% in 2019 as a result of strong government commitment, the inclusion of WASH in schools as a priority in the Education Sector Plan 2014–2025, and the National Action Plan for Water and Sanitation 2016–2030. The Ministry of Health led the development of norms and standards and incorporated WASH indicators into the EMIS. With World Bank support, the Government has implemented a school infrastructure programme that includes construction of toilets in schools. At current rates of progress, Togo will achieve universal access by 2030.

Source: Adapted from UNICEF and WHO, 2020, p.45.

There are significant differences in WASH coverage both between countries within regions and within countries. The WHO and UNICEF JMP global database enables analysis of different dimensions of inequality in access to WASH in schools. Coverage is generally higher in high- and upper-middle-income countries than in lower-middle- and low-income countries. Students in low-income countries are the least likely to have adequate access to WASH at school; nearly half of all children have no water service at their school and a quarter whose school has no sanitation service live in least developed countries.[24] In general, rural and primary schools have lower coverage of basic WASH services. It is estimated that, in rural areas, 61% of schools have a basic water service, 44% have a basic sanitation service and 34% have a basic hygiene service. Further, among countries with national estimates available for WASH in schools, there are often big differences between the proportion of schools with access to one of these services and the proportion with access to all three. For example, in 2018, two-thirds of schools in India had a basic water service and over half had a basic sanitation service and a basic hygiene service, but only one in three had all three WASH components. In the same year, half of the schools in the Syrian Arab Republic had a basic water and basic sanitation service, but only one in seven had all three (UNICEF and WHO, 2020a).

The quality and accessibility of WASH services is also an issue. Many countries monitor the availability of toilets accessible for students with disabilities. Available data show that relatively few schools have these facilities. In India, for example, 29% of schools had toilets classed as 'accessible to children with special needs', but only 14% had both a ramp and handrail; just 6% had a wide door for wheelchair entry and support structures inside the toilet. A survey of rural schools in 12 sub-Saharan African countries found that many school toilets did not meet criteria for quality, accessibility and acceptability (World Vision and the Water Institute at UNC, 2017). Two-thirds were not accessible to children with disabilities. Almost half did not have doors that locked from the inside and most did not have a bin inside the toilet cubicle for waste disposal, both of which are particularly important for female students and staff for privacy, safety and menstrual health (**Box 17**).

Infrastructure, facilities and equipment

Fewer than one-third of primary schools in at least 19 countries in sub-Saharan Africa have access to electricity. UIS tracks a range of indicators related to the physical school environment through the Annual Survey of Formal Education. This includes the proportion of schools with access to electricity, the internet and computers for pedagogical purposes. The most recent data show that most schools in all regions, with the exception of sub-Saharan Africa, have access to electricity. The median share of primary schools with access among countries in sub-Saharan Africa was only 34%. There is also a significant gap in access between higher-income and lower-income countries. While most schools in high-income countries have access to electricity, the coverage in low-income countries ranges from 3% to 60% for primary and 11% to 74% for lower-secondary schools (**Figure 21**).

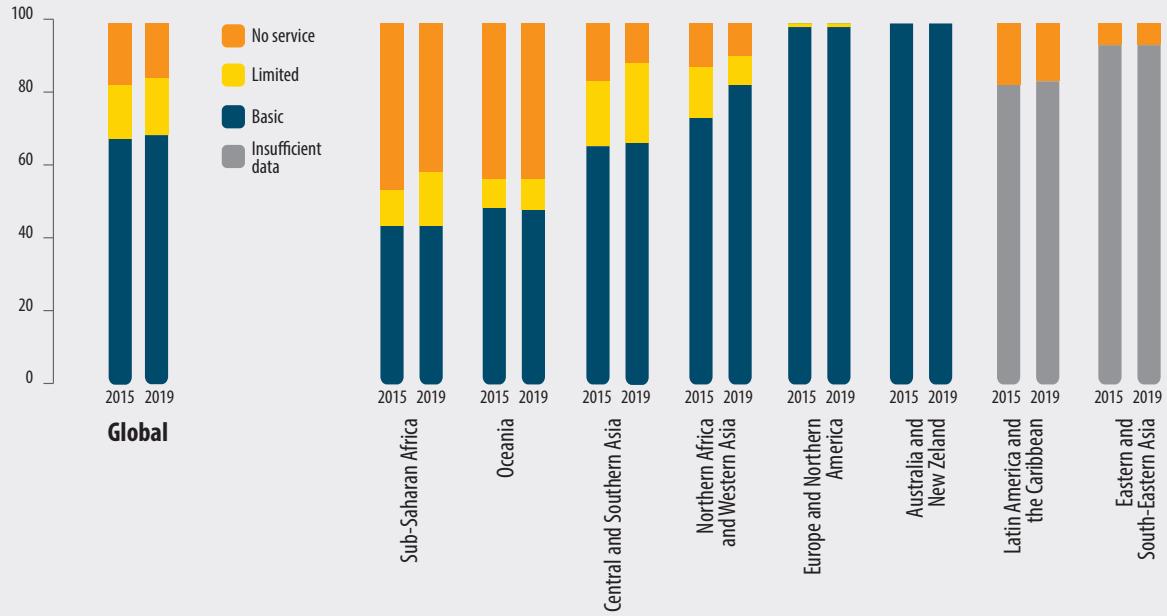
The majority of schools in most countries with available data do not have adequate infrastructure and facilities for students with disabilities. The most recent UIS data from 71 countries show that the median proportion of primary schools with access to adapted infrastructure and materials for students with disabilities is only 30%. Access for students with disabilities is particularly low in sub-Saharan Africa, where the median share of primary schools is as low as 12%. Burundi, the Democratic Republic of the Congo and Niger reported that no primary or lower-secondary school in their territory meets these criteria (**Figure 22**). Access is generally higher in high- and upper-middle-income countries; however, few primary schools meet the basic standards, even in some richer countries, such as Seychelles (7%) and Slovakia (14%).

School facilities and equipment for physical education are less than adequate in almost half of countries. In responses to UNESCO's 2013 *Worldwide Survey of School Physical Education* (UNESCO, 2014a), only 26% of countries reported that the quality of facilities for physical education was 'excellent' or 'good'; 30% reported quality was 'adequate' and 44% as 'below average' or 'inadequate'. Lower-income countries were most likely to report facilities and equipment as 'inadequate'. Initial analysis of responses to the UNESCO *Fourth Worldwide Survey of Quality Physical Education* (2020–2021) continues to highlight the need for increased investment in infrastructure for physical education. More than half of countries (57%) reported that they invest less than 2% of the national education budget in physical education (UNESCO, 2023).

24 Least developed countries – LDCs - are low-income countries confronting severe structural impediments to sustainable development. They are highly vulnerable to economic and environmental shocks and have low levels of human assets. An updated list of LDCs can be found at https://www.un.org/development/desa/dpad/least-developed-country-category.html

Figure 18

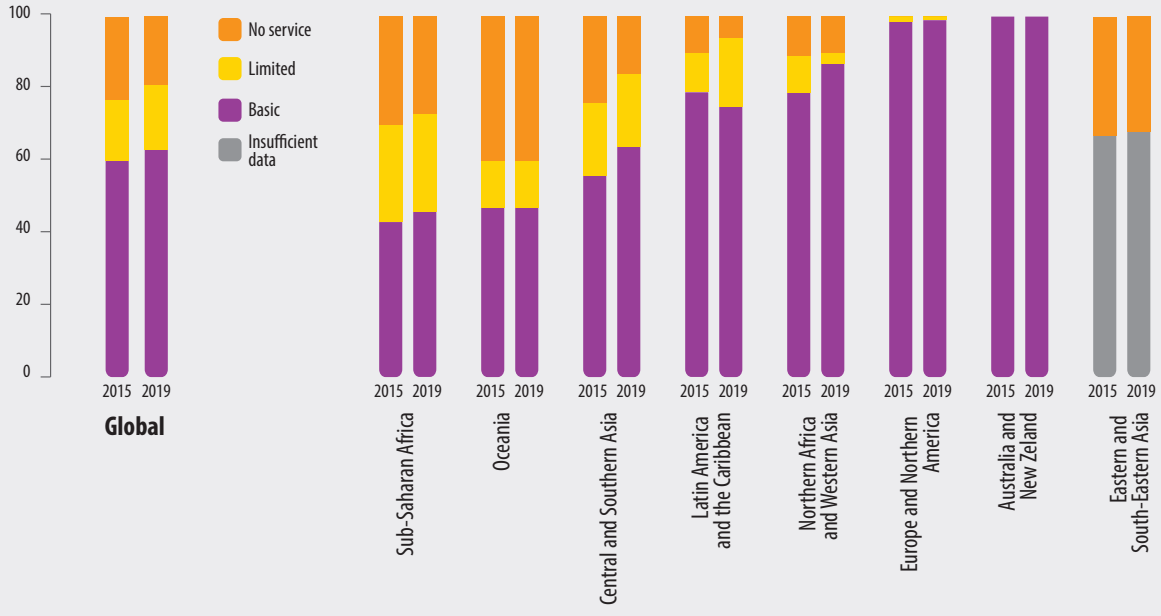
Coverage of drinking water in schools, by region, 2019 (% of schools)



Source: Adapted from UNICEF and WHO, 2020a, p.7.
Notes: The values for Latin America and the Caribbean in 2015 were 69% for basic services and 14% for limited services.
Only 6 out of the 8 SDG regions had estimates for basic drinking water in 2019. The values for Latin America and the Caribbean in 2015 were 69% for basic services and 14% for limited services.

Figure 19

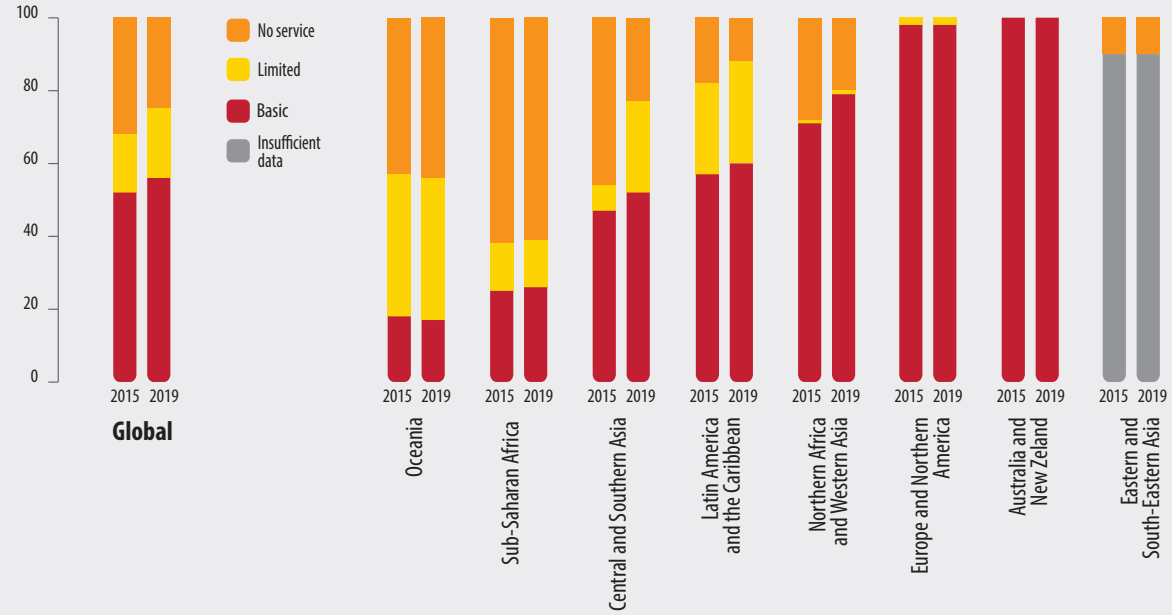
Coverage of sanitation in schools, by region, 2019 (% of schools)



Source: Adapted from UNICEF and WHO, 2020a, p.8.

Figure 20

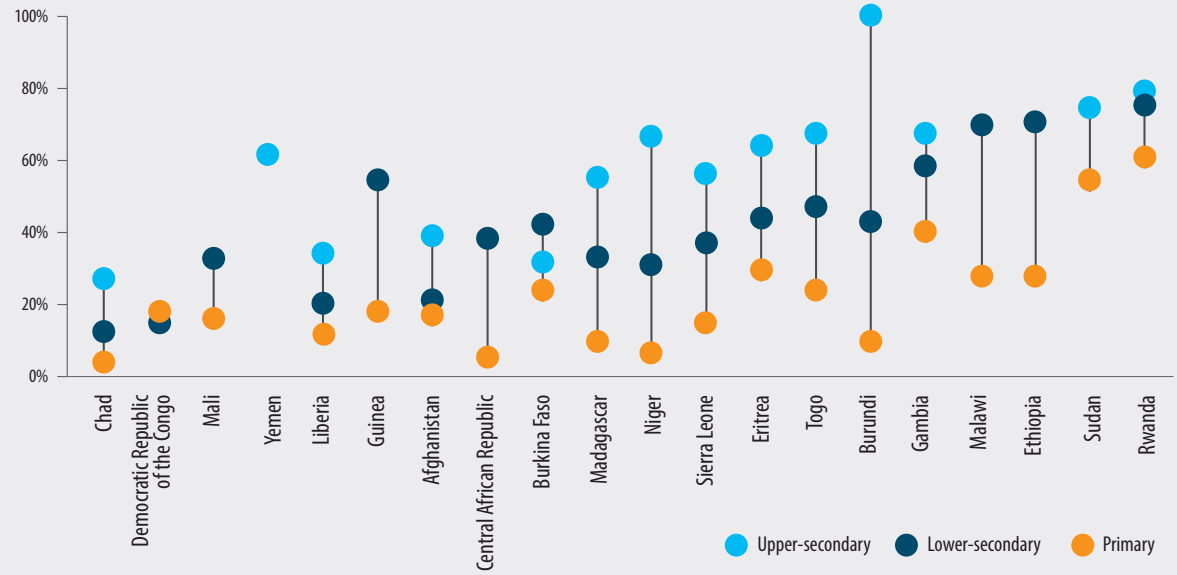
Coverage of hygiene in schools, by region, 2019 (% schools)



Source: Adapted from UNICEF and WHO, 2020a, p.9.

Figure 21

Percentage of schools with access to electricity in low-income countries, by education level, 2015–2021



Data source: UIS, 2022.
Notes: *The most recent data for countries since 2015 are used. ** Anguilla, Cook Islands, Montserrat, Niue, Tokelau, and the Bolivarian Republic of Venezuela are not classified by the World Bank income groups.

Box 17

Focus on menstrual health

Adolescent girls in many countries commonly report missing school due to menstruation, and lack of appropriate WASH facilities is often a significant factor. Surveys in West Africa found that 1 in 4 girls in Nigeria, 1 in 5 in Côte d'Ivoire, and 1 in 7 in Burkina Faso missed school due to menstruation in the previous 12 months (Johns Hopkins University, 2020). In Bhutan, 25% of girls reported missing school during their periods because there is nowhere at school to wash and change and 21% because there is nowhere at school to dispose of sanitary pads. (Department of School Education (DSE), and UNICEF, Bhutan, 2018). In 2017, a study found that less than 20% of rural schools in 6 African countries had 4 of the 5 recommended measures to support menstrual health — separate facilities for girls, water supply, toilet doors that lock and a waste disposal bin (Morgan, Bowling et al., 2017).

A comprehensive approach includes provision of knowledge and skills, availability of covered bins in school toilets, mechanisms for safe and hygienic disposal of menstrual waste, and social support from school staff and families. Access to sexuality education that addresses puberty and menstruation, together with WASH services in schools, is essential for female students and teachers to be able to manage menstruation safely, hygienically, and with dignity. Puberty education in comprehensive sexuality education is relevant for all genders to counter social norms, stigma and misinformation associated with menstruation and to support a more enabling school climate.

In 2017, a review of education sector plans and policies, girls' education policies, and gender policies with an education focus in 21 low- and middle-income countries found little explicit mention of menstruation or menstrual health. It concluded that overall, existing policies inadequately provide for WASH facilities or other menstrual health-related improvements in the school environment (Sommer, Figueroa et al., 2017).

Menstrual Hygiene Management in Ten[25] is a 10-year agenda to ensure that girls have an enabling school environment as well as information and support to manage menstruation with dignity, safety and comfort by 2024. An assessment in 2019 concluded that there had been progress in advocacy and strengthening the evidence base, as well as increasing government engagement and integration of menstrual health into national education systems, but that more needed to be done to ensure countries have the requisite policies and resources to support action. It highlighted the Philippines and Kenya as two examples of countries that have made progress (Sommer, Caruso et al., 2021).

The **Philippines** has used WASH in schools as an entry point to address menstrual health and is monitoring implementation of menstrual health policy through integration of related indicators in the national education monitoring system. In 2016, the Philippines Department of Education introduced the Comprehensive Policy and Guidelines on WASH in Schools, which decrees that a system and support mechanisms for effective menstrual health shall be ensured in all schools'. Menstrual health-related WASH indicators, including regular supply of soap and water in individual handwashing stations near toilets, facilities for disposal of menstrual health materials, private, secure, functional, gender-segregated toilets, availability of menstrual health-related information and education materials, and rest spaces for menstrual health, were integrated into the Enhanced Basic Education Information System, which is used for planning, monitoring and reporting at national, subnational and local levels. In 2019, after three years of implementation, awareness of WASH and menstrual health had improved, there was increased support for construction of gender-segregated toilets, with girls' toilets designed to allow for a bidet or a washing area, and the provision of covered bins. Menstrual health information is posted in toilets and on school health boards and has been included in science, social science and health classes.

Kenya has taken a comprehensive approach to addressing menstrual health in the education system, led by the Ministry of Health, including development of policy, guidelines and a manual for training teachers, together with support for construction of WASH facilities and provision of free sanitary pads. The National School Health Policy was revised by the Ministry of Health and Ministry of Education to include a strong commitment to menstrual health in the context of gender equality and the rights of women and girls to health, education and work, as well as clear objectives, actions and indicators to achieve comprehensive menstrual health management (MHM) in Kenyan schools. Kenya has also developed a policy and a strategy to guide implementation and in 2017 the President signed the Basic Education Amendment Act No. 17, which states that the government shall 'provide free sufficient and quality sanitary towels to every girl child registered and enrolled in a public basic education institution who has reached puberty, and provide a safe and environmentally sound mechanism for disposal of sanitary towels'.

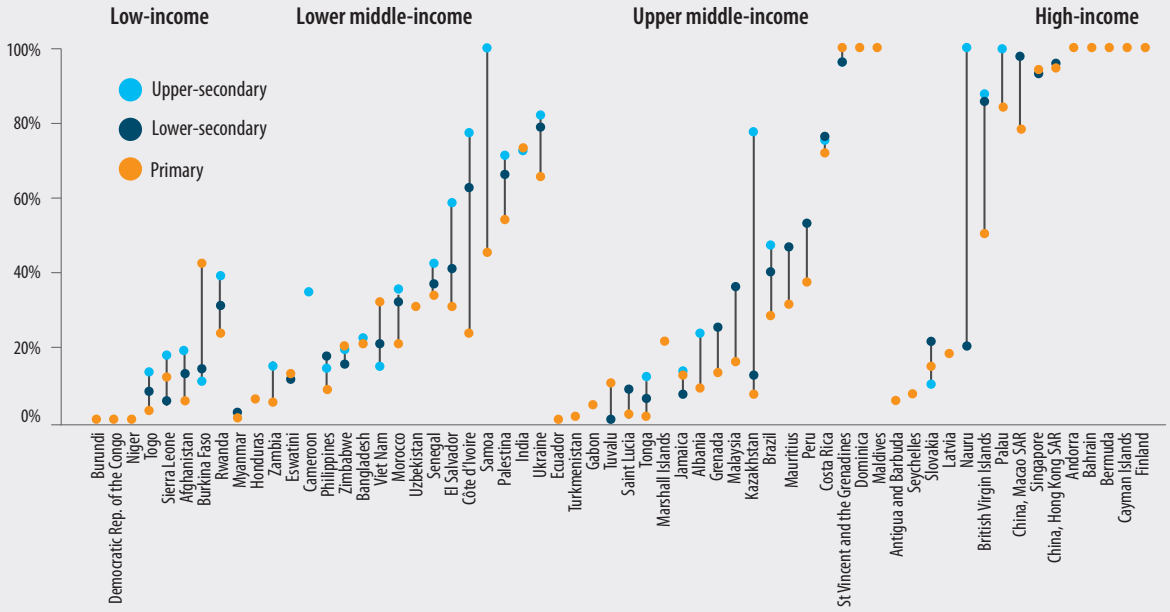
The Ministry of Health, Ministry of Education and other stakeholders have developed the MHM Teachers' Handbook to support the delivery of lessons to learners in primary schools. The 'Standards for WASH infrastructure in schools' now incorporate menstrual health, including guidance on the construction of menstrual health-friendly toilets, and the Ministry of Education has allocated funds for infrastructure development. Free sanitary pads are distributed to targeted girls in public primary schools by the Ministry of Public Service, Youth and Gender Affairs, and head teachers have a discretionary fund for purchase of sanitary pads. In addition, the Ministry of Education plans to revise the EMIS to include menstrual health indicators.

To learn more on the case studies from The Philippines and Kenya, please see Sommer, Caruso et al., 2021. Available under CC BY 4.0

25 The commonly used term is menstrual health but this specific agenda refers to menstrual hygiene management (MHM).

Figure 22

Percentage of schools with adapted infrastructure and materials for students with disabilities, by education level, 2015–2021



Data source: UIS, 2022.
Note: The most recent data for countries since 2015 are used.

Food environment

The school food environment encompasses all the spaces and conditions inside and around the school where food is available and consumed. A healthy school food environment is critical as it fosters lifelong healthy food habits and encourages children, staff and the wider community to eat nutritious and healthy foods (FAO, 2022). It includes facilities for food preparation, school gardens, and measures to restrict the promotion and sale of unhealthy food and beverages in and around schools and prevent food industry sponsorship and branding. As discussed earlier, many countries have policy goals related to school nutrition, and nutrition education is widely implemented in schools; however, the data show that standards and other measures to ensure that this is supported by a healthy school food environment are still lacking in many countries.

There are different ways in which governments can shape school food environments to be more supportive of healthy diets and improved nutrition. Initiatives include setting and implementing nutrition policies and standards on foods and beverages available in and around schools, in line with the 2013–2020 Global action plan for the prevention and control of NCDs (WHO, 2013) and recommendations on the marketing and sale in and around schools of foods and beverages that are high in fats, salt and sugars. In many countries, unhealthy foods and sugar-sweetened beverages are served or sold to children in school cafeterias or at convenience stores and street stalls outside or near schools (UNICEF, 2019). School standards and measures to restrict the sale and marketing of unhealthy foods and beverages can potentially reduce the intake of unhealthy fats, sugars and salt and increase the consumption of fruit and vegetables (Micha, Karageorgou et al., 2018). WHO monitors implementation of these recommendations through the GNPR, the GINA and the NCD Country Capacity Survey. The following summarizes available data on the school food environment.

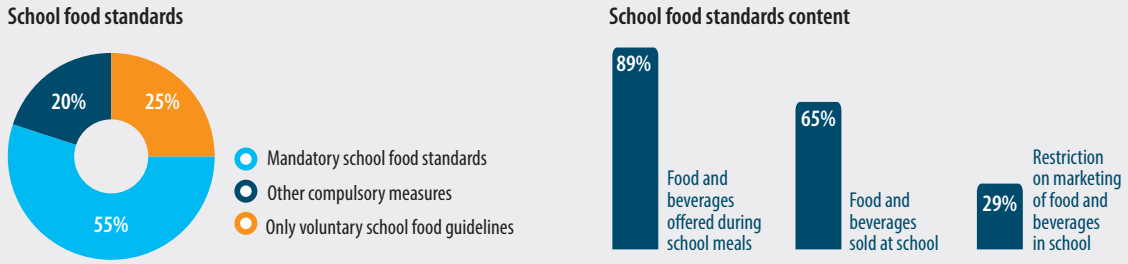
Available data show that 93 countries — half of the 187 countries for which data are available — have legislation, compulsory standards or guidance on school food and beverages. WHO GINA 2022 data show that there are, however, differences in the scope and content of these standards. Of the 93 countries, 89% have standards governing food and beverages offered during school lunches and other meals or snacks, and 65% have standards governing food and beverages sold in school cafeterias, food stores, snack bars and vending machines

(**Figure 23**). Measures typically promote healthier foods and beverages, especially fruits and vegetables, water for drinking, whole grain cereals and use of unsaturated oils for cooking. Only 29% of the 93 countries have measures restricting marketing of foods and beverages in the school setting. The GINA 2022 data are consistent with findings of the WHO 2018–2020 SRMNCAH policy survey (WHO, 2020b), which showed that only 58 of 146 countries had legislation and/or policies prohibiting the sale of unhealthy foods and sweetened non-alcoholic beverages in and around schools.

In some regions, school standards mainly focus on the nutritional content of school meals. FAO analysis based on a 2015–2016 survey of 33 low-income countries, the majority in Africa, Latin America and the Caribbean, showed that most countries had general recommendations to guide the composition of school meals and snacks, but only 13 countries, mostly in Latin America, had official nutrition guidelines and standards for school meals (FAO, 2019). Standards were most frequently related to energy content. Iron and vitamin A were the most common micronutrient-based standards. Restrictions on sugar and salt content and processed and fried foods were less common, as were indications about the provision of drinking water. The most common additional guidelines and standards related to food sold in school stores or tuck shops; very few countries reported initiatives related to vending machines in school or food vendors outside school. The Global Survey of School Meal Programs also found that food environment interventions mostly aim to regulate the nutritional content of school meals and that restricting the availability of unhealthy foods in and around schools only featured in 30% of school meal programmes (GCNF, 2021).

Figure 23

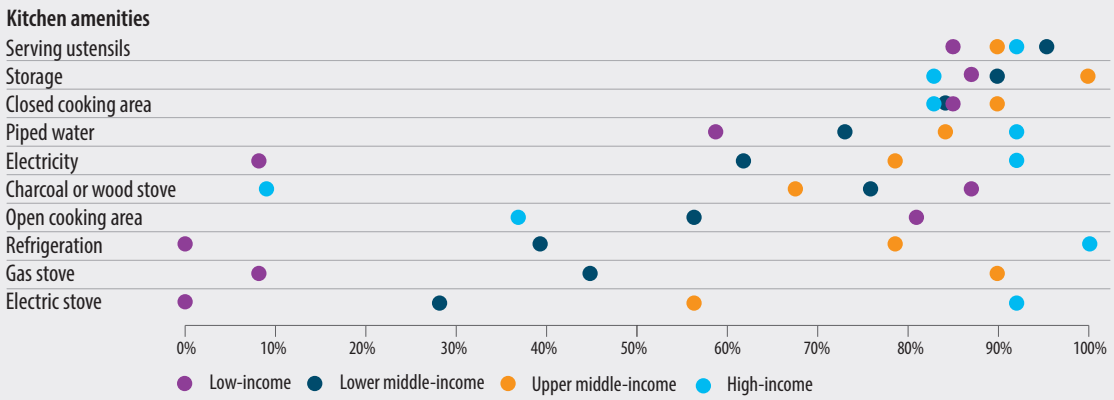
Type and content of national standards governing the availability of food and beverages in and around school in 93 countries, 2022



Data source: WHO, 2022b.

Figure 24

Percentage of school meal programmes in 85 countries with cooking and storage facilities, by country income group, 2019



Source: GCNF, 2021, p.56.

Many schools, especially in low and lower-middle-income countries, do not have facilities for safe preparation and storage of food or dedicated eating spaces. The presence or absence of eating spaces and cooking facilities can be a key determinant of the type of food students receive. GCNF collects data on where school meals are prepared and the facilities and equipment available to cook, store and serve them. Most school meals or snacks were prepared on the school premises. But, for example, in Kyrgyzstan, while 215,000 schoolchildren received hot meals, 380,000 received buns and tea as a snack because their schools did not have a kitchen to prepare hot meals. The availability of cooking and storage facilities remains a challenge for many programmes, especially in low and lower-middle-income countries, where few schools with on-site kitchens have a gas or electric stove or refrigeration (**Figure 24**). Based on responses from 85 countries, 42% reported that very few or no schools had cafeterias or eating spaces; this rate was 65% among low-income countries (GCNF, 2021).

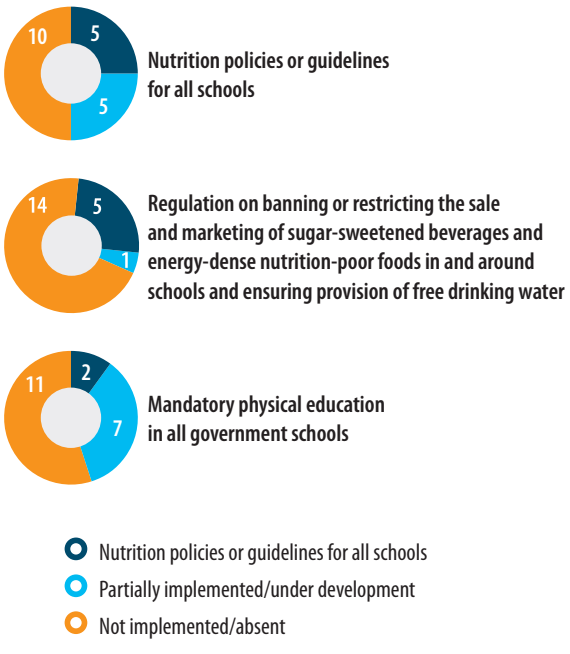
Community participation makes an important contribution to improving the school food environment. According to GCNF's report on the 2019 Global Survey of School Meal Programs, parents and other community members were involved in school meal programmes in 90% of countries that reported data. For example, in Kenya, parents provided water, firewood and utensils and were encouraged to assist with kitchen construction. In Sierra Leone, community members provided local materials and labour to construct kitchens, latrines and storage facilities while, in Mauritania, parents covered some of the cooks' wages and the costs of supplemental food items. In Switzerland, school catering activities are partly run by parent associations and in Guatemala, parents' organizations are responsible for food purchase decisions, preparing and distributing food, as well as overseeing and monitoring school meals programmes. Students also participate in almost half of programmes, for example, preparing or serving food or cleaning up. While community participation has contributed to building ownership and sustainability of programmes in many countries, it also raises some concerns about the risk of overwhelming the community, in particular women (WFP, 2017). My Healthy Caribbean School is an example of an initiative that actively involves parents and students in monitoring the school food environment (**Case study 17**).

Case study 17

Healthy Caribbean Coalition — Tracking school-related obesity prevention interventions and monitoring the school environment

One of the aims of the Healthy Caribbean Coalition (HCC) is to prevent obesity in children through a comprehensive approach that includes taxation of sugar-sweetened beverages, regulation of marketing to children, mandatory nutritional labelling, mandatory physical activity in schools and related school policies. The HCC developed the Childhood Obesity Prevention Scorecard, which uses 15 indicators in 7 priority areas to measure a country's response to childhood overweight and obesity, including indicators related to school-based interventions. The 2019 scorecard for 20 Caribbean countries shows that only a minority of countries are implementing these interventions (HCC, 2019).

My Healthy Caribbean School is a specific HCC initiative implemented in five countries — the Bahamas, Barbados, Belize, Jamaica, and Trinidad and Tobago — which provides students, parents and teachers with tools to monitor the school environment, with a focus on nutrition and physical activity, and to take action to make their schools healthier. School performance is rated based on responses to questions about issues including school policies on the sale and marketing of unhealthy foods and sugar-sweetened beverages in school, restrictions on bringing these types of food and drinks into school, the presence of advertisements and vendors in or near the school, availability of healthy food and drinking water in school, and whether physical education is mandatory.



For more information, see: https://www.healthycaribbean.org/

4.4 School socioemotional environment

HIGHLIGHTS

The school socioemotional environment plays an important role in the education, mental health and overall well-being of children and adolescents. A healthy socioemotional environment is one that is safe, supportive and inclusive, free from violence and bullying, and fosters respect for others and good relationships. It is also closely linked to the school physical environment. For example, well-lit classrooms and corridors, single-sex toilets with locks, and accessible buildings are crucial to reduce school violence and bullying and to the inclusion of learners with disabilities.

Relatively few countries measure the overall socioemotional environment in schools or the emotional well-being of students, but data are available on factors that provide an indication of the school socioemotional environment, including school violence and bullying and students' sense of belonging and inclusion in school.

School violence is common, occurs in all countries and takes many forms, affecting both girls and boys; almost one in three students reports that they have been bullied at school at least once in the last month. This has a lasting negative impact on physical and mental health and on educational attainment. Gender norms are a factor in school violence and bullying, and children and adolescents that are perceived as 'different', including students with disabilities and those who are or are perceived to be LGBTI, are more likely to be victimized.

Interventions to prevent violence in and through schools from early childhood to secondary education are feasible. In some countries, comprehensive approaches have been effective in reducing school violence and bullying, and teachers play a critical role. But while many countries are implementing school-based violence prevention interventions, coverage is low. There is also a gap between the number of countries reporting that they support violence prevention approaches, such as life skills and sexual abuse prevention education, and those assigning resources to them.

Children and young people with a higher sense of belonging in school perform better academically. While most students report a sense of belonging in school, a significant minority in all regions feel that they do not belong. Students in socio-economically advantaged schools report a greater sense of belonging at school than students in disadvantaged schools. However, limited evidence is available on education sector efforts to address this.

Education that is inclusive of all learners is not reflected consistently in laws, policies or education monitoring systems. In the one in four countries with a definition of inclusive education in their laws, policies and practices, the definition only covers students with disabilities.

The school socioemotional environment encompasses the norms, values, behaviour and attitudes of individuals in school communities and the quality of their interpersonal interactions. It plays an important role in the education, health and well-being of children and adolescents — as recognized in initiatives such as Safe to Learn (**Box 18**) and the Global Standards for Health-promoting Schools. A healthy socioemotional environment is one that is welcoming, safe, supportive and inclusive, is free from violence and bullying, promotes principles of tolerance and diversity, and fosters respect for others and good relationships between staff and students and between students (WHO and UNESCO, 2021).

Box 18

Safe to Learn global initiative

Safe to Learn aims to end violence in and through schools so that children are free to learn, thrive and pursue their dreams. Safe to Learn is an opportunity to deliver multiple wins — ending violence in schools, improving learning outcomes, leveraging investments in education and health, raising awareness and changing attitudes towards violence against children. The initiative is supported by a broad coalition of partners. Countries that have endorsed the Safe to Learn Call to Action include Cambodia, El Salvador, Georgia, Ghana, Honduras, Jamaica, Jordan, Lebanon, Mexico, Republic of Moldova, Nepal, Sierra Leone, South Africa, South Sudan, and Uganda.

To learn more, visit https://www.end-violence.org/safe-to-learn.

A positive school environment has been linked to improved behaviour, positive social and emotional development and reduced risk behaviour and substance use, and is conducive to learning (UNESCO, 2020a; Wodon, Fèvre et al., 2021). It can play a significant role in supporting children and adolescents, in particular, those who face challenges, for example those living with HIV or those with disabilities, those from disadvantaged families and those who have experienced or witnessed violence.

A healthy school socioemotional environment requires national policies, for example, on school safety, violence and bullying, non-discrimination and learner and staff well-being. This environment also depends on the school climate, which is affected by school culture and leadership, behaviour of teachers and other school staff, school rules and codes of conduct, the school's approach to classroom management and discipline, and reporting mechanisms. Attention to the safety and support of students at risk of violence and bullying is especially important.

Relatively few countries measure the overall socioemotional environment in schools or the emotional well-being of students. One example is New Zealand, which monitors whether students feel cared for, safe and secure along with their ability to establish and maintain positive relationships, respect others' needs and show empathy (UNESCO, 2020a).

This section presents an overview of available data on key issues that provide an indication of the status of the socioemotional environment and that also have an impact on the education and health of students, including the extent of violence and bullying, and student perceptions of their sense of belonging and inclusion in school.

School violence and bullying

School violence and bullying occur in all countries. School violence and bullying take many forms, including physical, psychological and sexual violence, can be perpetrated both by students and teachers, online and offline, and occur in all countries. In 2019, UNESCO published an overview of global data on the scale of school violence and bullying perpetuated by peers (UNESCO, 2019). This showed that bullying is the most common form of school violence globally— almost one in three students reported that they had been bullied at school at least once in the previous month, and cyberbullying affects as many as one in ten children. Violence and bullying perpetrated by teachers and other school staff are not as common as peer violence, including bullying, but are serious issues that need to be tackled.

Gender norms are a factor in school violence and bullying. In recent years, there has been increasing recognition of the manifestation of gender-based violence in school settings. This has given rise to the conceptualization of school-related gender-based violence (SRGBV), defined as acts or threats of sexual, physical, or psychological violence in and around schools perpetrated as a result of gender norms and stereotypes and enforced by unequal power dynamics (UNESCO and UN Women, 2016). Data show that patterns for perpetrators and victims of school violence differ by gender, with boys being more likely to be involved in or affected by physical violence and bullying and girls more likely to be involved in or affected by psychological forms of bullying (UNESCO, 2019). In some contexts, girls may be more at risk of school-related gender-based violence, which reflects gender attitudes and gender-based violence in the wider community (Ginestra, 2020). Gender non-conforming students, including those who are or are perceived to be LGBTI, are at higher risk of victimization. This highlights the importance of recognizing gender as a critical factor in the power dynamics that influence patterns of all forms of (school) violence, as well as the intersection of the impact of gender with other variables.

The importance of a supportive and inclusive school environment is highlighted by evidence showing that learners who are perceived as 'different' are more at risk of school violence and bullying. This can include girls; children from marginalized groups; children with disabilities (**Box 19**); those from ethnic, racial or religious minorities; those from indigenous groups and as mentioned before, LGBTI students (Wodon, Fèvre et al., 2021; UNESCO, 2020a). Physical appearance is the most common reason for being bullied (UNESCO, 2019).

Corporal punishment is inconsistent with a healthy school environment but is still used in schools in many countries. According to the End Corporal Punishment initiative of the Global Partnership to End Violence Against Children (2021), global progress towards ending corporal punishment is accelerating. To date, 135 countries have enacted legislation fully prohibiting corporal punishment in schools. However, enforcing legislation is a challenge. A survey of 63 countries, including 29 where corporal punishment in school is banned, found that the proportion of students who had experienced this at school was above 70% in 20 countries (Gershoff, 2017). There is limited data on initiatives to reduce corporal punishment in schools or to ensure that legislation and policy are implemented. One example is a randomized controlled trial in Ugandan primary schools, which successfully reduced corporal punishment by addressing the school culture, improving teacher-student relationships and working with parents and community leaders (Devries, Knight et al., 2015).

School violence and bullying have a negative impact on learning and educational outcomes. Students who are frequently bullied are nearly three times more likely to feel like an outsider at school, more than twice as likely to miss school, and more likely to expect to leave formal education after secondary school than those who are not bullied (UNESCO, 2019). They score lower in mathematics and reading tests; the more often they are bullied the worse their score. School violence and bullying also affect the attainment of the whole student population. Students in schools where bullying is common have lower test scores in science than those in schools where bullying occurs less often. Research has also shown that gender-based violence in schools is a significant contributor to irregular attendance and underachievement of girls.

Box 19

Focus on school violence and bullying and inclusion of students with disabilities

A UNESCO report published in 2021 showed that students with disabilities are at least as likely as, and usually far more likely than their non-disabled peers to be victims of peer violence and bullying at school. This is found in all education levels, from pre-school up to higher education. Students with disabilities also experience higher rates of physical violence at the hands of teachers. School bullying and violence affect the education of students with disabilities, in some cases because parents are reluctant to send them to school, in other cases because they miss classes or drop out of school altogether. Victimization also has a negative impact on students' sense of self and belonging and on their mental health — research shows high rates of depression, anxiety and suicidal ideation in students with disabilities who have experienced bullying.

Qualitative feedback from students with disabilities documented in the same report also suggests that the school and classroom environment is not inclusive of students with disabilities in many schools. They highlighted the importance of promoting an inclusive school culture, and this is supported by the literature. Other studies suggest that peer abuse is reduced when students with disabilities are recognized as active and valued members of the school community. For example, in Uganda, interventions to change school culture involved students, teachers and school staff in promoting mutual respect, engaged students in decision-making processes, used non-violent discipline and promoted responsive school governance, resulting in reduced levels of staff and peer violence.

Source: Adapted from UNESCO, 2021c. Available under CC-BY-SA 3.0 IGO

Case study 18

Country experience shows that school violence and bullying can be reduced

Case studies in six countries that have successfully reduced school physical violence and bullying — Eswatini, Italy, Jamaica, Lebanon, Republic of Korea and Uruguay — and two that have maintained low levels of physical violence and bullying over time — the Netherlands and Sweden — highlight key factors that contribute to effective national responses.

- **Political leadership and high-level commitment:** This is critical, together with a robust legal and policy framework that addresses violence against children and school violence and bullying. In Jamaica, the Prime Minister provided strong leadership for proposed amendments to the Education Act to ban corporal punishment in schools and to promote the use of positive discipline. Successful countries also have an emphasis in national policies on promoting a safe learning environment and a positive school and classroom climate, as well as a strong commitment to child rights and empowerment. The latter includes ensuring that schools have clear rules and codes of conduct, and effective mechanisms for reporting and responding to school violence and bullying.
- **Evidence, monitoring and evaluation:** Evidence-based approaches, informed by accurate and comprehensive data and systematic evaluation of the effectiveness of existing programmes, have been the foundation of successful national responses. Effective systems for routine reporting and monitoring of school violence and bullying and rigorous evaluation of the impact of programmes and interventions are also critical.
- **Training and support for teachers:** Training in countries including Eswatini, Jamaica, Lebanon and Uruguay has focused on developing teachers' skills in preventing and responding to school violence and bullying and improving their skills in classroom management, including creating a positive classroom culture and using positive discipline.
- **Collaboration and partnerships:** At the national level, this includes partnerships between the education sector and other ministries, civil society organizations, academic institutions, professional associations and the media. At the school level, it includes partnerships involving all stakeholders — headteachers, teachers, other staff, parents and students, local authorities, and professionals in other sectors. More specifically, the involvement of all students, including bystanders, and the use of peer approaches, has been a key factor in countries that have made the most progress. Sweden takes a holistic approach to involving students, teachers, other school staff, parents and the wider school community. Uruguay's approach involves 'participation councils' held several times a year, which bring together students, parents, teachers and other school staff elected by the school community to discuss their school, including activities to improve living together.

Source: Adapted from UNESCO, 2019. Available under CC-BY-SA 3.0 IGO

School violence and bullying have a negative impact on the physical and mental health of students. School violence causes physical injuries and harm. PIRLS data suggest that globally almost 1 in 3 students (28%) reports being injured at school by another student, with the highest prevalence in the Middle East (42%). Students who are bullied are around twice as likely to feel lonely, to be unable to sleep at night and to have contemplated suicide. Bullying is also associated with higher rates of smoking, alcohol and cannabis use, and earlier sexual experience (UNESCO, 2019). A systematic review of violence against children in Latin America and the Caribbean concluded that two sets of impacts stand out in the region: health impacts, particularly mental health and suicide among adolescent girls, and education impacts of experiencing or witnessing violence during childhood (Fry, Padilla et al., 2021).

Interventions to prevent violence in and through schools from early childhood to secondary education are feasible, but coverage of school-based violence prevention programmes remains low. A study commissioned by the Safe to Learn global initiative and undertaken by the World Bank: Ending violence in Schools: An Investment Case (Wodon, Fèvre et al., 2021) shows that school violence and bullying can be reduced. Research commissioned by UNESCO demonstrates that comprehensive approaches have been effective in reducing school violence and bullying (**Case study 18**) and teachers play a critical role in this (**Box 20**). However, there is limited global data on school-based programmes that respond to school violence and bullying. WHO has collected some data as part of efforts to monitor action to end violence against children. 'Education and life skills' is one of the seven INSPIRE strategies to prevent violence against and between children and adolescents (WHO, 2020d). This strategy includes five school-based approaches: life and social skills education; sexual abuse avoidance education; anti-bullying; school staff violence prevention, and dating violence prevention. Data from 150 countries show that while many countries implement school-based violence prevention approaches, coverage varies considerably and overall remains low.

Box 20

Focus on the role of teachers in preventing and responding to school violence and bullying

Teachers play a critical role in effective responses to school violence and bullying by creating psychologically and physically safe school and classroom environments and modelling caring and respectful relationships, as well as through specific interventions. It is essential to ensure that teachers have the knowledge, skills and confidence to prevent and address school violence and bullying, that they receive training that enables them to recognize incidents and reflect on their own values and beliefs, and that schools have protocols and systems in place for dealing with incidents and for supporting teachers.

Two UNESCO studies provide insights on teacher perceptions, practices and needs. The first collected feedback from 34,877 teachers (81% of whom were from Central and South America) through a global online survey and focus group discussions. The second used data from a pilot of the Connect with Respect programme in five countries (Eswatini, United Republic of Tanzania, Thailand, Timor-Leste and Zambia), where surveys, interviews and focus group discussions with teachers and students were conducted. The following highlights key findings.

Do teachers recognize violence in their school and how do they view their role? While around three in four teachers recognize physical violence between students, they are less likely to recognize it when it is perpetrated by a teacher towards a student. Teachers are equally likely to recognize different forms of psychological violence and sexual violence, whether they are perpetrated by another student or by a teacher. Four in five teachers agree that it is their responsibility to ensure that students feel safe in the classroom; one in five thinks that it is the responsibility of school management.

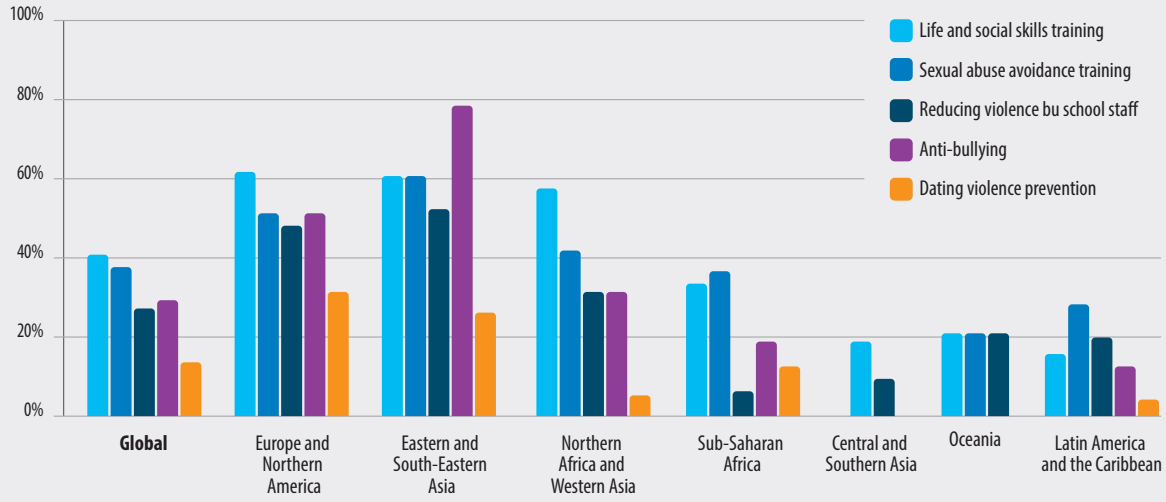
What capacities and support do teachers have to prevent and address school violence? Between 75% and 80% of participating teachers believe they have the skills to handle violence between students, but only half feel equipped to intervene immediately to stop an act of violence. Only 38% report that they were given sufficient training during pre-service education on how to prevent and address school violence, and only 47% report that their school offers adequate opportunities for in-service training. Additionally, only half of teachers reporting cases of school violence to school management feel fully supported in the process that follows.

What strategies are teachers using and what works? Teachers most commonly use classroom teaching on topics such as inclusive values and attitudes, identifying problematic relationships, and how to seek help. Most teachers report providing support to students who are victims of violence and bullying through classroom discussions, explaining how to avoid violence and engaging with parents. Teachers also engage perpetrators through school disciplinary procedures and classroom discussions. Only half of teachers mentioned the role of bystanders or involve them directly.

Source: Based on UNESCO, 2022b. Available under CC-BY-SA 3.0 IGO

Figure 25

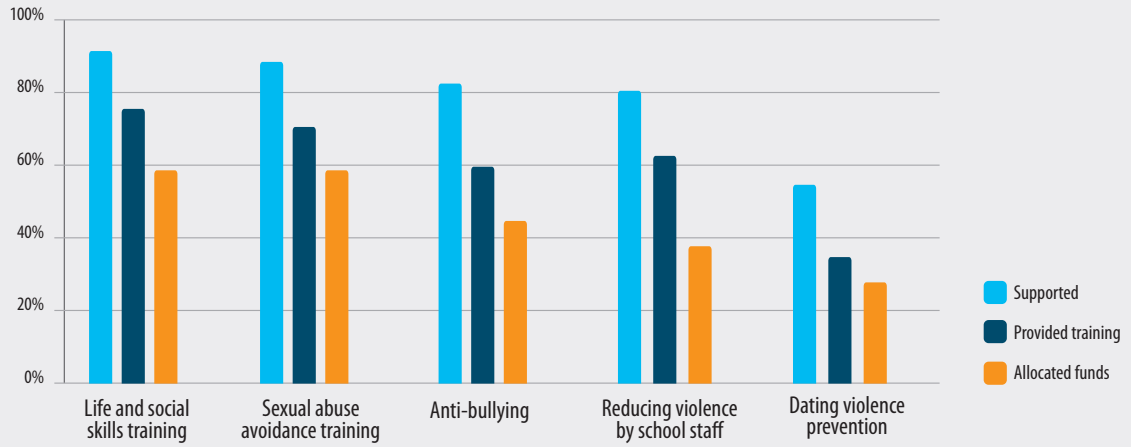
Education and life skills to prevent violence: share of 150 countries where support is considered adequate to reach all in need, by approach and region, 2018



Data source: WHO, 2020d. Available under CC BY-NC-SA 3.0 IGO

Figure 26

Country support for INSPIRE school-based approaches (150 countries), 2018



Data source: WHO, 2020d. Available under CC BY-NC-SA 3.0 IGO

Life and social skills education, which aims to support children and adolescents to manage their emotions, solve conflicts and build respectful relationships, is perceived to reach all or nearly all children in 59 of the 150 countries (39%). Sexual abuse education is perceived to reach all or nearly children all in 54 countries (36%). In all regions, reducing violence by school staff, school-based anti-bullying, and school-based dating violence prevention are less often perceived as reaching all in need (**Figure 25**).

There are considerable regional differences in coverage of interventions. As **Figure 25** shows, life and social skills education is perceived to reach all or nearly all in 3 countries out of 5 in Europe, North America and Eastern and South-Eastern Asia, but coverage is far lower in Central and Southern Asia (18%) and Latin America and the Caribbean (15%). The reach of sexual abuse avoidance education is higher than the reach of life and social skills education in sub-Saharan Africa and Latin America and the Caribbean, while in other regions, the coverage of both approaches is similar. The reach of approaches to reduce violence by school staff was higher in Eastern and South-East Asia and Northern Africa and Western Asia than in other regions.

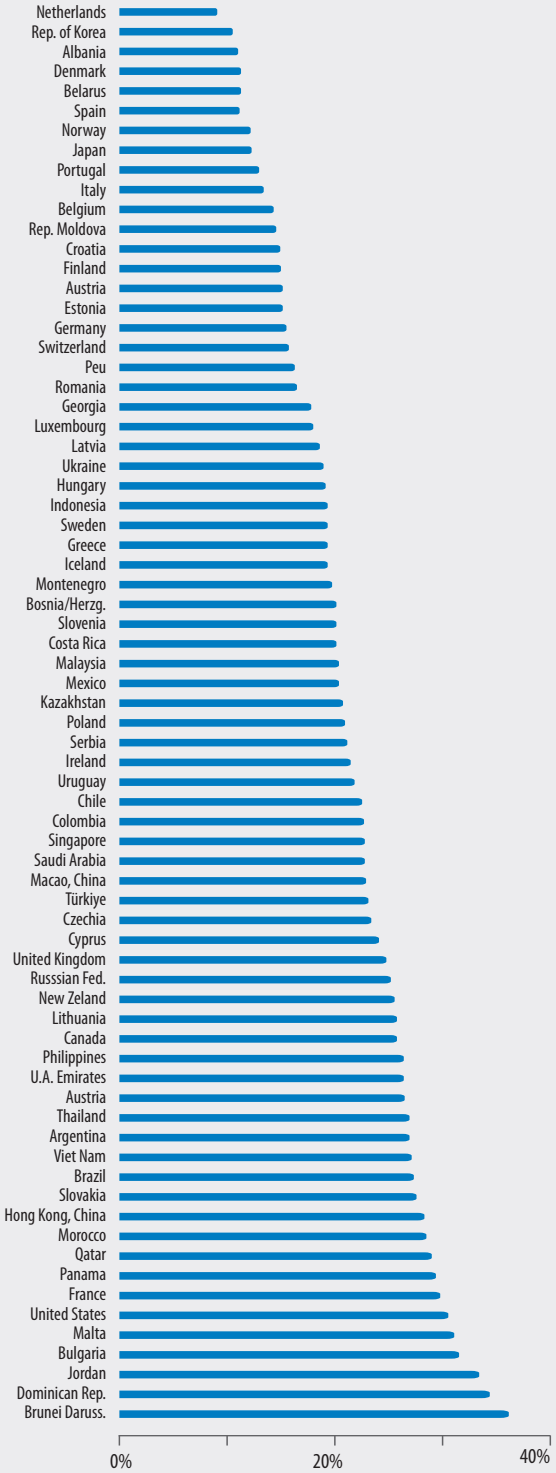
There is a gap between the number of countries reporting that they support these approaches and those assigning training or resources to them. As **Figure 26** shows, countries are more likely to support the INSPIRE school-based approaches with training than to allocate funding. More than 70% of the countries support life and social skills and sexual abuse avoidance education with training, but less than 60% allocate funds to these interventions. A similar pattern is observed for the other approaches.

Belonging and inclusion

It is important to create a school environment where all students feel safe, welcomed and supported — where they feel a sense of belonging and feel included. This includes parental involvement. A meta-analysis of 51 studies showed that parental involvement in school life through effective communication and information sessions is strongly associated with students' sense of belonging (Allen, Kern et al., 2018). Children and young people with a higher sense of belonging in school tend to perform better at school. School connectedness — a sense held by students that adults and peers in school care about them as individuals as well as about their learning — has been found to be a significant protective factor for adolescents (Blum, 2005; Bond, Butler et al., 2007).

Figure 27

Percentage of students who agree or strongly agree that they feel like outsiders or left out at school, selected countries, 2018



Source: Adapted from UNESCO, 2020a, p.82. Available under CC-BY-SA 3.0 IGO
Note: This figure is based on data from OECD, 2019a

Various school-based surveys provide data about students' sense of belonging, for example, the OECD PISA and other learning assessment surveys such TIMSS and PIRLS, which now include a focus on students' well-being and sense of belonging in school. The HBSC also includes questions about students' experience of school and peer and teacher support.

While most students report a sense of belonging in school, a significant minority feel like outsiders. The PISA survey assesses students' sense of belonging, based on the extent to which they agree with a set of statements: A) 'I make friends easily at school'; B) 'I feel like I belong at school'; C) 'Other students seem to like me'; D) 'I feel like an outsider (or left out of things) at school'; E) 'I feel awkward and out of place in my school', and F) 'I feel lonely at school'. Overall, the 2018 survey found around one in five students felt like an outsider (OECD, 2019a). Data show a wide variation, with the proportion of students who 'agreed' or 'strongly agreed' that they feel like outsiders or left out at school ranging from less than 10% in the Netherlands to more than 35% in Brunei Darussalam (**Figure 27**). Students in socio-economically disadvantaged, rural and public schools were more likely to report a weaker sense of belonging at school than students in advantaged, city and private schools, respectively.

In Europe and Canada, increased pressure of schoolwork and decreased teacher and peer support as students get older are widely reported. HBSC 2017–2018 data show that, compared with 2014, adolescents in around a third of countries are more likely to feel pressured by schoolwork and less likely to like school. Although more than half of adolescents report high levels of support from their fellow students and their teachers, only around a quarter (28%) like school a lot. In most countries, school satisfaction and support from teachers and classmates decline with age. Gender differences increase with age, with 15-year-old girls reporting higher levels of schoolwork pressure than boys in most countries. However, there are wide cross-national variations in reported school satisfaction and peer support (WHO, 2020c).

Although the right to inclusive education encompasses all learners, many governments are yet to base their laws, policies and education monitoring systems on this principle. While 68% of countries have a definition of inclusive education in their laws, policies and practices, only around half of these definitions cover multiple marginalized groups. In around a quarter of countries, the definition of inclusive education only covers students with disabilities (UNESCO, 2020a). Limited data are available on monitoring of inclusion, although there is evidence of efforts in some countries (**Case study 19**).

Case study 19

Inclusion in the Education Management Information System in Fiji

Efforts have been made across Pacific Island states to improve monitoring of disability-inclusive education. The evolution of the EMIS in Fiji is an instructive example. An online, individual-level system replaced the previous school-level system in 2013. The system was also expanded to include more sophisticated disability disaggregation based on the Multiple Indicators Cluster Surveys Module on Child Functioning. Teachers receive a guidebook and are trained to assess the difficulties that students experience. They are encouraged to complete a student learning profile for any child who consistently performs poorly. The form is intended to be completed with parents, taking clinical assessments into account when appropriate. Parents and teachers review the assessments together and agree on any need for targeted support. Student information in the system is complemented with school information, including an accessibility audit. Involvement of students with disabilities, their families and organizations of persons with disabilities is encouraged. The system records information on services needed and services available.

Source: Adapted from UNESCO, 2020a, p.84.

4.5 School health services and school feeding programmes

HIGHLIGHTS

Data presented in this report show that most countries across the world are implementing a package of SHN services and school feeding programmes, largely with domestic funds, to protect and promote the health and nutrition of their children and adolescents. This shows that school health services and school feeding are highly valued by governments and communities, feasible in all settings, and can be implemented at scale. Schools reach most school-age children and adolescents and are well-placed to provide integrated, time-sensitive health and nutrition services to this age group, and to ensure they are linked to health services if these are not provided at school.

School health services encompass a range of preventive, screening, care and support interventions. Their scope and delivery vary between countries. Over time, in many countries, school health services have evolved from an early focus on infection control and screening to, later, increased emphasis on preventive care and health promotion and stronger linkages with families and communities.

Some interventions are widely delivered, often through multicomponent programmes, increasing access to critical health care and support among school-age children and adolescents. However, overall, global data suggest that the coverage of school health services and school feeding is higher in higher-income countries than in lower-income countries, which means that many learners that would benefit the most are not reached. For example, school-based vaccination programmes are implemented in 100 countries — 54% of countries for which data are available — and 71% of countries routinely check vaccination status. School-based vaccination is more common in high- and middle-income countries than in low-income countries, although this is not the case for all vaccines. Around 60% of countries deliver human papillomavirus (HPV) vaccine in schools, either as their main strategy or in combination with facility-based delivery, and in 2020 almost all HPV vaccination programmes in lower-middle-income and low-income countries were school-based or mixed.

Schools also play a vital role in providing sexual and reproductive health information and referral to services; four in five countries report that schools make referrals to health clinics. Deworming coverage of school-age children has increased steadily in the past ten years, and schools play a determinant role — more than 450 million children are dewormed in schools in low- and middle-income countries every year. Schools are also well placed to support efforts to prevent malaria infections, as the risk of infection peaks during the school-age years; however, there are still very limited data available on school-based malaria prevention.

Until recently, school oral health services were largely provided in higher-income countries. However, this is changing due to increased recognition of the potential role of schools — particularly in contexts where access to dental health services is limited. Across many countries, schools are also a key delivery platform for anaemia prevention programmes such as weekly iron and folic acid supplementation.

In some contexts, there is a mismatch between the priority health problems of school-age children and adolescents that could effectively be addressed through school-based programmes, and the scope of school health services. Correcting vision and hearing problems can make a significant difference to children's education and well-being but screening has been a low priority for school health services, especially in low-income countries. Around half of countries have some form of school-based mental health programme, but more needs to be done to address the increasing prevalence of mental and emotional health problems among school-age children and adolescents. Although school health services can play an important role in prevention, early detection and referral for substance use and substance-use disorders, in most countries, substance use is not addressed by school health services.

School feeding programmes are the world's most extensive safety net — almost every country in the world provides school meals and an estimated 388 million children are receiving them — with 90% of funding coming from national government budgets. Globally, the number of children receiving school meals has increased, especially in low-income and lower-middle-income countries, particularly in Africa. Despite this, coverage remains lowest in low-income countries. An estimated 73 million of the most vulnerable children are not reached by school feeding programmes, undermining their ability to benefit from education.

School feeding programmes are often part of, or linked to, broader SHN programmes and represent a good example and opportunity for more integrated approaches. Depending on the context, complementary interventions delivered alongside school feeding include, for instance, provision of drinking water, promotion of handwashing with soap, height and weight measurement, deworming treatment, eye testing and glasses provision, hearing testing and treatment, oral health care, and menstrual health.

School closures due to COVID-19 prevented access to crucial health and nutrition services through schools, and evidenced that up-to-date contingency plans are required for delivering services in emergency situations, when schools are closed. Although many countries made considerable efforts to maintain SHN programmes, there is clear evidence of the impact of COVID-19, including on school feeding, provision of micronutrient supplementation and school mental health programmes, as well as on routine immunization services and school-based deworming.

Schools reach hundreds of millions of children and adolescents and are, therefore, well placed to provide health and nutrition services to this age group and to ensure that they are linked to health services if they are not provided at school. School health services are free at the point of use and can overcome barriers such as distance to health facilities, cost of transport, and inconvenient location or appointment systems, and therefore have the potential to better serve underprivileged populations (WHO, 2021b). They can also have a positive effect on multiple determinants of health and are highly valued by students, parents and communities. Delivering interventions that improve health and nutrition through school health services, such as vaccination and deworming, can also be cost-effective (Bundy, de Silva et al., 2018).

WHO defines school health services as 'services provided by a health worker to students enrolled in primary or secondary education, either within school premises or in a health service situated outside the school premises that has an official agreement with the school to provide health services to the school's students (WHO, 2021b). As set out in the WHO Guideline on School Health Services, services can include a wide range of interventions, such as health promotion, health education, screening, preventive interventions, clinical assessment, and management of health conditions.

School feeding programmes are a particular case as they are typically managed by sectors other than health, including education and social protection, and often involve the food and agriculture sector and private sector or NGO actors. However, as data presented in this report show, most school feeding programmes are delivered together with other SHN interventions, such as deworming, WASH, health and nutrition education and oral hygiene promotion.

This section provides an overview of the different ways in which school health services are delivered, their scope and available data on implementation and coverage of specific interventions and school feeding programmes.

Delivery and evolution of school health services

The way in which school health services are organized and delivered varies between countries. In most countries, services are provided in schools by dedicated staff, for example, school nurses based on school premises, or by visiting health personnel. In others, they are delivered in health facilities, and in some countries, through a combination of school- and facility-based provision.

School-based provision, either by health professionals based on the school premises or by visiting health and allied professionals, appears to be the most common approach, found in 97 of 102 countries — including 24 countries that provide services both on school premises and in health facilities (Baltag, Pachyna et al., 2015).

Box 21

School health services in Latin America and the Caribbean

A survey of 18 countries in Latin America and the Caribbean conducted between 2018 and 2019 noted that the organization and package of services in the region varies between and within countries and includes school-based health services, a distinct structure for school health services - but not based in schools, certain health services offered to pupils in primary health care facilities, and some scenarios where teachers provide some services. The most common approach are distinct school health services in the health systems. Only five countries had school health services that were based within schools. Countries can use a combination of these approaches. Activities from school health teams also extended beyond the clinic to public health action in the classroom and support for teachers and parents. Lack of supportive and clear legislation and regulation, shortage of personnel trained in school health, lack of and standardization of school health services, as well as limited involvement of parents were among the challenges associated with providing these services in the region.

Source: Based on PAHO, 2022. Available under CC BY-NC-SA 3.0 IGO

School-based health centres, staffed by on-site multidisciplinary teams of professionals, are mostly found in the United States and Canada, although it can be also found in other regions, for instance in Côte d'Ivoire in West Africa. Providing school health services in health care facilities is an approach found in one in four of the 102 countries. The provision of school health services varies, not only between regions, but also between countries in the same region (**Box 21**).

Over time, in many countries, school health services have evolved from an early focus on infection control and screening to, later, an increased emphasis on preventive care and health promotion (Case study 20). Broadly, while there are differences between countries, key developments in the evolution of school health services (Baltag and Saewyc, 2017; Baltag and Moran, 2018) include:

- Moving from mostly classroom and other group health education activities to including individual counselling
- Moving from a focus on sensorial and musculoskeletal deficiencies to addressing new concerns, such as mental health, chronic conditions and violence
- Moving from visits or appointments scheduled by providers to visits when students need them, for example, through drop-in services
- Moving from a focus on individual clinical assessments and screening activity to a well-child visit by including family-level and psychosocial assessment and brief intervention and referral, when necessary
- Better integration of school health services within whole-school approaches to health promotion.

Implementation and coverage of school health services

The WHO Guideline categorizes school health services in the following broad areas: positive health and development; unintentional injury; violence; communicable diseases; NCDs and sensory functions, including physical disability, oral health, nutrition and physical activity; communicable diseases; sexual and reproductive health, including HIV; and mental health and substance use and self-harm. Comprehensive school health services are defined as services that address at least four — but ideally all — of these areas (WHO, 2021b), as is the case, for example, in Norway (**Case study 21**).

Case study 20

The evolution of school health services in the Republic of Moldova and Tajikistan

The historical and health system context within which school health services have evolved is similar in the Republic of Moldova and in Tajikistan. After independence, these countries faced common challenges associated with the highly centralized model of health care inherited from the former Soviet Union, with its emphasis on curative and in-patient care. Likewise, school health services were based on a traditional medical model that did not reflect the shift towards health-promoting schools; they focused on infection control, and staff job descriptions had a clinical focus. For example, in the Republic of Moldova, school health services in the 1960s and 1970s included health screening, immunization, nutrition and supervision of sanitary conditions and, in Tajikistan, each school had health stations with school-based personnel.

After independence, both countries experienced under-funding of school health services and attrition of school health staff, but have since undertaken systematic reforms to these services. The shift to joint ownership of school health services by the health and education sectors was a significant development in the late 1980s to early 1990s. In the Republic of Moldova, for example, in 1989, a joint order by the Ministry of Health and Ministry of Education highlighted, for the first time, the issues of sexual education, prevention of alcoholism, drug addiction and smoking, and promotion of healthy lifestyles. There has also been a shift towards delivery of school health services as part of family medicine and social care. For example, since 1998, Tajikistan has been piloting a family medicine model whereby family doctors serve schools in the capital city and some districts; all other schools are still served by paediatricians from the local health facilities.

There have been, and still are, challenges. In the Republic of Moldova, for example, school nurses are categorized as 'other staff' together with non-professional staff, meaning they do not benefit from salary increases that apply to teachers or to the health sector because they are not employed by the latter. In Tajikistan, school nurses still spend a disproportionate amount of time on record keeping and reporting. In both countries there is a certain disconnect between priority and emerging health problems among school students and the content of school health services, and between a stated intent to make health promotion the core of school health services and the level of training and daily tasks of school health services personnel.

Source: Based on Baltag, Stronski et al., 2017.

Case study 21

The school health service — a comprehensive approach to promoting health and well-being in Norway

The School Health Service in Norway, which aims to promote good health, improve life skills and well-being, and prevent illness and injury, is an example of effective collaboration between the education and health sectors. The service is delivered by public health nurses with support from doctors, psychologists and physiotherapists, and includes: drop-in advice and guidance at school; health assessments in Grades 1 and 8; vaccination; support to parents and referral to other health services (Norwegian Directorate of Health, 2020).

Through the drop-in service, children and adolescents can talk to a public health nurse at school without an appointment and without needing permission from their parents. They can raise concerns, for example, about their body and puberty, love and friendship, sexual orientation and gender identity, thoughts and feelings, and problems with friends or family. Students who need more help are referred to a doctor, psychologist or other specialist. Parents can also ask the school health service for help or support relating to specific issues, for example, bullying or challenges at home that affect students' learning.

The school start health assessment is offered in Grade 1, and parents are invited to attend. The assessment includes weighing, measurement, and checking the child's heart, lungs, teeth, muscles, joints and motor skills. It also includes discussions with parents about health issues, including sleep and sleeping problems, diet, physical activity, vaccination and dental health. The school health service also offers vaccination at school to all children and adolescents resident in Norway. The health review in Grade 8, which also involves weighing and measurement, is primarily an opportunity for students to discuss any issues they are concerned about as well as issues such as sleep, diet and eating habits, physical activity, social media, smoking, alcohol and drugs, sexual health, and violence and abuse. In addition, public health nurses conduct classroom and group education on physical, mental, and sexual health and topics including violence and drug use.

For more information, see https://www.helsenorge.no/en/help-services-in-the-municipalities/school-health-service

This report presents available data on four of these categories: communicable diseases; NCDs and sensory functions; sexual and reproductive health, and mental health and substance use. There is limited or no data on school health services related to positive health and development or unintentional injury, and violence is covered in **Section 4.4**.

In some contexts, there is a gap between the content and interventions of school health services and the priority and emerging health problems among school-age children and adolescents. A review by WHO compared the top ten school health interventions and the leading causes of death and illness in adolescents. It concluded that mental health problems, violence, injuries and, in adolescent girls, maternal causes, appeared to be given insufficient priority in school health services or in links between school health services and referral services (Baltag, Pachyna et al., 2015). The findings of this report signal this is still the case.

There is limited overall data on the coverage of school health services but the Global Education Census Report 2018, which collected survey responses from 20,000 teachers and students in more than 100 countries, gives an insight. Globally, one-third of teachers report that their school provides health care services, and almost a quarter (23%) that their school provides mental health care. For example, 52% of teachers in India and 43% in Malaysia and Indonesia report that their school provides health services (Cambridge Assessment International Education, 2018).

▶ Communicable diseases

Many countries deliver vaccination programmes through schools. WHO recommends delivery of tetanus, diphtheria, hepatitis B, rubella and HPV vaccine antigens to school-age children and adolescents — one strategy is through school-based vaccination. WHO also recommends checking vaccination status at school. Some countries have long-established school vaccination programmes, such as the Russian Federation (**Case study 22**).

School-based vaccination — defined as delivering a vaccine routinely in schools (excluding doses given during campaigns) has been monitored annually by WHO and UNICEF since 2008 through the Joint Reporting Form on Immunization (JRF). Since 2018, the JRF has also tracked the number of countries that monitor vaccination status in schools.

Case study 22

School health and well-being in the Russian Federation

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The Russian Federation has traditionally placed a strong focus on school students' health and well-being, including school health services and, at the federal level, has developed a minimum package of interventions required for all schools. The following are key areas of intervention:

- **Vaccination to prevent infectious diseases:** Vaccination of school students in the Russian Federation follows the national immunization schedule and covers more than 90% of children. Vaccinations are either offered at school — by the in-house health service or a mobile team — or during visits to health care providers arranged by the school.
- **Physical training:** In the Russian Federation, 77% of schools have their own fully-equipped outdoor sports grounds. According to the federal core curriculum, schools must offer at least three hours of physical education a week.
- **Managing students' health:** Students have a comprehensive health assessment at admission to school and schools are also required to monitor their health through periodic check-ups by a paediatrician or general practitioner, as well as anthropometric measurements, screening for vision problems etc. Usually, schools arrange student visits to medical providers for regular health check-ups.

Other interventions delivered through school health programmes include:

- **Health and safety education:** Health education lessons are taught as part of the required Basics of Life Safety curriculum. Key topics include safety indoors and outdoors; safety of communications and awareness of risks; healthy lifestyle; first aid basics and population safety basics. There are optional courses and textbooks on topics such as smoking, alcohol and drug use prevention, prevention of infectious diseases, including HIV and STIs, and others. In recent years, some regions have been providing lessons to primary-school students on oral hygiene and healthy eating.
- **Creating a favourable and safe school environment:** Federal health and safety standards regulate school premises, water supply and sewerage systems, and fire safety measures.
- **Providing nutritious school meals:** A federal programme provides school students with nutritious hot meals; around 90% nationwide were receiving hot meals in 2020. The most common hot meal is breakfast, provided to 57% of students. Schools also provide free or subsidized meals for orphans, children without parental care and other disadvantaged students. The new Federal Law No. 47 on school meals, adopted in 2020, stipulates that all primary-school children will now receive free hot meals.
- **Prevention of violence and bullying in schools:** In larger schools with dedicated staff positions for psychologists or social educators, violence and bullying prevention is part of their job responsibilities. In smaller schools, this work is usually led by assigned teacher-educators. Activities include both group events and individual counselling for students at risk.
- **Prevention of smoking, alcohol and drug use, video game addiction and cyber safety classes:** Many schools assign this task to their staff psychologist or social educator or to the homeroom teacher.

The most recent JRF data for 2020 show that 133 of 188 countries (71%) routinely check students' vaccination status, most often at the time of enrolment, and school-based vaccination programmes are implemented in 100 of 184 countries (54%), a slight decrease compared to 108 countries in 2017 (**Figure 28**). School-based vaccination is more common in high- and middle-income countries than in low-income countries. Only seven low-income countries reported having such programmes in 2020. An analysis of school-based vaccination programmes in 2018 showed that 89 out of 108 countries (82%) indicated that vaccination was part of a more comprehensive school health programme (i.e. delivered together with other interventions such as deworming and health education) (Feldstein, Fox et al., 2020).

The most common vaccines delivered through school-based vaccination are tetanus, diphtheria and HPV. Delivery of routine vaccines in schools is most often conducted in the first grade of primary school in children aged 5–7 years, with the exception of HPV vaccine, which is mostly delivered to girls aged 9–13 years (Feldstein, Fox et al., 2020). Data as of June 2020 showed that 107 countries now include HPV vaccine in the routine immunization schedule and 63 of these countries (59%) deliver it in schools, either as the main strategy or in combination with facility-based delivery (Bruni et al., 2021).

In lower-middle-income and low-income countries, almost all HPV vaccination programmes in 2020 were school-based or mixed. Rwanda is an example of a country that has achieved high HPV vaccine coverage — 94% by 2019 — through a school-based strategy.

Evaluations from demonstration projects provide useful insight into successful delivery strategies, including, for example, the use of grade-based, rather than age-based targeting when it comes to vaccine administration (PATH and LSHTM, 2016).

School-based vaccination and checking students' vaccination records at school can increase vaccine coverage. In countries where vaccination coverage among school-age children and adolescents has been assessed, it was generally higher in high-income countries with well-established school-based programmes. In lower-middle-income countries, rapid uptake of vaccines in schools demonstrates that school-based programmes can be a useful way to reach school-age children with primary or booster doses of routine vaccines and achieve effective coverage (Feldstein, Fox et al., 2020; Bundy, de Silva et al., 2018).

Schools have been instrumental in expanding coverage of deworming treatment. School-age children typically have the highest intensity of worm infection of any age group, and deworming treatment can improve nutritional status, school attendance and learning (Baird, Hicks et al., 2016; WHO, 2011). Global targets have been established to ensure that children at risk in endemic areas receive regular preventive treatment for schistosomiasis and soil-transmitted helminths. Deworming coverage of school-age children has increased considerably since 2012 (**Box 22**) and approximately 82% of dewormed children are receiving treatment through schools (WHO, 2020). In many countries, deworming is seen as an integral part of school health programmes, combined with school feeding, WASH interventions and iron and other micronutrient supplementation where appropriate. The experience of Deworm the World, which works in partnership with governments to deliver school-based deworming, suggests that reaching children through schools helps to increase coverage. Deworm the World reports that, in 2019, 280 million children in Ethiopia, Kenya, India, Nigeria and Pakistan received preventive treatment in school (Evidence Action, 2021).

There is increasing interest in school-based interventions from national malaria control programmes. School-age children are an important population for malaria control. 'Asymptomatic' infections in children aged 5-15 years can adversely affect their health, which, in turn affects learning and perpetuates community transmission. Schools have the potential to ensure that malaria is diagnosed and treated in this population group as well as to promote malaria prevention interventions, such as insecticide-treated net distribution, malaria education, and intermittent preventive treatment (WHO, 2022c), together with referrals to health facilities where appropriate. There are some examples of pilot programmes (**Case study 23**), but there is no global data about the extent to which school health services are addressing the prevention, diagnosis and treatment of malaria.

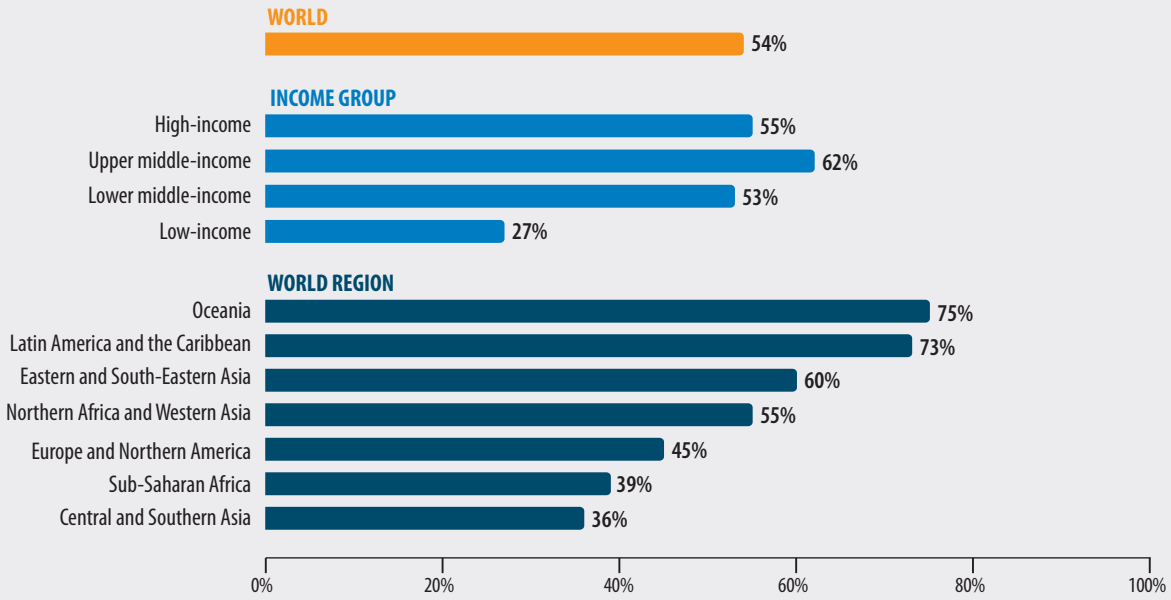
Box 22
Focus on deworming

Millions of children globally are at risk of contracting parasitic worm infections. If left untreated, infections can lead to anaemia, malnourishment, impaired mental and physical development and, for girls and women, female genital schistosomiasis. In 2001, the World Health Assembly set the target for regular administration of preventive chemotherapy or deworming to at least 75%, and up to 100%, of all children aged 5–14 years at risk of morbidity from schistosomiasis and soil-transmitted helminths.

In 2019, an estimated 129 million school-age children (5–14 years) in 51 countries required preventive chemotherapy for schistosomiasis. Over 86 million (67%) received deworming treatment, an increase from 48% in 2015. Country-wise coverage ranged from 100% in Egypt and Niger to 11% in South Sudan (Figure 29). In the same year, more than 750 million school-age children were estimated to require preventive chemotherapy for soil-transmitted helminths, of which 458 million (61%) in 70 countries received deworming treatment (Figure 30). Again, there were significant country variations, ranging from 100% in Burundi and Rwanda to 11% in the Republic of the Congo. In 2020, there was a significant decrease in the coverage of deworming interventions due to the COVID-19 pandemic. After a decade of progress, global coverage of children (5–14 years) requiring preventive chemotherapy fell to 45% for schistosomiasis and just below 47% for soil-transmitted helminths (Figure 31) (WHO, 2021f).

Figure 28

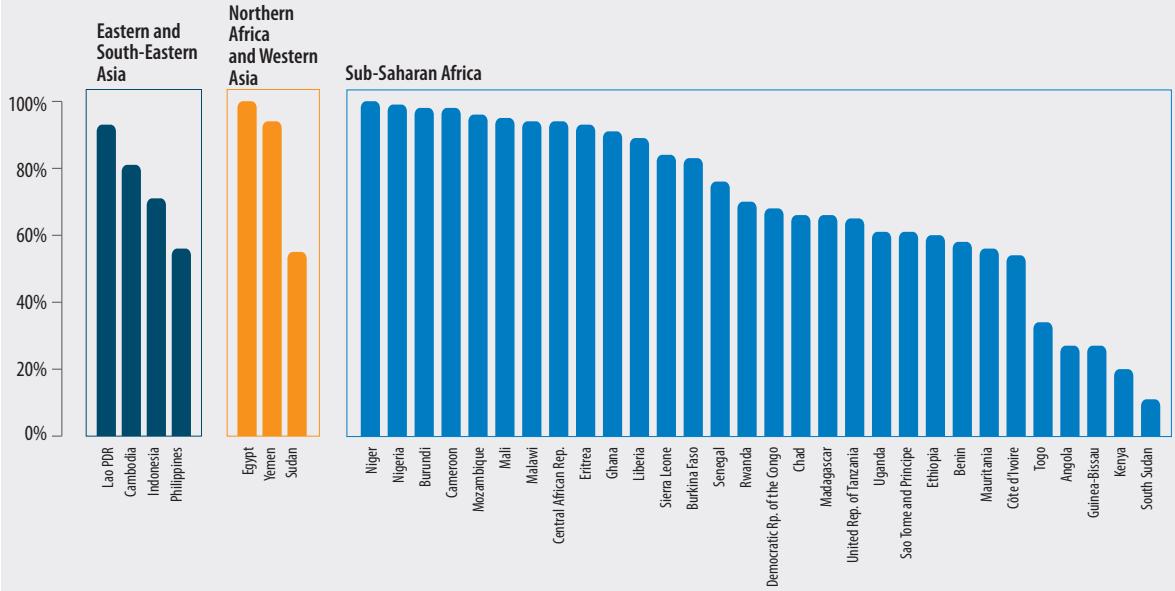
Share of 184 countries that deliver school-based immunization programmes, by region and country income group, 2020



Data source: WHO and UNICEF, 2022.
Note: Anguilla, Tokelau, and the Bolivarian Republic of Venezuela are not classified by the World Bank Income groups.

Figure 29

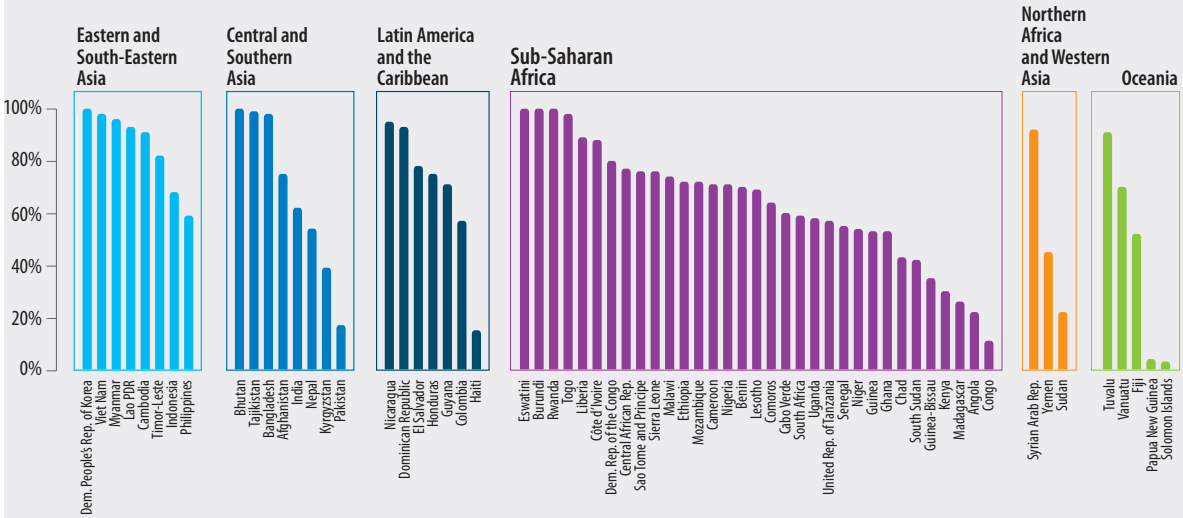
National coverage of preventive chemotherapy for schistosomiasis in children aged 5–14 years (%), by region and country, 2019



Data source: WHO, 2022i.

Figure 30

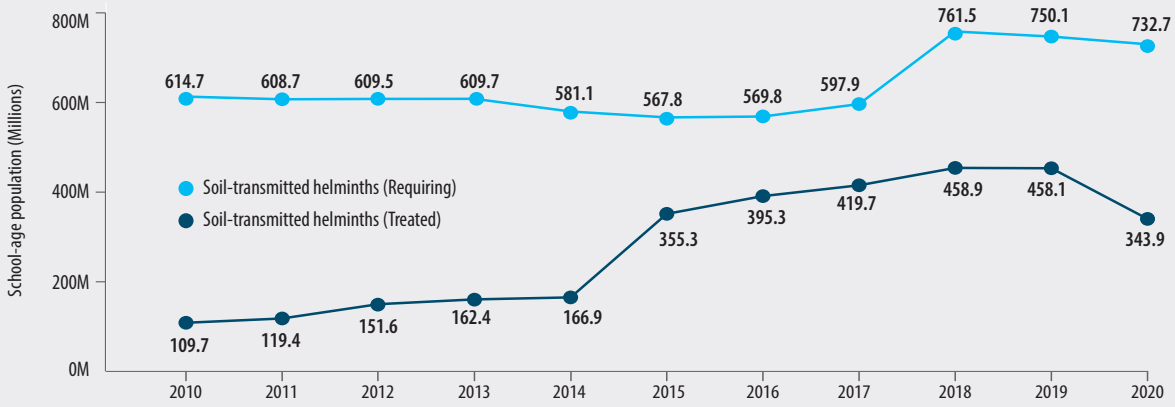
National coverage of preventive chemotherapy for soil-transmitted helminths in children aged 5–14 years (%), by region and country, 2019



Data source: WHO, 2022i.

Figure 31

Progress in global coverage of preventive chemotherapy for soil-transmitted helminths for children aged 5–14 years, 2010–2020



Data source: WHO, 2022i.

Case study 23

Malaria diagnosis and treatment in primary schools in Malawi

Malaria has a significant impact on the health and education of children. In Malawi, the Learner Treatment Kit (LTK) approach uses schools to ensure that school-age children have prompt access to malaria diagnosis and treatment. Trained teachers screen children based on symptoms to identify those who require a rapid diagnostic test and refer those with severe symptoms to the local health centre. Children take their first dose of artemisinin-based combination therapy at school and are provided with a complete course of medication and easy-to-understand instructions for their parents.

The initial LTK Project was evaluated in a cluster randomized controlled trial conducted in 58 primary schools in Zomba district in southern Malawi in collaboration with the National Malaria Control Programme, the Ministry of Education, Science and Technology, Save the Children, LSHTM and the Malaria Alert Centre at the College of Medicine, University of Malawi. Surveys in 2011 had shown that 60% of children were infected with malaria parasites and 32% were anaemic. School-based malaria case management was implemented in 29 of the 58 schools between December 2013 and March 2015, and the study aimed to evaluate the impact of this intervention on schoolchildren's attendance, numeracy and literacy, anaemia, self-reported well-being, health-seeking behaviour, teacher competency and feasibility and acceptability.

The study found high uptake among schoolchildren, particularly girls, and high acceptance among teachers and the community. Despite this, the intervention did not lead to significant reduction in school absenteeism or improvements in health or education outcomes.

However, in a context where school-age children are the least likely to access treatment at a health centre or sleep under a net, integration of malaria diagnosis and treatment in school health programmes could increase access to prompt treatment in this age group and enhance efforts towards universal access to malaria diagnosis and treatment in Malawi. The study also showed that providing treatment through schools was less expensive than through health facilities at US$5.86 versus US$7.55.

Save the Children has continued to support this approach — LTKs have treated over 50,000 cases of malaria in schools and are now used in 78 schools in Zomba and Machinga districts, with the Ministry of Health funding all LTK supplies. A study in Machinga district explored the main barrier to scale-up, which is the reported lack of teachers' time to treat sick children. It found that the percentage of time teachers devote to core teaching and administrative activities did not change significantly as a result of the introduction of the LTK approach in primary schools.

Through strong local partnerships and government ownership, LTKs are being scaled up in Malawi. They are incorporated in the National SHN strategic work plan within the Ministry of Education, Science and Technology, integrated in the 2019–2023 National Malaria Strategic Work Plan, and in 2022 the Global Fund is supporting scale-up to four new districts.

Source: Based on Witek-McManus, 2017; Halliday, Witek-McManus et al., 2020; Mathanga, Halliday et al., 2015; Mphwatiwa, Witek-McManus et al., 2017.

▶ NCDs and sensory functions

Growth and weight monitoring is included in school health services in many countries. Growth monitoring is usually done by measuring weight and height and assessing underweight, overweight and body mass index. GNPR data (WHO, 2018) show that 43% of 160 reporting countries provide growth monitoring through school health services or visits to local health care providers arranged by schools. School feeding programmes were also reported to include or to be linked to height and weight measurement in 33 and 36 of 85 countries, respectively (GCNF, 2021).

In some countries, schools are the key delivery mechanism for anaemia prevention programmes such as weekly iron and folic acid supplementations. WHO recommends weekly iron and folic acid supplementation to reduce anaemia among menstruating adolescents in areas where the prevalence of anaemia is 20% or higher (WHO, 2017a). According to the GNPR (WHO, 2018), 19% of 160 countries provide school-based micronutrient supplementation. Unsurprisingly, this is most common in regions where micronutrient deficiencies are a significant problem. For example, schools provide micronutrient supplementation in 40% of countries in South-East Asia and 32% of countries in Africa. Importantly, in many countries, micronutrients are also delivered through fortified food commodities and micronutrient supplements included in school feeding programmes (GCNF, 2021). Providing multiple micronutrient-fortified foods or beverages at school may effectively target micronutrient deficiencies and facilitate weight gain in undernourished populations (Wrottesley, Mates et al., 2022).

There is little global data on other NCD-related interventions delivered through school services. This includes screening for diseases such as asthma or diabetes. One example is the approach taken in New York City, which includes screening for asthma and obesity and follow-up support for students and their families (**Case study 24**).

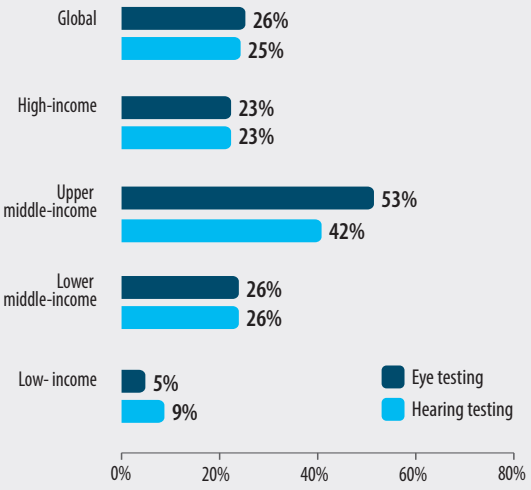
Correcting vision and hearing problems can make a significant difference to children's education and well-being but screening has been a low priority for school health services, especially in low-income countries. The Global Survey of School Meal Programs (GCNF, 2021) is one source of data on provision of vision and hearing screening in schools that is delivered together with school feeding programmes. As **Figure 32** shows, among 85 countries, 26% provide eye tests and 25% provide hearing tests. Low-income countries are less likely to deliver these services than middle-income and high-income countries.

This is consistent with the analysis of Programme for the Analysis of Education Systems — PASEC — data from 10 francophone countries in West Africa, which found that only 4.8% of children are likely to have received vision screening at the beginning of Grade 2 and only 7.3% will have had an eye test by the time they have finished primary school (Wodon, Male et al., 2019). In recent years, however, many countries have started to pay more attention to eye health (see **Box 23**).

Schools in more than 70 countries provide oral health services, however, there is limited data about the content of school oral health services. Until relatively recently, school oral health services were largely provided in higher-income countries. However, this has changed due to increased recognition of the potential role of schools, particularly in contexts where access to dental health services is limited. In a recent study of 101 countries, more than 70% reported school-based provision of oral health services (Petersen, Baez et al., 2020).

Figure 32

Proportion of 85 countries with visual and hearing screening services complementary to school feeding programmes, by country income group, 2019



Data source: GCNF, 2021.

Case study 24

School preventive and primary care health services in New York City

The Montefiore School-Based Health Centre Programme is a core component of the Montefiore Health System, an innovative health programme in the Bronx, in New York City. The Health Centres provide comprehensive preventive and primary care through clinical and community health services. Services include preventive care, first aid, management of chronic conditions, dental care and mental health services.

The Montefiore Health System has five priorities — asthma management, nutrition counselling, physical activity, reproductive health services, and emotional health services and support. The School-based Health Centres conduct activities to address these priorities, including school-wide asthma and obesity screening and follow-up with individual students. For example, they offer nutrition counselling to students at risk of obesity and their families. The Montefiore Health System also supports community organizations to implement activities that promote health and well-being, for example, community gardens and cooking classes. School-based Health Centres are viewed as a critical part of the health system — evaluations have shown that they can address gaps in health care for children and young people, improve health outcomes, particularly for those with chronic conditions, reduce hospital costs and have educational benefits.

Source: Based on American Public Health Association, 2018.

Box 23

Focus on school eye health

Globally, more than 300 million children have a vision impairment that can be corrected with glasses (WHO, 2019). Without glasses, children with poor vision, and specifically myopia, are at a major disadvantage in school. Children with poor vision have lower education outcomes and correcting poor vision with glasses can have a significant impact on academic performance (Wodon, Male et al., 2019). Simply screening children for visual impairment in schools and providing eyeglasses to children who need them has shown to be feasible, effective and increasingly affordable, as the cost of glasses has fallen (Minakaran, Morjana et al., 2020; Wodon, Male et al., 2019). It involves three key steps: 1) teachers or school nurses screen for vision problems at school; 2) children identified with vision problems are examined by an eye health professional who determines the prescription or refers them if necessary; 3) children who need spectacles are provided with them. Cambodia and Liberia are two countries that have taken steps to implement such initiatives.

In **Cambodia**, following a successful pilot — a partnership between the Ministry of Health, GPE, World Bank, Sightsavers, the Fred Hollows Foundation and PCD — eye health has been integrated into the Ministry of Education's school health programme. The importance of eye health was highlighted by a national study on disability and impairment among children, which found that many children who dropped out of school or never enrolled had poor vision. The pilot project trained teachers to conduct basic vision screening; children identified with poor vision were seen by a team of visiting eye health workers and provided with ready-made or customized glasses. In response to requests from teachers, the pilot incorporated vision screening for teaching staff as their vision is critical to effective learning, and teachers wearing glasses can also serve as role models. After the pilot, the Ministry of Education incorporated the model into the national education strategic plan and developed operational guidelines for school vision screening in collaboration with the Ministry of Health, the National Programme for Eye Health and other partners. The Government plans to scale up the approach and integrate vision screening with existing school health interventions.

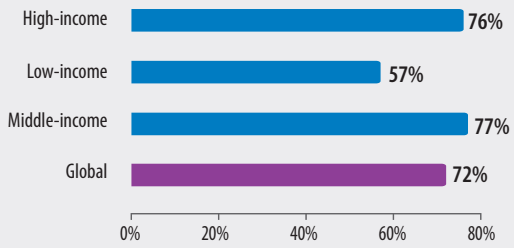
In **Liberia**, the Ministry of Education and Ministry of Health made a joint commitment to a national school eye health initiative that involves training teachers, building eye health capacity, collaborative data collection and creating referral networks for children in need of more advanced care. The initiative is led and implemented by both ministries, with the Director of School Health in the Ministry of Education and the Programme Manager for the National Eye Health Programme in the Ministry of Health acting as focal points, supported by a number of international and national NGOs. Following best practice set out in the Standard Guidelines for Comprehensive Eye Health Programmes, a minimum of two teachers in each school are trained to conduct basic vision screening and identify students who need to be seen by an eye health professional.

Eye health professionals either visit each school or conduct comprehensive eye examinations at a centrally located school where children from multiple schools are referred. They dispense ready-to-clip glasses in schools at the time of the eye examination, which are provided free-of-charge and can address the needs of 86% of children in need of glasses. Children who need less common prescriptions or advanced care are referred to an appropriate facility for customized glasses and treatment. To date, more than 215,000 school students — around 25% of all primary- and secondary-school students attending government schools in the country — have received vision screening and almost 2,500 pairs of glasses have been provided. Teachers can also request a vision screening and this has identified more than 1,600 teachers who needed glasses.

Source: Based on World Economic Forum, 2016; Wodon, Male et al., 2019.

Figure 33

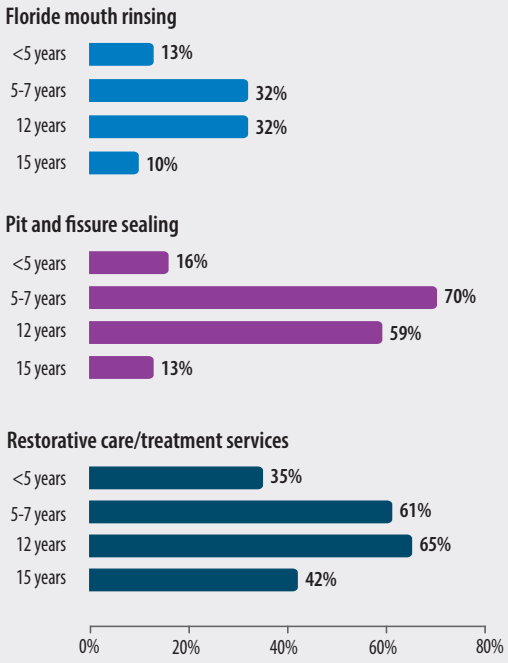
Proportion of 101 countries with school oral health services, by country income group, 2017–2018



Data source: Petersen, Baez et al., 2020. Available under CC BY 4.0

Figure 34

Proportion of 101 countries providing oral health services at school, by age group, 2017–2018



Data source: Petersen, Baez et al., 2020. Available under CC BY 4.0

The proportion of countries providing such services was higher in high- and middle-income countries than in low-income countries, but more than half of the low-income countries included in the study have school oral health programmes (**Figure 33**). The same study categorized school oral health services into three groups: fluoride mouth rinsing, pit and fissure sealing, and restorative care. The proportion of countries providing each of these types of oral health care in schools by age group is shown in **Figure 34**. School oral health services mostly target children aged 5–12 years. Services for this age group focus on pit fissure sealing and restorative care across all country income groups. Fluoride mouth rinsing for schoolchildren is reported by one-third of countries.

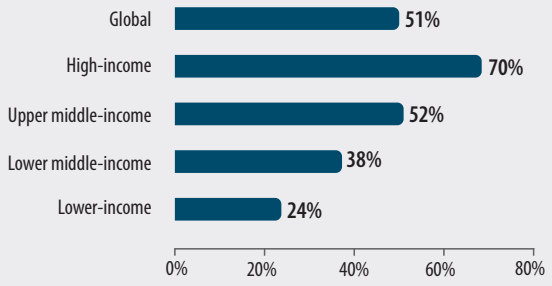
▶ Mental health and substance use

Only around half of the countries for which data are available have some form of school-based mental health and psychosocial support programme. WHO monitors mental health services, including school-based programmes, and reports data in the Mental Health Atlas. The most recent data show that 72 of 142 countries (51%) provide school-based mental health promotion and prevention programmes (WHO, 2021). This is a concern, considering that suicide is the fifth most prevalent cause of death for adolescents aged 10–19 and estimates indicate that more than 13% have a mental disorder as defined by WHO (UNICEF, 2021). The Mental Health Atlas data also show that school-based mental health programmes are more common in high-income countries than in low-income countries, where only around 24% report having school-based mental health programmes (**Figure 35**). High-income countries employ more health workers in child and adolescent mental health services per 100,000 population than countries in other income groups, and low- and lower-middle-income countries primarily report that the mental-health workforce for children and adolescents is non-existent. The experience of Kazakhstan highlights the strategic importance of involving parents, as well as the need to build capacity to identify adolescents experiencing mental health problems and link them to appropriate support (**Case study 25**).

School health services do not address substance use in most countries. Although there is some evidence that school-based prevention programmes can be effective (**Box 24**), a global review found only 25 out of 102 countries reported some form of services related to substance use (Baltag, Pachyna et al., 2015). This indicates the potential for school health services in many countries to play a greater role in a comprehensive education sector response to substance use.

Figure 35

Share of 142 countries with school-based mental health prevention and promotion programmes, by country income group, 2020



Data source: WHO, 2021. Available under CC BY-NC-SA 3.0 IGO

Box 24

Focus on the education sector response to substance use

A review of existing evidence (Das, Salam et al., 2016) concluded that school-based prevention programmes are effective in reducing smoking and are associated with reduced frequency of drinking. It also concluded that school-based interventions using a combination of social competence and social influence approaches have shown protective effects against drugs, including cannabis use.

A publication by UNESCO, UNODC and WHO (2017) on education sector responses to the use of alcohol, tobacco and drugs notes that appropriate school health services can play an important role in prevention, early detection and referral for substance use and substance use disorders. School health services may be delivered on-site as school-based health services, as school-linked health services provided in the community, or through a combination of school- and community-based services. Regardless of the model, a key function is to provide a link between the school and health and social services in the community.

School-based services have been found to be effective, particularly for hard-to-reach children and young people, as they are more accessible than community-based health services.

Case study 25

Improving adolescent mental health in Kazakhstan

Ten years ago, Kazakhstan had one of the highest adolescent suicide mortality rates in the world — in 2011, suicide was the leading cause of death in those aged 15–19. This prompted the development of a comprehensive adolescent mental health and suicide prevention programme involving the Ministry of Health, the Ministry of Education and Science, the National Centre for Mental Health, UNICEF and other partners, which was implemented initially in two provinces. The programme was integrated into existing systems, including schools and health facilities, with an emphasis on strengthening the capacity of school psychologists and health workers to identify adolescents experiencing mental health issues and connect them to services and treatment.

The Bilim Foundation, an NGO partner, developed an Adolescent Life Skills Development curriculum for Grade 9 students, including skills to promote and strengthen mental health. Another critical aspect of the programme was working with students to increase awareness and demand for school counselling and access to support services. It also worked with parents to address the stigma associated with mental health, which was, and still is, a significant barrier in Kazakhstan. For example, adolescents could only participate in mental health screening and access mental health services with parental consent, and many parents were reluctant to give permission. Engaging with parents was effective: the proportion refusing to refer adolescents identified as high risk to professional services fell from 11% in 2015 — the first year of the programme — to 1% in 2017.

Based on positive results in the initial two provinces, the Government of Kazakhstan supported the scale-up of the programme, which, by 2018, covered around 40% of schools in the country. In the same year, there was a significant change in national health policy, whereby prevention, management and treatment of mental health issues, which had previously only been provided by dedicated mental health clinics, would be provided by general practitioners. This helped to reduce the stigma associated with mental health and increase adolescents' access to mental health services without parental consent.

Source: Based on UNICEF, 2020b.

▶ Sexual and reproductive health

Schools can play an important role in the provision of sexual and reproductive health information, counselling and linkages to health services. Between 2019 and 2020, 28 countries in sub-Saharan Africa and Latin America and the Caribbean responded to a UNESCO survey on the status of comprehensive sexuality education. Most of these countries reported that students in secondary schools could access individual counselling on issues related to sexual and reproductive health (86%), referral by schools to health clinics (79%), and information about where and how to obtain contraceptives (75%) (UNESCO, UNAIDS et al., 2021). In Estonia and Sweden, secondary school classes regularly visit youth-friendly clinics and have lessons there, which helps them to become familiar with the clinic so that they can access services there in the future (Ketting and Ivanova, 2018). In South Africa, the Integrated School Health Programme gives high priority to linkages to sexual and reproductive health services in a context with high prevalence of adolescent pregnancy and HIV (**Case study 26**).

School feeding programmes

Almost every country in the world implements school feeding programmes. School feeding is the most widespread social safety net in the world (Drake, Lazrak et al., 2020). WFP estimates that 388 million children in 161 countries, nearly half the world's schoolchildren, are receiving school meals (WFP, 2020). **Figure 36** provides a breakdown by region. In Central and Southern Asia, India has the largest programme, reaching 90 million children. The majority of school feeding programmes are operated and funded by national governments.

The number of children receiving school meals has increased significantly since 2013, especially in lower-income countries. WFP estimates that globally the number of children receiving school meals increased by 9% across 150 countries between 2013 and 2020. The largest increase took place in lower-middle-income countries, where up to 86% more students received school meals in 2020 than in 2013, outpacing the growth in the school population, followed by low-income countries, where the increase was 36% (**Figure 37**).[26]

School feeding programmes are largely funded by national governments and domestic investment is increasing. School feeding is one of the few areas for which there are global estimates of costs and investments. WFP estimates that the annual investment in school feeding is between US$41 billion and US$43 billion, 90% of which is from national government budgets. In low-income countries, 28% of funding came from domestic funding in 2020, a significant increase from 17% in 2013. The increase in funding, together with the increase in scale — 36% more children reached — is a testament to how low-income countries are turning their political commitment into action by decreasing their reliance on external donors and introducing lines for school feeding programmes in their national budgets.

26 Due to the large scale of school feeding programmes in Brazil, the Russian Federation, India, China and South Africa, the analysis presents them as a stand-alone category. These countries account for 48% of all children receiving school meals globally. The apparent decline in these countries reflects changes in demography and reporting in India and Brazil.

Case study 26

The Integrated School Health Programme in South Africa

The Integrated School Health Programme in South Africa, which is based on health-promoting schools principles, offers a comprehensive package of interventions that includes health education, health screening in Grades 1, 4, 7 and 10 (including for vision, hearing, oral health and speech problems and tuberculosis), physical and nutritional assessment, and school-based health services (including deworming, immunization, psychosocial support and, for older students, linkage to sexual and reproductive health services). Sexual and reproductive health education and services are a critical component of the programme, reflecting the high prevalence of adolescent pregnancy and related school dropout among girls.

The programme is managed by a national body for Health, Education and Social Development, based in the Ministry of Education, and by offices in each of the nine provinces. School-based teams support students experiencing difficulties with learning; they secure consent from parents and coordinate access to a school nurse and school health services, referring students to other health services when necessary. The programme also funds the school nurses and health service delivery in primary and secondary schools.

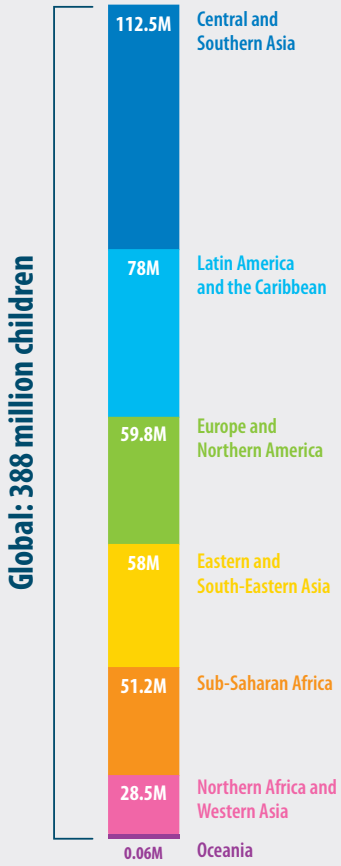
Enabling factors for the programme include political commitment, a supportive policy context and Ministry of Education leadership; community ownership; monitoring of health indicators to ensure that the programme is informed by the most up-to-date data, and monitoring and reporting on the programme itself.

Challenges include limited financial and human resources, in particular, a shortage of school nurses; weaknesses in follow-up and referral care; suboptimal collaboration between national, provincial and district education departments; inadequately trained teachers, and urban and rural disparities.

Source: Based on WHO and UNESCO, 2021a; WHO AFRO, 2013; Shaikh et al., 2021.

Figure 36

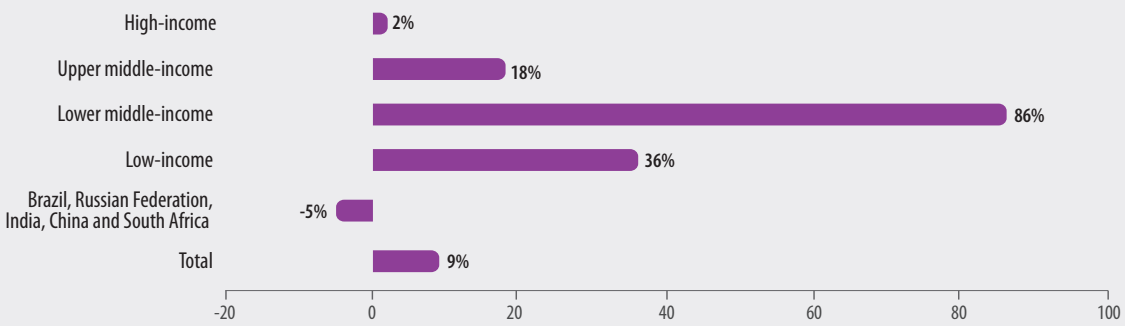
Number of children receiving school meals, by region, 2020



Data source: WFP, 2020.
Note: Countries and territories are grouped into the seven SDG regions as defined by the United Nations Statistics Division (UNSD). See annex 2 for more information.

Figure 37

Change in the number of children receiving school feeding between 2013 and 2020



Source: WFP, 2020, p.49.
Note: Analysis for 150 countries for which data are available for both years.

Despite progress, school feeding programmes are often least present where they are most needed. While such programmes in high-income and upper-middle-income countries reach on average 78% and 58% of primary-school children respectively, lower-middle-income countries reach only 45%, and the proportion falls to 20% in low-income countries (WFP, 2020).[27] This means that an estimated 73 million vulnerable primary-school children are still not reached (Drake, Lazrak et al., 2020). Overall, coverage has remained stable since 2013 due to the parallel growth of the school population over the same period. Coverage is particularly high in Latin America and the Caribbean (94%), where most countries have a universal approach. This means that all children enrolled in the public education system in the school grades covered by the programme are entitled to receive free meals as part of their right to food and education (WFP, 2017). This is the case in Brazil, which has the second largest programme in the world (**Case study 27**).

WFP analysis is limited to primary-school children due to the lack of data at secondary level. However, analysis conducted by the GCNF based on their Global Survey of School Meal Programs signals that coverage of primary-school children is higher than coverage of secondary-school children (GCNF, 2021).

There is an increasing focus on ensuring school meals are healthy and connected to the purchase of locally-produced nutritious foods to promote healthy and sustainable diets. In addition to expanding coverage, many countries are paying more attention to the quality and nutritional composition of school meals to address both undernutrition and overweight and obesity in school-age children and adolescents, while establishing policies and implementation modalities that allow to procure as locally as possible (Global Panel, 2015; FAO, 2019; AUDA-NEPAD, 2022), as the example from Brazil illustrates.

School feeding programmes are usually part of, or linked to, broader SHN programmes. The GCNF 2021 Global Survey of School Meal Programs found that more than 9 in 10 countries — 79 out of 85 countries that responded to the question — implement school feeding in conjunction with other interventions. About a third combine school feeding with four to six additional school health interventions, while around one in four delivers a package of seven to ten interventions (**Figure 38**). Depending on the context, in addition to drinking water, complementary interventions include promotion of handwashing with soap, height and weight measurement, deworming treatment, eye testing and glasses provision, hearing testing and treatment, oral health care, and menstrual health, among others. Most countries integrate hygiene and nutrition interventions. For example, in India, 95% of schools report practising group handwashing before midday meals to promote a culture of hygiene among students. The majority of school feeding programmes provide drinking water across country income groups. The availability of safe drinking water plays an important role in preventing the harm to health caused by drinking beverages with high sugar content.

Case study 27

Programa nacional de Alimentacão Escolar — a universal approach to home-grown school feeding in Brazil

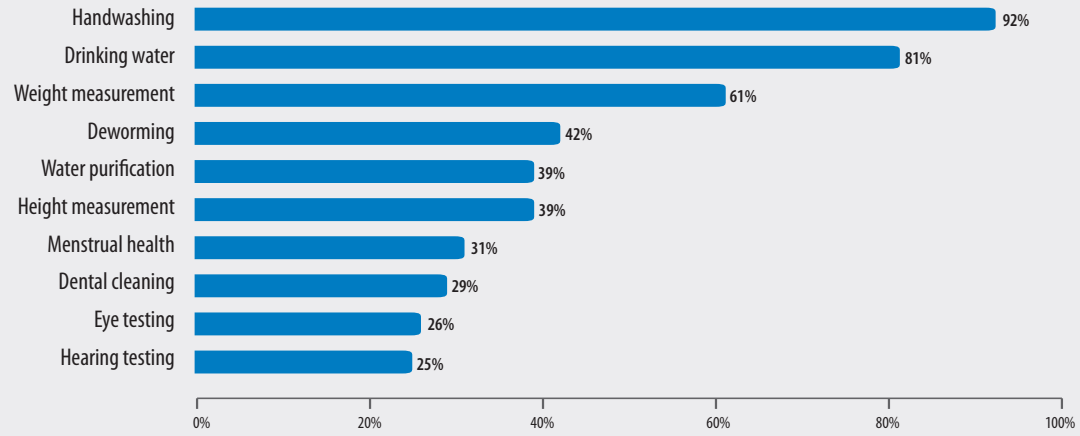
The Brazilian National School Feeding Programme, managed by the National Fund for Education Development (FNDE), an independent body within the Ministry of Education, covers more than 40 million students in more than 160,000 schools, from nursery up to secondary education. The programme is mandated and regulated by a federal law that provides for universal school feeding for all school students in Brazil. It provides 50 million meals every day adapted to the nutritional needs of different age groups, which are planned by nutritionists and monitored by school feeding board members. As well as ensuring that all students receive a healthy and varied diet, Programa nacional de Alimentacão Escolar aims to promote healthy eating habits. The programme's regulations also mandate that food and nutrition education is included in the school curriculum, and set guidelines for the content of school meals and for the purchase of food, including restricted and prohibited food items. Brazil has been a pioneer in linking its school feeding programme to local food production from smallholder farmers at scale: the law requires programme implementers to allocate 30% of financial resources to buying food from smallholder farmers.

Source: Adapted from WFP, 2020, p.70-71.

27 WFP estimated the coverage in each country using the number of children reported to receive school meals in primary schools, divided by the number of children enrolled in primary schools as reported by the UIS, 2019.

Figure 38

Complementary interventions linked to school feeding programmes in 85 countries, 2019



Data source: GCNF, 2021.

The impact of COVID-19 on school health services and school feeding

School closures due to COVID-19 prevented access to crucial school health services and school feeding programmes. However, education systems in many countries adapted, developing new and innovative approaches to ensure that learning could continue and that children and adolescents could still access health and nutrition support. This response showed that SHN programmes are highly valued by governments, but also that up-to-date contingency plans are required for delivering services when schools close. Data on the effects of COVID-19 on specific areas of work are as follows:

Deworming coverage: In 2020, there was a significant decrease in the coverage of deworming interventions due to the COVID-19 pandemic. Coverage of school-age children fell to 45% for schistosomiasis and just below 47% for soil-transmitted helminths (WHO, 2021f).

Nutrition interventions: The pandemic affected nutrition interventions, for example, a UNICEF report on the effect of COVID-19 on children in South Asia indicated that iron and folic acid supplementation in school-age children was disrupted between March and April 2020.

Mental health and psychosocial support: A WHO rapid assessment in 2020 found that around three-quarters of school mental health services were wholly or partially disrupted due to COVID-19 (WHO, 2020f). Of all types of mental health and substance-use services, school programmes were the most disrupted. However, many schools around the world tried to deliver support using alternative approaches, such as online support. Data from the May–June and July–October 2020 rounds of the survey on national education responses to COVID-19 indicate that 42% of countries implemented psychological counselling services for - at least a proportion of - parents and children (UNESCO, UNICEF et al., 2020).

School feeding programmes: The closure of schools in 2020 disrupted school feeding programmes, leaving an estimated 370 million children in at least 161 countries deprived of what was, for many, their only meal for the day — resulting in an estimated 39 billion missed school meals. Estimates show that globally, children missed, on average, four out of ten in-school meals they would have regularly received, with children in some countries missing nine out of ten (Borkowski, Ortiz-Correa et al., 2021). Alternative approaches were developed in some countries, although these did not achieve equivalent coverage to school feeding programmes. For example, WFP alternatives to school meals, such as take-home rations and cash-based transfers, have reached some 6.9 million children — about 40% of the 17 million children who received meals through WFP-supported programmes before COVID-19. As of April 2022, WFP estimated that 52 million children were still not receiving meals at school, based on data from global monitoring of school meals during COVID-19 closures (WFP, 2022a).


ЦИФРЫ
ДОМАШНИЕ ЖИВОТНЫЕ И ПТИЦЫ

Section 5

Conclusions and the way forward

SHN programmes are one of the most widely implemented public policies across all regions of the world. Governments in most countries are already investing in the health and well-being of school-age children and adolescents through them. These investments demonstrate growing recognition of the central role of the school system in protecting and promoting health, nutrition and well-being. While there has been significant progress, more needs to be done to ensure that these programmes are comprehensive, implemented at scale to meet the needs of all learners, and sustained. Improving the quality, relevance and reach of SHN programmes offers a unique opportunity to transform education and the lives and prospects of children and adolescents. Key conclusions and priorities for action highlighted by the report follow.

Looking after the health and well-being of learners holistically, through multisectoral approaches, is one of the most transformative and cost-effective ways to improve education outcomes and make education systems more inclusive and equitable. Realizing this potential will require a shift in thinking about the role of schools that goes beyond promoting academic outcomes to making the health and well-being of learners a core mission of education, as the consultations leading to the Transforming Education Summit in 2022 called for (UNESCO-OREALC, 2022).

SHN programmes are central to tackling the global learning crisis, to education sector recovery from the impact of COVID-19, and to building resilience against future pandemics and other shocks. There is a pressing need to reopen schools safely and re-engage all learners. Restoring and scaling up SHN programmes, including school meals, WASH, health and nutrition education, and services to address the adverse effects of the pandemic and other threats on learners' physical and mental health, are essential for learning recovery. This must be a priority for countries and for international partners supporting them.

Investment in SHN benefits the poorest and most disadvantaged children the most. However, the children and adolescents who could benefit most from SHN programmes are often those most likely to miss out. While more children than ever are in school, many school-age children and adolescents are still not. Strong country leadership and investment are required to ensure that all children and adolescents are in school and that SHN programmes reach those most in need in the poorest countries and the poorest and most marginalized households. Targeted action is needed to reach those at most risk of marginalization, poor health and malnutrition and this, in turn, requires that SHN programmes are designed to address equity, gender equality and inclusion. In the short term, innovative approaches are also necessary to reach out-of-school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children and increase enrolment, for example, through community-based programmes. Well-designed and targeted SHN programmes, especially, school feeding, can play a crucial role in promoting inclusion and equitable access to education.

Programmes must be comprehensive, implemented at scale and sustained by political and financial commitment from different sectors to maximize their impact. Global data suggest that SHN programmes are not always comprehensive in scope, that coverage of essential components remains low, particularly in low-income countries, and that interventions are not consistently implemented at both primary and secondary-school levels. More attention also needs to be paid to the quality of programme implementation and to monitoring and evaluating delivery and impact. Implementing and sustaining comprehensive SHN programmes at scale calls for commitment to be translated into supportive national policies and budgeted plans, innovative approaches to financing, and better coordination and collaboration across sectors. In many countries, this will not happen overnight, and a pragmatic and gradual approach, based on a clear set of priorities, better understanding of what works in different contexts, and lessons learned from experience, particularly about effective cross-sector collaboration, will be required.

SHN policies and programmes must be relevant and responsive to country contexts and evolving needs. In practice, policies and programmes vary between countries, reflecting differences in priorities and available resources and capacity. Countries need to review and adapt policy and programme design periodically to ensure that they meet the needs of school-age children and adolescents and respond to new evidence and emerging challenges, such as the impact of climate change. More attention needs to be given to promoting mental health and physical activity, to supporting students with disabilities, to addressing overweight and obesity, and to promoting social cohesion and preventing school violence and bullying. Programme quality and relevance also require greater efforts to engage learners and communities and to ensure school staff have the necessary knowledge, skills and support.

Coordinated action is needed to better monitor SHN and address key evidence gaps. The process of developing this report has highlighted the wealth of data that exists but also significant gaps in knowledge. These include limited information on SHN policies and coverage, and quality and fidelity of programme implementation in many countries; lack of data on delivery of specific aspects of SHN and on programmes in schools outside the government sector; and limited evidence about effectiveness of programmes, particularly their impact on education outcomes. Generating reliable, comparable and timely data, disaggregated by sex and age, on policy, implementation and impact will be critical to assess progress and enhance programming. Data must be improved on the health, nutrition and well-being of school-age children and adolescents to inform effective policy and programming, especially in low- income countries. We also need to better understand what children in this age group are eating and drinking and their mental health and well-being.

Ensuring that health and well-being are included in international and national measurement of school performance could contribute to better monitoring of SHN policy and programmes and, ultimately to greater investments in effective SHN. It could also incentivize implementation at the school level. More effective monitoring will also depend on strengthening national education and health management information systems and providing adequate resources to improve collection and analysis of SHN-related indicators, including bringing together and analysing national data from different sectors.

Globally, in recent years, there has been a shift in the priority that governments and partners give to SHN. Growing recognition of the central role of education systems in the health and well-being of children and adolescents is reflected in multisectoral initiatives, such as the 'Making Every School a Health-promoting School' (WHO and UNESCO, 2021), the Conceptual Framework for Adolescent Well-being (Ross, Hinton et al., 2020), and global and regional commitments to SHN. More than 70 governments and 70 partner organizations have joined the School Meals Coalition as of July 2022, with the objective of massively scaling up SHN programmes as cross-sectoral transformative platforms for more sustainable food systems and effective and equitable education systems. Promising initiatives have been developed recently to address data gaps, such as the GAMA project, the update of G-SHPPS to align with the Global Standards for Health-promoting Schools, and the Data and Monitoring Initiative of the School Meals Coalition. The Research Consortium for School Health and Nutrition has been established specifically to fill evidence gaps to inform policy in this area through a ten-year research agenda. These commitments from countries around the world offer a unique opportunity to address the learning crisis and transform education by improving the quality, relevance and reach of SHN programmes.

In March 2021, in the municipality of Serrinha, in the northeastern state of Rio Grande do Norte, Brazil, two boys wash their hands at school as part of the COVID-19 prevention routine.

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Toek Chan, a primary school student in Kampong Chhnang, Cambodia, in March 2021.

Annex 1

Quantitative data sources — dashboards and surveys

Table A - Overview of relevant data dashboards

Dashboard name (Acronym)	Host	Region (countries)	Underlying data	Topics covered	Years covered
Adolescent Health Dashboard - A focus on non-communicable diseases	UNICEF	Global (202)	Indicator-dependent: surveys, estimates (Various sources)	Health policies, programmes, health services, and inclusiveness	2012–2019
Education Statistics — All indicators	World Bank	Global	Various sources	Schooling, education, SABER, Violence, bullying	-
Food systems dashboard	Global Alliance for Improved Nutrition (GAIN)	Global	Various sources	Food, nutrition, food systems, food consumption	2010–2020
Global database on the Implementation of Nutrition Action (GINA)	WHO	Global	Global policy reviews, routine policy monitoring	Nutrition	2012–2022
Global Education Policy Dashboard (GEPD)	World Bank	LMICs (2 available, 100 targeted)	Survey	Learning outcomes, education sector policy, and practices	-
Global Health Observatory (GHO)	WHO	Global (215)	Indicator-dependent: estimation, computation, and survey	A wide range of health topics, from health status to health services and legislation, includes the Global Information System on Alcohol and Health (GISAH)	-
Global School-Based Student Health Survey (GSHS) Results Tool	PAHO	Americas (49)	GSHS and other sources	Health and behaviour status information	2013–2020
Health Nutrition and Population Statistics	World Bank	Global	Various international sources	Health and nutrition status, some services, school enrolment	-
Immunization dashboard (part of GHO)	WHO	Global	Joint Reporting Form (JRF) on Immunization	Disease incidence, immunization coverage (including school-based immunization)	2000–2020 (2015–2020)
Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)	WHO/UNICEF	Global	Household surveys, population and housing censuses, administrative data, service provider data	WASH in schools	2000–2019
Learning Outcomes Dashboard/ Education Statistics (EdStats)	World Bank	Global	Programme for International Student Assessment (PISA), Trends in International Mathematics & Science (TIMMS), Progress in International Reading Literacy Study (PIRLS), MICS, DHS, and more	Mostly learning outcomes	2000–2018
Maternal, Newborn, Child and Adolescent Health and Ageing – Data portal (SRMNCAH)	WHO	Global (150)	Survey data	Health and health-service policies	2018/19
Measurement of Mental Health Among Adolescents at the Population Level (MMAP)	UNICEF	Global	Institute for Health Metrics and Evaluation (IHME), wGlobal Burden of Disease Study	Mental health status	2019–2021
Non-communicable Diseases and Mental Health Data Portal Pan American Health Organization (PAHO)	PAHO	Americas (49)	Primarily based on estimates (WHO)	Health and disease status: NCDs), mental health, NCD risks, violence & injury; monitoring of NCD-relevant policies	2000–2019
Preventive Chemotherapy (PC) Data Portal	WHO	Global (215)	WHO estimates	Neglected tropical diseases and immunization	2003–2020
The State of the World's Children (SOWC) 2021 - interactive dashboard and statistical tables	UNICEF	Global (202)	Multiple Indicator Cluster Surveys (MICS), Demographic Health Surveys (DHS), and other UN data	Various health status & service data, social protection, demographics, WASH	-
UNESCO institute for statistics (UIS)	UNESCO	Global (201)	UIS database, including the Annual Survey of Formal Education (ASFE)	Education and learning outcomes, including SDG target 4.a (i.e., schools with electricity, WASH facilities, adaptable infrastructure and materials for children with disabilities; students experiencing bullying in the last 12 months) and target 4.7. (i.e., schools that provide life skills-based HIV and sexuality education).	2015–2020
UNICEF Data Warehouse	UNICEF	Global	Variable dependent: WHO/UNICEF Joint Monitoring Programme (2020)	A range of health and development indicators	1970–2019
World Development Indicators	World Bank	Global	Various sources	Various health and development topics, school attendance	-

Table B - Overview of relevant surveys/surveillance systems

Name (Acronym)	Lead agency	Years covered	Collection frequency (cycles conducted)	Description (as reported by lead agency)	Region (n countries)
GLOBAL INSTRUMENTS					
Demographic Health Surveys (DHS)	DHS programme	1984–2021	Every 5 years; More than 320 surveys	The Demographic Health Surveys (DHS) Programme has collected, analysed, and disseminated accurate and representative data on population, health, HIV, and nutrition through over 400 surveys in over 90 countries. This includes information on infant and child mortality, fertility, family planning use, maternal health, child immunization, malnutrition levels, HIV prevalence, and malaria.	Global (92)
Global Nutrition Policy Review (GNPR) Survey	WHO	2009–2010; 2016–2017	2 cycles	GNPR is a comprehensive analysis of nutrition-related policy environment, coordination mechanisms, available capacities, and actions being taken by countries on topic areas related to infant and young child nutrition, school health and nutrition, promotion of healthy diets, vitamin and mineral nutrition, prevention and management of acute malnutrition and nutrition, and infectious diseases.	Global (160)
Global School Health Policies and Practices Survey (G-SHPPS)	WHO	2014-2017	Country dependent	G-SHPPS enables countries to generate scientifically credible school-level data that describe characteristics of school health policies and practices nationwide. It was developed to help countries develop priorities, establish programmes, advocate for resources for school health, establish trends and allow comparisons across countries. G-SHPPS is conducted among primary and secondary school principals and headteachers The questionnaire was revised in 2021.	Global (5)
Global School-Based Student Health Survey (GSHS)	WHO/Centres for Disease Control (CDC)	2003–2019	Country dependent	The GSHS is a collaborative surveillance project designed to help countries measure and assess the behavioural risk factors and protective factors in 10 key areas among young people aged 13 to 17 years. The GSHS is a school-based survey, which uses a self-administered questionnaire to obtain data on young people's health behaviour and protective factors related to the leading causes of morbidity and mortality among children and adults worldwide.	Global (106)
Global Sexual, Reproductive, Maternal, Newborn, Child and Adolescent Health (SRMNCAH) Policy Survey	WHO	2009/10–2018/19	Variable; 5 cycles	The Policy survey tracks the country progress in adopting WHO recommendations in national health legislation, policies, strategies, and guidelines related to sexual, reproductive, maternal, newborn, child and adolescent health.	Global (150)
Global Status Report on Preventing Violence Against Children 2020 Survey	WHO/Global Partnership to End Violence Against Children	2018/2019	-	The self-administered survey contains questions about the status of national action plans, laws, indicators, and data collection mechanisms and about programmes and services along the lines of those given as examples under each of the INSPIRE strategies.	Global
Global Survey of School Meal Programs	Global Child Nutrition Foundation (GCNF)	Since 2019	2 cycles	GCNF launched a Global Survey of School Meal Programs in 2019. This is conducted every two to three years thereafter, with the second round of the survey undertaken in 2021. The survey asks a standard set of questions about school meal programs and associated topics and is used to develop a periodically-updated database on the current state of school feeding programmes in all countries of the world.	Global (85)
Global Youth Tobacco Survey (GYTS)	WHO	1999–2018	Country dependent, 491 surveys available	The GYTS is a self-administered, school-based survey of students in grades associated with 13 to 15 years of age. It is designed to enhance the capacity of countries to monitor tobacco use among youth and to guide the implementation and evaluation of tobacco prevention and control programmes. The GYTS uses a standard methodology for constructing the sampling frame, selecting schools and classes, preparing questionnaires, following consistent field procedures, and using consistent data management procedures for data processing and analysis.	Global (177)

Name (Acronym)	Lead agency	Years covered	Collection frequency (cycles conducted)	Description (as reported by lead agency)	Region (n countries)
Health Behaviour in School-Aged Children Survey (HBSC)	HBSC Consortium, University of Bergen	1983–2018	4-year interval; 10 cycles	Since 1982 HBSC has been a pioneer cross-national study gaining insight into young people's well-being, health behaviours, and their social context. This research collaboration with the WHO Regional Office for Europe is conducted every four years in 50 countries and regions across Europe and North America. With children and young people accounting for 42% of our world's population, HBSC uses its findings to inform policy and practice to improve the lives of millions of young people.	Europe and North America (50)
Joint Reporting Form (JRF) on immunization	WHO/UNICEF	2015–2021	Annually	School-based policies and vaccination activity data are reported annually through the WHO/UNICEF JRF on Immunization. These data help to better understand the adoption of school-based immunization strategies and the development of guidance for countries.	Global (184–188)
Mental Health Atlas Project	WHO	2001-2020	Variable; 6 cycles	WHO Mental Health Atlas Project is designed to collect, compile and disseminate data on mental health resources in the world. The Mental Health Atlas survey is the normative tool to monitor progress by WHO's Member States towards the objectives and targets of the WHO mental health action plan.	Global (171)
Multiple Indicator Cluster Surveys (MICS)	UNICEF	1993–2021	Country dependent; 349 surveys available	MICS is the largest source of comparable statistics on children, women, and households worldwide. It is an integral part of plans and policies of many governments around the world and a major data source for more than 30 Sustainable Development Goal indicators.	Global (118)
Programme for International Students Assessment (PISA)	OECD	2000–2022	3-year interval; 9 cycles	PISA is the OECD's Programme for International Student Assessment. It measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges. PISA was the first large-scale study to examine student well-being in its 2015 cycle.	OECD countries (93)
Progress in International Reading Literacy Study (PIRLS)	IEA (International Association for the Evaluation of Educational Achievement)	2001–2021	5-year interval; 5 cycles	PIRLS has monitored trends in reading achievement at the fourth grade since 2001. In addition to reading assessment, the PIRLS school, teacher, student, and home questionnaires gather extensive information about contextual factors at home and school associated with the teaching and learning of reading. These rich data include information on how the education system is organized to facilitate learning; students' home environment and supports for learning; school climate and resources and how instruction usually occurs in the classroom.	Global (60)
Report on the global tobacco epidemic and Annex 6.1: Smoke-free legislation	WHO	2008-2020	1 to 2- year interval; 8 reports	The WHO report on the global tobacco epidemic tracks the progress made by countries in tobacco control since 2008. Annex 6.1 includes data on smoke-free legislation in educational facilities.	Global (192)
State of school-based Food and Nutrition Education Survey	FAO	2019	One-time	The survey explores the extent to which school-based food and nutrition education is incorporated into national education, nutrition and school feeding policies and school systems.	Latin America and the Caribbean (11), Africa (7), Europe and Central Asia (5), Asia-Pacific (4), Near East and North Africa (3)
Survey on National Education Responses to COVID-19 School Closures	UNESCO / UNICEF / World Bank / OECD	2020–2022	Four iterations: (May–June 2020; July–October 2020; February–April 2021, April–June 2022	The survey collects information on national education responses to school closures related to the COVID-19 pandemic. It is designed for ministry of education officials at central or decentralized level in charge of school education. Analysis of results allows for policy learning across the diversity of country settings in order to better inform local/national responses and prepare for the reopening of schools.	Global (~150)

Name (Acronym)	Lead agency	Years covered	Collection frequency (cycles conducted)	Description (as reported by lead agency)	Region (n countries)
Systems Approach for Better Education Results (SABER) – School Health and School Feeding (SHSF)	World Bank	2011–2020	Country dependent	The SABER-SHSF is a diagnostic tool that collects comparable data on school health and school feeding policies and helps countries design effective policies to improve their education systems, facilitate comparative policy analysis, identify key areas to focus investment, and assist in disseminating good practice.	Global
Teaching and Learning International Survey (TALIS)	OECD	2008–2018	3 cycles	The Teaching and Learning International Survey (TALIS) is the first international survey on teachers' professional development; their teaching beliefs and practices; the assessment of their work and various other school leadership, management and workplace issues. TALIS relies on teachers' and school leaders' expertise as professionals to describe their work situation as accurately as possible, as well as their experiences in and feelings about their schools and working conditions. It is not an assessment, but a self-reported survey.	OECD countries (48)
Trends In International Mathematics and Science Study (TIMMS)	IEA	1995–2023	4-year interval; 8 cycles	Since 1995, TIMSS has monitored trends in mathematics and science achievement every four years, at the fourth and eighth grades. TIMSS 2019 was the seventh such assessment, providing 24 years of trends. TIMSS 2019 began the transition to eAssessment, where countries could administer TIMSS 2019 in electronic or paper format.	Global (64)
Violence Against Children Survey (VACS)	CDC	2007–2020	2/3-year interval	The VACS are led by the Together for Girls partnership. The survey measures the prevalence, past 12-month incidence, and circumstances surrounding violence in childhood and young adulthood (before age 24). It covers multiple forms of violence: sexual, physical and emotional. The surveys also provide important data on risk factors, protective factors, and consequences of violence.	Africa, Americas (12)
Worldwide Survey of School Physical Education (QPE Survey)	UNESCO	2009, 2011, 2013, 2020	Variable; 4 cycles	The Worldwide Survey of Quality Physical Education (QPE) has been developed in collaboration with a compact of partners and is administered at both policy-level and at school-level. It has been designed to assess quality physical education policy and practice, as well as to address basic data gaps. Data collected as part of this survey inform the development of international indicators on QPE.	Global (117 – latest round)
REGIONAL INSTRUMENTS					
European School Survey Project on Alcohol and Other Drugs (ESPAD)	ESPAD Group	1995–2019	4-year interval; 7 cycles	ESPAD collects comparable data on substance use among 15–16 year-old students in as many European countries as possible. The objectives are to monitor trends and to compare trends between countries. Almost 100 000 students participated in the latest survey round, responding to an anonymous questionnaire. The ESPAD Report 2019 features information on students' experiences of, and perceptions about a variety of substances, including: tobacco, alcohol, illicit drugs, inhalants, pharmaceuticals and new psychoactive substances. Social media use, gaming and gambling are also covered.	Europe (40)
School health in Latin America and the Caribbean: National-level survey	PAHO/WHO	2018	One-time	As part of the regional assessment of the status of school health policies and programmes in Latin America and the Caribbean, a national-level and school-level survey was administered covering the following areas: 1. School health policies and strategies; 2. Healthy and safe learning environment; 3. Skills-based health education; 4. Organization and delivery of health services.	Latin America and the Caribbean (18)
Schools for Health in Europe (SHE) Monitoring Survey	SHE Network Foundation Secretariat hosted by the University College South Denmark	2019, 2020	1–2 year interval; 2 cycles	SHE monitors the implementation of school health promotion in its member states. In 2020, a survey was conducted among 24 of the 40 SHE member countries or regions. In 2019, 28 countries participated.	Europe and Central Asia (28)

Annex 2

Table of selected country indicators

Regional and country income groups

For this report, the countries and territories are grouped into the seven Sustainable Development Goal (SDG) regions as defined by the United Nations Statistics Division (UNSD) and used for the SDG and the Global Education Monitoring reports: Central and Southern Asia, Eastern and South-Eastern Asia, Europe and North America, Latin America and the Caribbean, Northern Africa and Western Asia, Oceania, and sub-Saharan Africa. In addition, the countries were classified by income group as defined by the World Bank for the period of 1 July 2021 to 1 July 2022. While the analyses in the body of the report use the data from all countries and territories as per the UNSD list, whether independent national entities or parts of bigger entities, the statistical tables in Annex 2 include only full UNESCO member states and associate members for which the data were available, as well as Bermuda and Turks and Caicos Islands, non-member states that are included in the Global Education Monitoring Report.

			EDUCATION			PHYSICAL ENVIRONMENT					SOCIOEMOTIONAL ENVIRONMENT		
Country/territory	Region	Income group	Nutrition education in school curriculum	Sexuality education in school curriculum	Physical education in school curriculum	Schools with basic water service (%)	Schools with basic sanitation service (%)	Schools with basic hygiene service (%)	Primary schools with access to electricity (%)	Primary schools with access to infrastructure adapted for students with disabilities (%)	Helping children protect themselves from sexual abuse (level of support)	Helping children protect themselves from sexual abuse (perceived reach)	School-based anti-bullying (level of support)
Source			GNPR survey	CSE Status Report	QPE Survey	JMP WASH			UIS		Report on preventing violence against children		
Reference year			2016-2017	2021	2021	2019			2021		2018		
Afghanistan	CSA	LIC	No	CU	...	66	38	6	16 -2	5 -2	None	...	None
Albania	ENA	UMIC	...	CU	CB	59	89	82	100 -1	8 -1	National	High	National
Algeria	NAWA	LMIC	Yes	No	CB	92	99	99	99 -1	...	...	...	...
Andorra	ENA	HIC	...	...	CB	100	100	100	100 -1	100 -1	...	...	...
Angola	SSA	LMIC	...	CB	...	...	...	...	22 -5	...	...	...	...
Anguilla	LAC	...	...	...	...	...	...	...	100 -2	100 -2	...	...	...
Antigua and Barbuda	LAC	HIC	Yes	...	...	100	100	100	100 -3	5 -3	National	Medium	None
Argentina	LAC	UMIC	No	CB	CB	...	...	...	98 -2	...	...	...	...
Armenia	NAWA	UMIC	Yes	...	CB	...	...	...	100 -1	...	National	Medium	Subnational
Aruba	LAC	HIC	...	...	...	...	...	...	...	...	...	...	...
Australia	OCE	HIC	No	...	CB	100	100	100	100 -5	...	National	...	National
Austria	ENA	HIC	No	CU	CB	...	...	...	...	...	National	Low	National
Azerbaijan	NAWA	UMIC	No	...	CB	100	100	100	100 -1	...	National	Medium	National
Bahamas	LAC	HIC	...	...	CP	...	...	...	...	...	Subnational	...	None
Bahrain	NAWA	HIC	Yes	...	CB	100	100	100	100 -1	100 -1	National	High	National
Bangladesh	CSA	LMIC	Yes	CU	UD	82	56	51	76 -1	20 -1	National	Medium	None
Barbados	LAC	HIC	Yes	...	CB	100	100	100	100 -1	...	...	...	...
Belarus	ENA	UMIC	Yes	No	...	100	100	100	100 -1	...	National	High	National
Belgium	ENA	HIC	Yes	CU	CB	100	...	100	100 -3	...	Subnational	...	Subnational
Belize	LAC	LMIC	Yes	...	CP	...	...	...	...	...	National	Medium	National
Benin	SSA	LMIC	Yes	CS	...	45	...	...	34 -1	...	...	...	...
Bermuda	ENA	HIC	...	...	...	...	...	100	100 -5	100 -5	...	...	...
Bhutan	CSA	LMIC	Yes	CU	...	64	86	...	95 -1	...	...	...	...
Bolivia (Plurinational State of)	LAC	LMIC	Yes	No	...	...	...	...	...	...	Subnational	...	Subnational
Bosnia and Herzegovina	ENA	UMIC	Yes	CU	CB	...	...	...	...	...	National	High	Subnational
Botswana	SSA	UMIC	No	CB	No	...	...	...	...	...	...	...	...
Brazil	LAC	UMIC	Yes	No	CB	...	...	61	96 -4	28 -4	National	Medium	National

Regions:

CSA: Central and Southern Asia
ENA: Europe and Northern America
ESEA: Eastern and South-Eastern Asia
LAC: Latin America and the Caribbean
NAWA: Northern Africa and Western Asia
OCE: Oceania
SSA: Sub-Saharan Africa

Income groups:

LIC: Low-income
LMIC: Lower-middle-income
UMIC: Upper-middle-income
HIC: High-income

Legends:

CB: Curriculum for primary and secondary education
CP: Curriculum for primary education only
CS: Curriculum for secondary education only
CU: Related curriculum (no level specified)
UD: Under development
PB: Education policies on life skills-based HIV and sexuality education in both primary and secondary education
PP: Education policies on life skills-based HIV and sexuality education in primary education only
PS: Education policies on life skills-based HIV and sexuality education in secondary education only
SL: Relevant legal frameworks, laws, decree, acts and policies (levels of education are not specified)
(…) Data not available or category not applicable.
(± n) Reference year differs (e.g. -2: reference year 2017 instead of 2019).

	SCHOOL HEALTH SERVICES				POLICIES						
School-based anti-bullying (perceived reach)	School-based immunization (delivery)	Coverage of PC against STH among school-age children, 5–14 y.o. (%)	Coverage of PC against schistosomiasis among school-age children, 5–14 y.o. (%)	Children receiving school feeding (000)	Standards on health-promoting schools	Law/policy on sexuality education	Smoke-free legislation in educational facilities (except universities)	Policy on physical education	School feeding policy	Policy commitment related to school nutrition action	Country code
	JRF Immunization	PC Data Portal		State of school feeding worldwide	SRMNCAH Policy Survey	CSE Status Report	Global tobacco epidemic report	QPE Survey	State of school feeding worldwide	GINA	
	2020	2019		2020	2018–2019	2021	2020	2021	2020	2022	
…	No	75	…	1342	Yes	No	Yes	…	…	Yes	AFG
High	No	…	…	99	No	PB	Yes	Yes	…	Yes	ALB
…	…	…	…	40	Yes	PS	Yes	Unknown	…	Yes	DZA
…	Yes	…	…	…	…	…	Yes	Yes	…	No	AND
…	No	22	28	1516	Yes	PB	Yes	…	…	No	AGO
…	Yes	…	…	…	…	…	…	…	…	No	AIA
…	Yes	…	…	9	Yes	PB	Yes	…	…	Yes	ATG
…	Yes	…	…	1688	Yes	PB	Yes	Yes	…	Yes	ARG
…	…	…	…	103	Yes	PS	Yes	Yes	Yes	No	ARM
…	…	…	…	…	…	…	…	…	…	…	ABW
…	Yes	…	…	5	No	…	No	Yes	…	Yes	AUS
Medium	Yes	…	…	…	Yes	SL	Yes	Yes	…	Yes	AUT
Low	No	…	…	…	No	PS	Yes	Yes	…	Yes	AZE
…	No	…	…	…	…	PB	No	Yes	…	Yes	BHS
High	Yes	…	…	96	…	…	No	Yes	…	Yes	BHR
…	No	98	…	2965	Yes	SL	Yes	Yes	Yes	Yes	BGD
…	No	…	…	17	Yes	PB	Yes	Yes	…	Yes	BRB
Medium	Yes	…	…	248	…	PS	Yes	…	…	Yes	BLR
…	Yes	…	…	…	…	SL	…	Yes	…	Yes	BEL
Medium	Yes	…	…	29	Yes	…	No	Yes	…	Yes	BLZ
…	No	70	58	460	Yes	PB	Yes	…	Yes	Yes	BEN
…	No	…	…	4	…	…	…	…	…	…	BMU
…	Yes	100	…	75	Yes	No	Yes	…	Yes	Yes	BTN
…	Yes	…	…	2383	No	PS	Yes	…	…	Yes	BOL
…	…	…	…	92	…	SL	No	Yes	…	Yes	BIH
…	Yes	…	…	359	Yes	PB	No	No	Yes	Yes	BWA
Medium	No	…	…	40197	Yes	No	Yes	Unknown	Yes	Yes	BRA

Annex 2

			EDUCATION			PHYSICAL ENVIRONMENT					SOCIOEMOTIONAL ENVIRONMENT		
Country/territory	Region	Income group	Nutrition education in school curriculum	Sexuality education in school curriculum	Physical education in school curriculum	Schools with basic water service (%)	Schools with basic sanitation service (%)	Schools with basic hygiene service (%)	Primary schools with access to electricity (%)	Primary schools with access to infrastructure adapted for students with disabilities (%)	Helping children protect themselves from sexual abuse (level of support)	Helping children protect themselves from sexual abuse (perceived reach)	School-based anti-bullying (level of support)
Source			GNPR survey	CSE Status Report	QPE Survey	JMP WASH			UIS		Report on preventing violence against children		
Reference year			2016-2017	2021	2021	2019			2021		2018		
British Virgin Islands	LAC	HIC	...	...	...	93	100	95	100 -1	50 -1	...	...	...
Brunei Darussalam	ESEA	HIC	Yes	...	...	...	...	100	100 -1	...	National	Medium	National
Bulgaria	ENA	UMIC	No	CU	CB	...	...	...	...	...	National	High	National
Burkina Faso	SSA	LIC	Yes	CB	CB	53	70	25	23 -1	42 -1	National	Medium	National
Burundi	SSA	LIC	No	CB	CB	46	49	17	9 -2	0 -2	...	...	...
Cabo Verde	SSA	LMIC	Yes	CB	...	...	90	84	87 -2	...	...	...	...
Cambodia	ESEA	LMIC	No	CB	CB	73	32	48	87 -2	...	National	High	National
Cameroon	SSA	LMIC	Yes	CB	CB	34	39	...	31 -2	... ...	National	High	National
Canada	ENA	HIC	No	...	CB	...	...	...	...	...	National	...	National
Cayman Islands	LAC	HIC	...	...	CB	100	100	100	100 -1	100 -1	...	...	...
Central African Republic	SSA	LIC	...	CB	...	16	...	...	4 -4	...	National	Medium	Subnational
Chad	SSA	LIC	Yes	No	...	23	...	...	3 -2	...	National	High	National
Chile	LAC	HIC	Yes	CS	CB	...	...	...	...	...	National	High	None
China	ESEA	UMIC	No	CU	CB	...	...	...	99 -1	...	National	High	National
China, Hong Kong Special Administrative Region	ESEA	HIC	...	...	...	100	100	100	100 -1	95 -1	...	...	...
China, Macao Special Administrative Region	ESEA	HIC	...	...	...	100	100	100	100 -1	78 -1	...	...	...
Colombia	LAC	UMIC	Yes	CS	CB	...	...	...	86 -1	...	National	Medium	National
Comoros	SSA	LMIC	No	...	...	...	...	...	41 -4	...	National	High	None
Congo	SSA	LMIC	No	CB	...	...	...	...	34 -2	...	National	Medium	National
Cook Islands	OCE	...	Yes	...	...	100	100	100	100 -1	100 -1	None	...	None
Costa Rica	LAC	UMIC	Yes	CU	No	84	75	78	99 -1	72 -1	National	High	National
Côte d'Ivoire	SSA	LMIC	Yes	CB	CB	...	...	...	61 -1	23 -1	None	...	None
Croatia	ENA	HIC	Yes	...	...	...	...	...	...	...	National	High	National
Cuba	LAC	UMIC	No	CB	CB	100	100	100	100 -1	...	National	High	National
Curaçao	LAC	HIC	...	...	CB	...	...	...	...	...	...	...	...
Cyprus	NAWA	HIC	Yes	CU	CB	...	...	...	...	...	National	High	National
Czechia	ENA	HIC	Yes	CU	CB	...	...	...	...	...	National	High	National
Democratic People's Republic of Korea	ESEA	LIC	No	...	...	...	...	...	...	...	...	...	...
Democratic Republic of the Congo	SSA	LIC	...	CB	CB	...	...	...	17 -2	0 -6	...	...	...
Denmark	ENA	HIC	No	...	...	100	100	100	100 -5	...	National	High	National
Djibouti	SSA	LMIC	No	No	...	...	...	...	85	...	...	...	...
Dominica	LAC	UMIC	...	...	CS	100	100	100	100 -1	100 -1	National	Low	National
Dominican Republic	LAC	UMIC	No	CB	CB	...	...	...	...	...	National	High	National
Ecuador	LAC	UMIC	Yes	No	...	87	80	...	79 -1	0 -1	None	...	National
Egypt	NAWA	LMIC	Yes	No	...	...	100	100	100 -5	...	...	...	...
El Salvador	LAC	LMIC	Yes	CB	...	82	87	...	98 -3	30 -3	National	Medium	National
Equatorial Guinea	SSA	UMIC	...	...	UD	...	...	...	...	...	...	...	...
Eritrea	SSA	LIC	Yes	CB	...	...	33	5	29 -3	...	...	...	...
Estonia	ENA	HIC	No	CU	CB	100	100	100	100 -5	...	Subnational	...	Subnational
Eswatini	SSA	LMIC	Yes	CB	...	...	...	...	99 -2	12 -5	National	High	National
Ethiopia	SSA	LIC	...	No	...	15	40	5	27 -1	...	National	High	None
Fiji	OCE	UMIC	Yes	CU	...	88	76	61	98 -5	...	...	...	...
Finland	ENA	HIC	Yes	CU	CB	100	100	100	100 -2	100 -2	National	...	National
France	ENA	HIC	No	...	CB	100	100	100	100 -2	...	National	High	National
Gabon	SSA	UMIC	No	CB	CB	...	...	...	71 -2	4 -2	National	Medium	None
Gambia	SSA	LIC	Yes	CB	...	...	63	...	40	...	...	...	...

	SCHOOL HEALTH SERVICES				POLICIES						
School-based anti-bullying (perceived reach)	School-based immunization (delivery)	Coverage of PC against STH among school-age children, 5–14 y.o. (%)	Coverage of PC against schistosomiasis among school-age children, 5–14 y.o. (%)	Children receiving school feeding (000)	Standards on health-promoting schools	Law/policy on sexuality education	Smoke-free legislation in educational facilities (except universities)	Policy on physical education	School feeding policy	Policy commitment related to school nutrition action	Country code
	JRF Immunization	PC Data Portal		State of school feeding worldwide	SRMNCAH Policy Survey	CSE Status Report	Global tobacco epidemic report	QPE Survey	State of school feeding worldwide	GINA	
	2020	2019		2020	2018–2019	2021	2020	2021	2020	2022	
...	Yes	...	...	...	...	...	...	...	...	No	VGB
High	Yes	...	...	...	No	PS	Yes	...	...	Yes	BRN
High	No	...	...	152	No	SL	Yes	Yes	...	Yes	BGR
Medium	No	...	83	3864	Yes	PB	Yes	Unknown	Yes	Yes	BFA
...	No	100	98	613	No	PB	Yes	Yes	Yes	Yes	BDI
...	...	60	...	3	...	...	No	...	...	Yes	CPV
High	...	91	81	281	Unknown	PB	Yes	Yes	Yes	Yes	KHM
High	Yes	71	98	18	Unknown	PB	Yes	Yes	No	Yes	CMR
...	Yes	...	...	293	...	...	Yes	Yes	...	Yes	CAN
...	Yes	...	...	...	...	...	...	Yes	...	...	CYM
...	No	77	94	242	...	PB	No	...	No	No	CAF
High	No	43	66	138	Yes	...	Yes	Yes	Yes	Yes	TCD
...	Yes	...	...	1829	Yes	PS	Yes	Yes	...	Yes	CHL
High	No	...	...	40000	Yes	PB	No	Yes	No	Yes	CHN
...	Yes	...	...	244	...	...	...	...	...	...	HKG
...	Yes	...	...	...	...	...	...	...	...	...	MAC
Low	No	57	...	5388	Yes	PB	Yes	No	No	Yes	COL
...	No	64	...	0	...	PB	Yes	...	...	Yes	COM
Medium	No	11	...	142	No	PB	Yes	...	Yes	Yes	COG
...	...	...	...	...	Unknown	...	Yes	...	...	Yes	COK
Medium	Yes	...	...	691	Yes	PB	Yes	Yes	...	Yes	CRI
...	Yes	88	54	976	Yes	PB	No	Yes	Yes	Yes	CIV
High	Yes	...	...	152	Yes	...	Yes	...	...	Yes	HRV
High	Yes	...	...	827	Yes	PB	Yes	Yes	...	Yes	CUB
...	...	...	...	...	...	...	...	Yes	...	...	CUW
High	No	...	...	15	No	SL	Yes	Yes	Yes	Yes	CYP
High	No	...	...	1351	No	PS	Yes	Yes	Yes	Yes	CZE
...	No	100	...	318	...	...	Yes	...	...	Yes	PRK
...	No	80	68	124	Yes	SL	Yes	Yes	No	Yes	COD
High	No	...	...	...	No	...	Yes	...	...	Yes	DNK
...	...	...	...	20	Yes	...	Yes	...	...	Yes	DJI
Low	Yes	...	...	4	No	PB	No	UD	...	No	DMA
Medium	No	93	...	1739	Yes	PB	Yes	Yes	...	Yes	DOM
Medium	Yes	...	...	2873	No	PB	Yes	...	...	Yes	ECU
...	Yes	...	100	11201	Yes	...	Yes	...	Yes	Yes	EGY
Medium	Yes	78	...	1300	No	PB	Yes	...	...	Yes	SLV
...	No	...	...	...	No	No	No	UD	...	No	GNQ
...	Yes	...	93	...	Yes	SL	No	...	...	Yes	ERI
...	Yes	...	...	72	Yes	SL	Yes	Yes	...	Yes	EST
High	No	100	...	365	Unknown	PB	No	...	Yes	Yes	SWZ
...	Yes	73	60	2539	Yes	PS	Yes	...	Yes	Yes	ETH
...	Yes	52	...	40	...	PB	No	...	Yes	Yes	FJI
...	Yes	...	...	840	Yes	SL	Yes	Yes	Yes	Yes	FIN
High	No	...	...	6000	Yes	...	Yes	Yes	...	Yes	FRA
...	No	...	...	...	No	PB	Yes	Yes	...	Yes	GAB
...	...	...	...	165	Yes	...	Yes	...	Yes	Yes	GMB

Annex 2

			EDUCATION			PHYSICAL ENVIRONMENT					SOCIOEMOTIONAL ENVIRONMENT		
Country/territory	Region	Income group	Nutrition education in school curriculum	Sexuality education in school curriculum	Physical education in school curriculum	Schools with basic water service (%)	Schools with basic sanitation service (%)	Schools with basic hygiene service (%)	Primary schools with access to electricity (%)	Primary schools with access to infrastructure adapted for students with disabilities (%)	Helping children protect themselves from sexual abuse (level of support)	Helping children protect themselves from sexual abuse (perceived reach)	School-based anti-bullying (level of support)
Source			GNPR survey	CSE Status Report	QPE Survey	JMP WASH			UIS		Report on preventing violence against children		
Reference year			2016-2017	2021	2021	2019			2021		2018		
Georgia	NAWA	UMIC	Yes	No	CB	...	...	...	100 -1	...	None	...	National
Germany	ENA	HIC	Yes	CU	CB	100	100	100	100 -2	...	National	...	National
Ghana	SSA	LMIC	Yes	CS	...	71	64	54	25 -3	...	National	Medium	National
Greece	ENA	HIC	No	...	...	...	...	...	...	...	None	...	National
Grenada	LAC	UMIC	...	...	...	100	...	100	100 -1	13 -1	National	Medium	None
Guatemala	LAC	UMIC	...	CB	CB	...	76	...	...	...	National	Medium	National
Guinea	SSA	LIC	Yes	CB	...	10	...	...	17 -1	...	...	...	...
Guinea-Bissau	SSA	LIC	No	...	...	59	32	12	...	...	National	Medium	None
Guyana	LAC	UMIC	...	CB	...	...	...	...	...	...	National	Medium	Subnational
Haiti	LAC	LMIC	No	No	UD	...	...	...	...	...	...	...	...
Honduras	LAC	LMIC	...	...	CB	68	82	12	91 -2	5 -5	None	...	National
Hungary	ENA	HIC	...	...	...	100	100	100	100 -5	...	...	...	...
Iceland	ENA	HIC	Yes	...	CB	...	...	...	...	...	...	...	...
India	CSA	LMIC	No	CS	UD	67	64	53	77 -1	73 -1	...	...	...
Indonesia	ESEA	LMIC	Yes	CS	...	73	40	59	94 -2	...	National	High	National
Iran (Islamic Republic of)	CSA	LMIC	Yes	No	...	...	...	...	...	...	Subnational	...	...
Iraq	NAWA	UMIC	No	...	...	...	...	...	...	...	National	Medium	National
Ireland	ENA	HIC	...	CU	CB	...	...	...	...	...	...	...	...
Israel	NAWA	HIC	No	...	...	100	100	100	100 -5	...	Subnational	...	Subnational
Italy	ENA	HIC	No	...	CB	100	100	100	100 -5	...	...	...	...
Jamaica	LAC	UMIC	Yes	CB	CB	95	95	97	100 -2	12 -4	National	Medium	National
Japan	ESEA	HIC	Yes	...	CB	...	...	...	...	...	...	...	...
Jordan	NAWA	UMIC	Yes	...	...	93	33	...	100 -1	...	National	High	Subnational
Kazakhstan	CSA	UMIC	No	CU	...	...	...	...	100 -1	7 -3	Subnational	...	National
Kenya	SSA	LMIC	Yes	CB	CB	...	...	...	83 -5	...	National	High	National
Kiribati	OCE	LMIC	...	CU	...	...	...	...	42 -1	...	National	Medium	Subnational
Kuwait	NAWA	HIC	Yes	...	CS	100	100	100	100 -1	100 -1	None	...	Subnational
Kyrgyzstan	CSA	LMIC	...	CB	...	...	...	100	100 -4	...	National	Medium	National
Lao PDR	ESEA	LMIC	Yes	CB	CB	...	16	35	54 -1	...	...	...	...
Latvia	ENA	HIC	No	CU	CB	100	100	100	100 -5	18 -5	National	Medium	National
Lebanon	NAWA	UMIC	Yes	...	CB	59	93	36	100 -1	...	National	Medium	National
Lesotho	SSA	LMIC	Yes	CB	CP	...	...	...	...	...	National	Medium	National
Liberia	SSA	LIC	No	No	...	50	27	69	10 -4	...	...	...	...
Libya	NAWA	UMIC	No	...	CB	17	61	13	...	...	Subnational	...	None
Liechtenstein	ENA	HIC	...	...	...	...	...	...	...	...	...	...	...
Lithuania	ENA	HIC	Yes	...	CB	...	...	...	...	...	National	High	National
Luxembourg	ENA	HIC	Yes	...	CB	...	...	...	...	...	Subnational	...	National
Madagascar	SSA	LIC	Yes	CB	CB	...	62	...	8 -2	...	National	Medium	National
Malawi	SSA	LIC	Yes	CB	...	78	65	21	27 -2	...	National	Medium	Subnational
Malaysia	ESEA	UMIC	Yes	CU	CB	98	100	98	100 -1	16 -1	National	High	National
Maldives	CSA	UMIC	Yes	CU	CB	100	96	...	100 -2	100 -4	None	...	National
Mali	SSA	LIC	Yes	CS	...	70	30	63	16 -4	...	National	Medium	National
Malta	ENA	HIC	No	...	...	...	...	...	...	...	National	High	National
Marshall Islands	OCE	UMIC	No	...	...	3	27	36	74 -1	21 -5	...	...	...
Mauritania	SSA	LMIC	No	No	No	...	21	...	44 -2	...	Subnational	...	Subnational
Mauritius	SSA	UMIC	...	...	CB	100	100	86	100	31	National	Medium	None
Mexico	LAC	UMIC	Yes	CU	CB	...	74	...	... ...	...	National	Low	National
Micronesia (Federated States of)	OCE	LMIC	No	...	...	...	...	...	...	...	Subnational	...	Subnational

		SCHOOL HEALTH SERVICES				POLICIES						
School-based anti-bullying (perceived reach)	School-based immunization (delivery)	Coverage of PC against STH among school-age children, 5–14 y.o. (%)	Coverage of PC against schistosomiasis among school-age children, 5–14 y.o. (%)	Children receiving school feeding (000)	Standards on health-promoting schools	Law/policy on sexuality education	Smoke-free legislation in educational facilities (except universities)	Policy on physical education	School feeding policy	Policy commitment related to school nutrition action	Country code
	JRF Immunization	PC Data Portal		State of school feeding worldwide	SRMNCAH Policy Survey	CSE Status Report	Global tobacco epidemic report	QPE Survey	State of school feeding worldwide	GINA	
	2020	2019		2020	2018–2019	2021	2020	2021	2020	2022	
High	No	...	...	...	No	No	Yes	Yes	...	Yes	GEO
...	No	...	...	...	...	PB	No	Yes	...	Yes	DEU
Medium	No	53	91	1700	Yes	PB	...	...	...	Yes	GHA
Low	No	...	...	6	...	...	Yes	...	Yes	Yes	GRC
...	Yes	...	...	7	No	...	No	...	...	Yes	GRD
Medium	Yes	...	...	2459	Yes	PB	Yes	Yes	Yes	Yes	GTM
...	No	53	...	375	Yes	PS	Yes	...	...	Yes	GIN
...	No	35	27	178	No	PB	No	...	Yes	Yes	GNB
...	Yes	71	...	14	Yes	PB	Yes	...	No	Yes	GUY
...	No	15	...	876	Yes	No	No	UD	...	Yes	HTI
Medium	Yes	75	...	1300	Unknown	PB	Yes	Yes	Yes	Yes	HND
...	Yes	...	...	1004	...	...	Yes	...	Yes	Yes	HUN
...	Yes	...	...	...	...	PB	Yes	Yes	...	Yes	ISL
...	No	62	...	90415	Yes	PS	Yes	UD	Yes	Yes	IND
High	Yes	68	71	100	Yes	...	Yes	...	Yes	Yes	IDN
...	No	...	...	3	...	PS	Yes	...	...	Yes	IRN
Medium	No	...	...	633	Yes	...	No	...	Yes	Yes	IRQ
...	Yes	...	...	91	...	PB	Yes	Yes	...	Yes	IRL
...	Yes	...	...	776	Yes	No	Yes	...	...	Yes	ISR
...	No	...	...	2454	Yes	...	...	Yes	...	Yes	ITA
Medium	Yes	...	...	311	...	PB	Yes	Yes	...	Yes	JAM
...	...	...	...	8864	...	...	Yes	Yes	...	Yes	JPN
...	Yes	...	...	419	Yes	...	Yes	...	...	Yes	JOR
...	Yes	...	...	3059	Yes	PS	Yes	...	Yes	Yes	KAZ
Medium	No	30	20	1754	Yes	PB	No	Yes	Yes	Yes	KEN
...	Yes	...	...	...	...	SL	No	...	...	Yes	KIR
...	...	...	...	237	...	No	Yes	Yes	...	Yes	KWT
Medium	Yes	39	...	595	Unknown	PS	Yes	...	Yes	Yes	KGZ
...	Yes	93	93	196	Unknown	PB	Yes	Yes	Yes	Yes	LAO
Medium	No	...	...	103	Yes	SL	Yes	Yes	...	Yes	LVA
Medium	No	...	...	32	No	...	Yes	Yes	...	Yes	LBN
Medium	No	69	...	387	Yes	PB	No	UD	Yes	Yes	LSO
...	No	89	89	287	No	PB	No	...	Yes	Yes	LBR
...	...	...	...	21	...	No	Yes	Yes	No	...	LBY
...	...	...	...	...	...	...	...	...	...	...	LIE
High	No	...	...	636	Yes	PB	Yes	Yes	...	Yes	LTU
High	No	...	...	32	Yes	PS	Yes	Yes	...	Yes	LUX
Medium	No	26	66	568	Unknown	PB	Yes	No	Yes	Yes	MDG
...	Yes	74	94	2936	...	PB	No	...	Yes	Yes	MWI
High	Yes	...	...	500	...	PS	No	Yes	Yes	Yes	MYS
...	No	...	...	...	Yes	SL	Yes	No	...	Yes	MDV
Medium	No	...	95	515	Yes	PB	No	...	No	Yes	MLI
Medium	...	...	...	21	Yes	PB	Yes	...	...	Yes	MLT
...	...	...	...	5	Yes	No	Yes	...	...	Yes	MHL
...	No	...	56	52	No	PB	No	No	Yes	Yes	MRT
...	Yes	...	...	75	No	PS	Yes	Yes	...	Yes	MUS
Low	...	...	...	6358	No	SL	Yes	Yes	Yes	Yes	MEX
...	...	...	...	...	Unknown	No	Yes	...	...	Yes	FSM

Annex 2

			EDUCATION			PHYSICAL ENVIRONMENT					SOCIOEMOTIONAL ENVIRONMENT		
Country/territory	Region	Income group	Nutrition education in school curriculum	Sexuality education in school curriculum	Physical education in school curriculum	Schools with basic water service (%)	Schools with basic sanitation service (%)	Schools with basic hygiene service (%)	Primary schools with access to electricity (%)	Primary schools with access to infrastructure adapted for students with disabilities (%)	Helping children protect themselves from sexual abuse (level of support)	Helping children protect themselves from sexual abuse (perceived reach)	School-based anti-bullying (level of support)
Source			GNPR survey	CSE Status Report	QPE Survey	JMP WASH			UIS		Report on preventing violence against children		
Reference year			2016-2017	2021	2021	2019			2021		2018		
Monaco	ENA	HIC	...	...	...	100	100	100	100	100	...	...	...
Mongolia	ESEA	LMIC	No	CU	CB	74	63	41	... ...	...	National	Medium	National
Montenegro	ENA	UMIC	No	...	...	...	...	...	...	...	National	Medium	National
Montserrat	LAC	...	...	...	...	100	100	100	100 -2	25 -3	...	...	...
Morocco	NAWA	LMIC	Yes	CB	CB	84	70	89	97 -1	20 -1	National	...	National
Mozambique	SSA	LIC	No	CB	...	...	...	...	...	...	National	High	Subnational
Myanmar	ESEA	LMIC	No	CB	CB	75	68	59	64 -2	1 -3	...	...	...
Namibia	SSA	UMIC	Yes	CB	CB	...	...	...	73 -3	...	National	Medium	National
Nauru	OCE	HIC	...	...	...	...	86	...	100 -2	...	...	...	...
Nepal	CSA	LMIC	...	CS	...	47	...	...	50 -1	...	National	Medium	National
Netherlands	ENA	HIC	No	CU	CB	100	100	100	100 -2	...	...	...	...
New Zealand	OCE	HIC	No	...	. . .	...	...	...	...	...	National	...	National
Nicaragua	LAC	LMIC	Yes	CB	CB	54	12	40	...	...	...	...	...
Niger	SSA	LIC	No	CB	...	16	25	15	5 -1	0 -5	None	...	None
Nigeria	SSA	LMIC	...	CS	...	36	38	28	...	...	National	High	National
Niue	OCE	...	Yes	...	CB	100	100	100	100 -1	100 -1	...	...	...
North Macedonia	ENA	UMIC	No	...	CB	...	...	...	...	...	National	Medium	National
Norway	ENA	HIC	No	...	CB	100	100	100	100 -1	...	None	...	National
Oman	NAWA	HIC	Yes	...	CB	100	96	100	100 -1	...	National	High	National
Pakistan	CSA	LMIC	No	CU	...	57	...	...	62 -4	...	None	...	None
Palau	OCE	HIC	...	...	...	...	...	...	84 -1	84 -1	...	...	...
Palestine	NAWA	LMIC	...	...	CB	78	81	21	100 -1	54 -1	National	High	National
Panama	LAC	UMIC	...	No	...	...	...	...	82 -1	...	Subnational	...	National
Papua New Guinea	OCE	LMIC	Yes	CS	UD	47	46	12	...	...	National	Medium	None
Paraguay	LAC	UMIC	...	No	CB	67	...	62	94 -5	...	National	Medium	National
Peru	LAC	UMIC	No	CB	CB	80	61	...	85 -1	37 -1	National	Medium	National
Philippines	ESEA	LMIC	Yes	CB	CB	47	39	54	98 -1	8 -1	National	Medium	National
Poland	ENA	HIC	No	...	CB	100	100	100	100 -5	...	National	High	National
Portugal	ENA	HIC	...	...	CB	100	100	100	100 -3	...	National	High	National
Qatar	NAWA	HIC	No	...	CB	100	100	100	100 -1	100 -1	National	High	Subnational
Republic of Korea	ESEA	HIC	No	...	CB	100	100	100	100 -5	...	National	High	National
Republic of Moldova	ENA	UMIC	Yes	CS	...	92	81	100	100 -2	...	National	High	National
Romania	ENA	UMIC	No	...	CB	72	72	72	...	...	Subnational	...	None
Russian Federation	ENA	UMIC	Yes	CU	CB	...	...	...	...	...	Subnational	...	Subnational
Rwanda	SSA	LIC	...	CB	CB	55	65	52	61 -2	23 -2	...	...	...
Saint Kitts and Nevis	LAC	HIC	No	...	CS	84	...	84	100 -5	...	...	...	...
Saint Lucia	LAC	UMIC	No	...	CB	100	100	100	100 -1	1 -1	National	High	None
Saint Vincent and the Grenadines	LAC	UMIC	...	...	...	100	100	100	100 -3	100 -3	...	...	...
Samoa	OCE	LMIC	Yes	CU	CP	100	...	100	99 -1	45 -1	National	High	National
San Marino	ENA	HIC	...	...	CB	100	100	100	100 -1	100 -1	None	...	National
Sao Tome and Principe	SSA	LMIC	Yes	...	...	...	76	...	87 -4	...	National	High	National
Saudi Arabia	NAWA	HIC	Yes	...	...	100	100	100	100 -1	100 -1	National	High	National
Senegal	SSA	LMIC	Yes	CS	CB	45	16	22	46 -1	33 -1	...	...	None
Serbia	ENA	UMIC	No	...	CB	72	74	73	...	...	National	High	National
Seychelles	SSA	HIC	Yes	...	CB	100	100	100	100 -1	7 -1	Subnational	...	Subnational
Sierra Leone	SSA	LIC	Yes	CB	CB	63	20	...	14 -1	11 -1	...	...	...
Singapore	ESEA	HIC	Yes	...	...	100	100	100	100 -2	94 -2	National	...	National

	SCHOOL HEALTH SERVICES				POLICIES						
School-based anti-bullying (perceived reach)	School-based immunization (delivery)	Coverage of PC against STH among school-age children, 5–14 y.o. (%)	Coverage of PC against schistosomiasis among school-age children, 5–14 y.o. (%)	Children receiving school feeding (000)	Standards on health-promoting schools	Law/policy on sexuality education	Smoke-free legislation in educational facilities (except universities)	Policy on physical education	School feeding policy	Policy commitment related to school nutrition action	Country code
	JRF Immunization	PC Data Portal		State of school feeding worldwide	SRMNCAH Policy Survey	CSE Status Report	Global tobacco epidemic report	QPE Survey	State of school feeding worldwide	GINA	
	2020	2019		2020	2018–2019	2021	2020	2021	2020	2022	
...	No	...	...	...	Yes	PS	Yes	...	...	...	MCO
Medium	Yes	...	...	309	Yes	PB	Yes	Yes	Yes	Yes	MNG
Medium	Yes	...	...	...	...	No	Yes	...	...	Yes	MNE
...	...	...	...	...	...	...	...	...	...	No	MSR
...	...	...	...	1267	Yes	PB	Yes	Yes	...	Yes	MAR
...	Yes	72	96	200	Yes	PB	No	...	Yes	Yes	MOZ
...	No	96	...	353	Yes	No	Yes	UD	No	Yes	MMR
Low	Yes	...	...	366	Yes	PB	Yes	UD	Yes	Yes	NAM
...	...	...	...	3	...	PB	Yes	...	No	Yes	NRU
Medium	No	54	...	636	Yes	PS	Yes	...	Yes	Yes	NPL
...	No	...	...	...	...	SL	No	Yes	...	Yes	NLD
...	Yes	...	...	...	...	PB	Yes	Unknown	...	Yes	NZL
...	No	95	...	1200	No	PS	Yes	Yes	...	Yes	NIC
...	No	54	100	193	Yes	PB	Yes	...	Yes	Yes	NER
High	No	71	99	9830	Yes	PB	Yes	...	Yes	Yes	NGA
...	...	...	...	...	...	No	Yes	Yes	...	Yes	NIU
High	Yes	...	...	...	Unknown	No	Yes	Yes	...	Yes	MKD
Medium	Yes	...	...	...	Yes	...	Yes	Yes	...	Yes	NOR
High	Yes	...	...	...	Yes	PS	No	Yes	...	Yes	OMN
...	...	17	...	10405	No	SL	Yes	...	...	Yes	PAK
...	No	...	...	2	Unknown	PB	Yes	...	Yes	Yes	PLW
High	Yes	...	...	65	...	...	Yes	Yes	...	Yes	PSE
High	Yes	...	...	463	Yes	No	Yes	...	Yes	Yes	PAN
...	Yes	4	...	...	...	PB	Yes	UD	...	Yes	PNG
Medium	Yes	...	...	1086	Yes	No	Yes	Yes	...	No	PRY
Medium	No	...	...	2398	No	PB	Yes	Yes	...	No	PER
Medium	Yes	59	56	2300	Unknown	PB	Yes	Yes	Yes	Yes	PHL
High	No	...	...	730	Unknown	...	Yes	Yes	...	Yes	POL
High	...	...	...	1317	Yes	...	Yes	Yes	Yes	Yes	PRT
...	Yes	...	...	130	...	...	No	Yes	...	Yes	QAT
High	...	...	...	...	...	No	Yes	Yes	...	Yes	KOR
High	No	...	...	305	Yes	PS	Yes	...	Yes	Yes	MDA
...	No	...	...	...	No	...	Yes	Yes	...	Yes	ROU
...	Yes	...	...	8287	Yes	No	Yes	Yes	...	Yes	RUS
...	Yes	100	70	724	Yes	PB	No	Yes	No	Yes	RWA
...	Yes	...	...	5	Unknown	...	No	Unknown	...	Yes	KNA
...	Yes	...	...	7	...	PS	Yes	Yes	Yes	Yes	LCA
...	Yes	...	...	8	...	PB	No	...	...	Yes	VCT
Medium	Yes	...	...	...	...	SL	Yes	No	...	Yes	WSM
High	...	...	...	...	Yes	...	Yes	Yes	...	Yes	SMR
Medium	...	76	61	47	...	PB	No	...	Yes	Yes	STP
High	No	...	...	2790	Yes	No	Yes	...	...	Yes	SAU
...	Yes	55	76	588	Yes	PB	Yes	Yes	Yes	Yes	SEN
High	...	...	...	155	No	PP	Yes	Yes	...	Yes	SRB
...	Yes	...	...	8	...	PB	Yes	Yes	...	Yes	SYC
...	No	76	84	836	Yes	PB	No	UD	No	Yes	SLE
...	...	...	...	198	Yes	PS	Yes	...	...	Yes	SGP

Annex 2

			EDUCATION			PHYSICAL ENVIRONMENT					SOCIOEMOTIONAL ENVIRONMENT		
Country/territory	Region	Income group	Nutrition education in school curriculum	Sexuality education in school curriculum	Physical education in school curriculum	Schools with basic water service (%)	Schools with basic sanitation service (%)	Schools with basic hygiene service (%)	Primary schools with access to electricity (%)	Primary schools with access to infrastructure adapted for students with disabilities (%)	Helping children protect themselves from sexual abuse (level of support)	Helping children protect themselves from sexual abuse (perceived reach)	School-based anti-bullying (level of support)
Source			GNPR survey	CSE Status Report	QPE Survey	JMP WASH			UIS		Report on preventing violence against children		
Reference year			2016-2017	2021	2021	2019			2021		2018		
Sint Maarten	LAC	HIC	...	...	...	...	...	...	...	...	...	...	...
Slovakia	ENA	HIC	Yes	...	CB	100	100	100	100 -5	14 -5	National	Low	National
Slovenia	ENA	HIC	Yes	...	CB	100	100	100	100 -5	...	National	Medium	National
Solomon Islands	OCE	LMIC	Yes	CU	No	17	27	17	56 -2	...	National	High	National
Somalia	SSA	LIC	...	No	...	...	...	...	...	...	Subnational	...	Subnational
South Africa	SSA	UMIC	Yes	CB	CB	77	...	...	...	...	National	High	National
South Sudan	SSA	LIC	...	CB	...	51	37	18	...	...	National	Medium	National
Spain	ENA	HIC	No	CU	CB	100	100	100	100 -1	...	National	High	National
Sri Lanka	CSA	LMIC	Yes	CU	CB	83	96	...	99 -2	...	National	Medium	National
Sudan	NAWA	LIC	No	No	...	...	...	...	54 -5	...	National	High	None
Suriname	LAC	UMIC	Yes	CB	UD	...	...	...	...	...	Subnational	...	Subnational
Sweden	ENA	HIC	Yes	CU	CB	...	...	...	...	...	National	High	National
Switzerland	ENA	HIC	Yes	CU	CB	100	100	100	100 -5	...	Subnational	...	Subnational
Syrian Arab Republic	NAWA	LIC	No	...	...	49	49	21	...	...	Subnational	...	National
Tajikistan	CSA	LMIC	Yes	CS	...	79	47	26	...	...	None	...	None
Thailand	ESEA	UMIC	Yes	CB	CB	...	...	...	100 -1	...	National	Medium	National
Timor-Leste	ESEA	LMIC	Yes	CU	...	69	38	60	84 -2	...	National	High	National
Togo	SSA	LIC	Yes	CS	...	20	65	...	23 -1	2 -1	National	Low	None
Tokelau	OCE	...	...	...	...	...	...	...	100 -1	0 -1	...	...	...
Tonga	OCE	UMIC	Yes	CU	...	...	...	...	83 -1	1 -1	...	...	...
Trinidad and Tobago	LAC	HIC	Yes	...	CB	...	...	...	...	...	National	High	National
Tunisia	NAWA	LMIC	Yes	No	CB	70	63	38	100 -1	...	Subnational	...	Subnational
Türkiye	NAWA	UMIC	No	...	CB	...	...	...	...	...	National	...	National
Turkmenistan	CSA	UMIC	...	...	...	...	...	...	100 -1	1 -1	...	...	...
Turks and Caicos Islands	LAC	HIC	...	...	...	100	100	100	100 -1	...	...	...	...
Tuvalu	OCE	UMIC	No	CU	CB	...	...	...	90 -1	10 -1	None	...	None
Uganda	SSA	LIC	No	CB	CS	68	80	30	...	...	National	Medium	Subnational
Ukraine	ENA	LMIC	...	CS	...	...	...	82	100 -1	66 -1	National	High	National
United Arab Emirates	NAWA	HIC	...	...	...	100	100	100	100 -1	100 -1	...	...	...
United Kingdom of Great Britain and Northern Ireland	ENA	HIC	Yes	CU	CB	...	...	...	...	...	National	Medium	National
United Republic of Tanzania	SSA	LMIC	Yes	CB	...	...	...	21	43 -1	...	National	Medium	National
United States of America	ENA	HIC	No	...	...	100	100	100	...	...	National	High	National
Uruguay	LAC	HIC	...	CB	...	100	...	...	100 -2	100 -2	National	High	National
Uzbekistan	CSA	LMIC	No	CS	...	90	92	89	100 -1	30 -1	Subnational	...	Subnational
Vanuatu	OCE	LMIC	Yes	CU	...	...	...	...	67 -6	...	National	Medium	National
Venezuela (Bolivarian Republic of)	LAC	...	Yes	CB	...	97	90	...	99 -5	...	...	...	...
Viet Nam	ESEA	LMIC	No	CU	CB	...	...	...	100 -1	32 -1	National	High	National
Yemen	NAWA	LIC	Yes	...	...	...	...	...	... ...	...	...	...	...
Zambia	SSA	LMIC	Yes	CB	...	79	66	57	36 -4	4 -5	National	High	National
Zimbabwe	SSA	LMIC	Yes	CB	CB	66	...	...	60 -1	19 -1	National	High	National

		SCHOOL HEALTH SERVICES				POLICIES						
School-based anti-bullying (perceived reach)	School-based immunization (delivery)	Coverage of PC against STH among school-age children, 5–14 y.o. (%)	Coverage of PC against schistosomiasis among school-age children, 5–14 y.o. (%)	Children receiving school feeding (000)	Standards on health-promoting schools	Law/policy on sexuality education	Smoke-free legislation in educational facilities (except universities)	Policy on physical education	School feeding policy	Policy commitment related to school nutrition action	Country code
	JRF Immunization	PC Data Portal		State of school feeding worldwide	SRMNCAH Policy Survey	CSE Status Report	Global tobacco epidemic report	QPE Survey	State of school feeding worldwide	GINA	
	2020	2019		2020	2018–2019	2021	2020	2021	2020	2022	
...	...	...	...	...	...	...	...	...	...	...	SXM
High	No	...	...	191	Yes	...	Yes	Yes	...	Yes	SVK
High	No	...	...	105	Yes	...	Yes	Yes	...	Yes	SVN
Medium	Yes	3	...	...	...	SL	Yes	No	...	Yes	SLB
...	No	...	...	165	No	...	No	...	...	No	SOM
Medium	Yes	59	...	9200	Yes	PB	No	Yes	Yes	Yes	ZAF
Low	No	42	11	460	No	PB	No	...	Yes	No	SSD
High	No	...	...	1759	No	PB	Yes	Yes	...	No	ESP
Medium	Yes	...	...	1467	Yes	SL	Yes	Yes	Yes	Yes	LKA
...	No	22	55	1362	Yes	PB	No	...	No	Yes	SDN
...	Yes	...	...	...	No	No	Yes	Yes	...	Yes	SUR
High	Yes	...	...	1181	Yes	SL	No	Yes	...	Yes	SWE
...	Yes	...	...	81	...	SL	No	Unknown	Yes	No	CHE
Medium	Yes	92	...	1309	Yes	PB	Yes	...	No	No	SYR
...	No	99	...	417	Yes	PS	Yes	...	Yes	Yes	TJK
High	Yes	...	...	4082	Yes	SL	Yes	UD	Yes	No	THA
High	...	82	...	302	...	No	Yes	...	Yes	Yes	TLS
...	No	98	34	91	No	PB	Yes	...	Yes	Yes	TGO
...	Yes	...	...	...	...	...	...	...	...	...	TKL
...	Yes	...	...	10	...	PB	Yes	...	...	Yes	TON
High	Yes	...	...	141	No	...	Yes	Yes	Yes	Yes	TTO
...	Yes	...	...	360	...	PS	No	Yes	Yes	Yes	TUN
...	Yes	...	...	6182	Yes	...	Yes	Yes	...	Yes	TUR
...	No	...	...	...	Yes	...	Yes	...	...	Yes	TKM
...	Yes	...	...	...	...	...	...	...	...	...	TCA
...	Yes	91	...	...	...	No	No	No	...	Yes	TUV
...	Yes	58	61	3651	Yes	PB	Yes	Yes	Yes	Yes	UGA
Medium	No	...	...	762	...	PS	Yes	...	...	Yes	UKR
...	Yes	...	...	821	Yes	PS	Yes	...	Yes	Yes	ARE
Medium	Yes	...	...	1275	...	SL	Yes	Yes	...	Yes	GBR
High	Yes	57	65	28	Yes	PB	No	...	...	Yes	TZA
Medium	...	...	...	30000	...	...	No	...	Yes	Yes	USA
Medium	No	...	...	274	No	PS	Yes	...	Yes	Yes	URY
...	Yes	...	...	1130	Yes	PS	No	...	...	Yes	UZB
Medium	Yes	70	...	...	Yes	PB	No	...	...	Yes	VUT
...	Yes	...	...	1904	Yes	PB	Yes	...	...	Yes	VEN
High	No	98	...	0	Yes	PB	Yes	Yes	No	Yes	VNM
...	No	45	94	680	Yes	...	Yes	...	Yes	Yes	YEM
High	Yes	...	...	1194	Yes	PB	Yes	...	No	Yes	ZMB
Medium	Yes	...	...	3219	Unknown	PB	Yes	Yes	No	Yes	ZWE

Ready to learn and thrive

School health and nutrition around the world

School health and nutrition programmes are among the most widely implemented public policies in the world. Governments recognize that these initiatives significantly improve health, nutrition and learning outcomes for school-age children and adolescents and deliver big development gains to their communities and countries. Yet too many children are still missing out on the integrated programmes they need.

Drawing on existing literature, the most up-to-date data, and case studies from around the world, this report provides the first overview of the extent to which countries are supporting their children and adolescents through school health and nutrition policies and programmes. It encourages efforts to improve, scale up, sustain and monitor the progress of these programmes to address learners' needs holistically, so that all children and adolescents can learn and thrive.

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