

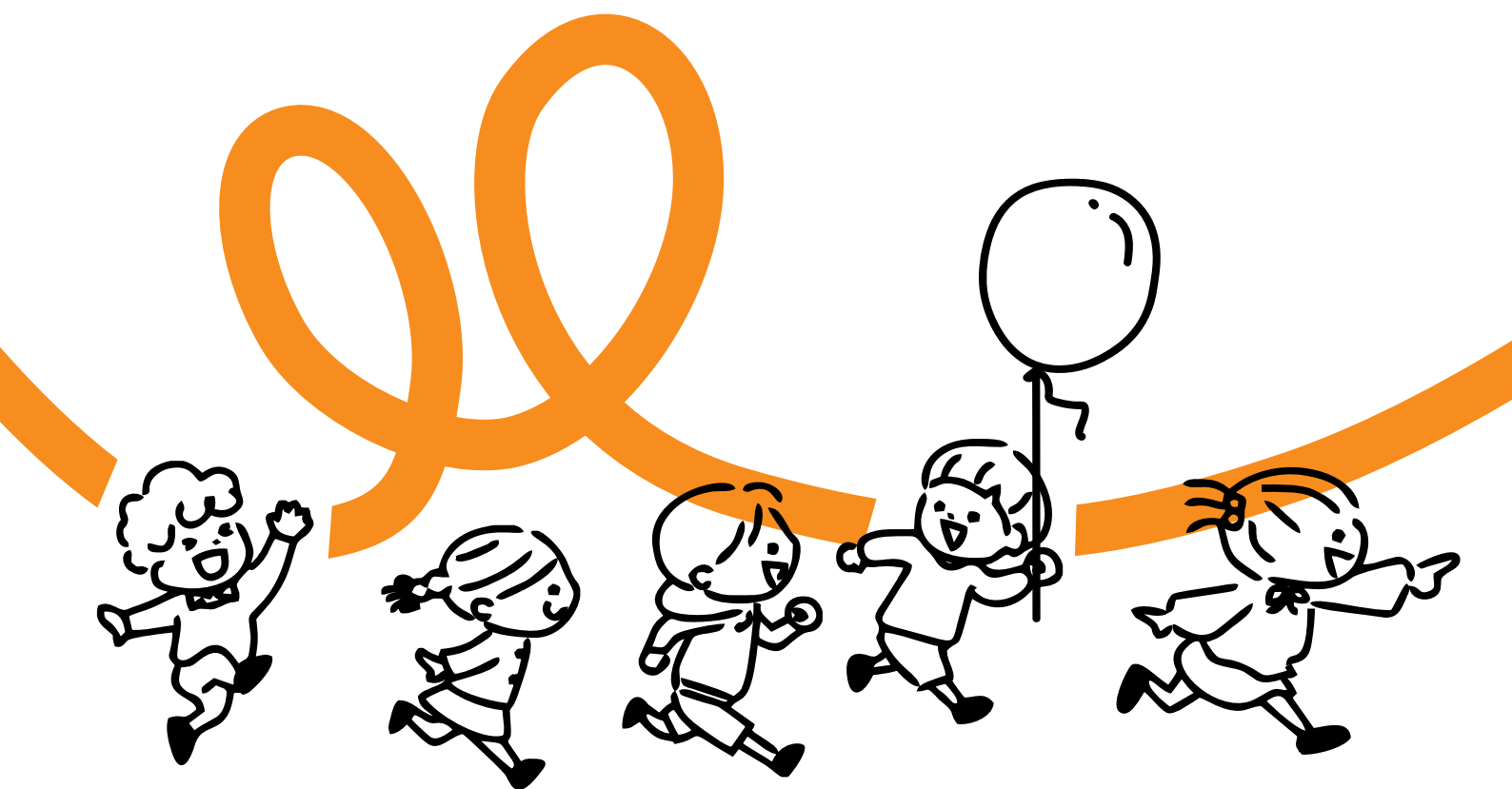
WHO European Childhood Obesity Surveillance Initiative (COSI)

Report on the sixth round of data collection, 2022–2024



World Health
Organization

European Region



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Abstract

Unhealthy bodyweight in children affects physical and mental health, school performance and quality of life, while also raising the risk of obesity and noncommunicable diseases later in life. Reliable data are essential to guide action against childhood obesity and to track progress. To this end, WHO established the European Childhood Obesity Surveillance Initiative (COSI) in 2007. This is now the largest childhood obesity surveillance initiative in the world, with the participation of 48 countries in 2024.

This report presents findings from COSI's sixth round (2022–2024), covering about 470 000 children aged 6–9 years across 37 countries, with additional information on family and health behaviours for over 150 000 children. Overall, 25% of children aged 7–9 years were living with overweight (including obesity) and 11% with obesity. Large differences continue in prevalence between countries, with the prevalence of overweight ranging from 9–42% and prevalence of obesity ranging from 3–20%.

Unhealthy dietary habits were common, and only about half of children travel actively to school. These findings highlight that childhood obesity continues to pose a serious public threat to the Region and underscore that comprehensive policy action is urgently needed at international, national and local levels.

Keywords

EUROPE; CHILD; PEDIATRIC OBESITY; OVERWEIGHT; NUTRITION SURVEYS; EPIDEMIOLOGICAL MONITORING

Document number: WHO/EURO:2025-11788-51560-78769 (PDF)

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Cataloguing-in-Publication (CIP) data. CIP data are available at HYPERLINK "<http://apps.who.int/iris/>" "http://apps.who.int/iris.

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Acknowledgements

This report was made possible through the support and commitment of the Principal Investigators of the WHO European Childhood Obesity Surveillance Initiative (COSI) and their colleagues. Special thanks are also due to the data collectors, school officials, parents/caregivers and children who participated in the survey. The WHO Regional Office for Europe also wishes to thank the Member States of the WHO European Region for their support, leadership and commitment to this initiative.

The Regional Office also sincerely thanks Harry Rutter (University of Bath, United Kingdom of Great Britain and Northern Ireland) and Wolfgang Ahrens (Leibniz Institute for Prevention Research and Epidemiology, Bremen, Germany; WHO Collaborating Centre for Obesity Prevention, Nutrition and Physical Activity) for overall advice on the design of COSI and its protocol, and Gerben Rienk (Trial Data Solutions, Netherlands (Kingdom of the)) for data management.

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The data have been made available by the Netherlands Centre for Youth Healthcare and the youth healthcare organizations.

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Vladyslav Zbanatskyi and Iryna Skorbun, Ukrainian-Swiss Project «Reducing Risk-factors for Non-Communicable Diseases in Ukraine»
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Mirjam Heinen (technical support of COSI round 6 data collection), Daniela-Maria Madan (technical support and report review) and Stephen Whiting (technical support and report review)



Data collection in participating countries was carried out with financial support from the following institutions and organizations: **Albania:** WHO Country Office in Albania, WHO Regional Office for Europe and United Nations Children's Fund (UNICEF), Institute of Public Health; **Armenia:** WHO Country Office in Armenia, WHO Regional Office for Europe, Arabkir Medical Centre – Institute of Child and Adolescent Health and World Food Programme Country Office; **Austria:** Federal Ministry of Social Affairs, Health, Care and Consumer Protection; **Azerbaijan:** WHO Country Office in Azerbaijan and WHO Regional Office for Europe; **Belgium:** Flemish Agency for Care and Health; **Bulgaria:** Ministry of Health, National Center of Public Health and Analyses; **Croatia:** Ministry of Health and Croatian Institute of Public Health; **Cyprus:** Ministry of Health Cyprus (Dietetic Department); **Czechia:** Czech Ministry of Health and Institute of Endocrinology; **Denmark:** The Danish Ministry of Health; **Estonia:** National Institute for Health Development; **Finland:** Finnish Institute for Health and Welfare; **France:** Santé publique France, French Public Health Agency; **Georgia:** National Center for Disease Control and Public Health (Georgia) and WHO Regional Office for Europe; **Germany:** Senator for Health, Women and Consumer Protection and Senator for Science and Ports, Free Hanseatic City of Bremen, Germany (partial support) and Leibniz Institute for Prevention Research and Epidemiology – BIPS; **Greece:** International Hellenic University; **Hungary:** Ministry of Human Capacities (State Secretariat for Health); **Ireland:** Health Service Executive (HSE) Healthy Eating Active Living Programme; **Israel:** Ministry of Health; **Italy:** Istituto Superiore di Sanità [Italian National Institute of Health]; **Kazakhstan:** State educational grant for training PhD doctor S. Abdrakhmanova; **Kyrgyzstan:** WHO Country Office in the Kyrgyz Republic, The Republican Center for Health Promotion and Mass Communication, Ministry of Health of the Kyrgyz Republic; **Latvia:** Ministry of Health; **Lithuania:** WHO Country Office in Lithuania and the WHO Regional Office for Europe; **Luxembourg:** Ministry of Health and Social Security; **Malta:** Ministry for Health and Active Ageing; **Montenegro:** Institute of Public Health of Montenegro; **Netherlands (Kingdom of the):** Ministry of Health, Welfare and Sport; **North Macedonia:** Ministry of Health, Institute of Public Health and Centers of Public Health; **Norway:** Ministry of Health and Care Services and Norwegian Institute of Public Health; **Poland:** National Health Programme 2021-2025, Ministry of Health; **Portugal:** National Health Service Regional and Local Institutions / Ministry of Health, the National Institute of Health Doutor Ricardo Jorge, and the kind technical support of the Centre for Studies and Research in Social Dynamics and Health; **Republic of Moldova:** WHO Country Office in the Republic of Moldova; **Romania:** Ministry of Health, National Institute of Public Health; **San Marino:** Health Authority and Institute for Social Security; **Serbia:** WHO Regional Office for Europe; **Slovakia:** Ministry of Health and Office of Public Health of the Slovak Republic; **Slovenia:** Ministry of Education, Science and Sport of the Republic of Slovenia within the SLOfit surveillance system; **Spain:** Spanish Agency for Food Safety and Nutrition; Servicio Canario de la Salud del Gobierno de Canarias; **Sweden:** Public Health Agency of Sweden; **Switzerland:** Federal Office of Public Health, Switzerland; **Tajikistan:** Ministry of Health and Social Protection of Population; **Türkiye:** Ministry of Health, General Directorate of Public Health; **Turkmenistan:** Ministry of Health and medical industry of Turkmenistan; **Ukraine:** The Swiss Agency for Development and Cooperation, within the framework of Ukrainian-Swiss Project “Reducing Risk Factors for Non-Communicable Diseases in Ukraine,” led by GFA Consulting Group GmbH; **Uzbekistan:** WHO Country Office in Uzbekistan.

This work is part of the activities carried out under the WHO Europe Special Initiative on NCDs and Innovation, which is financially supported by grants from the governments of Denmark, Estonia, Finland, France, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Norway, Slovenia, and Sweden.

Abbreviations

BMI	body mass index
CI	confidence interval
COVID-19	coronavirus disease
COSI	Childhood Obesity Surveillance Initiative
IOTF	International Obesity Task Force
NCD	noncommunicable disease

Country codes for Member States of the WHO European Region included in the report

Country Code	Country Name	Country Code	Country Name
ALB	Albania	LUX	Luxembourg
ARM	Armenia	MAT	Malta
AUT	Austria	MDA	Republic of Moldova
AZE	Azerbaijan	MKD	North Macedonia
BEL	Belgium	MNE	Montenegro
BUL	Bulgaria	NET	Netherlands (Kingdom of the)
CRO	Croatia	NOR	Norway
CYP	Cyprus	POL	Poland
CZH	Czechia	POR	Portugal
DEN	Denmark	ROM	Romania
EST	Estonia	RUS-MS	Russian Federation – Moscow
FIN	Finland	RUS-YK	Russian Federation – Yekaterinburg
FRA	France	SMR	San Marino
GEO	Georgia	SPA	Spain
GER-BR	Germany – Bremen federal state	SRB	Serbia
GRE	Greece	SVK	Slovakia
HUN	Hungary	SVN	Slovenia
IRE	Ireland	SWE	Sweden
ISR	Israel	SWI	Switzerland
ITA	Italy	TJK	Tajikistan
KAZ-AL	Kazakhstan – Almaty city	TKM	Turkmenistan
KGZ	Kyrgyzstan	TUR	Türkiye
LTU	Lithuania	UKR	Ukraine
LVA	Latvia	UZB	Uzbekistan

Executive summary



The sixth round of the WHO European Childhood Obesity Surveillance Initiative (COSI) collected data, using standardized methods, on approximately 470 000 children aged 6–9 years in 37 participating countries in the WHO European Region from 2022–2024. Additional data on family situation and health-related behaviours were collected on over 150 000 of these children.

Prevalence of overweight, obesity and thinness

Among the countries participating in the sixth round, 25% of children aged 7–9 years were living with overweight (including obesity) according to WHO definitions. Prevalence among boys in this age group was 27%, while among girls it was 23%. Overall, prevalence of obesity was 11%; prevalence was higher among boys in this age group, at 13%, compared to 9% among girls.

As in previous rounds of COSI, there continue to be large differences between countries – with prevalence of overweight ranging from 9–42% and prevalence of obesity ranging from 3%–20%. In most countries (24 of 37), more than one in 10 children – and almost one in five in several southern European countries – were living with obesity.

The study population in round 6 of COSI differs from that in round 5 (2018–2020), as different groups of countries participated in each round. Therefore, the overall estimates for round 6 are not directly comparable with those from the previous round, which were published in the round 5 report.¹ However, when pooling data only from the 28 countries that participated in both rounds, a general tendency toward stability emerged. Despite this, a statistically significant change in the prevalence of overweight among boys, girls or both was observed in eight countries: four showed an increase (Bulgaria, Malta, Slovenia and Sweden), while four showed a decrease (Greece, Israel, Italy and Spain). A similar pattern emerged for obesity, although when a change in prevalence occurred, it more frequently involved an increase (four countries – Finland, Malta, Slovenia and Sweden – recorded a statistically significant rise) rather than a decrease (only San Marino).

Taking into account all the latest available data – including data from previous rounds of COSI for countries that did not participate in the sixth round – there were only six of 46 countries (47 study locations) where fewer than one in five children aged 7–9 years were affected by overweight and only 19 countries (20 study locations) where fewer than one in 10 children were living with obesity.

For the first time, the COSI report includes information on the prevalence of thinness – which, like overweight and obesity, can affect child development, health and well-being. Levels of thinness were relatively low – overall prevalence was 3% – but higher in some eastern European and central Asian countries. The highest prevalence was found in Romania (7%), Uzbekistan and North Macedonia (both 5%), followed by Azerbaijan, Kazakhstan (Almaty only), Republic of Moldova and Poland (all 4%). These countries also have levels of obesity prevalence ranging from 3–15% and are thus facing the double burden of malnutrition – whereby undernutrition coexists with overweight and obesity.

COSI round 6 data confirm previous COSI findings that parents do not always accurately perceive their child's weight status, particularly the parents of children with overweight or obesity. Overall, nearly two thirds (66%) of children living with overweight are perceived by their parents to be under or normal weight.

¹ Report on the fifth round of data collection, 2018–2020: WHO European Childhood Obesity Surveillance Initiative (COSI). Copenhagen: WHO Regional Office for Europe; 2022 (<https://iris.who.int/handle/10665/363950>). License: CC BY-NC-SA 3.0 IGO.

At the country level, more than half of the parents of children living with overweight underestimate their child's weight status in all countries with data available. These findings point to the need for ongoing education and awareness-raising to influence social norms and to involve parents in the prevention and treatment of childhood obesity.

Eating habits

Unhealthy diets are an important determinant of overweight and obesity. COSI collects data on a relatively small set of eating-related behaviours of children aged 6–9 years, collected through an additional family questionnaire, which is optional for countries and is completed by parents or caregivers. Data were available on the consumption of soft drinks containing sugar, fresh fruit and vegetables in 31 countries; breakfast in 30 countries; sweets in 29 countries; and savoury snacks in 27 countries. For the first time in COSI, data were collected on meals ordered online, and these data were available for 18 countries.

Overall, three quarters (75%) of 6–9-year-old children consumed breakfast every day – meaning that a quarter of children did *not* have breakfast daily. At the country level, the prevalence of daily breakfast ranged from 27–93% and the levels were similar among boys and girls in most countries, but more common among children of parents with a high level of education in nearly all countries.

Less than half (46%) of 6–9-year-old children consumed fresh fruit daily and less than a third (32%) consumed vegetables at least once a day. The limited differences between boys and girls that were observed tended to show that daily consumption of both fruit and vegetables was higher in girls than boys. Children of parents with a higher level of education were more likely to consume fruit or vegetables daily in most countries. Among the 21 countries with data, very few children consumed five or more portions of fresh fruits and/or vegetables on a typical day – in 16 countries, less than 5% of children consumed the five or more portions that WHO recommends.

Among the countries with data, 16% of 6–9-year-olds consumed savoury snacks more than three days per week, 41% consumed sweets more than three days per week, and 29% consumed soft drinks containing sugar more than three days per week. The only gender differences were that frequent soft drink consumption was slightly more common in boys than girls. Frequent consumption of savoury snacks and soft drinks containing sugar was, in general, more common in children of parents with a low to medium level of education than children of those with a high level of education.

Recent years have seen a substantial increase in the consumption of food ordered online in the WHO European Region. In most of the 18 countries with data, more than half of the families consumed meals ordered online never or less than once a month. The proportion of families ordering meals online more than once a month ranged from 8% to 39%.

Physical activity

Regular physical activity is an important part of a healthy lifestyle at all ages – it is important for maintaining a healthy weight, the prevention of noncommunicable diseases (NCDs) and the promotion of mental health and well-being. Data on physical activity among 6–9-year-olds – as with eating habits, collected through an additional family questionnaire – were available on travel to and from school in 31 countries and time spent playing actively or vigorously in 26 countries.



More than half (53%) of children in the countries participating in the sixth round travelled to school on foot or by bike or skating, compared to 40% that travelled by motorized vehicle. The remaining 7% used a combination of these modes. There are large variations between countries and, in only 13 of the countries with data, more children travelled to school actively than by motorized vehicle. There were very few gender differences, but there were differences by level of education – children of parents with a low to medium level of education were more likely to go to and from school on foot or by bike or skating in comparison to children of parents with a high level of education in most countries.

On average, almost all children played actively or vigorously for at least an hour a day throughout the week – overall, 94% of children did so on weekdays and 97% did so on weekends. There were few differences by gender or level of parental education.

Screen time and sleep duration

As children grow and develop, it is important that, as well as being physically active, they have low levels of sedentary behaviour and they get enough sleep each day. For the sixth round of COSI, data were collected on screen time in 29 countries and on sleep duration in 31 countries.

Among children in the participating countries, 42% of 6–9-year-olds spent at least two hours a day watching television or using electronic devices (together known as screen time) on weekdays and 78% on weekends. Boys were more likely than girls to spend at least two hours watching television or using devices on an average day (45% and 41%, respectively), and there was a tendency for a higher percentage of children of parents with a low to medium level of education to have at least two hours of screen time on an average day than children of parents with a high level of education.

The vast majority (89%) of children were sleeping at least nine hours per night, while the percentage of children sleeping at least 10 hours per night was lower (47%). In only two of the 31 countries – Latvia and Kazakhstan (Almaty only) – the percentage of children sleeping for at least nine hours per night was below 80%. There were no differences by gender. There was no clear relationship with level of parental education.

The sixth round of COSI represents the first full round of data collection since the height of the coronavirus disease (COVID-19) pandemic, and its findings should be seen alongside the findings of the specific COSI-COVID study conducted in 17 countries to investigate the impact of the pandemic on children's daily routine and behaviours.² This study, which investigated, for the first time, the negative impact that the pandemic had on children's well-being, reported a doubling in parents who perceived their child as overweight and pointed to mixed results on eating habits, a nearly 30% decline in physical activity on weekdays and, for around one third of children, an increase in screen time.

In many countries, there are clear differences in children's behaviours by level of parental education (as an indicator of socioeconomic status), but the association is not consistent across all countries. The healthier eating habits tend to be more common in children of parents with a higher level of education in most countries. Conversely, two healthier behaviours – active travel to school and sleeping for at least nine hours per night – tended to be more common among children of parents with a low to medium level of education.

² Report on the impact of the COVID-19 pandemic on the daily routine and behaviours of school-aged children: results from 17 Member States in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2024 (<https://iris.who.int/handle/10665/376574>). License: CC BY-NC-SA 3.0 IGO.

While these results suggest that prevalence may have stabilized in some countries, the overall picture is mixed. Taken together, the stubbornly high prevalence of obesity, the lack of progress in reducing the prevalence of childhood overweight, the double burden of underweight and overweight facing several countries, and the persistence of unhealthy eating and sedentary behaviours, clearly show that there is no room for complacency. Childhood obesity continues to pose a serious public health threat to the Region and urgent policy action, as well as ongoing collection of reliable data to monitor the situation, is needed.

There is no one single intervention that can halt the rise of childhood overweight and obesity. Comprehensive policy action – at the international, national and local levels – is needed to create healthier environments, promote healthy diets and physical activity, and address the behaviours of commercial actors that market unhealthy products and undermine the implementation of effective policy responses.

WHO has set out a range of policy options to help create healthy and sustainable food environments and generate opportunities for physical activity. The Special Initiative on NCDs and Innovation is committed to supporting Member States of the Region to implement these policies across the Region in order to tackle childhood overweight and obesity and protect current and future generations.

Key findings from the sixth round of the WHO European Childhood Obesity Surveillance Initiative (COSI), 2022–2024

- Overall, across the 37 participating countries, one in four (25%) children were living with overweight (including obesity) according to WHO definitions, and one in ten (11%) were living with obesity.
- The prevalence of both overweight and obesity was higher among boys than girls.
- Large differences continue between countries, with the prevalence of overweight ranging from 9–42% and prevalence of obesity ranging from 3–20%.
- The prevalence of both overweight and obesity tended to be stable among the 28 countries that participated in both this round and the previous COSI round in 2018–2020. Despite this, where changes occurred, they were more likely to be increases rather than decreases.
- The inclusion of thinness data in this COSI report, for the first time, highlights that some countries in the Region face the double burden of malnutrition, where undernutrition coexists with overweight and obesity.
- Unhealthy dietary habits were relatively common: more than half (54%) of children did not consume fresh fruit daily; 68% did not consume fresh vegetables at least once a day; and savoury snacks, sweets and soft drinks were consumed more than three days a week by 16%, 41% and 29% of children, respectively.
- More than half (53%) of children in participating countries travelled to school on foot or by bike or skating and almost all played actively or vigorously for at least one hour a day.
- Among 6–9-year-olds in participating countries, 42% spent at least two hours a day watching television or using electronic devices on weekdays and 78% on weekends. The vast majority of children (89%) were sleeping for at least nine hours per night.

Introduction



Globally, over one billion people are living with obesity, undermining the health, well-being and economic prosperity of individuals, their families and whole societies (1). In the WHO European Region, the epidemic of overweight and obesity affects one in 12 children under 5 years of age, one in four children aged 10–19 years, and nearly two thirds (60%) of adults (2). The Region is not on track to reach the agreed global target of halting the rise in obesity by 2025 (2), and there are concerns that the disruptions to daily life caused by the coronavirus disease (COVID-19) pandemic may have further exacerbated the problem of childhood overweight and obesity in the Region.

Overweight and obesity increase the risk of noncommunicable diseases (NCDs), such as cardiovascular disease, cancer and diabetes. Overweight (including obesity) is responsible for more than 1.2 million deaths across the Region every year and is a leading cause of disability (2). Unhealthy bodyweight in children affects a child's immediate physical and mental health, educational attainment and quality of life, and also increases the risk of obesity, NCDs and poor health later in life (3).

Tackling obesity is vital for the achievement of the Sustainable Development Goals and, to drive progress in this area, Member States adopted the global *WHO Acceleration Plan to Stop Obesity* in 2022 (4, 5). Decisive action on obesity is also integral to the implementation of the *WHO European Programme of Work 2020–2025: "United Action for Better Health"* (6) and the work of the WHO Regional Office for Europe's Special Initiative on NCDs and Innovation, which supports Member States' efforts to reduce avoidable NCDs.

To generate reliable and valid country-level data on the prevalence of overweight and obesity among primary school-aged children, the WHO European Childhood Obesity Surveillance Initiative (COSI) was established in 2007. The initiative established a common protocol, which allows systematic collection of data on children's weight status by routine and standardized measurement of bodyweight and height of children aged 6–9 years. Additional data on dietary intake, physical activity, sedentary behaviour, family background and school environments are also collected in many countries. COSI is now the largest childhood obesity surveillance initiative in the world, with participation increasing from 13 countries in 2007 to 48 countries in 2024 (Fig. 1)³. In total, the first six rounds of data collection have yielded measured anthropometric data on over 1.6 million children (7).

Comprehensive, multisectoral policy action is needed to tackle obesity, which is a complex multifactorial disease, and to target unhealthy environments and commercial determinants of unhealthy diets (8). To date, the implementation of known cost-effective interventions – including the WHO "best buys" for tackling NCDs (9) – has been lagging behind. The high-quality data on the prevalence of overweight and obesity provided regularly by COSI are important for highlighting the urgent need for policy action and for enabling countries to develop responses that are appropriate to the country context (10, 11).

The fifth round of COSI, conducted in 33 countries between 2018 and 2020, found that around one in three (29%) children aged 7–9 years were living with overweight (including obesity, according to WHO definitions) (12). The overall prevalence of obesity among 7–9-year-olds was 12%. Both overweight and obesity were more common in boys than girls. Between the fifth round and the fourth round of data collection, conducted from 2015–2017, there were very few changes in country prevalence of overweight or obesity. Analysis

3 Since 2007, overweight and obesity prevalence has been estimated for 46 of the 48 COSI countries. Data collection couldn't proceed in Bosnia and Herzegovina, and in Switzerland.

of earlier COSI data, collected from 2007–2017 in 11 countries, found that, in general, prevalence had decreased mainly in countries which had high prevalence (e.g. Greece, Italy, Portugal and Spain), while it remained stable in northern and eastern European countries (13).

To explore the impact of the COVID-19 pandemic on the prevalence of overweight, obesity and related behaviours, a specific study (hereafter referred to as “the COSI-COVID study”) was conducted in 17 COSI countries in the 2021–2022 and 2022–2023 school years. These results are reported separately (14).

This report presents the main results of the sixth round of COSI data collection, conducted from 2022–2024. Data are presented on the prevalence of overweight, obesity and thinness, obtained from measurements of over 420 000 children aged 6–9 years in 37 countries. In addition, data were collected in 31 countries relating to known determinants of obesity, including nutrition, physical activity and sedentary behaviours, on over 150 000 children within the overall sample. This report presents data on the prevalence of thinness, overweight and obesity for 6–9-year-olds and on eating habits, physical activity, screen time and sleep duration, and how these vary by country, age, gender and level of parental education.

A summary of the methodology and the main characteristics of the study and sample in each country is provided in Annex 1. A more detailed description of the methodology has been published elsewhere (7).





Fig. 1. Expansion of COSI, rounds 1–6, 2007–2024

ROUND 1 (2007–2008)	ROUND 2 (2009–2010)	ROUND 3 (2012–2013)	ROUND 4 (2015–2017)	ROUND 5 (2018–2020)	ROUND 6 (2022–2024)
1. Belgium ^a	1. Belgium ^a	1. Belgium ^a	1. Albania	1. Albania	1. Albania (ALB)
2. Bulgaria	2. Bulgaria	2. Bulgaria	2. Belgium	2. Austria	2. Armenia (ARM)
3. Cyprus	3. Cyprus	3. Cyprus	3. Bulgaria	3. Belgium	3. Austria (AUT)
4. Czechia	4. Czechia	4. Czechia	4. Cyprus	4. Bulgaria	4. Azerbaijan (AZE)
5. Ireland	5. Ireland	5. Greece	5. Czechia	5. Croatia	5. Belgium (BEL)
6. Italy	6. Italy	6. Hungary	6. Greece	6. Cyprus	6. Bosnia and Herzegovina (BiH)
7. Latvia	7. Latvia	7. Ireland	7. Hungary	7. Czechia	7. Bulgaria (BUL)
8. Lithuania	8. Lithuania	8. Italy	8. Ireland	8. Denmark	8. Croatia (CRO)
9. Malta	9. Malta	9. Latvia	9. Italy	9. Estonia	9. Cyprus (CYP)
10. Norway	10. Norway	10. Lithuania	10. Latvia	10. Finland	10. Czechia (CZH)
11. Portugal	11. Portugal	11. Malta	11. Lithuania	11. France	11. Denmark (DEN)
12. Slovenia	12. Slovenia	12. North Macedonia	12. Malta	12. Georgia	12. Estonia (EST)
13. Sweden	13. Sweden	13. Norway	13. North Macedonia	13. Greece	13. Finland (FIN)
	14. Greece	14. Portugal	14. Norway	14. Hungary	14. France (FRA)
	15. Hungary	15. Slovenia	15. Portugal	15. Ireland	15. Georgia (GEO)
	16. North Macedonia	16. Spain	16. Republic of Moldova	16. Italy	16. Germany (GER-BR) ^d
	17. Spain	17. Sweden	17. Romania	17. Kazakhstan	17. Greece (GRE)
		18. Albania	18. San Marino	18. Kyrgyzstan	18. Hungary (HUN)
		19. Republic of Moldova	19. Slovenia	19. Latvia	19. Ireland (IRE)
		20. Romania	20. Spain	20. Lithuania	20. Israel (ISR)
		21. San Marino	21. Sweden	21. Malta	21. Italy (ITA)
		22. Türkiye	22. Türkiye	22. Montenegro	22. Kazakhstan (KAZ-AL) ^e
			23. Austria	23. Netherlands (Kingdom of the)	23. Kyrgyzstan (KGZ)
			24. Croatia	24. North Macedonia	24. Latvia (LVA)
			25. Denmark	25. Norway	25. Lithuania (LTU)
			26. Estonia	26. Poland	26. Malta (MAT)
			27. Finland	27. Portugal	27. Montenegro (MNE)
			28. France	28. Republic of Moldova	28. Netherlands (Kingdom of the) (NET)
			29. Georgia	29. Romania	29. North Macedonia (MKD)
			30. Kazakhstan	30. Russian Federation ^b	30. Norway (NOR)
			31. Kyrgyzstan	31. San Marino	31. Poland (POL)
			32. Montenegro	32. Serbia	32. Portugal (POR)
			33. Netherlands (Kingdom of the)	33. Slovakia	33. Republic of Moldova (MDA)
			34. Poland	34. Slovenia	34. Romania (ROM)
			35. Russian Federation ^b	35. Spain	35. Russian Federation (RUS)
			36. Serbia	36. Sweden	36. San Marino (SMR)
			37. Slovakia	37. Tajikistan	37. Serbia (SRB)
			38. Tajikistan	38. Türkiye	38. Slovakia (SVK)
			39. Turkmenistan	39. Turkmenistan ^c	39. Slovenia (SVN)
				40. Armenia	40. Spain (SPA)
				41. Azerbaijan ^c	41. Sweden (SWE)
				42. Bosnia and Herzegovina ^c	42. Tajikistan (TJK)
				43. Germany ^d	43. Türkiye (TUR)
				44. Israel	44. Turkmenistan (TKM)
				45. Uzbekistan ^c	45. Uzbekistan (UZB)
					46. Luxembourg (LUX)
					47. Switzerland ^f (SWI)
					48. Ukraine (UKR)

Text in red: countries that participated in COSI for the first time.

Text in bold: countries that collected data during the time period of the listed data collection round.

^a Data were collected only in Flanders

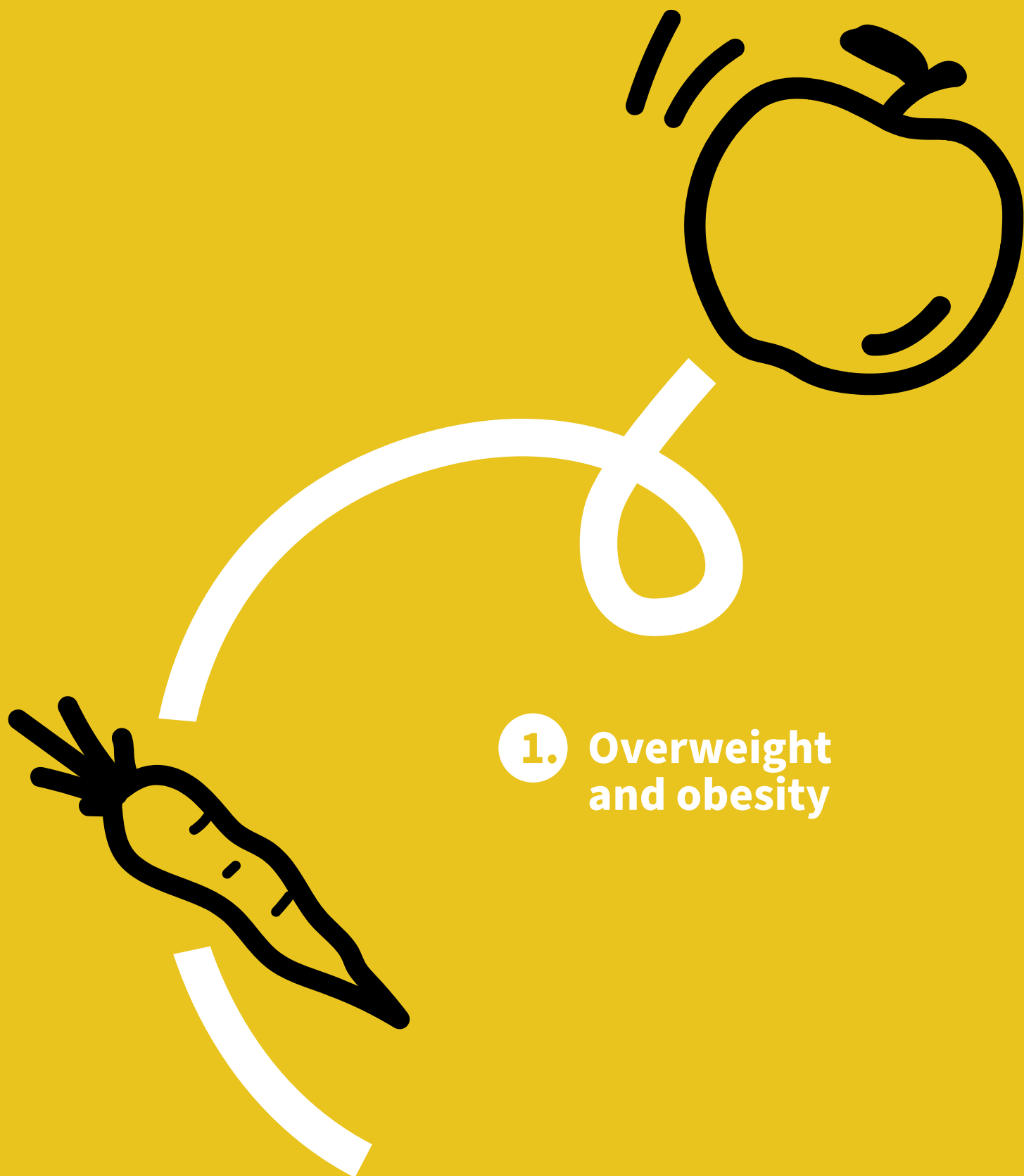
^b Data were collected only in Moscow (rounds 4 and 5, RUS-MS) and Yekaterinburg (round 5, RUS-YK).

^c Data collection was disrupted by the COVID-19 pandemic and hence could not take place.

^d Data were collected only in the Bremen federal state (GER-BR).

^e Data were collected only in Almaty (KAZ-AL).

^f Due to difficulties encountered during the data collection process, the number of children measured is insufficient to estimate the prevalence of overweight and obesity in accordance with the COSI Protocol.



**1. Overweight
and obesity**

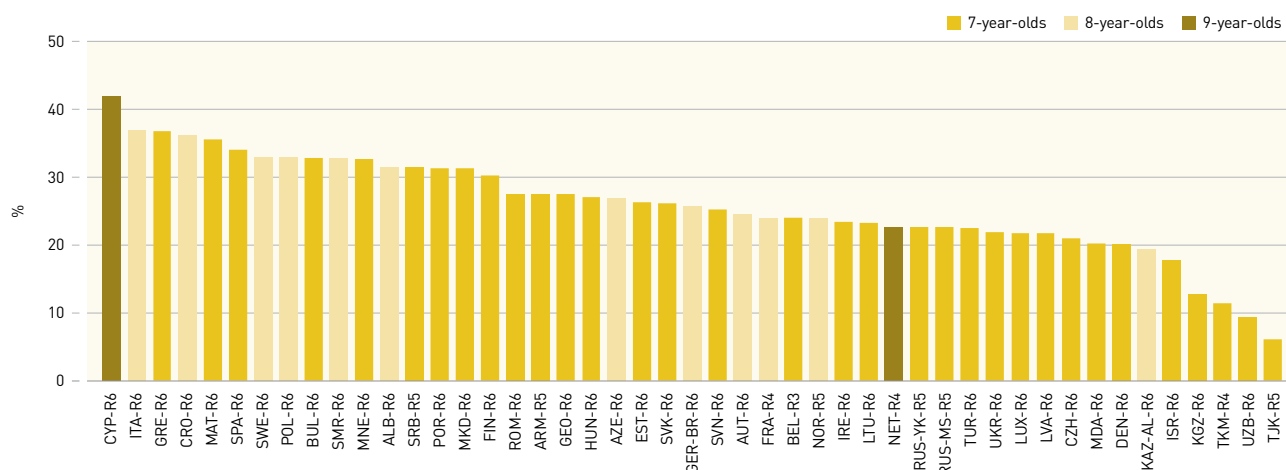


The latest available COSI data on overweight (including obesity) in boys and girls aged 7–9 years from all countries are shown in Fig. 2.A; data from previous rounds are included for those countries that did not participate in the sixth round of data collection.⁴ The prevalence of overweight (including obesity) for both genders was highest in Cyprus (42% in round 6) and lowest in Tajikistan (6% in round 5). In 11 of the 46 participating countries (47 study locations), one in three children or more were living with overweight. There were only six countries where fewer than one in five children aged 7–9 years were affected by overweight.

The latest available COSI data on obesity from all countries are shown in Fig. 2.B. As is the case for Fig. 2.A, data from previous rounds are included for those countries that did not participate in round 6. The prevalence of obesity for both genders was highest in Cyprus (20% in round 6) and lowest in Tajikistan (1% in round 5). More than one in 10 children aged 7–9 years are affected by obesity in half of the countries, according to the latest available data.

The prevalence estimates shown in Fig. 2.A and Fig. 2.B were calculated by including only one targeted age group per country. Differences in prevalence estimates between countries may be partially explained by variations in the targeted age group.

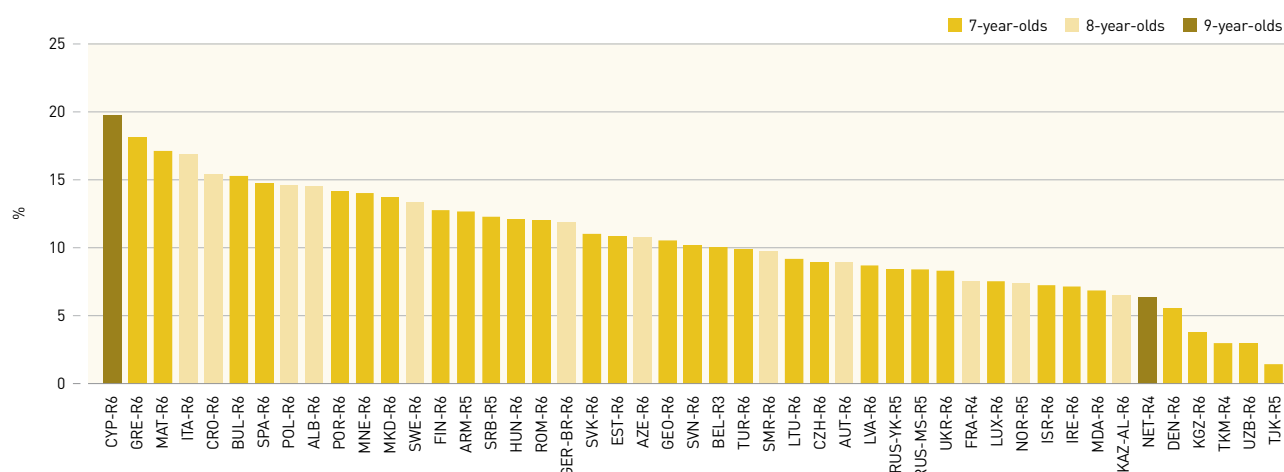
Fig. 2.A. Prevalence of overweight (including obesity – WHO definitions) in boys and girls aged 7–9 years, according to latest available COSI round (%)^a



^a Data from COSI round 6 (2022–2024) were used for all countries except the following: Armenia (round 5, 2018–2020), Belgium (round 3, 2012–2013), France (round 4, 2015–2017), Kingdom of the Netherlands (round 4, 2015–2017), Norway (round 5, 2018–2020), Russian Federation (round 5, 2018–2020), Serbia (round 5, 2018–2020), Tajikistan (round 5, 2018–2020) and Turkmenistan (round 4, 2015–2017).

⁴ The classification of children's weight status used in COSI is based on WHO definitions as provided in the 2007 WHO recommended growth reference for school-aged children and adolescents. More details are provided in Annex 1. Unless otherwise indicated, in this report, overweight includes obesity.

Fig. 2.B. Prevalence of obesity (WHO definitions) in boys and girls aged 7–9 years, according to latest available COSI round (%)^a



^a Data from COSI round 6 (2022–2024) were used for all countries except the following: Armenia (round 5, 2018–2020), Belgium (round 3, 2012–2013), France (round 4, 2015–2017), Netherlands (Kingdom of the) (round 4, 2015–2017), Norway (round 5, 2018–2020), Russian Federation (round 5, 2018–2020), Serbia (round 5, 2018–2020), Tajikistan (round 5, 2018–2020) and Turkmenistan (round 4, 2015–2017).

1.1 Overweight

Overall, in the 37 countries of the Region that collected data in the sixth round of COSI,⁵ 25% of children aged 7–9 years were living with overweight (including obesity) according to WHO definitions (Fig. 3). Overall, prevalence among boys in this age group was 27%, while among girls it was 23% (Fig. 4).

At the country level, the prevalence of overweight ranged from 9% in Uzbekistan to 42% in Cyprus. In most countries the prevalence was higher among boys than girls, with a difference of five percentage points or more in 10 countries. No countries had a prevalence of overweight statistically significantly higher for girls than boys. For Switzerland, due to challenges encountered during the data collection process, it was not possible to estimate the prevalence of overweight by age group and sex according to the COSI Protocol 15. Consequently, Switzerland is not included in Fig. 3, which presents prevalence values for a single age group per country. However, when pooling all measured Swiss children aged 6–9 years, 23% were found to be living with overweight. As International Obesity Task Force (IOTF) cutoff points are widely used in the Region, prevalence was also calculated using these cutoffs and these data are presented in Annex 2.

5 Albania, Austria, Azerbaijan, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, Germany (Bremen federal state only), Georgia, Greece, Hungary, Ireland, Israel, Italy, Kazakhstan (Almaty only), Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, North Macedonia, Poland, Portugal, Republic of Moldova, Romania, San Marino, Slovakia, Slovenia, Spain, Sweden, Türkiye, Ukraine and Uzbekistan. The study population in round 6 of COSI differs from that in round 5, as different groups of countries participated in each round. Therefore, the overall estimates for round 6 are not directly comparable with those from the previous round, which have been published elsewhere.



Fig. 3. Prevalence of overweight (including obesity – WHO definitions) in children aged 7–9 years (%)

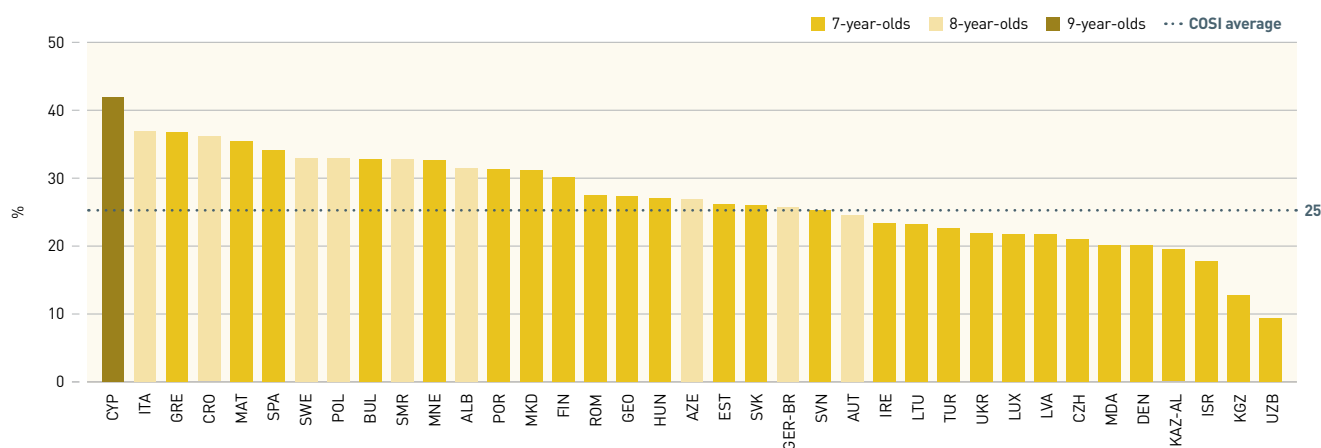
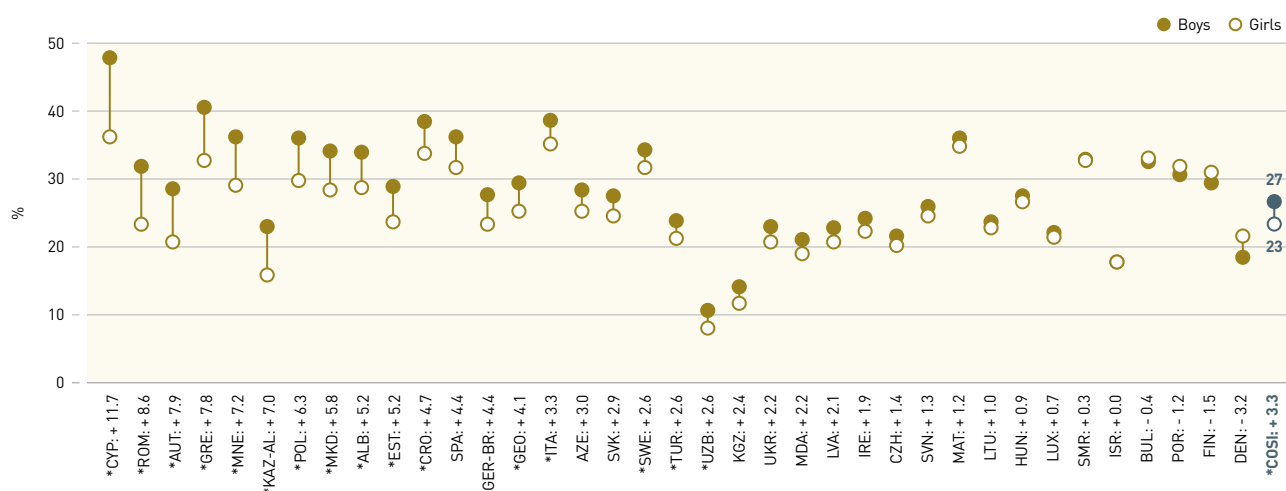


Fig. 4. Prevalence of overweight (including obesity – WHO definitions) in boys and girls aged 7–9 years and difference between genders (boys minus girls, percentage points on horizontal axis)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. Data relate to: (i) 7-year-olds in Bulgaria, Czechia, Denmark, Estonia, Finland, Georgia, Greece, Hungary, Ireland, Israel, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, North Macedonia, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Türkiye, Ukraine and Uzbekistan; (ii) 8-year-olds in Albania, Austria, Azerbaijan, Croatia, Germany (Bremen federal state only), Italy, Kazakhstan (Almaty only), Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus. An asterisk indicates a significant difference ($P < 0.05$).

In Luxembourg and Slovenia, where data were collected for all age groups (6-, 7-, 8-, and 9-year-olds), there was a tendency for the prevalence of overweight (including obesity) to increase with age (Fig. 5). In Spain, which also targeted all age groups, this trend appeared only in boys. A similar age-gradient pattern was observed in the three countries that gathered data on three age groups (Finland, Poland and Sweden). However, a less clear pattern emerged in the seven countries that covered only two age groups.

Fig. 5. Prevalence of overweight (including obesity – WHO definitions) in boys and girls in countries collecting data for two or more age groups (%)

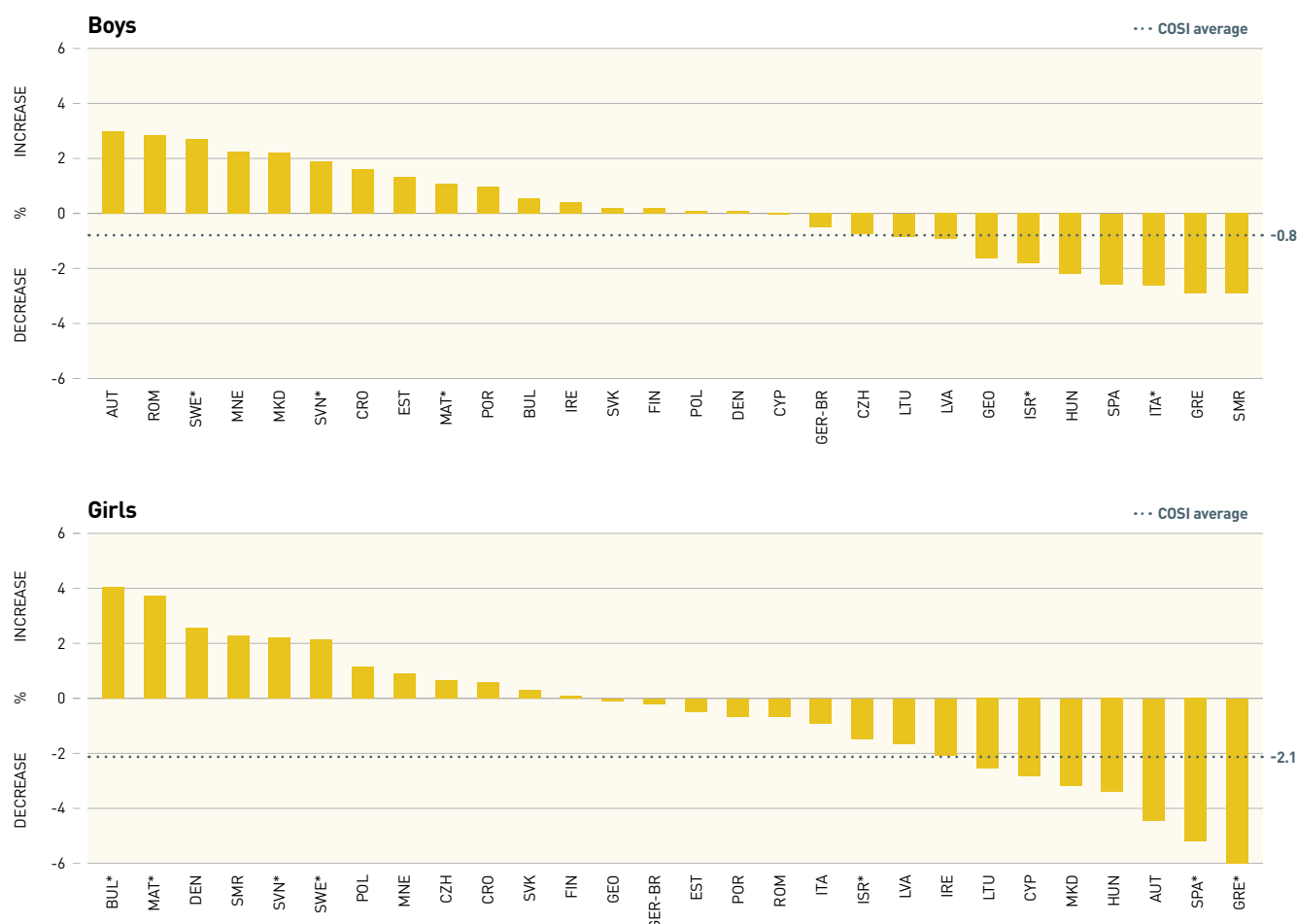


The regular collection of COSI data with standardized methodology enables countries to view the evolution of prevalence over time. Figure 6 shows the difference in prevalence of overweight in boys and girls aged 6–9 years between the fifth round of COSI data collection from 2018–2020 and the sixth round between 2022–2024.

The overall pooled prevalence estimates for overweight in the 28 countries, which collected data in both rounds, were very similar, showing a difference of less than one percentage point. At the country level, data show that the prevalence of overweight tended to be stable in several countries. Nevertheless, a statistically significant increase in the prevalence of overweight among boys was observed in three countries – namely, Malta, Slovenia and Sweden – with the difference between the two rounds of data collection ranging from +1.1 to +2.7 percentage points. Conversely, a statistically significant decrease emerged in two countries: Israel (-1.8 percentage points) and Italy (-2.6).



Fig. 6. Changes in prevalence of overweight (including obesity – WHO definitions) in children aged 6–9 years between COSI round 5 (2018–2020) and round 6 (2022–2024)^a

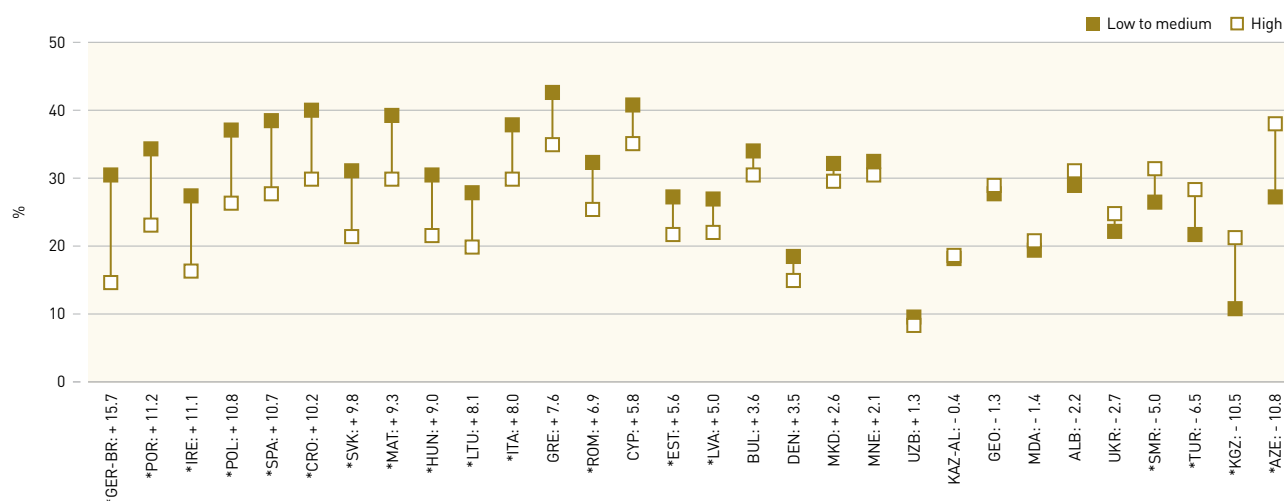


^a Data relate to children aged 6–9 years who have available information on body weight, height and sex, and who belong to the age group(s) that were targeted in each participating country. The following countries targeted more than one age group in both rounds (all age groups included in the analysis): Estonia, Finland, Greece, Latvia, Israel, Italy, Romania, Slovakia, Slovenia, Spain and Sweden. COSI average estimates were calculated by including only countries with nationally representative data and considering children from only one age group per country. Differences between rounds, expressed as percentage points, were calculated by subtracting the estimates for round 5 from those for round 6. The symbol “*” indicates a significant difference between the two rounds of data collection ($P < 0.05$).

The increase in the prevalence of overweight was slightly more frequent among girls, with four countries recording a higher prevalence in round 6 compared to the previous round of data collection – namely, Bulgaria, Malta, Slovenia and Sweden. The difference between the two rounds tended to be more pronounced and ranged from +2.2 to +4.1 percentage points. On the other hand, a statistically significant decline was observed in three countries: Greece (–6.0 percentage points), Israel (–1.5) and Spain (–5.2). On average, when data from all 28 countries that collected data in both rounds are pooled, the prevalence of overweight among girls was slightly lower in round 6, with a decrease of 2.1 percentage points.

The level of parental education is one of the variables used in COSI to assess family socioeconomic status. This information is available for 30 of the 37 countries that participated in the sixth round of data collection. The prevalence of overweight was significantly higher among children whose parents had a low to medium level of education relative to children with high parental education in 14 countries (Fig. 7). The largest difference in prevalence between children with parents of low to medium education and those with a high level of education was 16 percentage points in Germany (Bremen federal state only). An inverse relationship was observed in four countries –Azerbaijan, Kyrgyzstan, San Marino and Türkiye – where the prevalence of overweight was significantly higher among children of parents with a high level of education.

Fig. 7. Prevalence of overweight (including obesity – WHO definitions) in children aged 6–9 years, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. Data relate to all children aged 6–9 years for whom data about parental education and weight status were available. The asterisk indicates a significant difference ($P < 0.05$).

1.2 Obesity

Overall, the prevalence of obesity among children aged 7–9 years in the 37 countries of the Region participating in round 6 was 11% (Fig. 8).⁶ The prevalence among boys in this age group was 13% overall, compared to 9% among girls (Fig. 9). As IOTF cutoff points are widely used in the Region, prevalence was also calculated using these cutoffs and these data are presented in Annex 2.

The country-specific prevalence of obesity ranged from 3% in Uzbekistan to 20% in Cyprus. In only 15 of the 37 countries was prevalence below 10% – in other words, in most of the countries, more than one in 10 children – and almost one in five in several southern European countries – were living with obesity. The prevalence of obesity was higher in boys than in girls in most countries. The difference was more than five

⁶ The study population in round 6 of COSI differs from that in round 5, as different groups of countries participated in each round. Therefore, the overall estimates for round 6 are not directly comparable with those from the previous round, which have been published elsewhere.



percentage points in 10 countries, with the greatest differences observed in Cyprus and Greece (around 10 percentage points). There were no countries where obesity prevalence was statistically significantly higher in girls than boys (Fig. 9.). Due to data collection challenges, Switzerland's obesity prevalence could not be estimated by age group and sex per the COSI Protocol. As a result, it is excluded from Fig. 8. However, among all measured Swiss children aged 6–9 years, 7% had obesity.

Fig. 8. Prevalence of obesity (WHO definitions) in children aged 7–9 years (%)

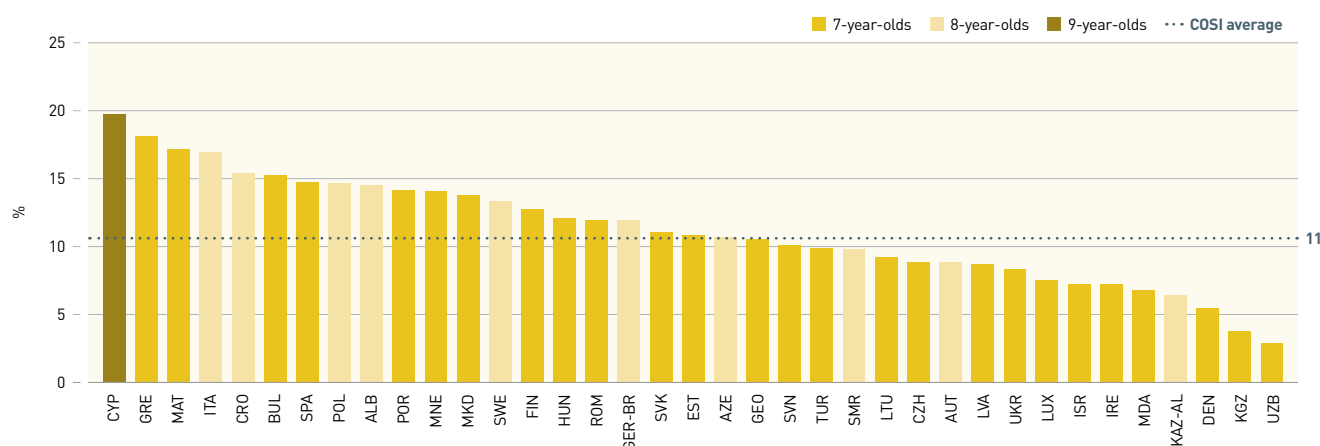
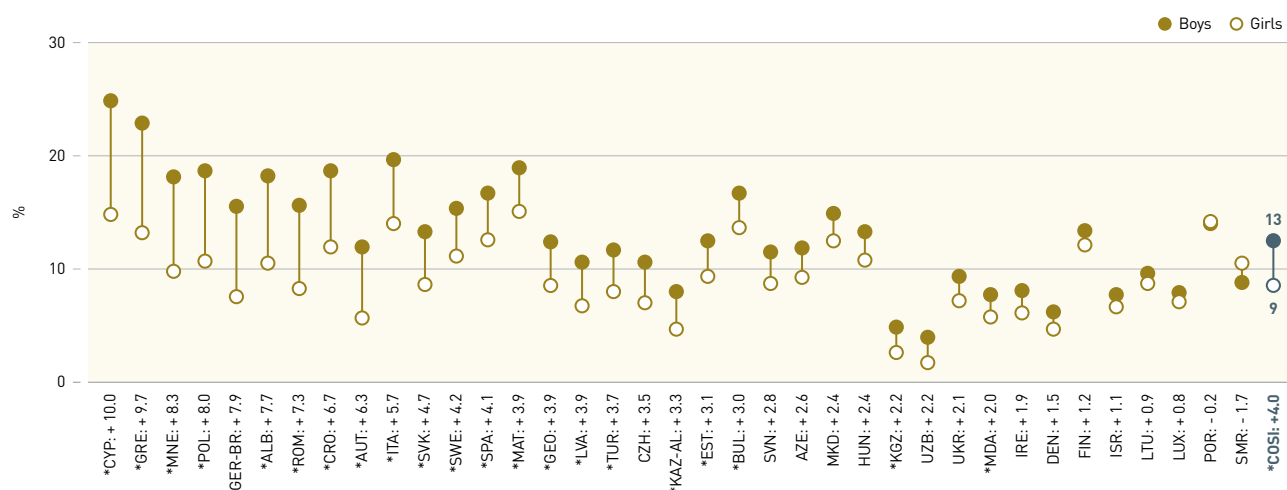


Fig. 9. Prevalence of obesity (WHO definitions) in boys and girls aged 7–9 years and difference between genders (boys minus girls, percentage points on horizontal axis)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. Data relate to: (i) 7-year-olds in Bulgaria, Czechia, Denmark, Estonia, Finland, Georgia, Greece, Hungary, Ireland, Israel, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, North Macedonia, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Türkiye, Ukraine and Uzbekistan; (ii) 8-year-olds in Albania, Austria, Azerbaijan, Croatia, Germany (Bremen federal state only), Italy, Kazakhstan (Almaty only), Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus. The asterisk indicates a significant difference ($P < 0.05$).

The prevalence of obesity tended to increase with age among both boys and girls in all countries that collected data for at least three age groups, except in Finland, where this trend appeared only among boys. As observed with overweight, the pattern is less clear in countries that targeted only two age groups (Fig. 10).

Fig. 10. Prevalence of obesity in boys and girls in countries collecting data for two or more age groups (%)

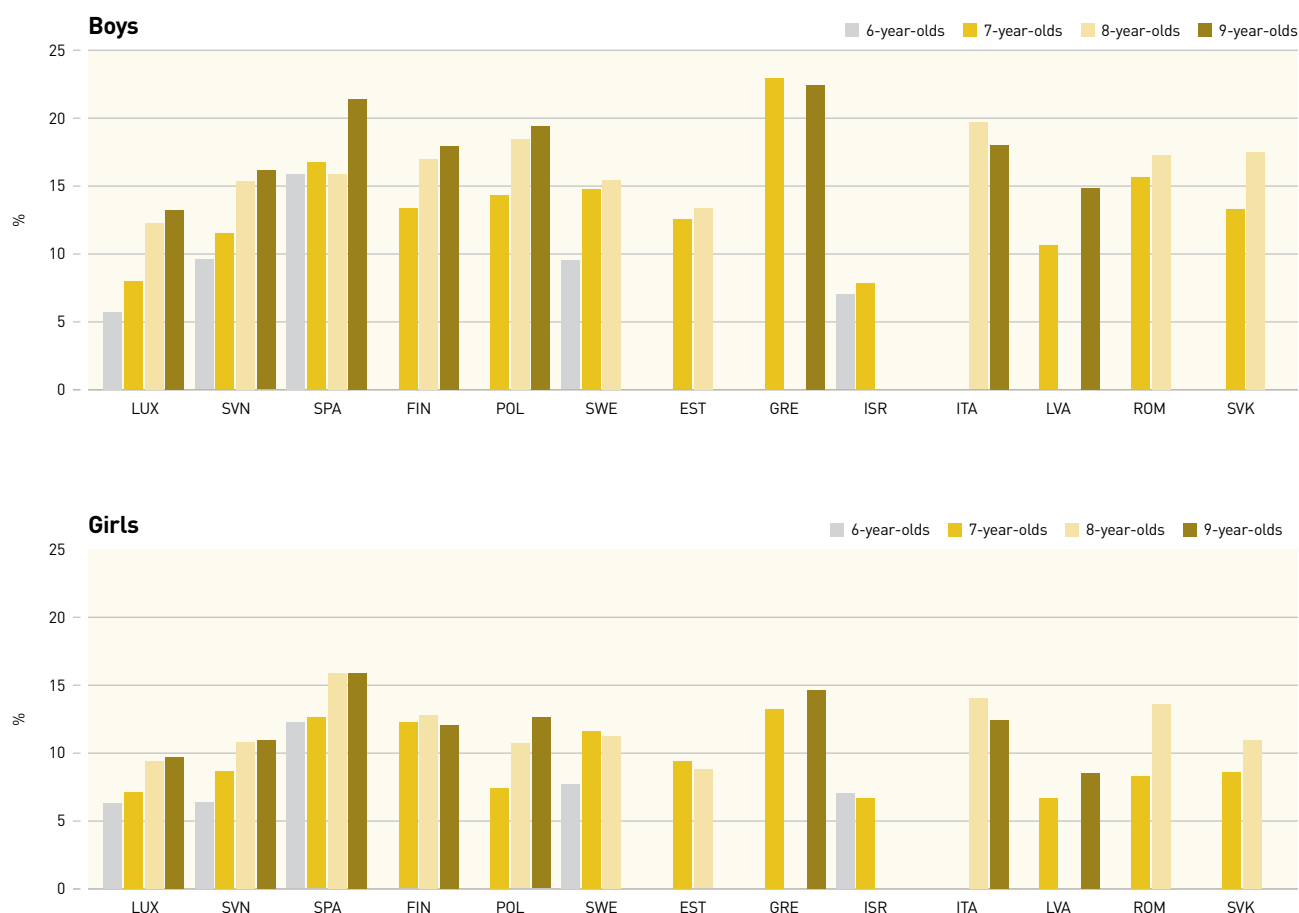
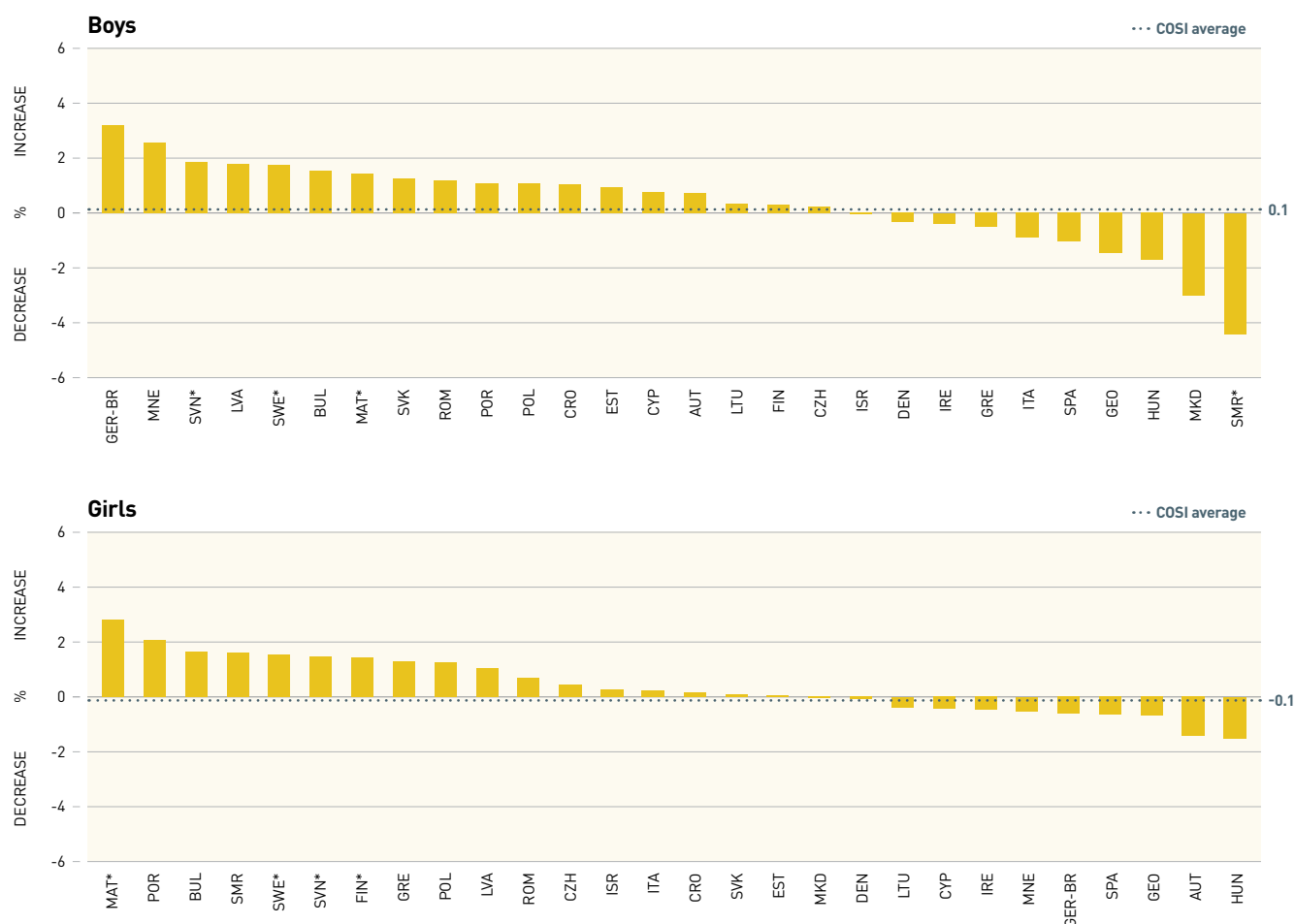


Figure 11 illustrates the differences in the prevalence of obesity among boys and girls, respectively, between the sixth round of COSI data collection and the fifth round for 28 countries.

Despite a tendency to stability, three countries (Malta, Slovenia and Sweden) showed a statistically significant increase in the prevalence of obesity among boys, with differences between the two rounds ranging from +1.4 to +1.9 percentage points. Only in San Marino was a statistically significant decrease in the prevalence of obesity (-4.5 percentage points) observed.



Fig. 11. Changes in prevalence of obesity (WHO definitions) in children aged 6–9 years between COSI round 5 (2018–2020) and round 6 (2022–2024)^a

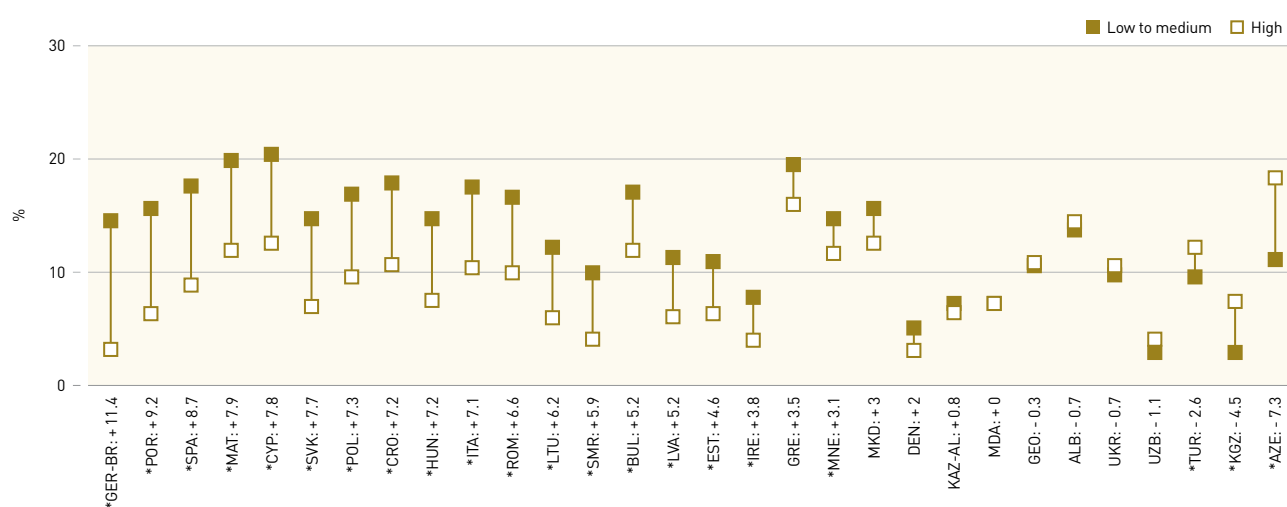


^a Data relate to children aged 6–9 years who have available information on body weight, height and sex, and who belong to the age group(s) that were targeted in each participating country. The following countries targeted more than one age group in both rounds (all age groups included in the analysis): Estonia, Finland, Greece, Latvia, Israel, Italy, Romania, Slovakia, Slovenia, Spain and Sweden. COSI average estimates were calculated by including only countries with nationally representative data and considering children from only one age group per country. Differences between rounds, expressed as percentage points, were calculated by subtracting the estimates for round 5 from those for round 6. The symbol “*” indicates a significant difference between the two rounds of data collection ($P < 0.05$).

As with overweight, the rise in the prevalence of obesity was slightly more frequent among girls compared to boys. In four countries (Finland, Malta, Slovenia and Sweden), the round 6 prevalence estimates were significantly higher than those of the previous round of data collection – with differences ranging from +1.4 to +2.8 percentage points – while no country showed a statistically significant decline.

The prevalence of obesity was significantly higher in children whose parents had a low to medium level of education, relative to those whose parents had a high level of education, in 18 of the 30 countries with data (Fig. 12). The biggest difference was observed in Germany (Bremen federal state only), where there was a difference of 11 percentage points. Obesity prevalence was significantly higher in children whose parents had a high level of education in Azerbaijan, Kyrgyzstan and Türkiye.

Fig. 12. Prevalence of obesity (WHO definitions) in children aged 6–9 years, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. Data relate to all children aged 6–9 years for whom data about parental education and weight status were available. The asterisk indicates a significant difference ($P < 0.05$).

1.3 Thinness

As with overweight and obesity, thinness and underweight in childhood can affect child development, health and well-being. There are, however, few studies available on thinness and underweight among children in Europe. The representative height and weight data collected as part of COSI can help address this gap because they also enable the prevalence of thinness (body mass index (BMI)-for-age value < -2 Z-score) to be estimated (16).

The prevalence of thinness was generally relative low but was higher in eastern Europe countries and central Asian countries (Fig. 13). Overall, the prevalence of thinness in the COSI population was 3% and there was no difference between boys and girls. The highest prevalence was found in Romania (7%), Uzbekistan and North Macedonia (both 5%), followed by Azerbaijan, Kazakhstan (Almaty only), Republic of Moldova and Poland (all 4%). Given that the prevalence of obesity ranges from 3% to 15% in these countries, they are all facing the double burden of malnutrition, whereby undernutrition coexists with overweight and obesity (17). In most countries, there were no significant differences in the prevalence of thinness between boys and girls, but prevalence was higher among boys than girls in eight countries (Bulgaria, Finland, Israel, Italy, Luxembourg, Malta, Slovenia and Türkiye) (Fig. 14).



Fig. 13. Prevalence of thinness (WHO definitions) in children aged 7–9 years (%)

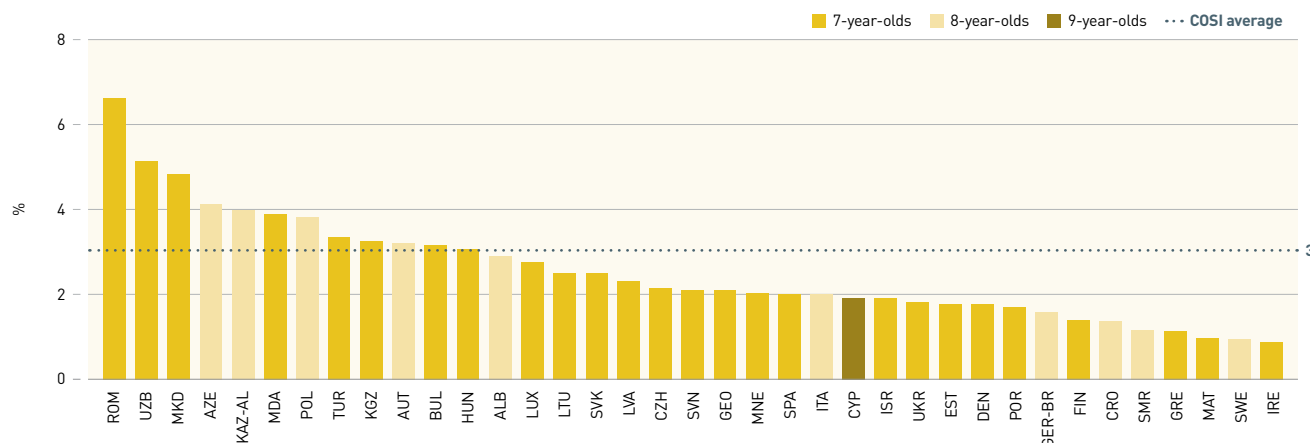
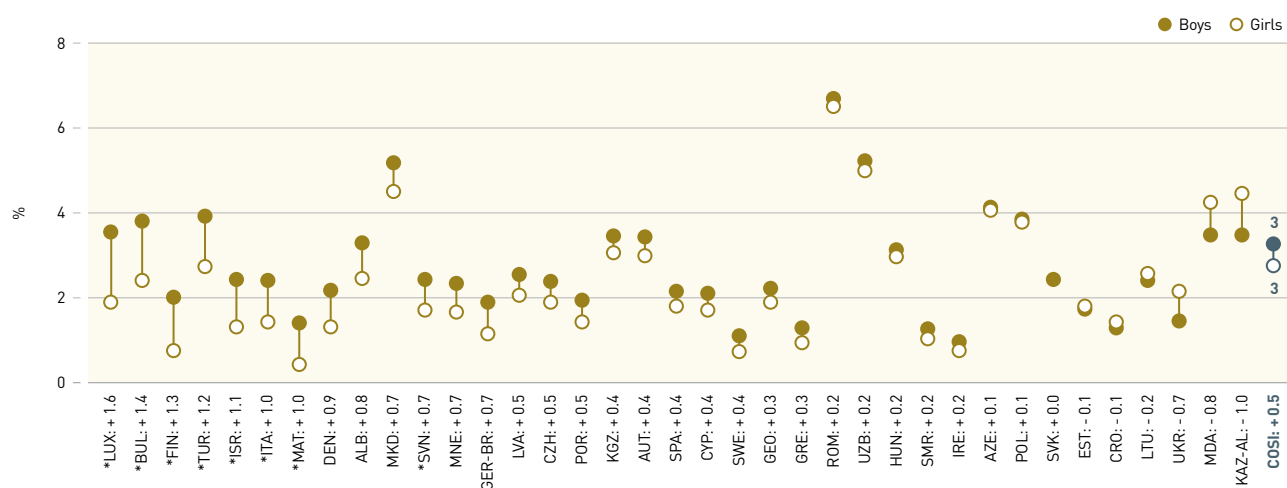


Fig. 14. Prevalence of thinness (WHO definitions) in boys and girls aged 7–9 years and difference between genders (%)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. Data relate to: (i) 7-year-olds in Bulgaria, Czechia, Denmark, Estonia, Finland, Germany (Bremen only), Georgia, Greece, Hungary, Ireland, Israel, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, North Macedonia, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Türkiye, Ukraine and Uzbekistan; (ii) 8-year-olds in Albania, Austria, Azerbaijan, Croatia, Italy, Kazakhstan (Almaty only), Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus.

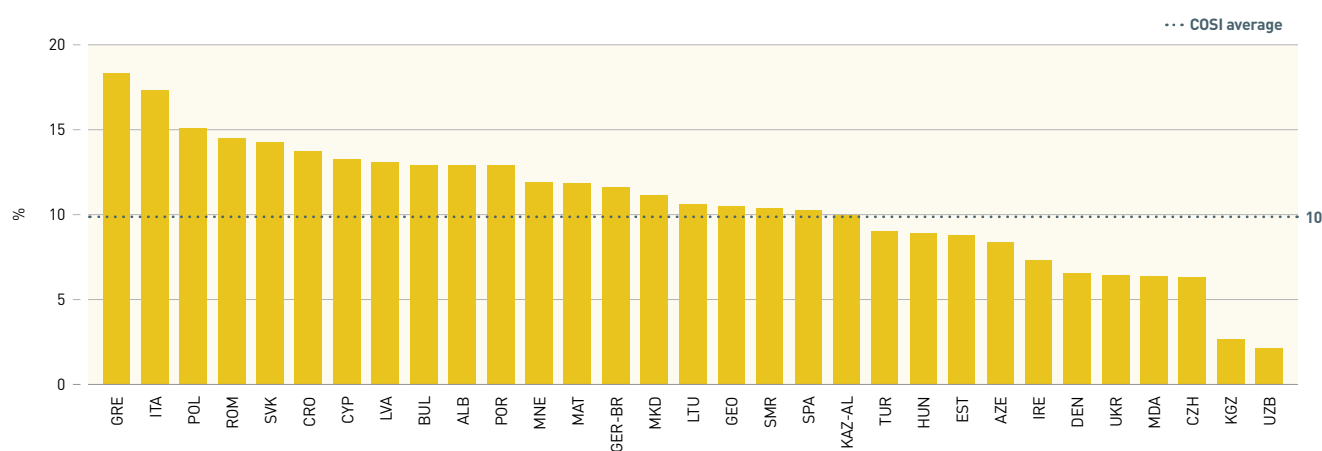
1.4 Parental perceptions of children's weight status

Previous analysis of COSI data has shown that parents are not always able to accurately perceive their child's weight status, particularly the parents of children with overweight or obesity (18). This matters because parents have an important role to play in the prevention and treatment of childhood obesity.

Data on parents' perception of their child's weight status were collected in 31 of the 37 countries that participated in the sixth round of data collection. Overall, among children aged 6–9 years for whom data were available, only 10% were perceived as a "little or extremely overweight" by their parents (Fig. 15).

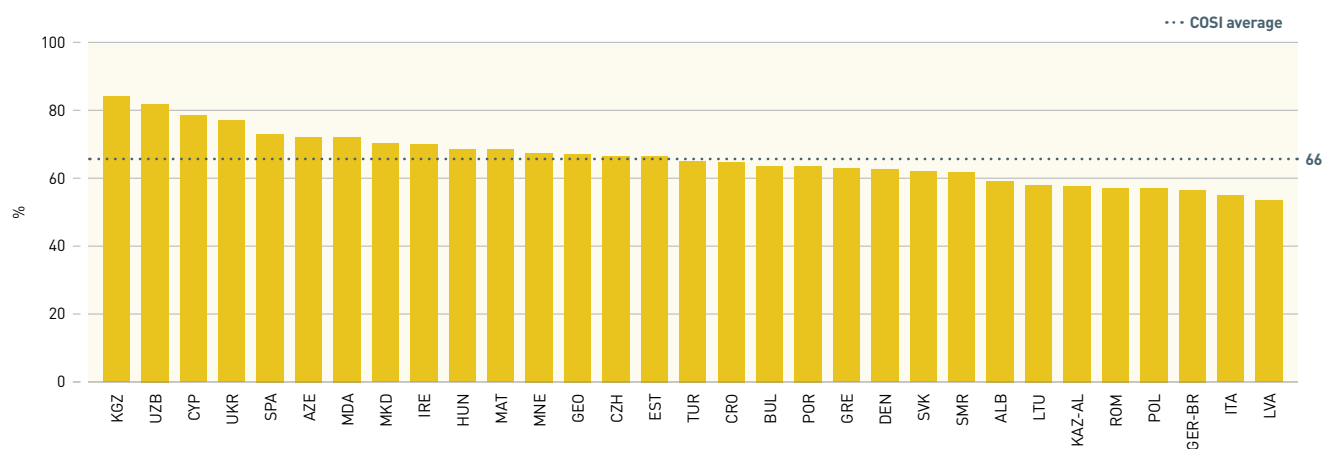
This ranged from 2% in Uzbekistan – where measured data suggest that 9% of children had overweight (including obesity) according to the WHO definition – to 18 % in Greece, where more than a third (37%) of children were living with overweight or obesity according to the objective data. Overall, nearly two thirds (66%) of children living with overweight were perceived by their parents to be under or normal weight (Fig. 16). In all countries with data available, more than half of the parents of children living with overweight underestimated their child’s weight status, with the proportion ranging from 54% in Latvia to 84% in Kyrgyzstan.

Fig. 15. Children aged 6–9 years who are perceived as a “little or extremely overweight” by their parents (%)^a



^a Data relate to all children aged 6–9 years for whom data about parental perception of their weight status were available.

Fig. 16. Children aged 6–9 years living with overweight, according to WHO’s definition, who are perceived by their parents as being under or normal weight (%)^a



^a Data relate to all children aged 6–9 years for whom data about parental perception and weight status were available.



2. Eating habits

Unhealthy diets are an important determinant of overweight and obesity and are responsible for 11 million deaths globally (19). In the Region, unhealthy food and beverage products are among the four major commercial products that, together, cause nearly a quarter (24.5%) of all deaths (8). COSI collects data on a relatively small set of eating related behaviours of children through an additional family questionnaire, which is optional for countries and is completed by parents or caregivers. Previously, COSI data have identified that less healthy eating habits are common, and they are associated with lower socioeconomic status as assessed by parental education (12,20).

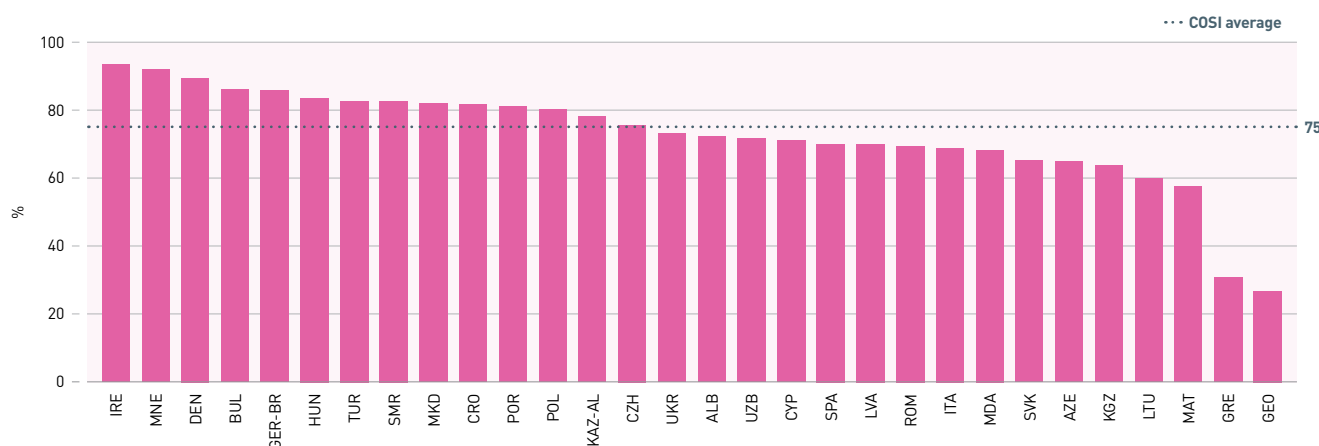
This report focuses on the frequency of consumption of breakfast, fresh fruit and vegetables – all considered to be important elements of a healthy diet – as well as the frequency of consumption of soft drinks containing sugar, savoury snacks and sweets. Data were available on the consumption of fresh fruit, vegetables and soft drinks in 31 countries; breakfast in 30 countries; sweets in 28 countries; and savoury snacks in 27 countries. For the first time in COSI, data were collected on meals ordered online, and these data were available for 18 countries.

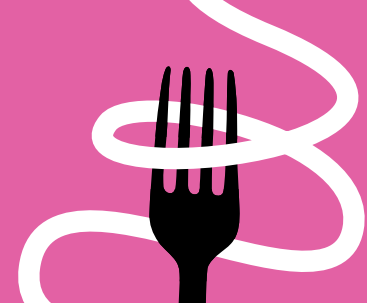
2.1 Breakfast consumption

Given that there is some evidence that skipping breakfast is associated with BMI and overweight (21–23), data were collected on daily breakfast consumption. The data are presented as the proportion of children consuming breakfast every day, overall and at the country level, and then by gender and level of parental education.

Overall, across the 30 countries with data, three quarters (75%) of 6–9-year-old children consumed breakfast every day, meaning that a quarter of children did not have breakfast on a daily basis (Fig. 17). At the country level, the proportion of children consuming breakfast every day ranged from 27% in Georgia to 93% in Ireland, and there were 16 countries where less than three quarters of children consumed breakfast every day.

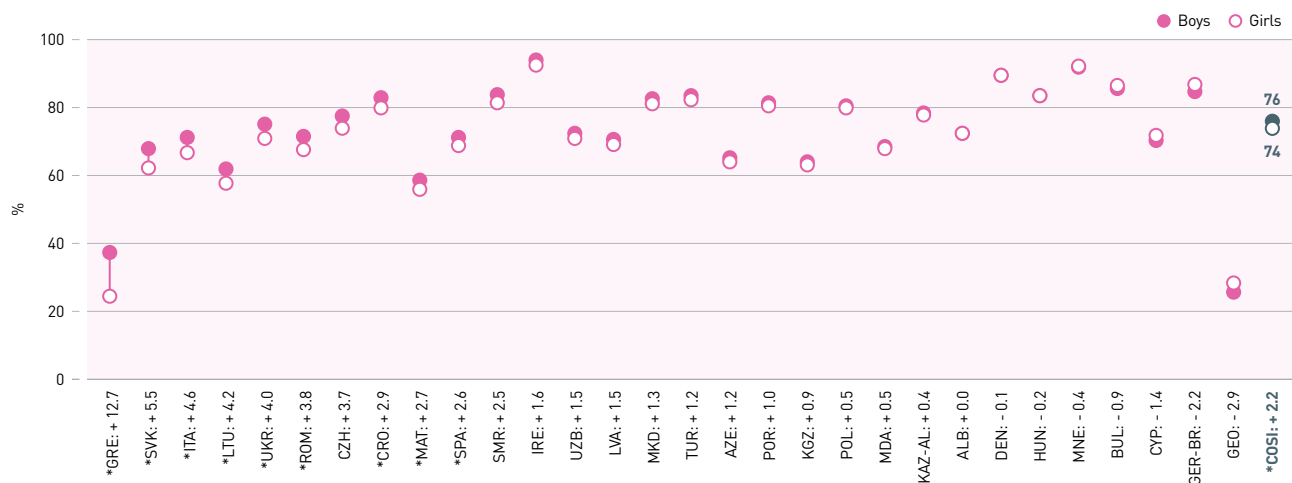
Fig. 17. Daily breakfast consumption among 6–9-year-olds (%)





Overall, the frequency of daily breakfast consumption was similar among boys and girls (76% and 74%, respectively) (Fig. 18), as in previous COSI findings (12). This tendency was consistent in most countries, with the exception of a few countries where boys were more likely to consume breakfast than girls.

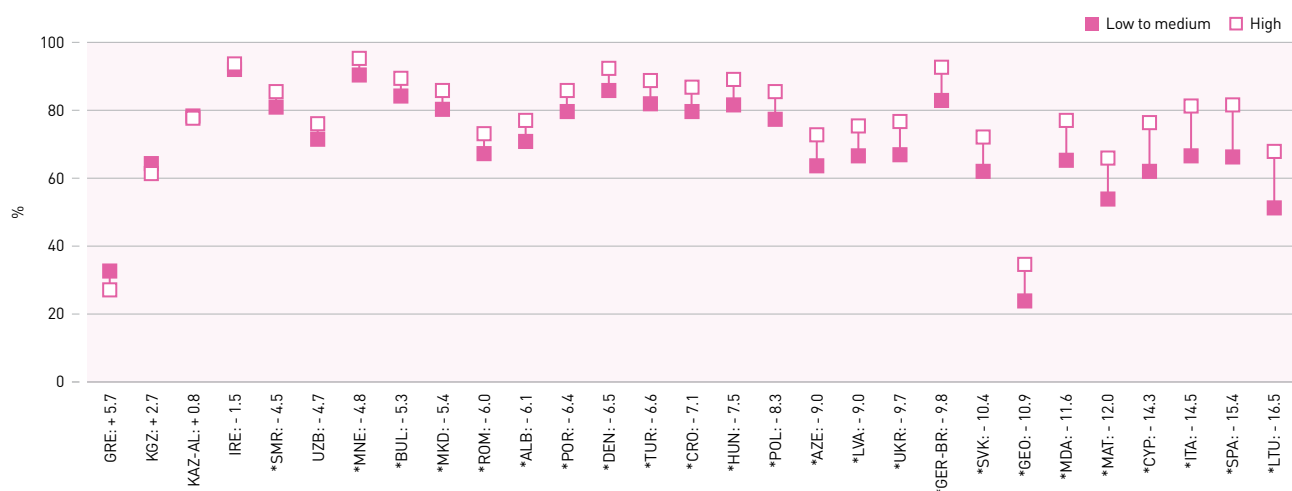
Fig. 18. Daily consumption of breakfast among boys and girls aged 6–9 years (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).

Children of parents with a high level of education were significantly more likely to eat breakfast every day than children of parents with a low to medium level of education in most countries (Fig. 19). In 12 countries, the differences between the two groups were equal to or greater than nine percentage points, with the biggest difference observed in Lithuania (17 percentage points). These data are consistent with previous COSI findings (12, 22).

Fig. 19. Daily consumption of breakfast among 6–9-year-olds, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

2.2 Consumption of fresh fruit and vegetables

Fruits and vegetables are important components of a healthy diet, and daily consumption may help to prevent weight gain and reduce the risk of obesity (24–26). WHO recommends the implementation of policies to increase consumption of fruit and vegetables (9), but levels of consumption in the countries of the Region remain low (27).

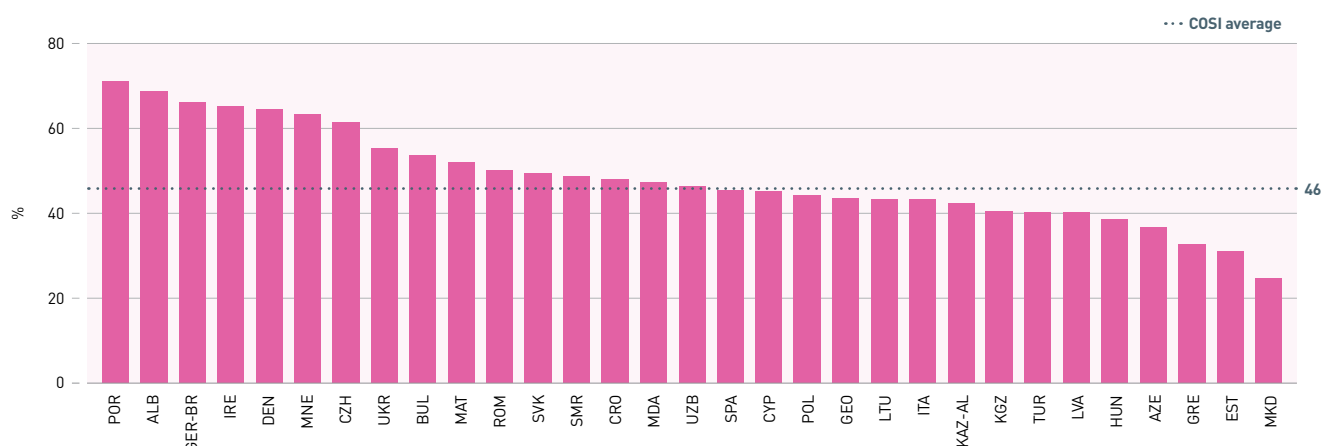
Previous rounds of COSI data collection have found great variation between countries in the percentage of children who did not eat fresh fruit or vegetables daily, and that the proportion was higher among parents with a lower level of education (20). As in previous rounds of COSI data collection, data were collected separately on the proportion of 6–9-year-olds consuming fresh fruit and vegetables on a daily basis. These data are presented overall and on a country-specific basis, along with analyses by gender and level of parental education. For the first time, country-specific data on the number of portions of fruits and vegetables consumed on a typical day were also collected and are presented here.

2.2.1 Daily fresh fruit consumption

Among the 31 countries with data on fresh fruit consumption, less than half of the children (46%) consumed fresh fruit daily, and this proportion ranged from 25% in North Macedonia to 71% in Portugal (Fig. 20). In 20 of the 31 countries, more than half of the children did not consume fruit every day.

In many countries, data showed limited differences between boys and girls. When differences were detected, they favoured girls, who recorded higher proportions of fresh fruit daily consumption. The greatest differences, from high to low, were observed in San Marino, Bulgaria, Latvia, Kazakhstan (Almaty only), Slovakia, Montenegro, Hungary and Croatia, all with differences of 5 or more percentage points (Fig. 21). As in previous COSI findings (12,20), children of parents with a higher level of education were more likely to consume fruit every day than children of parents with a low to medium level of education in most countries, with differences of up to 16 percentage points (Fig. 22).

Fig. 20. Daily consumption of fresh fruit among 6–9-year-olds (%)



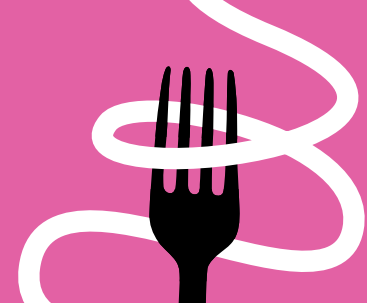
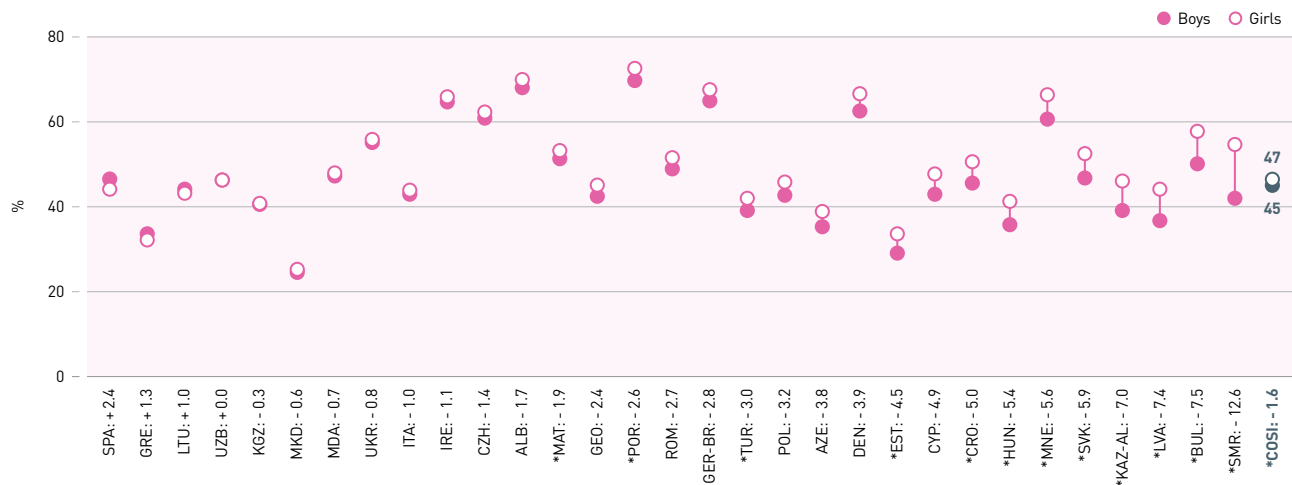
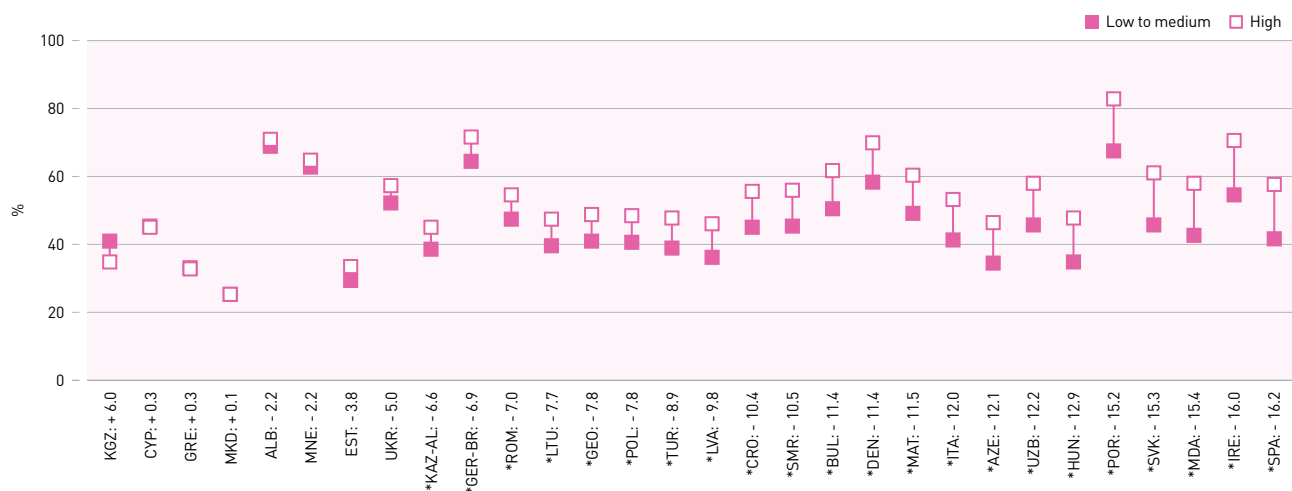


Fig. 21. Daily consumption of fresh fruit among boys and girls aged 6–9 years (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).

Fig. 22. Daily consumption of fresh fruit among 6–9-year-olds, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

2.2.2 Daily vegetables consumption

While there is room for improvement in the proportion of children eating fruit every day, the picture is worse for vegetable consumption. Overall, less than a third (32%) of children in the 31 countries with data consumed vegetables at least once on a daily basis (Fig. 23). At the country level, this proportion ranged from 16% in Greece to 69% in Portugal, and only seven countries – Bulgaria, Czechia, Denmark, Germany (Bremen federal state only), Ireland, Portugal and San Marino – had at least half of 6–9-year-olds consuming vegetables at least once every day.

A slightly higher proportion of girls than boys consumed vegetables on a daily basis overall in the 31 countries with data (33% vs 31%), and – as with daily consumption of fresh fruits – when gender differences were registered at the country level, they favoured girls (Fig. 24). In seven countries (Albania, Czechia, Estonia, Latvia, Malta, San Marino and Ukraine), the proportions among girls were statistically significantly higher than boys by four to 10 percentage points. Children of parents with a high level of education were more likely to consume vegetables daily in most countries, with a difference equal or more than 10 percentage points in 13 countries (Bulgaria, Denmark, Germany (Bremen federal state only), Hungary, Ireland, Italy, Lithuania, Malta, Poland, Portugal, San Marino, Slovakia and Spain) (Fig. 25). These data are consistent with previous COSI findings, which pointed to an association between parental education and daily vegetable consumption (12, 20).

Fig. 23. Daily consumption of vegetables among 6–9-year-olds (%)

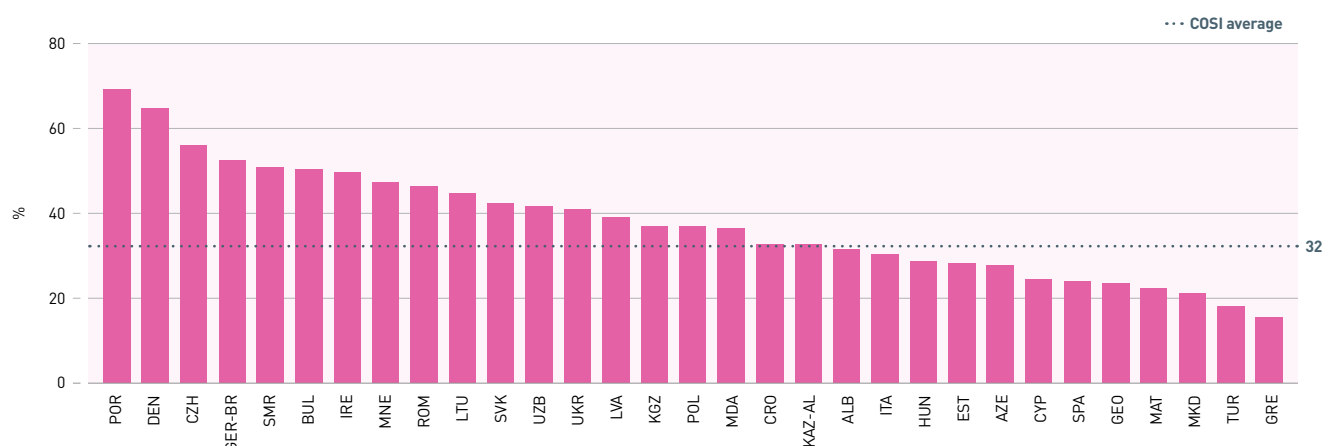
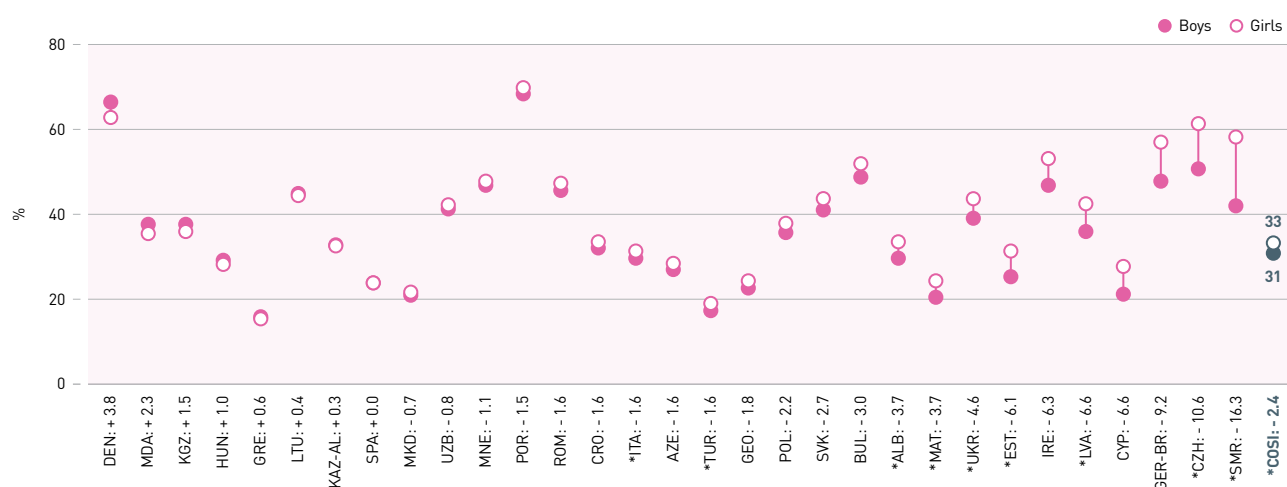


Fig. 24. Daily consumption of vegetables among boys and girls aged 6–9 years (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).

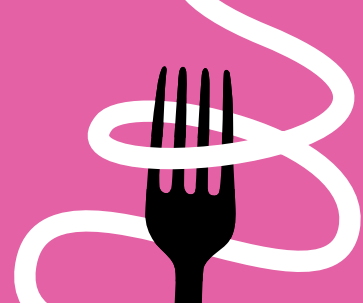
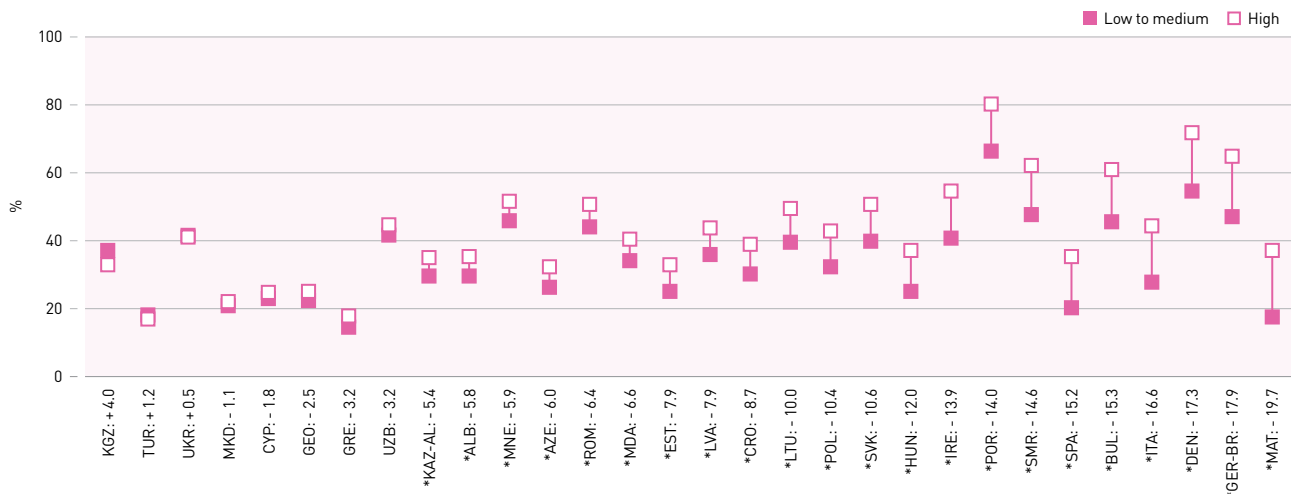


Fig. 25. Daily consumption of vegetables among 6–9-year-olds, by level of parental education (low to medium versus high) (%)^a



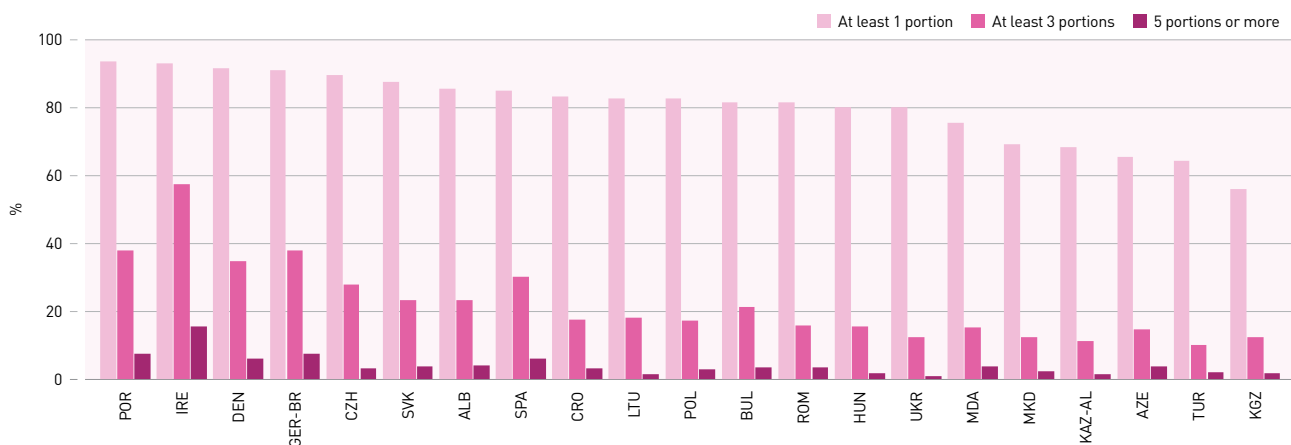
^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

2.2.3 Number of portions of fresh fruits and/or vegetables consumed on a typical day

WHO recommends consumption of at least five portions of fruit and vegetables per day for the prevention of NCDs (28). Among the 21 countries with data, it is clear that very few children were consuming five portions per day – in 16 countries less than 5% of children consumed five or more portions of fresh fruits and/or vegetables on a typical day (Fig. 26). No differences by gender were found in any country.

When considering the consumption of at least three portions on a typical day, figures ranged from 10% in Türkiye to 57% in Ireland. Even in this case, there is still room for improvement considering that less than a third of children consumed three or more portions of fruits and vegetables a day in most (17) of the countries.

Fig. 26. Number of portions of fresh fruits and/or vegetables consumed on a typical day by 6–9-year-olds (%)



2.3 Consumption of savoury snacks and sweets

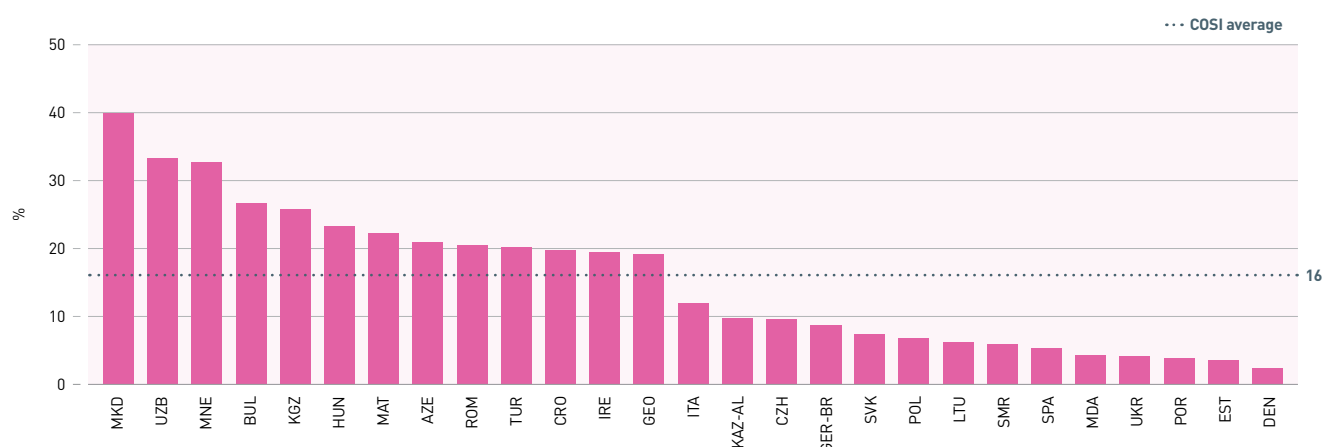
WHO's practical advice on healthy diets recommends limiting the consumption of salty snacks and of sugary snacks and candies (27). These products are, however, heavily marketed to children in the Region and are commonly consumed (29). For COSI round 6, data were collected on the consumption of savoury snacks and sweets. Data are presented for frequent consumption – that is consumption on more than three days per week – of savoury snacks and of sweets, overall and on a country-specific basis, along with analyses by gender and by level of parental education.

2.3.1 Frequent consumption of savoury snacks

Overall, in the 27 countries with data, 16% of 6–9-year-olds consumed savoury snacks more than three days per week (Fig. 27). At the country level, the proportion of children with frequent consumption varied considerably, from 2% in Denmark to 40% in North Macedonia. In 10 of the 27 countries, at least one in five children frequently consumed savoury snacks.

In almost all countries, no significant gender differences were observed in children consuming savoury snacks more than three days per week. A statistically significant difference of greater than two percentage points was observed in Malta, Poland and Romania, where frequent consumption was more common among boys than girls, and in San Marino, where the opposite was true (Fig. 28). There was a clear association with level of parental education – frequent consumption of savoury snacks was more common among children of parents with a low to medium level of education than those with a high level of education in almost all countries (Fig. 29).

Fig. 27. Frequent (more than three days per week) consumption of savoury snacks among 6–9-year-olds (%)



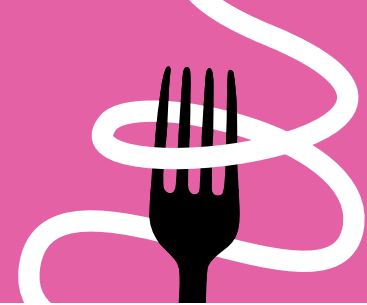
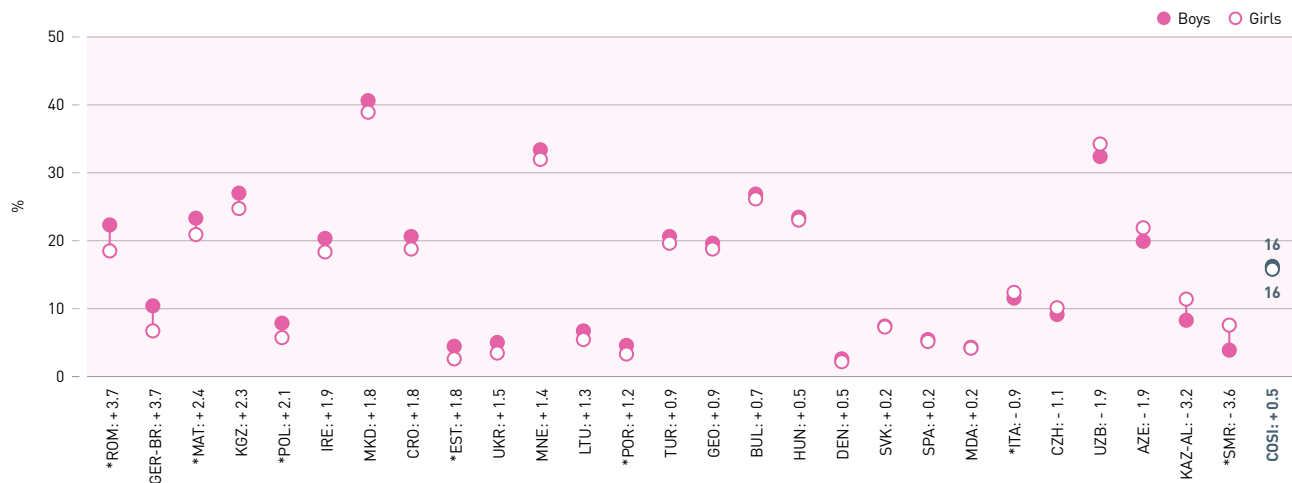
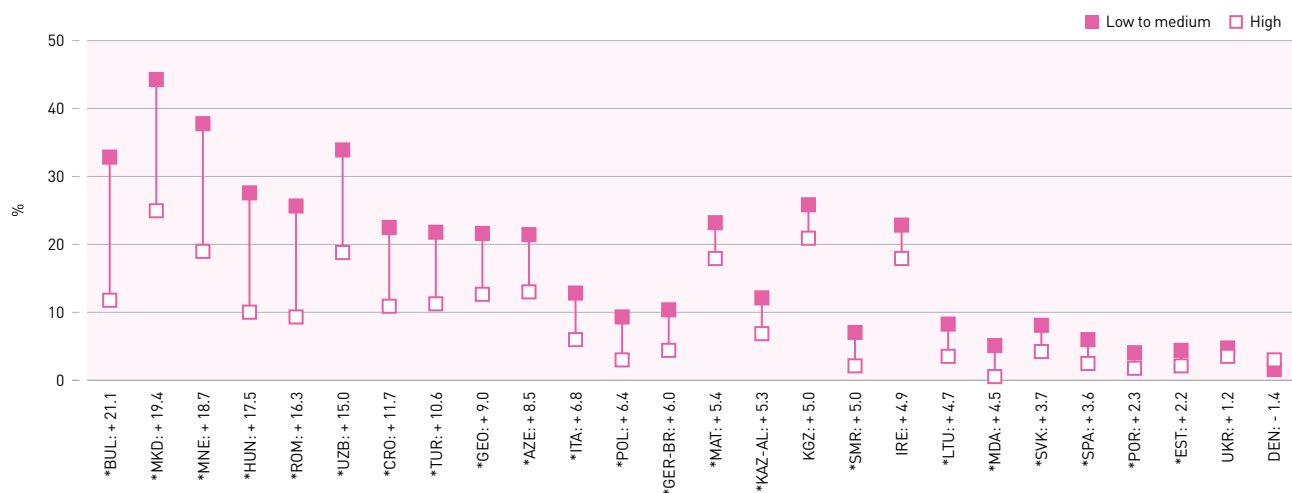


Fig. 28. Frequent (more than three days per week) consumption of savoury snacks among boys and girls aged 6–9 years (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).

Fig. 29. Frequent (more than three days per week) consumption of savoury snacks among 6–9-year-olds, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

2.3.2 Frequent consumption of sweets

Overall, among the 28 countries with data, 41% of children consumed sweets more than three days per week (Fig. 30). At the country level, the proportion ranged from 24% in Portugal to 65% in Latvia, and at least one in three children consumed sweets frequently in all but six countries.

There were no statistically significant gender differences in any country except Italy and the Republic of Moldova, where frequent consumption of sweets was slightly higher among boys than girls, and Uzbekistan, where it was the opposite (Fig. 31). There was no clear relationship with level of parental education – in

three countries (Croatia, Estonia and Malta) frequent consumption was more common among children of parents with a high level of education, while in five countries (Azerbaijan, Bulgaria, Georgia, Ireland and San Marino) it was more common among children of parents with a low to medium level of parental education (Fig. 32).

Fig. 30. Frequent (more than three days per week) consumption of sweets among 6–9-year-olds (%)

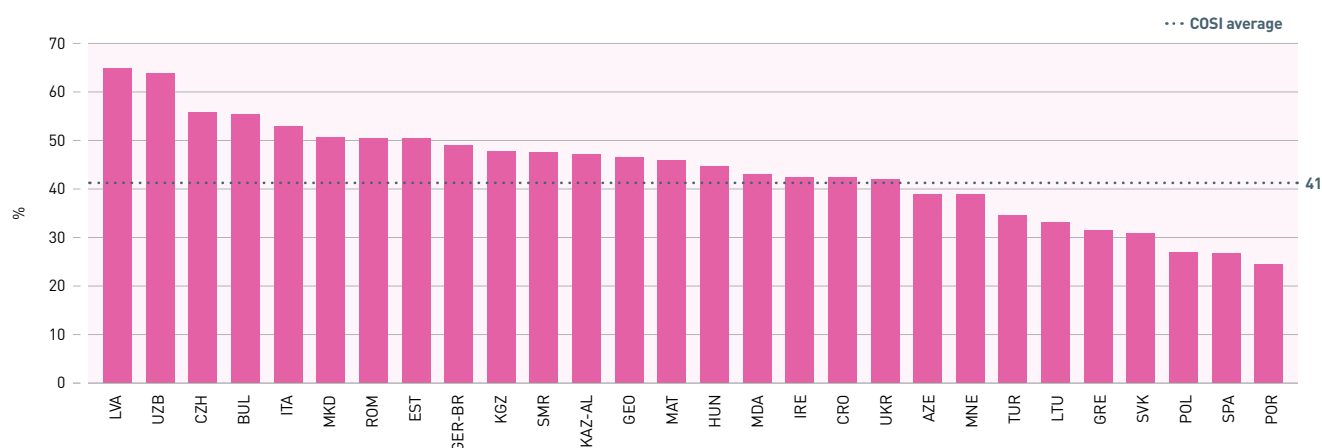
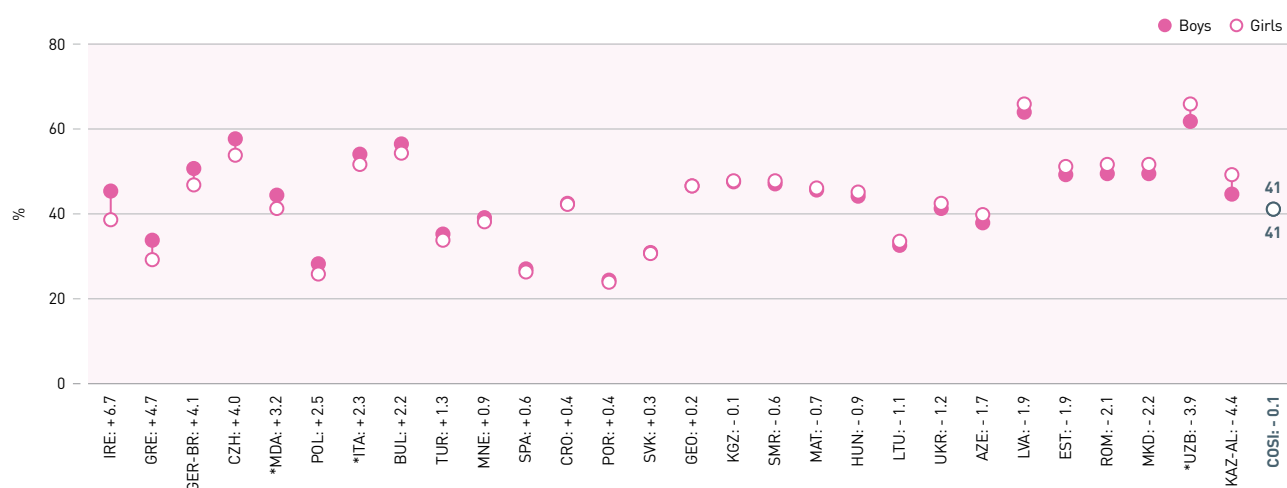


Fig. 31. Frequent (more than three days per week) consumption of sweets among boys and girls aged 6–9 years (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).

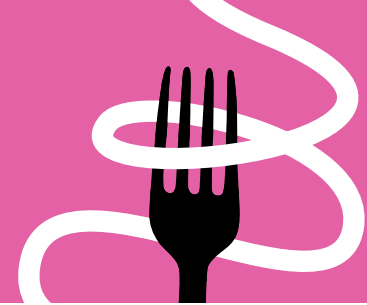
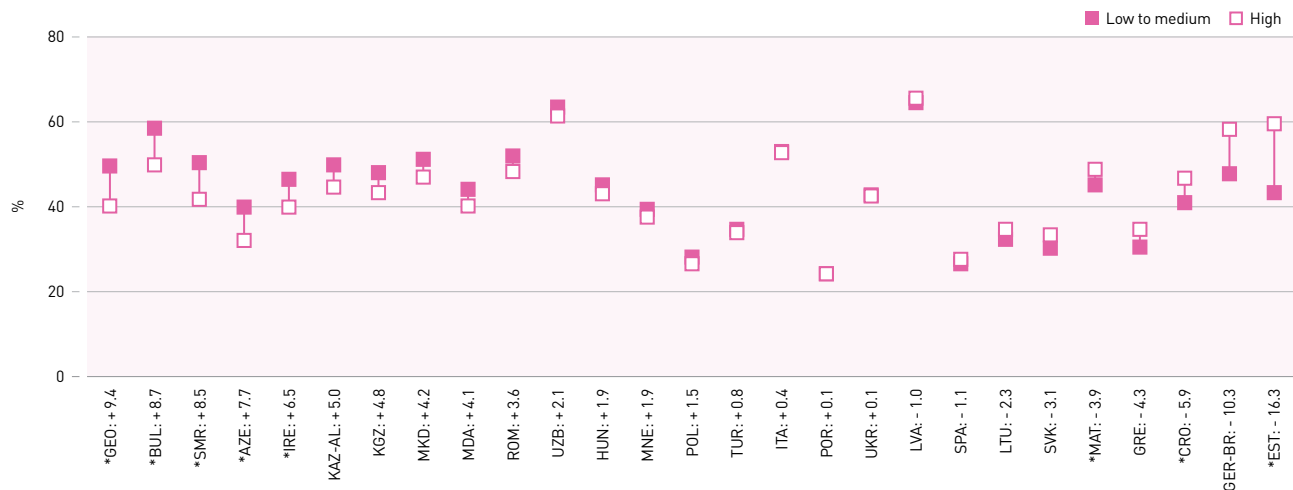


Fig. 32. Frequent (more than three days per week) consumption of sweets among 6–9-year-olds, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

2.4 Consumption of soft drinks containing sugar

Children's sugar intakes should not exceed 10% of their total energy intake (29), but across the Region, children's sugar intakes are too high (30), and soft drinks are a major contributor. High intake of sugar-sweetened beverages is associated with a greater risk of weight gain and obesity (31, 32) and has a detrimental impact on dental health (33). Across the Region, diets high in sugar-sweetened beverages are estimated to be responsible for over 15 600 deaths every year (8).

For round 6 of COSI, data are presented on the overall and country-specific prevalence of frequent consumption of soft drinks containing sugar among 6–9-year-olds (consumption on more than three days per week), as well as analyses by gender and level of parental education. Overall, from the 31 countries with data, more than a quarter (29%) of children consumed soft drinks on more than three days per week (Fig. 33). In the COSI-COVID study one in eight parents (13%) reported that their child reduced their consumption of sugar-sweetened soft drinks during the pandemic, but frequent consumption of soft drinks remained common (14).

At the country level, there is wide variation, ranging from 2% in Greece to 48% in Hungary. At least one in four 6–9-year-olds frequently consumed soft drinks in 13 countries – namely, Azerbaijan, Croatia, Czechia, Hungary, Kazakhstan (Almaty only), Kyrgyzstan, Montenegro, North Macedonia, Poland, Slovakia, Türkiye, Ukraine and Uzbekistan.

Frequent soft drink consumption was slightly more common in boys than girls overall (30% and 28%, respectively). At the country level, a significant difference of three percentage points or more was observed in seven countries – Croatia, Cyprus, Georgia, Latvia, North Macedonia, Poland and Türkiye – where boys had higher levels of frequent consumption, and San Marino, where the opposite was true (Fig. 34).

Children of parents with a low to medium level of education were more likely to drink soft drinks more than three days per week in almost all countries (Fig. 35). The difference compared to children with highly educated parents ranged from +3 to +19 percentage points.

Fig. 33. Frequent (more than three days per week) consumption of soft drinks containing sugar among 6–9-year-olds (%)

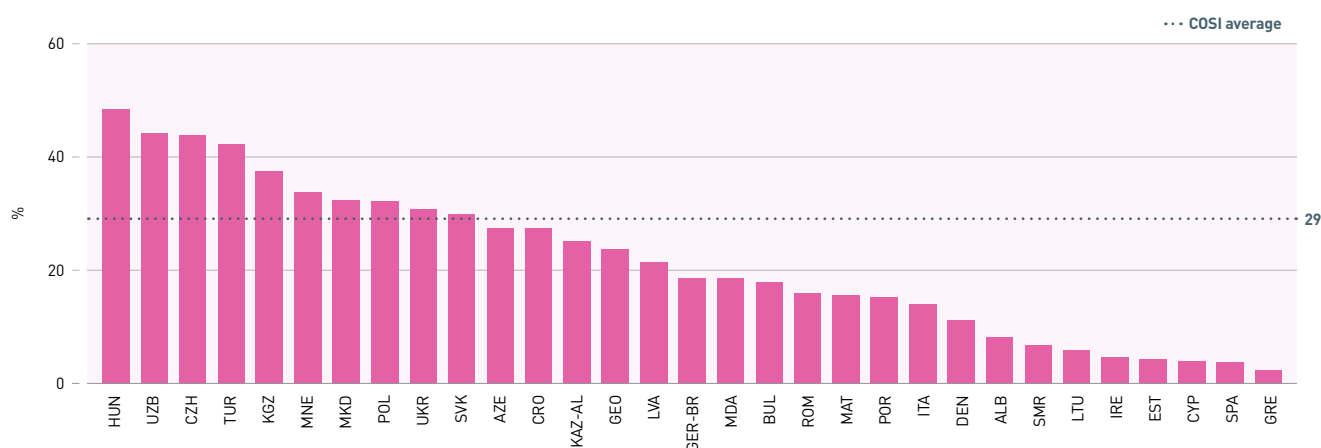
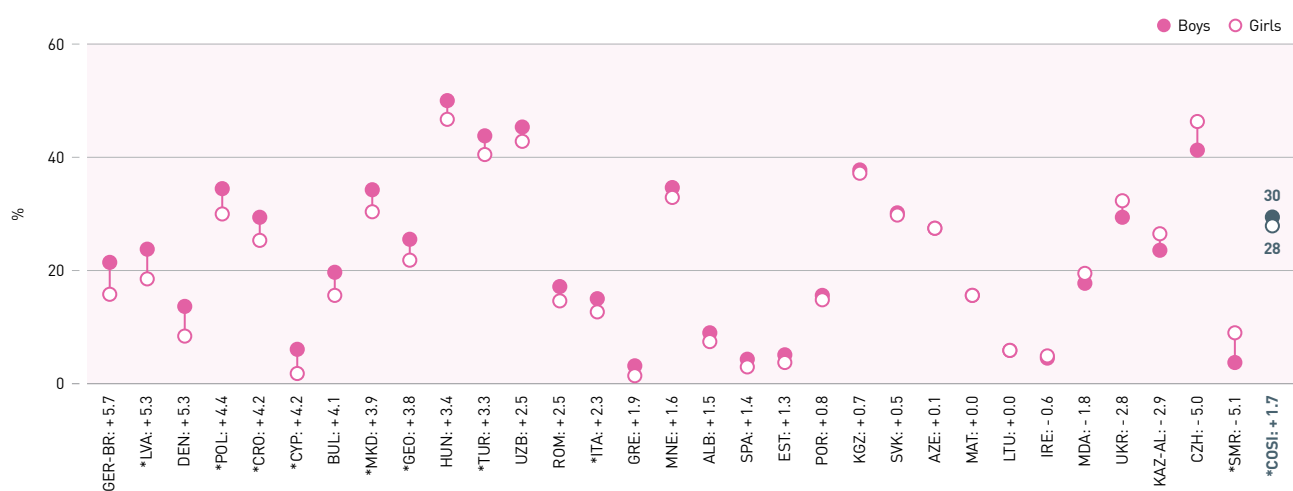


Fig. 34. Frequent (more than three days per week) consumption of soft drinks containing sugar among boys and girls aged 6–9 years (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).

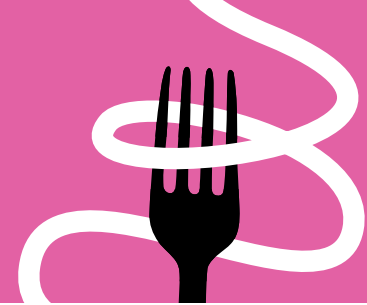
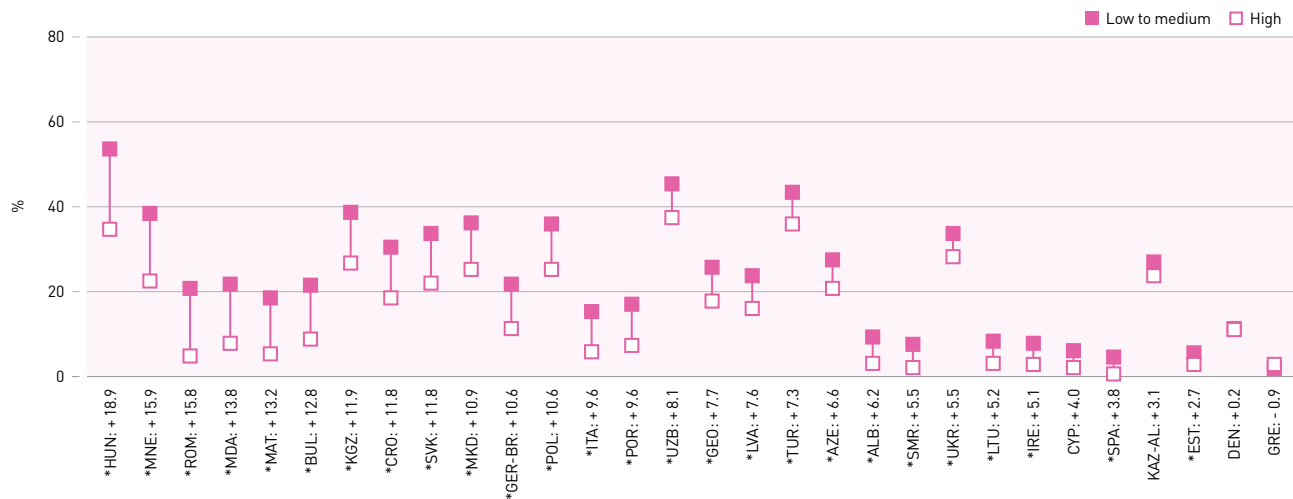


Fig. 35. Frequent (more than three days per week) consumption of soft drinks containing sugar among 6–9-year-olds, by level of parental education (low to medium versus high) (%)^a



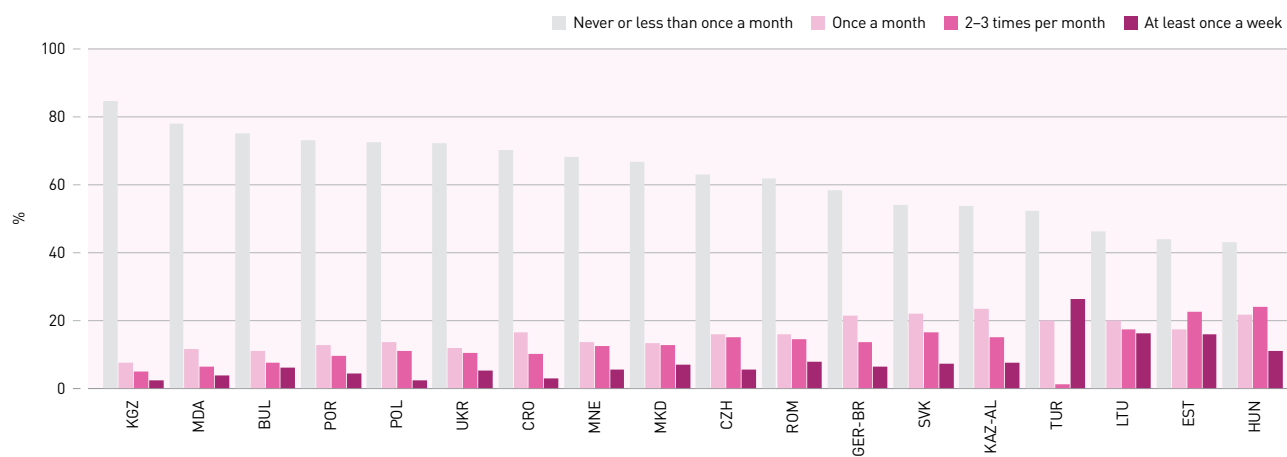
^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

2.5 Consumption of meals ordered online

Recent years have seen a substantial increase in the consumption of food ordered online in the Region (34). Most commonly, food is ordered via meal delivery apps, whereby meals and snacks are delivered from food production and retail outlets to private residences and offices by couriers using bicycles, motorbikes and cars. Foods prepared out of the home are associated with high levels of calories, sugar, saturated fat and salt, and portion sizes tend to be larger (35, 36). Meal delivery apps increase the accessibility of such foods and drinks and, by enabling people to have meals delivered to them directly, promote sedentary behaviour. Food delivery apps and websites are also platforms for advertising that may lead to increased consumption of unhealthy foods.

Data on the frequency of consumption of meals ordered online among families with 6–9-year-old children were collected for the first time during the sixth round of COSI data collection. Country-specific data on frequency are available for 18 countries. In most of the countries, more than half of the families consumed meals ordered online never or less than once a month. The proportion of families ordering meals online more than once a month ranged from 8% to 39% (Fig. 36). Ordering online meals at least once a week appeared to be particularly prevalent in Estonia (16%), Lithuania (16%), Hungary (11%) and Türkiye (26%).

Fig. 36. Frequency of consumption of meals ordered online among families with 6–9-year-old children (%)



3. Physical activity



Regular physical activity is an important part of a healthy lifestyle at all ages. It is important for maintaining a healthy weight, the prevention of NCDs and promotion of mental health and well-being (37). Establishing healthy physical activity patterns in childhood helps shape habits throughout adolescence and into adulthood. For children and adolescents, WHO recommends at least an average of 60 minutes per day of moderate-to-vigorous-intensity physical activity, mostly aerobic, across the week (38). Physical activity levels remain low in the Region, with 30% of adults insufficiently active in 2016 (39), and only 25% of adolescent boys and 15% of adolescent girls achieving the recommended levels of physical activity in 2021–2022 (40). For many children, physical activity levels were undermined during the pandemic (14). Socioeconomic inequalities are evident, with adolescents from more affluent families reporting higher levels of physical activity (40), suggesting that factors such as access to spaces and opportunities for participation in physical activity and sports might be influenced by family income.

The physical environment – including workplaces, transport systems, neighbourhoods, houses, cycle paths, playgrounds and sports grounds – provide opportunities for participation in physical activity, while schools are a key setting for encouraging physical activity. WHO has called on policy-makers in the Region to promote physical activity among school children through diverse means, including making sure playgrounds are available and safe, training staff to deliver active breaks, and investing in safe walking and cycling routes (39).

In the sixth round of COSI, data were available on travel to and from school in 31 countries and time spent playing actively or vigorously in 26 countries.

3.1 Travel to and from school

Going to and from school actively – on foot, by bicycle, skating or by non-motorized scooter – can contribute to children's physical activity and help to reduce carbon emissions and promote cleaner air (2). Data from the fifth round of COSI, from 2018–2020, suggested that, overall, only 41% of children aged 6–9 exclusively travelled to school actively, and that there are very wide variations between countries (12). For the sixth round, data are presented on the proportion travelling to and from school on foot, cycling or skating versus going by motorized vehicle, and these data are analysed by distance to school, gender and level of parental education. In addition, data are presented from 21 countries on the reasons given for not travelling to school actively.

Overall, in the 31 countries with data, 53% of children travelled to school on foot or by bike or skating compared to 40% that travelled by motorized vehicle (Fig. 37). The remaining 7% used a combination of these modes. The proportion of children travelling actively to and from school varied from 6% in Cyprus to 81% in Uzbekistan. In only 13 of the 31 countries did more children travel to school actively than by motorized vehicle. The distance between a child's home and school is likely to affect decisions about how children travel to school. Even among children that live near school, however, there is wide variation – the proportion of children who live less than a kilometre from school that travelled actively to and from school ranged from 49% in Portugal to 93% in Kyrgyzstan (Fig. 38). Nonetheless, school being too far from home was the most commonly given reason for a child not travelling to school on foot, cycling or skating in 17 of



the 21 countries with data (Fig. 39). The second most common reason in those countries – and the most common reason in four countries – is that routes are not considered safe. In Ukraine, the exceptionally high proportions of respondents citing that routes are not considered safe (78%) or that school is too far from home (93%) as reasons that children do not travel actively to school are not surprising in the context of a full-scale war since February 2022.

There were very few differences between boys and girls in the proportion of children travelling to school actively in the 31 countries with data (Fig. 40). There were, however, differences by level of parental education – children of parents with a low to medium level of education were more likely to go to and from school on foot or by bike or skating in most countries (Fig. 41). Differences of 10 percentage points or more – and up to 44 percentage points – were observed in 11 of the 30 countries with data.

Fig. 37. Transport to and from school (on foot/cycling/skating versus going by motorized vehicle) among 6–9-year-olds (%)

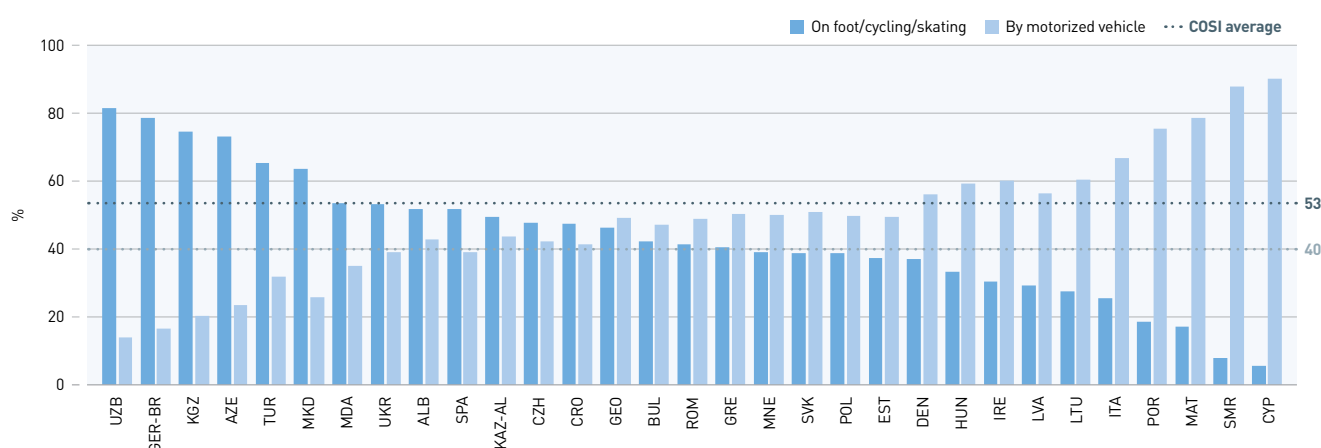
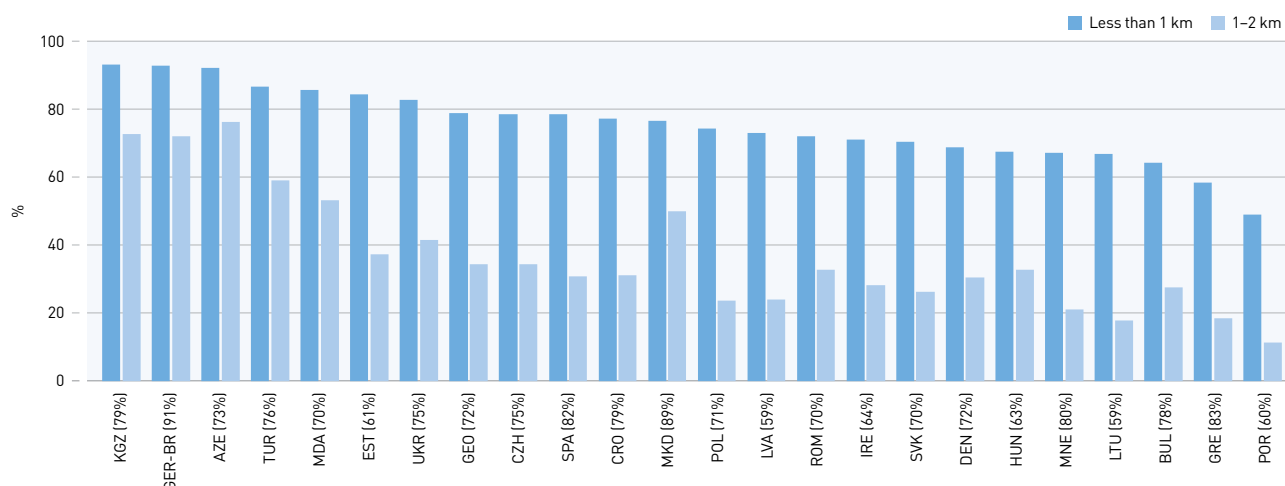


Fig. 38. Percentage of 6–9-year-old boys and girls going to and from school on foot/cycling/skating by distance to school and percentage of 6–9-year-old boys and girls who lived within two kilometres of school^a



^a The percentage of 6–9-year-old boys and girls who lived within two kilometres of school is reported next to the country's code.

Fig. 39. Reasons for not going to and from school on foot/cycling/skating (%)

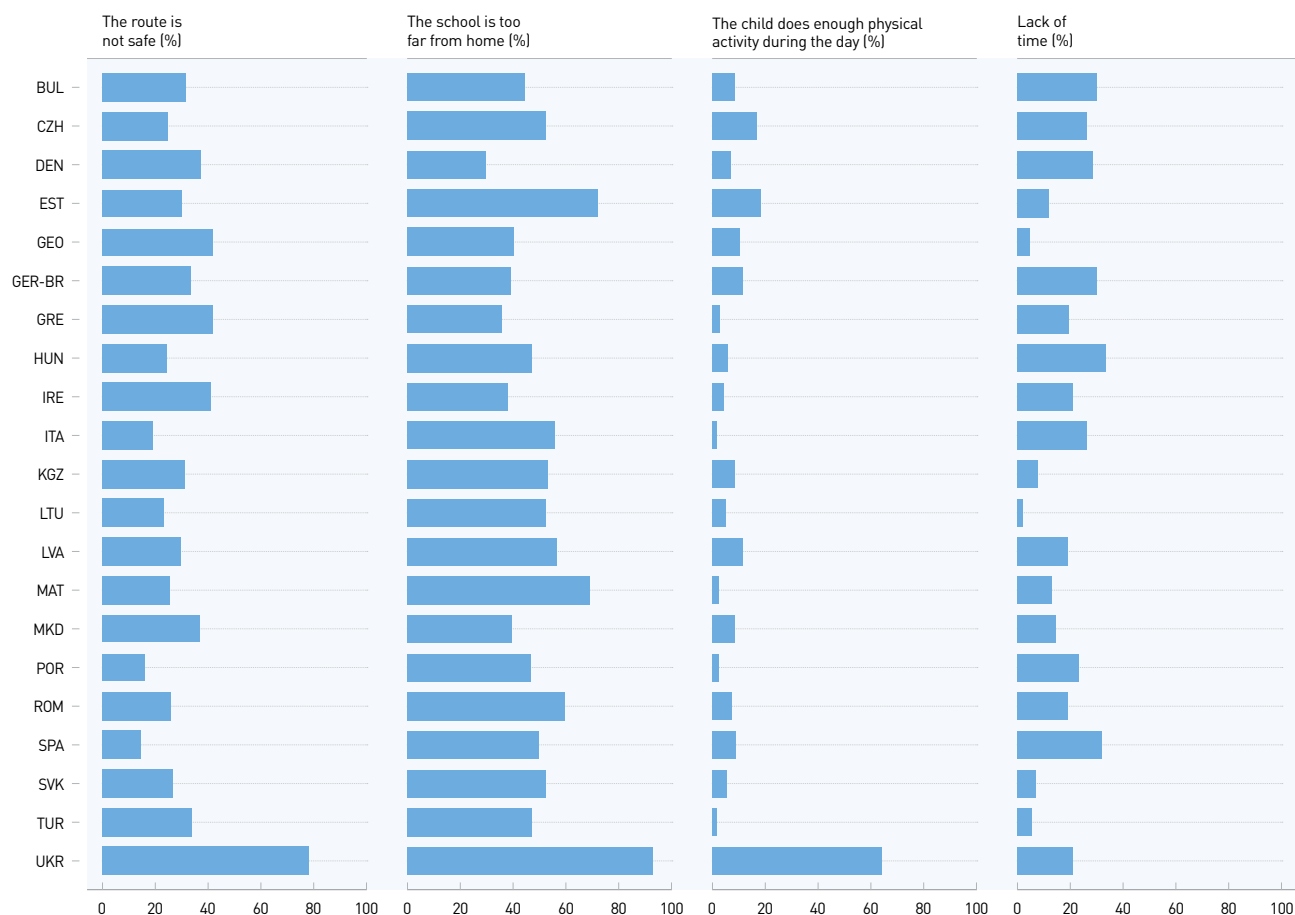
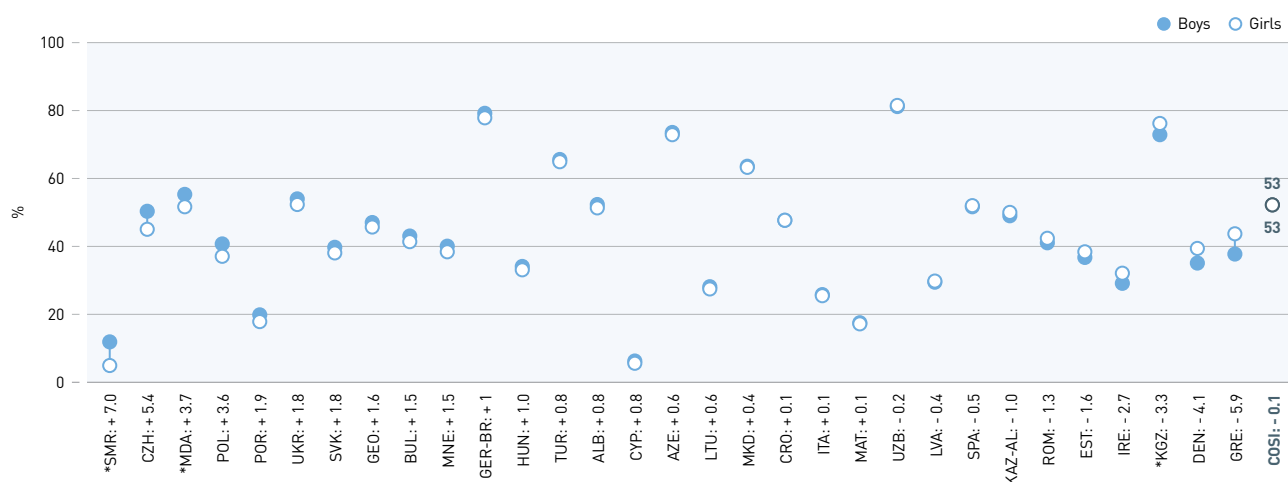


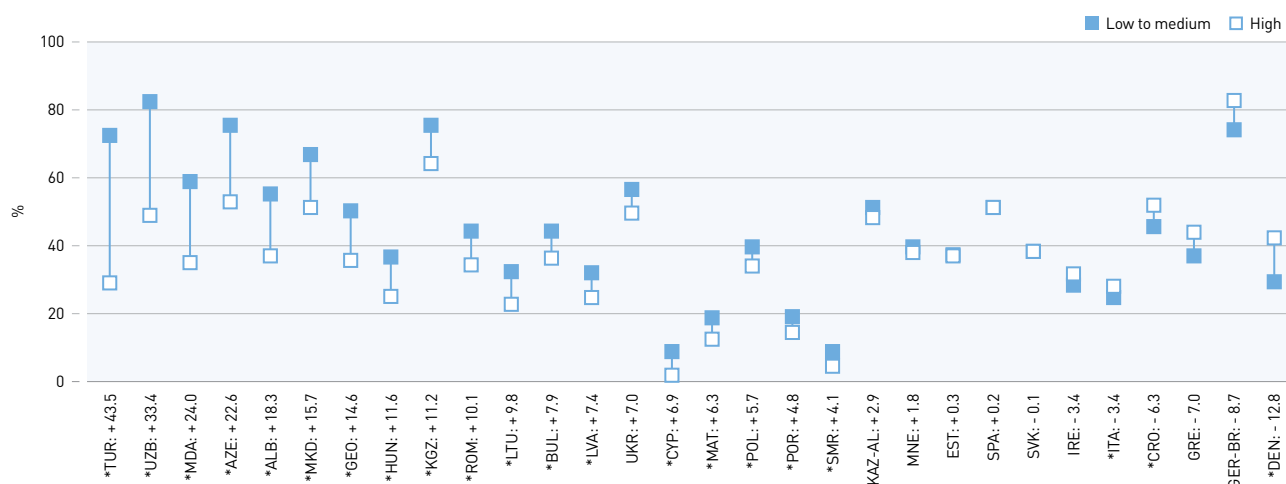
Fig. 40. Percentage of 6–9-year-old boys and girls going to and from school on foot/cycling/skating (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).



Fig. 41. Percentage of 6–9-year-olds going to and from school on foot/cycling/skating, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

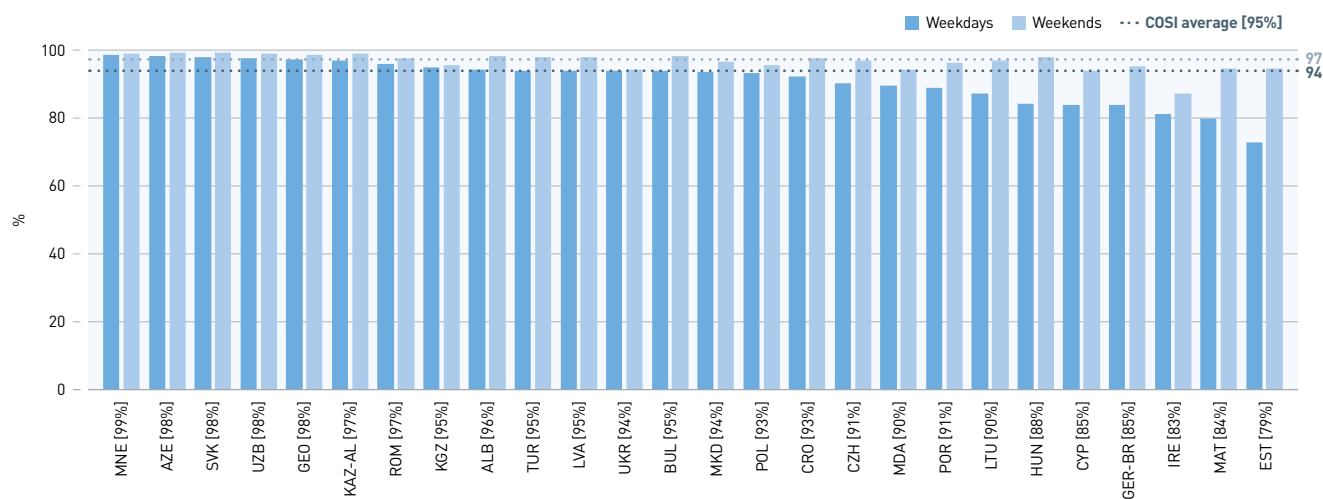
3.2 Time spent playing actively/vigorously

Physically active play can be an important way to help children meet the recommended level of 60 minutes of moderate or vigorous activity daily, and WHO recommends that children participate in vigorous-intensity aerobic activities at least three days a week [38]. For many children, this important opportunity to be physically active was undermined during the pandemic – the COSI-COVID study in 17 countries found that around a quarter of children experienced a decrease in time spent in outdoor activities on both weekdays and weekends during the pandemic period [14].

Parents were asked how many hours their child usually spent playing actively or vigorously outside school hours, both on weekdays and weekends. Data are presented for the percentage of children usually playing actively/vigorously for at least one hour a day on average, on weekdays and weekend days, for 26 countries.

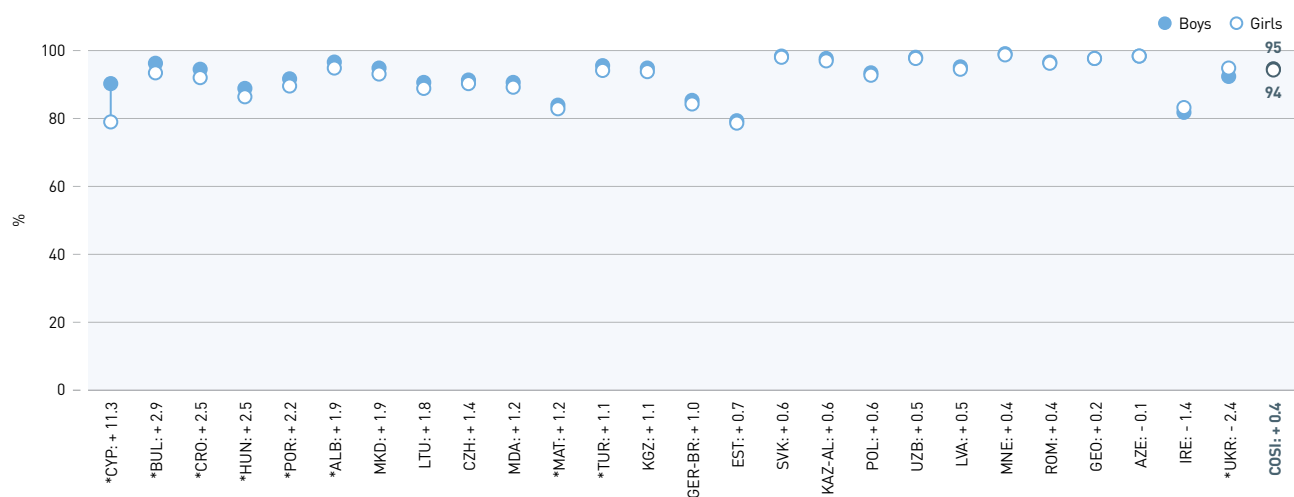
On average, almost all children played actively or vigorously for at least an hour a day throughout the week – overall, 94% of children did so on weekdays and 97% did so on weekends (Fig. 42). At the country level, the proportion playing actively or vigorously for at least an hour on weekdays dropped below 90% in nine countries – Cyprus, Estonia, Germany (Bremen federal state only), Hungary, Ireland, Lithuania, Malta, Republic of Moldova and Portugal – but more than 90% of children play actively or vigorously for at least an hour on weekend days in all the countries with data. In most countries, the percentage of children spending an hour in active or vigorous play on an average day were very similar for boys and girls, although the percentage was much higher for boys than girls in Cyprus (+11 percentage points) (Fig. 43). There were also few differences by level of parental education – differences, which are statistically significant, were registered in seven countries with children of parents with a low to medium level of education being more likely to play actively for at least an hour on an average day (Croatia, Estonia, Germany (Bremen federal state only), Hungary, Lithuania, Malta and Türkiye) (Fig. 44).

Fig. 42. Percentage of 6–9-year-olds spending at least one hour a day, on average, playing actively/vigorously, on weekdays and weekends (%)^a



^a Estimates for an average day are reported in squared brackets.

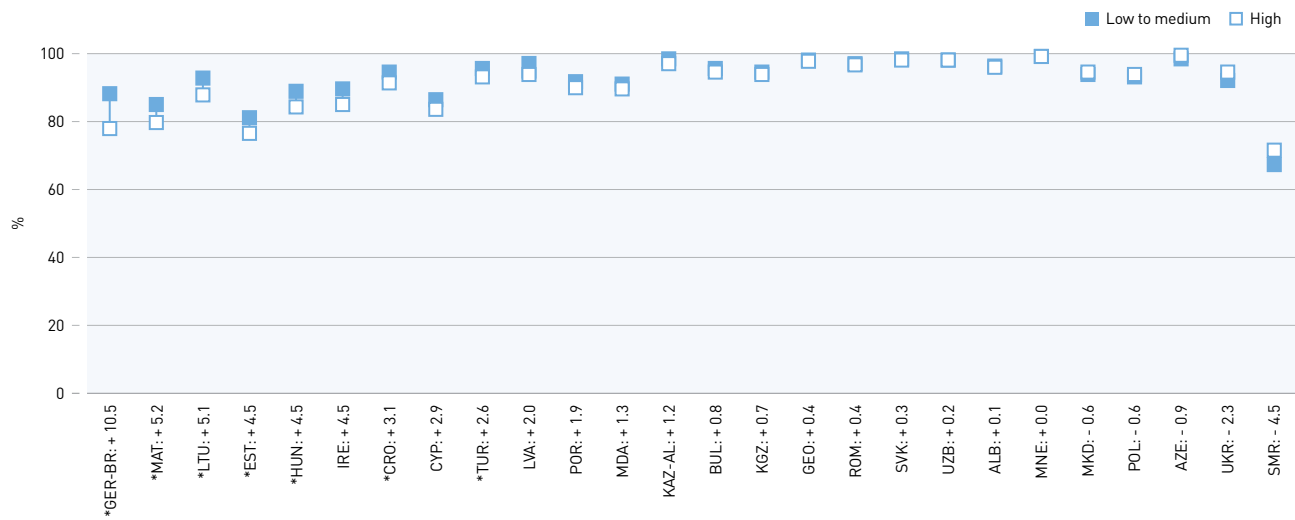
Fig. 43. Percentage of 6–9-year-old boys and girls spending at least one hour on an average day playing actively/vigorously (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).

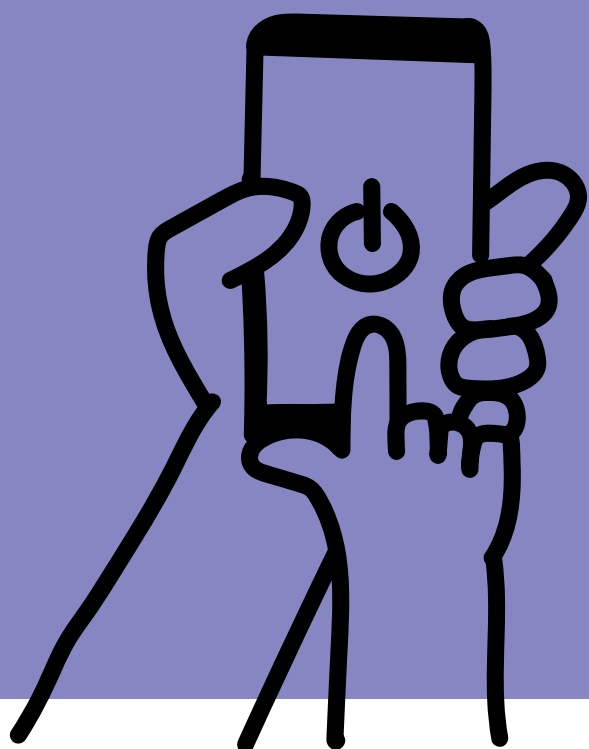


Fig. 44. Percentage of 6–9-year-olds spending at least one hour on an average day playing actively/vigorously, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

4. Screen time and sleep duration





As children grow and develop, it is important that, as well as being physically active, they have low levels of sedentary behaviour and get enough sleep each day. The amount of time that children spend watching television or using electronic devices (together known as screen time) increases sedentary behaviour, which has been correlated with a higher intake of energy-dense snacks, drinks and fast foods and with an overall higher energy intake (41). Sleep is important for children's overall well-being and short sleep duration has been linked to the development of obesity in children (42). For the sixth round of COSI, data were collected on screen time for 29 countries and on sleep duration in 31 countries.

4.1 Time spent watching television or using electronic devices (i.e. screen time)

WHO recommends that children over five years of age and adolescents should limit the amount of time spent being sedentary, particularly the amount of recreational screen time (38). The previous round of COSI data collection found that approximately four in ten children were spending at least two hours a day, on average, watching television or using electronic devices (12). The lifestyle changes that families experienced during the pandemic period led to changes in screen time for many children – the previously mentioned COSI-COVID study in 17 countries found that, overall, time spent watching television, playing video/computer games or using social media for non-educational purposes increased for 36% of the children and decreased for under 10% of the children (14). Earlier analyses of COSI data found that, in pooled analyses of data from 24 countries, lower parental education was associated with increased screen time, and this association was found in most northern, western, eastern and southern European countries (43).

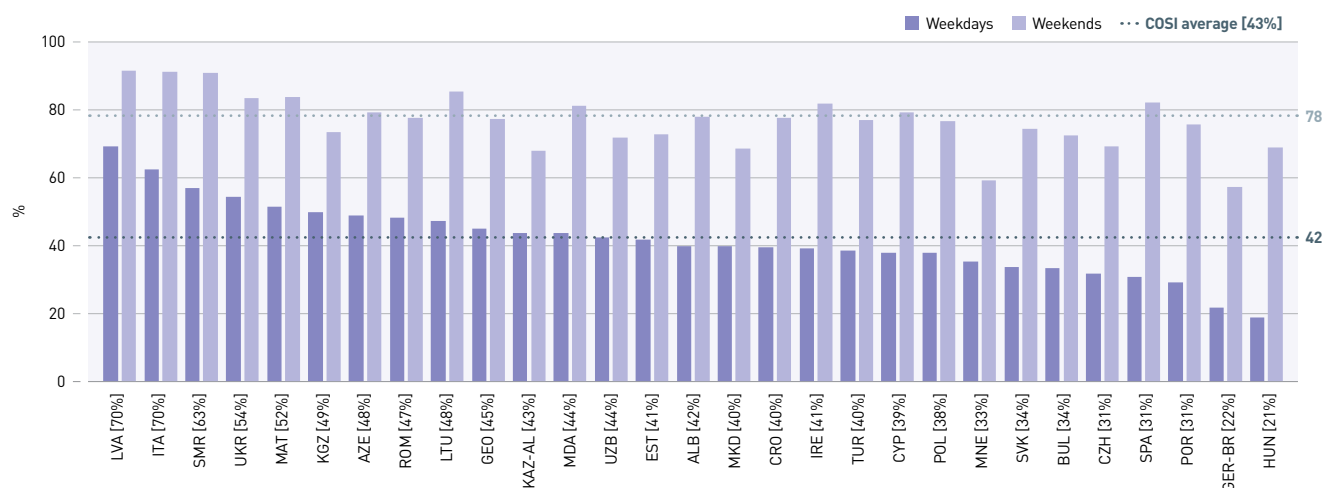
Parents were asked how much time their child usually spent watching television or playing with electronic devices, either at home or outside home, on weekdays and on the weekend. Data are presented for the percentage of children spending at least two hours a day, on average, watching television or using electronic devices, on weekdays and on weekend days, along with analyses by country, gender and level of parental education.

Overall, in the 29 countries that collected data, 42% of 6–9-year-olds spent at least two hours a day watching television or using electronic devices on weekdays (Fig. 45). On weekend days, this proportion rose to 78%. There is wide variation at the country level – the percentage of children with at least two hours a day of screen time on weekdays ranged from 19% in Hungary to 69% in Latvia. On weekends, over two thirds of children spent at least two hours a day watching television or using electronic devices in all countries except Montenegro and Germany (Bremen federal state only).

Overall, boys were more likely than girls to spend at least two hours watching television or using devices on an average day (45% and 41%, respectively), with differences of up to 14 percentage points observed at the country level (Fig. 46).

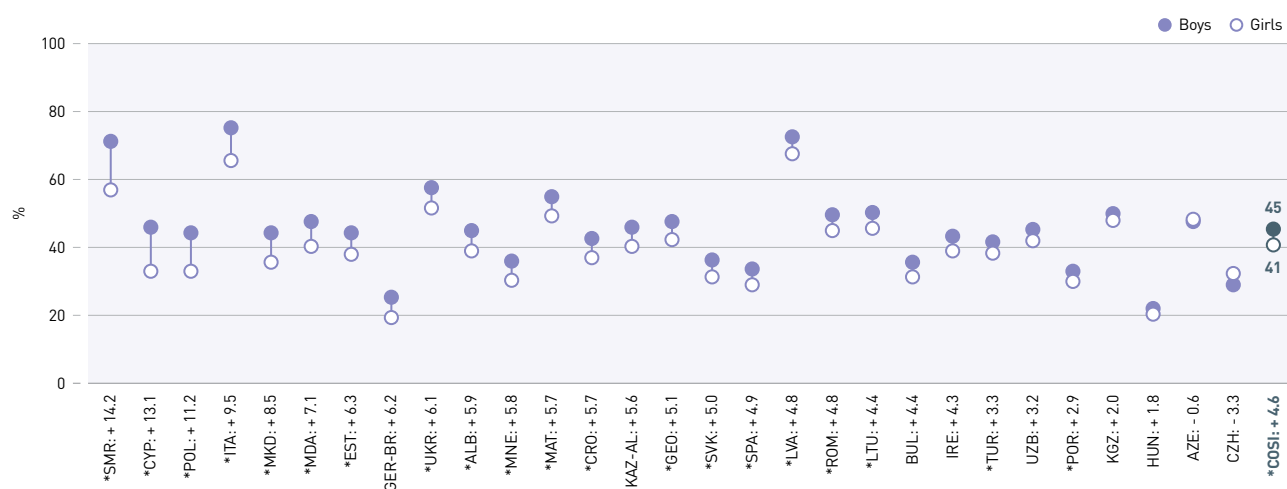
There was a tendency for a higher percentage of children of parents with a low to medium level of education to have at least two hours of screen time on an average day than children of parents with a high level of education (Fig. 47). The differences, which were statistically significant in 17 of the 28 countries with data, ranged from 5 to 20 percentage points.

Fig. 45. Percentage of 6–9-year-olds spending at least two hours a day, on average, watching television or using electronic devices, on weekdays and weekends (%)^a



^a Estimates for an average day are reported in squared brackets.

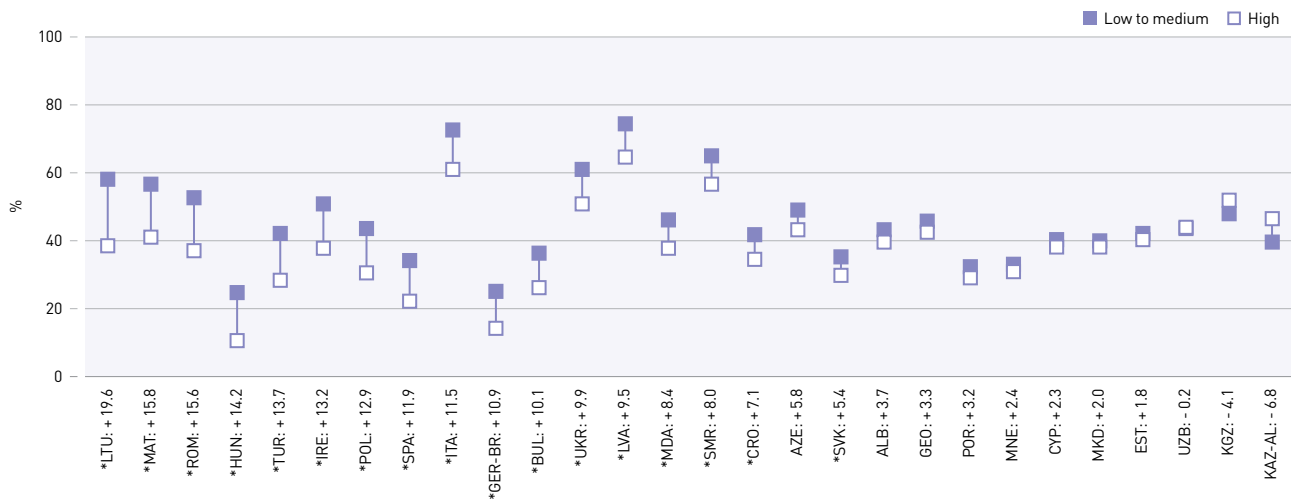
Fig. 46. Percentage of 6–9-year-old boys and girls spending at least two hours on an average day watching television or using electronic devices (%) and difference between genders (percentage points)^a



^a Gender differences, measured in percentage points, were calculated by subtracting the estimates for girls from those for boys. The asterisk indicates a significant difference ($P < 0.05$).



Fig. 47. Percentage of 6–9-year-olds spending at least 2 hours on an average day watching television or using electronic devices, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference ($P < 0.05$).

4.2 Sleep duration

As part of overall guidance on movement behaviours, some countries have issued recommendations on sleep duration, recommending 9–11 hours of sleep per night for children aged 6–9 years (43). Previous COSI data have found that most children were reported to have achieved the recommended 9–11 hours of sleep, that there were substantial differences between countries (43), and that the relationship between sleep and socioeconomic status varied by the indicator used (45).

Parents were asked to report the time that their child usually goes to bed and time the child usually wakes up on school days. Data are presented for the percentage of 6–9-year-olds sleeping at least nine or at least 10 hours per night, and analyses by gender and level of parental education.

Overall, among the 31 countries with data, the vast majority (89%) of children were sleeping at least nine hours per night, while the percentage of children sleeping at least 10 hours per night was much lower (47%) (Fig. 48). Among the 31 countries, there were only two – Latvia and Kazakhstan (Almaty only) – where the percentage of children sleeping for at least nine hours per night dropped below 80%. The percentage of children sleeping at least 10 hours per night ranged from 20% to 97%. There were no differences by gender (data are not shown). There was no clear relationship with level of parental education. In five countries (Albania, Azerbaijan, Kyrgyzstan, Republic of Moldova and Uzbekistan) the children of parents with a low to medium level of education were more likely to sleep at least nine hours per night than those of parents with a high level of education, with differences ranging from six to 14 percentage points (Fig. 49). Conversely, in a few countries, it was the children of parents with a high level of education that were more likely to sleep for at least nine hours – with differences of up to five percentage points (Italy).

Fig. 48. Percentage of 6–9-year-olds sleeping at least nine or at least 10 hours per night (%)

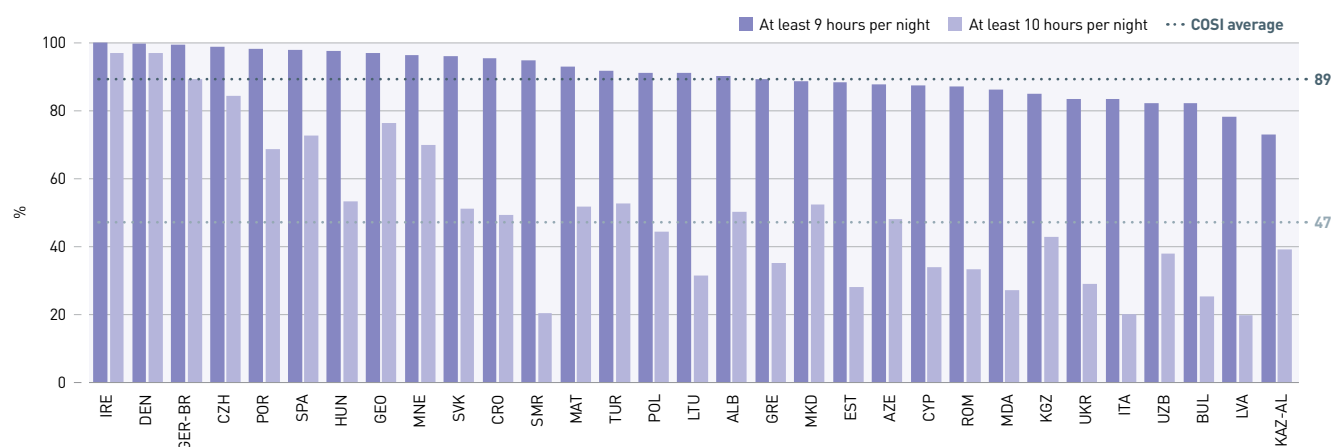
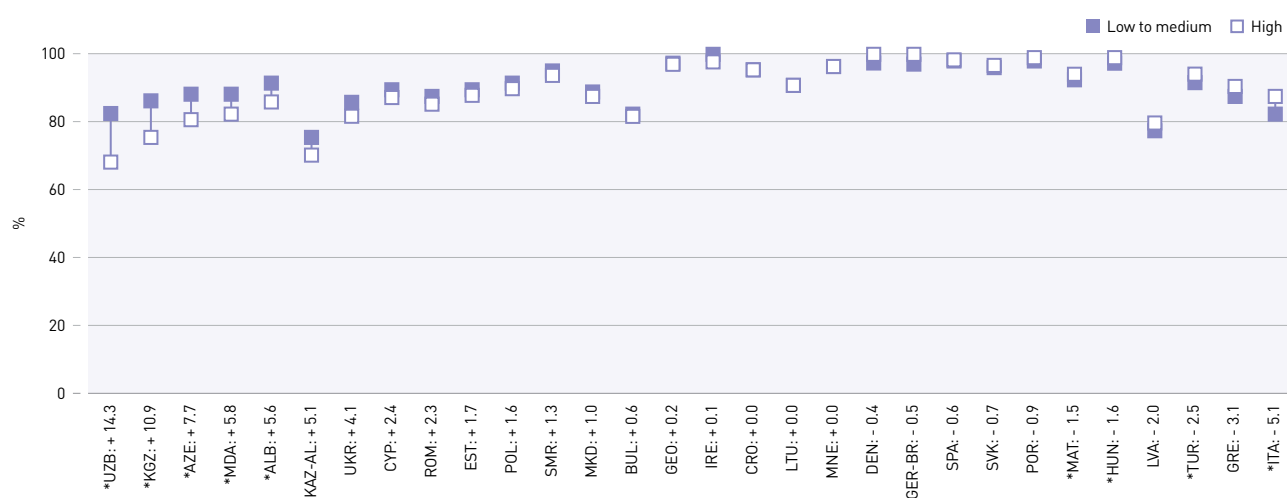


Fig. 49. Percentage of 6–9-year-olds sleeping at least nine hours per night, by level of parental education (low to medium versus high) (%)^a



^a Variations, measured in percentage points, were calculated as the difference between the estimate for children with low to medium parental education and the estimate for children with high parental education. The asterisk indicates a significant difference (P < 0.05).



5. Conclusion

The sixth round of COSI collected measurements, using standardized methods, on approximately 470 000 children aged 6–9 years in 37 participating countries between 2022 and 2024. In addition, data on family situation and health-related behaviours were collected on over 150 000 of these children.

Overall, across the 37 participating countries, one in four (25%) 7–9-year-old children were living with overweight (including obesity) according to WHO definitions, and one in ten (11%) were living with obesity. As in previous rounds of COSI, there continue to be large differences between countries – with the prevalence of overweight ranging from 9–42% and prevalence of obesity ranging from 3–20%. In most countries, more than one in 10 children – and almost one in five in several southern European countries – were living with obesity. Gender differences also persist, and both overweight and obesity tend to be more common among boys than girls. A tendency for the prevalence of obesity to increase with age among both boys and girls was seen in almost all countries that collected data for at least three age groups.

The countries that participated in the fifth and sixth rounds of COSI data collection are different, which means that the overall estimates for the two rounds refer to different populations and cannot be directly compared. However, when pooling data only from the 28 countries that participated in both rounds, a general tendency toward stability emerged and country level comparisons suggest that the prevalence of overweight and obesity tended to be stable in many countries. This is a continuation of the trend observed between the fourth and fifth round of COSI data collection (12). While these results suggest that several countries might be managing to halt the rise in childhood overweight and obesity, the overall picture is mixed. A statistically significant increase in prevalence of either overweight or obesity among boys, girls or both was observed in five countries (Bulgaria, Finland, Malta, Slovenia and Sweden). Only one country (San Marino) showed a statistically significant decline in prevalence of obesity (among boys), while four countries (Greece, Israel, Italy and Spain) experienced a decline in prevalence of overweight in either boys or girls.

Taking into account all the latest available data – including from earlier rounds of COSI for countries that did not participate in the sixth round – there were only six of 46 countries (47 study locations) where fewer than one in five children aged 7–9 years were affected by overweight and only 19 countries (20 study locations) where fewer than one in 10 children were living with obesity.

For the first time, the COSI report includes information on the prevalence of thinness – which, like overweight and obesity, can affect child development, health and well-being. Prevalence was relatively low in most countries but was higher in some eastern European and central Asian countries, which are facing the double burden of malnutrition as undernutrition coexists with overweight and obesity.

There have been concerns that the disruptions to daily life caused by the COVID-19 pandemic – including lockdowns, school closures and other mitigation strategies – may have further exacerbated the problem of childhood overweight and obesity in many countries. The sixth round of COSI, with data collection between 2022–2024, represents the first full round of data collection since the height of the pandemic. In addition, in order to investigate the impact of the pandemic on dietary habits and physical activity levels, a specific COSI-COVID study was conducted in 17 countries (14). That study highlighted the negative impact that the pandemic had on children's well-being and reported a doubling in parents who perceived



their child as overweight across the participating countries. It also pointed to mixed results on eating habits, a decline in physical activity on weekdays of nearly 30% and, for around one third of children, an increase in screen time.

In the sixth round of COSI within countries, differences in eating habits, physical activity and sedentary behaviours by level of parental education (as an indicator of socioeconomic status) persist. The healthier eating habits tend to be more common in children of parents with a higher level of education. Conversely, two healthier behaviours – active travel to school and sleeping for least nine hours per night – tended to be more common among children of parents with a low to medium level of education.

Taken together, the stubbornly high prevalence of obesity, the lack of progress in reducing the prevalence of childhood overweight, the double burden of underweight and overweight facing several countries, and the persistence of unhealthy eating and sedentary behaviours, clearly show that there is no room for complacency. Childhood obesity continues to pose a serious public health threat to the Region and urgent policy action is needed, as well as ongoing collection of reliable and valid data to monitor the situation.

There is no one single intervention that can halt the rise of childhood overweight and obesity. Comprehensive, multisectoral policy action – at the international, national and local levels – is needed to create healthier environments and promote a healthy diet and physical activity across the life course. The importance of a comprehensive approach and the necessity of working together across sectors and disciplines was emphasized in the Zagreb Declaration issued in May 2023 by the spouses of European leaders (44). Action is also needed to address the commercial determinants of health and challenge the behaviours of the commercial actors that market unhealthy food and beverage products and undermine the implementation of effective policy responses (8). WHO has set out a range of policy options to help create healthy and sustainable food environments and generate opportunities for physical activity (2, 5, 8, 9, 39, 45). The *WHO Technical Package* developed to support the *Acceleration Plan to Stop Obesity* highlights a number of areas with proven priority interventions (5). These include fiscal policies, restricting food and beverage marketing, food labelling, early food environment for infants and young children, public food procurement, physical activity, building capacity in the health system to deliver obesity management services, and public education and awareness. The *WHO European regional obesity report 2022* set out in more detail, for Member States' consideration, a suite of interventions and policy options across the life course and for particular age groups, including children (see Annex 3) (2).

The Special Initiative on NCDs and Innovation is committed to supporting Member States of the Region to implement these policies in order to protect current and future generations of children across the Region from the harms caused by overweight and obesity.



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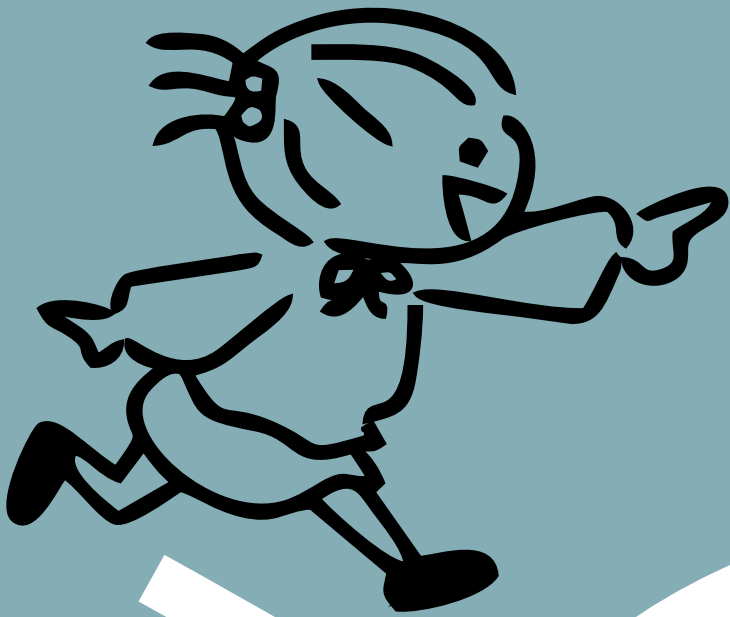
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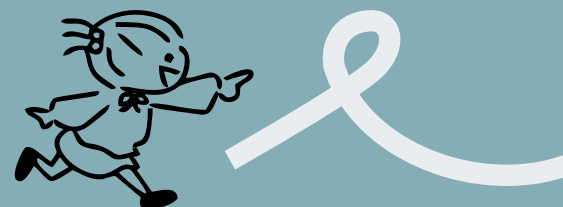


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Annex 1

Methodology



The data for the sixth round of the WHO European Childhood Obesity Surveillance Initiative (COSI), carried out between 2022–2024 in 37 countries, were gathered using a standardized protocol developed by the WHO Regional Office for Europe in partnership with Member States (1, 2). Further information on the COSI methodology and data collection processes can be found in other sources (3, 4).

Enrollment settings

Children were mainly enrolled through primary schools in all participating countries, with the exception of Czechia and Finland. In Czechia, children were selected at pediatric clinics during mandatory health check-ups conducted by pediatricians. In Finland, the data were obtained from the national primary health-care register. In other countries, such as Austria, Denmark, Israel, Luxembourg, North Macedonia, Slovenia, and Sweden, COSI was incorporated into their existing measurement systems.

Target population and sampling design

Participating countries had the option to select one or more of the following age groups: 6.0–6.9, 7.0–7.9, 8.0–8.9, and 9.0–9.9 years. Sixteen countries focused exclusively on 7-year-olds, seven on 8-year-olds, and Cyprus targeted only 9-year-olds. Thirteen countries chose to target multiple age groups (Table A1.1). The most commonly targeted age group was the 7-year-old age group, selected by 28 of the 37 participating countries, followed by 8-year-olds, targeted by 17 countries.

Table A1.1. Main characteristics of the study design in each country collecting data in COSI round 6

Country	Targeted age group(s) (years)	Previous COSI rounds in which country participated ^a	Sentinel approach ^b	Data collection period (month/year)
ALB	8	3, 4	–	10/2022–11/2022
AUT	8	4, 5	No	01/2022–12/2022
AZE	8	None	–	04/2022–06/2022
BUL	7	1, 3, 4, 5	Yes	03/2023–05/2023
CRO	8	4, 5	No	02/2022–04/2022
CYP	9	4, 5	No	01/2022–06/2022
CZH	7	1, 2, 3, 4, 5	No	01/2023–01/2024
DEN	7	4, 5	Yes	08/2022–01/2023
EST	7, 8	4, 5	No	03/2022–06/2022
FIN	7, 8, 9	4, 5	No	09/2022–10/2022
GEO	7	4, 5	No	10/2022–12/2022
GER-BR	8	4, 5	No	01/2023–06/2023
GRE	7, 9	2, 3, 4, 5	No	05/2023–06/2023
HUN	7	2, 4, 5	No	09/2022–11/2022
IRE	7	1, 2, 3, 4, 5	Yes	10/2022–01/2023
ISR	6, 7	4, 5	No	08/2022–07/2023
ITA	8, 9	1, 2, 3, 4, 5	No	03/2023–06/2023

Table A1.1 (contd)

Country	Targeted age group(s) (years)	Previous COSI rounds in which country participated ^a	Sentinel approach ^b	Data collection period (month/year)
KAZ-AL	8	4, 5	No	03/2022–06/2022
KGZ	7	4	No	12/2023
LTU	7	1, 2, 3, 4, 5	No	04/2023–06/2023
LUX	6, 7, 8, 9	None	–	01/2023–12/2023
LVA	7, 9	1, 2, 3, 4, 5	No	01/2023–05/2023
MAT	7	1, 2, 3, 4, 5	No	03/2022–06/2022
MDA	7	3, 4	No	02/2023–03/2023
MKD	7	2, 3, 4, 5	Yes	10/2022–12/2022
MNE	7	4, 5	No	05/2022–06/2022
POL	7, 8, 9	4, 5	No	10/2022–09/2023
POR	7	1, 2, 3, 4, 5	Yes	04/2022–06/2022
ROM	7, 8	3, 4, 5	No	05/2023–06/2023
SMR	8	4, 5	No	04/2023
SPA	6, 7, 8, 9	2, 3, 4, 5	No	10/2023–01/2024
SVK	7, 8	4, 5	No	01/2022–06/2022; 12/2022
SVN	6, 7, 8, 9	1, 2, 3, 4, 5	No	03/2022–09/2022
SWE	6, 7, 8	1, 4, 5	No	Not available
TUR	7	3, 4	No	09/2022–12/2022
UKR	7	None	–	11/2023–02/2024
UZB	7	None	–	04/2022

^a COSI round 1: 2007–2008; round 2: 2009–2010; round 3: 2012–2013; round 4: 2015–2017; round 5: 2018–2020.

^b Countries that participated in a previous round of data collection could choose to select a new sample of schools or follow a sentinel site approach – that is, involving the same schools that were selected previously.

Israel, Luxembourg, Malta, San Marino and Sweden included the entire population of a specific school grade or age group, while other countries selected nationally representative samples. In Germany and Kazakhstan, the COSI sample was representative at the subnational level, with data collected only in the Bremen federal state (Germany) and Almaty (Kazakhstan).

Sixteen countries implemented a two-stage cluster sampling design, with schools as the primary sampling units and classes as the secondary sampling units (Table A1.2). Twelve countries adopted a cluster design using classes, schools or paediatric units as sampling units, while two countries employed a three-stage cluster design. In Finland, all measurements taken between 1 September and 31 October 2022 were obtained from the national primary health-care register. In Austria, a non-probabilistic sample of schools was chosen based on the availability of an on-site doctor and the school's willingness to participate in the study.

Five countries used a sentinel approach, reusing the same schools across multiple data collection rounds, while most countries selected new samples of schools for the sixth round of COSI (Table A1.1). In Israel, measurements were extracted from the national register between August 2022 and July 2023. In Sweden, all regions and municipalities were invited to participate in COSI, supported by the Swedish Education Act, which requires health visits during the primary school years. Malta and San Marino included all children enrolled in third-grade primary school classes.

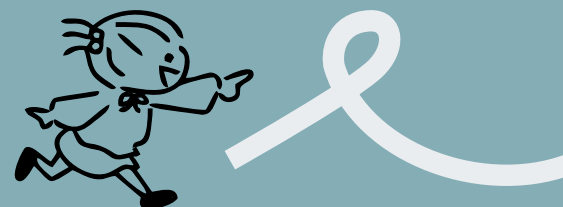


Table A1.2. Main features of the sampling design used in COSI round 6, by country^a

Country	Sampling design	Sampling unit (SU) definition	Stratification variable
ALB	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 2nd and 3rd grades	Region and degree of urbanization
AUT	Non-probabilistic sample of schools selected based on the availability of a doctor on school premises and the school's willingness to participate in the study	SU: 3rd grades of primary school	
AZE	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 2nd grades	Degree of urbanization
BUL	Three-stage sampling design	PSU: primary schools SSU: 1st grades SU: 7-year-old pupils	–
CRO	Cluster sampling design	SU: 2nd and 3rd grades of primary school	Region
CYP	Cluster sampling design	SU: 1st and 4th grades of primary school	–
CZH	Stratified cluster sampling design	SU: paediatric clinics	Region and degree of urbanization
DEN	Cluster sampling design	SU: 1st and 2nd grades of primary school	Region
EST	Stratified cluster sampling design	SU: 1st grades of primary school	County
FIN	All height and weight measurements of 7.0–9.9-year-old children that had been taken in September and October 2022 were extracted from the national register for primary health care	SU: 7.0–9.9-year-old children	–
GEO	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 2nd grades	Region and degree of urbanization
GER	Stratified cluster sampling design	SU: 2nd and 3rd grades of primary school	District
GRE	Cluster sampling design	SU: 2nd and 4th grades of primary school	–
HUN	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st and 2nd grades	County
IRE	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st and 2nd grades	Region and degree of urbanization
ITA	Stratified cluster sampling design	SU: 3rd grades of primary school	Region Local Health Unit
KAZ-AL	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 2nd and 3rd grades	City neighbourhood

Table A1.2 (contd)

Country	Sampling design	Sampling unit (SU) definition	Stratification variable
KGZ	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st grades	Region and degree of urbanization
LTU	Stratified cluster sampling design	SU: 1st grades of primary school	County
LVA	Stratified cluster sampling design	SU: 1st and 3rd grades of primary school	Degree of urbanization and language of instruction
MDA	Stratified cluster sampling design	SU: 1st grades of primary school	Region
MKD	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 2nd grades	Public health authority
MNE	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st and 2nd grades	Region and degree of urbanization
POL	Three-stage stratified cluster sampling design	PSU: districts SSU: municipalities TSU: 1st, 2nd and 3rd grades of primary schools	Region
POR	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st and 2nd grades	Region and school size
ROM	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 2nd and 3rd grades	County and degree of urbanization
SPA	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st, 2nd, 3rd and 4th grades	Region and degree of urbanization
SVK	Stratified cluster sampling design	SU: 1st, 2nd and 3rd grades of primary school	Public health authority
SVN	Two-stage cluster sampling design	PSU: primary schools SSU: 1st, 2nd and 3rd grades	–
TUR	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 2nd grades	Region
UKR	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st and 2nd grades	Region and degree of urbanization
UZB	Two-stage stratified cluster sampling design	PSU: primary schools SSU: 1st grades	Region

* Dash (–) = not applicable; SU: sampling unit; PSU: primary sampling unit; SSU: secondary sampling unit; TSU: tertiary sampling unit; Israel, Luxembourg, Malta, San Marino and Sweden have included the entire population of a particular school grade or of particular age groups and are therefore not included in this table because they did not apply a sampling approach.



Sample size and participation

The protocol specifies that the effective sample size – the number of measured children – should be at least 2800 children per target age group (1400 girls and 1400 boys) to ensure 80% power to detect a minimum difference of 0.10 Z-score in mean body mass index (BMI) per year at a two-sided 5% significance level, after adjusting for a design effect of 1.2. To accommodate for non-participation or children outside the target age groups, the total number of children approached should exceed these minimum thresholds. Countries aiming for subnational estimates should significantly increase their sample size.

Among countries using a sampling approach, the effective sample size for the sixth round of COSI data collection varied due to differences in study design, sampling strategies and participation levels. The effective sample sizes ranged from over 25 000 in Italy, where subregional representativeness was prioritized, to around 600 in Cyprus, Czechia, and Germany (Bremen federal state only) (Table A1.3). Eleven countries did not meet the minimum effective sample size, seven countries nearly achieved it, and 14 exceeded it.

Children's participation was at least 80% in eight countries, between 70%–79% in 10 countries, and between 60%–69% in two countries (Table A1.3). In eight countries, participation was below 60%, with the lowest observed levels dropping to under 30%. For nine countries, this information is not available.

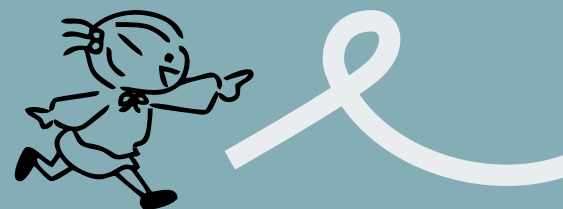
In the sixth round of COSI, 31 countries utilized the family form.⁸ In general, parent participation was lower than children's participation (Table A1.3). Only in five countries did over 80% of selected children's parents complete and return the family form, with the highest level recorded in Italy (89%). Participation ranged between 70%–79% in six countries, and between 60%–69% in four countries. In three countries, about one in two selected children's parents filled in the family form. In Germany (Bremen federal state only), Ireland, and Spain, only about one in four parents participated. Participation levels were even lower in Denmark (15%), Estonia (20%), Greece (9%), and Latvia (19%). This information is not available for six countries.

⁸ Albania, Azerbaijan, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Georgia, Germany (Bremen federal state only), Greece, Hungary, Ireland, Italy, Kazakhstan (Almaty only), Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Poland, Portugal, Republic of Moldova, Romania, San Marino, Slovakia, Spain, Türkiye, Ukraine and Uzbekistan.

Table A1.3. Participation of children and parents in COSI round 6 by country^a

Country	Number of children invited to participate			Number of measured children with complete information in each target age group ^b			
	Total	Proportion who participated in measurements (%)	Proportion whose family form was filled in (%)	6-year-olds	7-year-olds	8-year-olds	9-year-olds
ALB	6 430	91.5	82.3	–	–	3 161	–
AUT	3 121	85.1	–	–	–	1 282	–
AZE	5 363	52.7	44.6	–	–	2 827	–
BUL	3 954	80.4	80.6	–	3 131	–	–
CRO	7 516	70.5	73.8	–	–	2 374	–
CYP	NA	NA	NA	–	–	–	683
CZH	NA	NA	NA	–	669	–	–
DEN	3 509	67.4	14.9	–	1 417	–	–
EST	7 957	75.9	20.1	–	2 479	3 562	–
FIN	NA	NA	NA	–	4 469	4 639	5 055
GEO	4 353	76.6	76.9	–	2 674	–	–
GER-BR	4 582	26.6	25.5	–	–	610	–
GRE	7 293	55	8.7	–	1 169	–	1 220
HUN	6 659	76.9	68.0	–	2 409	–	–
IRE	4 385	59.1	26.3	–	1 285	–	–
ISR	NA	NA	NA	–	101 430	47 636	–
ITA	51 255	90.8	89.0	–	–	26 782	15 327
KAZ-AL	NA	NA	NA	–	–	1 063	–
KGZ	5 579	58.0	57.6	–	1 918	–	–
LTU	5 807	59.3	57.8	–	2 266	–	–
LUX	NA	NA	NA	2 609	2 888	2 336	2 534
LVA	8 454	75.8	18.7	–	2 409	–	2 308
MAT	4 155	85.2	70.0	–	2 452	–	–
MDA	4 654	77.9	69.3	–	3 033	–	–
MKD	3 705	75.7	74.8	–	2 384	–	–
MNE	4 111	79.3	77.9	–	1 625	–	–
POL	8 111	78.7	65.8	–	1 122	2 993	2 253
POR	7 231	87.4	74.0	–	3 048	–	–
ROM	13 508	64.9	61.4	–	2 900	3 032	–
SMR	297	89.2	80.5	–	–	174	–
SPA	45 834	29.7	27.6	3 161	3 272	3 221	3 030
SVK	NA	NA	NA	–	2 316	2 349	–
SVN	17 395	95.7	–	3 096	5 309	5 662	2 481
SWE	NA	NA	NA	39 894	21 432	37 169	–
TUR	17 500	76.2	83.4	–	10 301	–	–
UKR	7 075	50.3	50.9	–	1 885	–	–
UZB	NA	NA	NA	–	3 069	–	–

^a Dash (–) = age group not targeted or family data were not collected; NA = not available.^b The reported values include only those children with complete information on sex, age, body weight and height and who belonged to the targeted age group(s). These values are therefore lower than the total number of children who were measured in each country.



Data collection procedures

Data were collected using two forms. The child record form, completed by the examiner, documented the child's age in months, gender, date and time of measurement, clothing worn during measurement and anthropometric data. The family form, a self-administered questionnaire filled out by parents or caregivers, was available in both paper and online formats. This form collected information on the child's dietary habits, physical activity, sedentary behaviour, sleep patterns, family socioeconomic status, and health conditions related to overweight and obesity. In the sixth round of COSI data collection, two new questions were added to the family form: one regarding the number of portions of fruits and/or vegetables the child typically consumes each day, and the other concerning the frequency of the family's use of meal delivery apps or websites to order meals online.

Children's body weight and height were measured in a private room at school by trained examiners following standardized procedures. The measurements were conducted with the children wearing normal light indoor clothing. All participating countries were required to use the same highly accurate and precise anthropometric instruments. For weight, portable electronic (digital) scales calibrated to 0.1 kg (100 g) with a maximum capacity of 150 kg were used. Height was measured in centimetres, with readings taken to the nearest millimetre (0.1 cm), using a height board (preferably equipped with a digital counter) mounted at a right angle between a level floor and a vertical surface.

Data cleaning

Data quality assurance was first implemented at the country level, following guidelines specifically developed for COSI data by the WHO Regional Office for Europe. Once the datasets were cleaned, they were submitted to the Regional Office's COSI team for further review. This review process assessed the completeness of the data and identified any inconsistencies before the datasets were merged for inter-country analyses. The Regional Office also estimated sampling weights, using a standardized approach that accounted for the sampling design used in each country (4). These weights were applied in all analyses to infer the results from the sample to population, with the exception of Cyprus, where the analysis was conducted without weighting.

Analysis of data on children's overweight and obesity

Children's weight status was classified according to the 2007 WHO-recommended growth reference for school-aged children and adolescents (5). Overweight and obesity are defined as a BMI-for-age value $> +1$ Z-score and $> +2$ Z-score, respectively (6). The estimated prevalence of overweight includes children with obesity (7). Children with biologically implausible (or extreme) BMI-for-age values (below -5 or above $+5$ Z-scores relative to the 2007 WHO growth reference median) were excluded from the analysis (6). As International Obesity Task Force cutoff points are widely used in the WHO European Region (8), prevalences were also calculated using these cutoffs and are presented in Annex 2. BMI was calculated as weight (kg) divided by height squared (m^2).

The report presents the prevalence of overweight and obesity for individual countries as well as overall values, which were estimated by pooling data from countries with nationally representative samples (i.e. all countries except Germany (Bremen federal state only) and Kazakhstan (Almaty only)). To address the heterogeneity in the number and types of age groups targeted by each country, the overall analysis included only one target age group per country. For the pooled analysis, 7-year-olds were selected if they were among the targeted groups; otherwise, the nearest available target age group was chosen⁹. This approach ensured balanced contributions and minimized age differences among the children. An adjustment factor was applied to the sampling weights to account for differences in population size among the participating countries. This factor was calculated based on the number of children in the targeted age group, using Eurostat figures or national official statistics for 2022.

The prevalence of overweight and obesity, along with their 95% confidence intervals (95% CI), was estimated by the child's gender and age group. Children not within the defined target age groups were excluded from this analysis. In total, approximately 470 000 children aged 6–9 years were measured, of which over 420 000 fell within the targeted age groups.

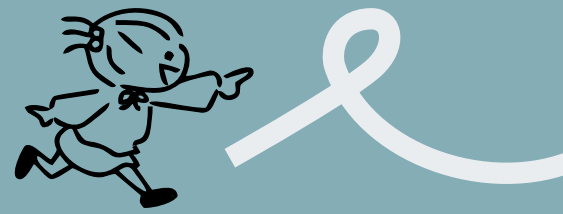
Twenty-eight out of the 37 countries that participated in round 6 also collected data in round 5. For these countries, the difference in the prevalence of overweight and obesity between the two rounds of data collection was calculated separately for boys and girls. The difference was determined by subtracting the estimates for round 5 from those for round 6. This analysis included all age groups targeted in each country.

The prevalence of overweight and obesity, along with their 95% confidence intervals (95% CI), was also calculated by parental education level for the 30 countries with available data. Two categories of parental education were created: (i) low to medium, where both parents have lower education or one parent has lower education and the other has higher education; and (ii) high, where both parents have higher education. Lower education was defined as “primary school or less”, “lower secondary education”, or “upper secondary and post-secondary non-tertiary education”. Higher education included “short-cycle tertiary education or bachelor's or equivalent level” and “master's or doctoral or equivalent level”. In single-parent families, parental education was determined based on the educational attainment of the single parent. All children with available data on parental education and weight status were included in this analysis, regardless of whether they belonged to a target age group.

Pearson's chi-squared test, corrected using the Rao–Scott method, was used to assess differences in distributions by the child's sex, parental education, and the round of data collection. A p-value of 0.05 was used to define statistical significance.

The report also presents data on parents' perceptions of their child's weight status, which was collected in 31 countries using the following question from the family form: “In your opinion, is your child: underweight – normal weight – a little overweight – extremely overweight?” The distribution of children across these

9 Pooled estimates included the following age groups for each country: (i) 7-year-olds in Bulgaria, Czechia, Denmark, Estonia, Finland, Georgia, Greece, Hungary, Ireland, Israel, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, North Macedonia, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Türkiye, Ukraine and Uzbekistan; (ii) 8-year-olds in Albania, Austria, Azerbaijan, Croatia, Italy, Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus.



categories was calculated, as well as the proportion of children living with overweight or obesity (according to WHO's definition) who were perceived by their parents as underweight or of normal weight.

Minor deviations from national results published elsewhere may occur due to several factors: (i) data-checking procedures implemented by the Regional Office; (ii) the application of sampling weights for estimates; (iii) variations in inclusion criteria for data analysis; and (iv) differences in indicator definitions.

Analysis of data on children's dietary habits, physical activity, screen time and sleep patterns

Regarding children's eating habits, the report focuses on the frequency of breakfast consumption, the frequency of consuming fresh fruits and vegetables (generally considered healthy), and the frequency of consuming savoury snacks, sweet snacks, and sugar-containing soft drinks (considered less healthy).

The report also presents data on the number of portions of fresh fruits and/or vegetables consumed on a typical day by children in 21 countries with available data. The proportions of children consuming at least one portion, three portions, or five portions were calculated.

Eighteen countries also collected information about the family's frequency of ordering meals online. The distribution was calculated across four categories: "Never or less than once a month", "Once a month", "2–3 times per month", and "At least once per week".

Regarding children's physical activity patterns, two aspects were analysed: how children travelled to and from school and how much time they spent playing actively or vigorously. The report also presents data on recreational screen time, specifically the time children spent watching television or using electronic devices. Additionally, the report includes data on the number of hours children slept per night.

For each of the above behaviours, an indicator of "healthy" or "less healthy" behaviour was defined to facilitate comparisons between countries, as well as according to the child's gender and parents' educational attainment. The indicators were calculated by aggregating answer options as reported in Table A1.4.

Table A1.4. Questions and answer options included in the COSI family record form on children's eating habits, physical activity, screen time, and indicators of healthy and less healthy behaviour

Family record form items and related questions	Answer options	Indicator	Countries with no data
Breakfast consumption frequency			
Over a typical week, how often does your child have breakfast (more than just a beverage; e.g. milk, tea or juice), including breakfast at school?	"every day"; "most days (4–6 days)"; "some days (1–3 days)"; "never"	"healthy" behaviour: 7 days = "every day"	Estonia
Food items and beverages consumption frequency			
Over a typical week, how often does your child eat or drink the following kinds of foods or beverages? (i) "fresh fruit"; (ii) "vegetables (including vegetable soup, excluding potatoes)"; (iii) "savoury snacks (e.g. potato chips, corn chips, popcorn, peanuts)"; (iv) "sweet snacks (e.g. cakes, biscuits, candy desserts)"; (v) "soft drinks containing sugar"	"more than once a day"; "once every day"; "most days (4–6 days)"; "some days (1–3 days)"; "never"	"healthy" behaviour for food items (i) and (ii): 7 days = "once every day" or "more than once a day" "less healthy" behaviour for food items (iii), (iv) and (v): >3 days/week = "once every day" or "more than once a day" or "most days (4–6 days)"	For item (iii): Albania, Cyprus, Greece, Latvia For item (iv): Albania, Cyprus, Denmark
Over a typical week, how many portions of fresh fruits and/or vegetables does your child eat on a typical day? (One portion is the amount your child can fit in the palm of their hand: e.g. four dessertspoons of cooked vegetables, a small bowl of salad, a small bowl of vegetable soup; or one medium size fruit [one small apple], two small fruits [two plums], 4–7 strawberries or 10–14 cherries.)	"none"; "less than one portion per day"; "1 to 2 portions per day"; "3 to 4 portions per day"; "5 or more portions per day"	"healthy" behaviour: 5 portions per day = "5 or more portions per day"	Cyprus, Estonia, Georgia, Greece, Italy, Latvia, Malta, Montenegro, San Marino, Uzbekistan
Transport to and from school			
How does your child usually get to and from school? Please tick one option for "to school" and one for "from school" that he or she uses the most. If in doubt tick the option taking the longest time.	To school: "Walking"; "Cycling, skating or non-motorized scooter"; "School bus or public transport"; "Private motorized vehicles" From school: "Walking"; "Cycling, skating or non-motorized scooter"; "School bus or public transport"; "Private motorized vehicles"	"healthy" behaviour: "Walking" or "Cycling, skating or non-motorized scooter" on both ways (to and from school)	
Time spent playing actively/vigorously			
Outside school hours, how much time on average per day does your child play actively at a moderate-vigorous intensity (e.g. running, jumping, playing non-supervised sports/dance, or physically active games)?	Hours: ____ Minutes: ____ per weekday Hours: ____ Minutes: ____ per weekend day	"healthy" behaviour: ≥1 hours/day	Denmark, Greece, Italy, San Marino, Spain
Screen time			
Outside school hours, how much time does your child on average per day watch TV or play with electronic devices (e.g. computer, tablet, smartphone; not including moving or fitness games)?	Hours: ____ Minutes: ____ per weekday Hours: ____ Minutes: ____ per weekend day	"less healthy" behaviour: ≥2 hours/day	Denmark, Greece
Sleep duration			
When does your child usually go to bed on school days? When does your child usually wake up on school days?	My child usually goes to bed at ____ h My child usually wakes up at ____ h	"healthy" behaviour: ≥ 9 hours/night	

* Number of hours and minutes per day is calculated weighting weekday hours (5/7) and weekend hours (2/7).

* Number of hours and minutes per day is calculated weighting weekday hours (5/7) and weekend hours (2/7).



Country-specific estimates were calculated including all children aged 6–9 years. Pooled values were estimated by including only one age group per country to balance the contribution of each country to the overall estimates and to minimize differences in children's ages as much as possible. All countries with nationally representative data were included in the pooled analysis¹⁰. In a few countries, data on some of the indicators were either collected differently or not at all, and thus were not included in the analysis.

Pearson's chi-squared test, corrected using the Rao–Scott method, was used to assess differences in distributions by the child's sex and parental education. A p-value of 0.05 was used to define statistical significance.

References to Annex 1

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10 Pooled estimates included the following age groups for each country: (i) 7-year-olds in Bulgaria, Czechia, Denmark, Estonia, Georgia, Greece, Hungary, Ireland, Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Portugal, Republic of Moldova, Romania, Slovakia, Spain, Türkiye, Ukraine and Uzbekistan; (ii) 8-year-olds in Albania, Azerbaijan, Croatia, Italy, Poland and San Marino; and (iii) 9-year-olds in Cyprus.

Supplementary data tables

Table A2.1. Country-specific prevalence and 95% confidence intervals (CIs) of overweight (including obesity) and obesity according to WHO definitions among 6–9-year-olds, by age (%)^a

Country	6-year-olds		7-year-olds		8-year-olds		9-year-olds	
	Overweight	Obesity	Overweight	Obesity	Overweight	Obesity	Overweight	Obesity
ALB	—	—	—	—	31.4 [29.3–33.6]	14.5 [13.1–16.0]	—	—
AUT	—	—	—	—	24.6 [21.8–27.7]	8.8 [7.4–10.5]	—	—
AZE	—	—	—	—	26.9 [24.3–29.6]	10.7 [9.1–12.4]	—	—
BUL	—	—	32.8 [30.9–34.8]	15.2 [13.9–16.6]	—	—	—	—
CRO	—	—	—	—	36.1 [34.3–37.9]	15.4 [13.9–16.9]	—	—
CYP	—	—	—	—	—	—	41.9 [38.4–45.4]	19.7 [16.6–23.1]
CZH	—	—	21.0 [16.6–26.2]	8.9 [6.0–12.8]	—	—	—	—
DEN	—	—	20.0 [17.8–22.4]	5.5 [4.4–6.9]	—	—	—	—
EST	—	—	26.2 [24.7–27.7]	10.9 [9.9–11.9]	27.4 [26.1–28.8]	11.4 [10.6–12.3]	—	—
FIN	—	—	30.1 [28.8–31.4]	12.8 [11.9–13.7]	32.6 [31.4–34.0]	14.9 [14.0–16.0]	34.6 [33.3–35.8]	15.0 [14.1–16.0]
GEO	—	—	27.4 [25.5–29.3]	10.5 [9.3–11.9]	—	—	—	—
GER-BR	—	—	—	—	25.7 [21.8–30.0]	11.9 [9.4–15.0]	—	—
GRE	—	—	36.7 [32.2–41.4]	18.1 [15.3–21.1]	—	—	41.5 [37.9–45.2]	18.7 [16.1–21.6]
HUN	—	—	27.0 [24.9–29.3]	12.1 [10.5–13.8]	—	—	—	—
IRE	—	—	23.3 [20.8–26.1]	7.2 [5.8–8.9]	—	—	—	—
ISR	18.1 [17.9–18.3]	7.0 [6.9–7.1]	17.7 [17.5–18.0]	7.2 [7.1–7.4]	—	—	—	—
ITA	—	—	—	—	36.9 [36.1–37.6]	16.8 [16.2–17.5]	36.0 [35.0–36.9]	15.3 [14.6–16.1]
KAZ-AL	—	—	—	—	19.5 [16.9–22.3]	6.4 [5.3–7.7]	—	—
KGZ	—	—	12.7 [11.1–14.6]	3.7 [2.6–5.2]	—	—	—	—
LTU	—	—	23.2 [20.6–26.2]	9.2 [7.6–11.0]	—	—	—	—
LUX	17.9 [16.7–19.1]	6.0 [5.3–6.8]	21.7 [20.5–22.9]	7.5 [6.8–8.3]	27.2 [25.8–28.7]	10.8 [9.9–11.9]	29.9 [28.5–31.3]	11.5 [10.6–12.6]
LVA	—	—	21.7 [19.7–23.8]	8.7 [7.5–10.1]	—	—	29.9 [26.9–33.1]	11.6 [10.1–13.2]
MAT	—	—	35.5 [34.8–36.1]	17.1 [16.6–17.7]	—	—	—	—
MDA	—	—	20.1 [17.4–23.1]	6.8 [5.7–8.1]	—	—	—	—
MKD	—	—	31.2 [28.7–33.8]	13.7 [11.9–15.8]	—	—	—	—
MNE	—	—	32.6 [30.1–35.3]	14.0 [12.1–16.2]	—	—	—	—
POL	—	—	27.7 [23.7–32.0]	10.6 [8.8–12.9]	32.9 [30.4–35.4]	14.6 [12.5–17.0]	35.0 [32.3–37.8]	16.0 [14.2–17.0]
POR	—	—	31.3 [29.1–33.5]	14.1 [12.6–15.8]	—	—	—	—
ROM	—	—	27.5 [24.7–30.5]	11.9 [10.2–14]	32.0 [29.3–34.7]	15.4 [13.7–17.3]	—	—
SMR	—	—	—	—	32.8 [30.5–35.1]	9.8 [8.4–11.3]	—	—
SPA	33.6 [30.6–36.8]	14.1 [12.1–16.4]	34.0 [30.9–37.3]	14.7 [12.7–17.0]	36.1 [33.3–39.0]	15.9 [13.8–18.3]	40.5 [37.2–43.9]	18.8 [16.2–21.8]
SVK	—	—	26.1 [23.7–28.5]	11.0 [9.5–12.7]	32.0 [29.7–34.3]	14.3 [12.7–16.1]	—	—
SVN	22.6 [21.1–24.2]	7.9 [6.9–9.1]	25.2 [24.1–26.4]	10.1 [9.4–10.9]	31.4 [29.8–33.0]	13.1 [12.1–14.1]	33.9 [32.1–35.7]	13.8 [12.4–15.3]
SWE	25.1 [24.7–25.2]	8.7 [8.4–9.0]	31.6 [31.0–32.2]	13.2 [12.8–13.6]	32.9 [32.5–33.4]	13.3 [13.0–13.7]	—	—
TUR	—	—	22.5 [21.4–23.7]	9.8 [9.2–10.6]	—	—	—	—
UKR	—	—	21.9 [18.9–25.1]	8.3 [6.4–10.7]	—	—	—	—
UZB	—	—	9.4 [8.4–10.6]	2.9 [2.3–3.7]	—	—	—	—

^a Calculated only for the targeted age groups. Dash (–) = age group not targeted.

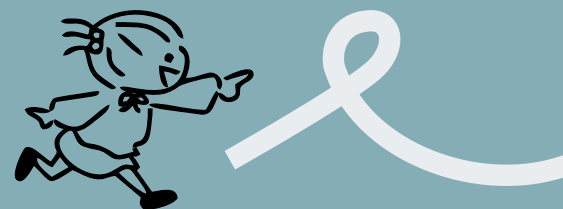


Table A2.2. Country-specific prevalence and 95% CIs of overweight (including obesity) according to WHO definitions among 6–9-year-olds, by age and gender (%)^a

Country	6-year-olds		7-year-olds		8-year-olds		9-year-olds	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
ALB	—	—	—	—	33.9 [31.0–37.1]	28.7 [25.9–31.7]	—	—
AUT	—	—	—	—	28.5 [24.7–32.7]	20.7 [17.2–24.7]	—	—
AZE	—	—	—	—	28.3 [25.4–31.3]	25.3 [21.8–29.1]	—	—
BUL	—	—	32.6 [30.1–35.2]	33.0 [30.1–36.0]	—	—	—	—
CRO	—	—	—	—	38.4 [35.8–41.2]	33.7 [31.3–36.2]	—	—
CYP	—	—	—	—	—	—	47.9 [41.4–54.5]	36.2 [31.8–40.8]
CZH	—	—	21.6 [16.4–27.9]	20.3 [14.9–27.0]	—	—	—	—
DEN	—	—	18.5 [15.8–21.5]	21.7 [18.4–25.3]	—	—	—	—
EST	—	—	28.9 [26.6–31.4]	23.7 [21.9–25.6]	29.2 [27.6–30.9]	25.4 [23.6–27.2]	—	—
FIN	—	—	29.4 [27.6–31.2]	30.9 [29.0–32.8]	34.5 [32.7–36.3]	30.7 [28.9–32.6]	37.3 [35.6–39.0]	31.7 [29.9–33.5]
GEO	—	—	29.3 [26.8–32.1]	25.3 [22.7–28.0]	—	—	—	—
GER-BR	—	—	—	—	27.7 [22.7–33.3]	23.3 [18.3–29.1]	—	—
GRE	—	—	40.6 [34.7–46.7]	32.7 [27.0–39.0]	—	—	47.8 [42.5–53.0]	34.5 [30.6–38.7]
HUN	—	—	27.5 [24.4–30.8]	26.6 [23.7–29.6]	—	—	—	—
IRE	—	—	24.3 [20.5–28.5]	22.4 [19.6–25.4]	—	—	—	—
ISR	17.1 [16.8–17.3]	19.1 [18.8–19.4]	17.7 [17.4–18.1]	17.8 [17.4–18.1]	—	—	—	—
ITA	—	—	—	—	38.5 [37.5–39.5]	35.2 [34.2–36.3]	37.8 [36.4–39.2]	34.0 [32.7–35.3]
KAZ-AL	—	—	—	—	22.9 [18.6–27.9]	15.9 [12.6–20.0]	—	—
KGZ	—	—	14.0 [11.4–17.2]	11.6 [9.5–14.0]	—	—	—	—
LTU	—	—	23.7 [20.6–27.2]	22.8 [19.7–26.2]	—	—	—	—
LUX	18.4 [16.8–20.1]	17.3 [15.7–19.0]	22.0 [20.4–23.7]	21.4 [19.7–23.1]	27.8 [25.8–29.8]	26.7 [24.7–28.7]	32.2 [30.1–34.3]	27.5 [25.6–29.4]
LVA	—	—	22.7 [20.1–25.6]	20.6 [18.3–23.2]	—	—	29.9 [26.9–33.1]	23.0 [20.7–25.5]
MAT	—	—	36.0 [35.1–37.0]	34.8 [33.8–35.8]	—	—	—	—
MDA	—	—	21.1 [18.1–24.6]	19.0 [16.3–22.0]	—	—	—	—
MKD	—	—	34.0 [31.3–36.9]	28.3 [24.3–32.6]	—	—	—	—
MNE	—	—	36.2 [32.3–40.3]	29.0 [25.8–32.4]	—	—	—	—
POL	—	—	30.9 [25.4–37.0]	24.8 [19.8–30.7]	36.1 [32.2–40.1]	29.7 [26.6–33.1]	38.2 [34.0–42.6]	31.8 [28.4–35.5]
POR	—	—	30.6 [27.8–33.6]	31.9 [29.2–34.6]	—	—	—	—
ROM	—	—	31.9 [29.0–34.9]	23.3 [19.6–27.3]	32.2 [28.4–36.2]	31.8 [28.8–34.9]	—	—
SMR	—	—	—	—	32.9 [29.6–36.4]	32.6 [29.6–35.8]	—	—
SPA	34.3 [30.4–38.4]	32.9 [29.1–36.9]	36.1 [31.9–40.6]	31.7 [27.9–35.8]	36.0 [31.9–40.4]	36.3 [32.3–40.4]	44.5 [39.4–49.7]	35.9 [32.5–39.5]
SVK	—	—	27.5 [25.0–30.2]	24.6 [21.5–27.9]	34.4 [31.6–37.3]	29.3 [26.4–32.4]	—	—
SVN	23.7 [21.7–25.8]	21.5 [19.8–23.4]	25.9 [24.4–27.5]	24.6 [23.0–26.2]	33.5 [31.6–35.4]	29.1 [27.3–31.1]	34.1 [31.6–36.7]	33.6 [31.2–36.0]
SWE	26.1 [25.5–26.6]	24.0 [23.5–26.6]	32.2 [31.4–33.0]	31.0 [30.2–31.8]	34.2 [33.6–34.8]	31.6 [31.0–32.2]	—	—
TUR	—	—	23.8 [22.4–25.3]	21.2 [19.8–22.6]	—	—	—	—
UKR	—	—	22.9 [18.8–27.6]	20.7 [17.3–24.6]	—	—	—	—
UZB	—	—	10.7 [9.1–12.5]	8.0 [6.7–9.6]	—	—	—	—

^a Calculated only for the targeted age groups. Dash (–) = age group not targeted.

Table A2.3. Country-specific prevalence and 95% CIs of obesity according to WHO definitions among 6–9-year-olds, by age and gender (%)^a

Country	6-year-olds		7-year-olds		8-year-olds		9-year-olds	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
ALB	—	—	—	—	18.3 [16.0–20.7]	10.5 [9.0–12.3]	—	—
AUT	—	—	—	—	12.0 [9.5–15.0]	5.7 [4.2–7.6]	—	—
AZE	—	—	—	—	11.9 [10.0–14.1]	9.3 [7.3–11.7]	—	—
BUL	—	—	16.7 [14.9–18.7]	13.7 [11.9–15.7]	—	—	—	—
CRO	—	—	—	—	18.7 [16.5–21.1]	12.0 [10.4–13.9]	—	—
CYP	—	—	—	—	—	—	24.8 [19.6–30.9]	14.8 [12.0–18.2]
CZH	—	—	10.6 [7.1–15.6]	7.0 [3.7–12.9]	—	—	—	—
DEN	—	—	6.2 [4.6–8.3]	4.7 [3.4–6.6]	—	—	—	—
EST	—	—	12.5 [11.0–14.1]	9.4 [8.2–10.7]	13.4 [12.5–15.0]	8.8 [7.7–10.1]	—	—
FIN	—	—	13.4 [12.1–14.7]	12.2 [10.9–13.6]	17.0 [15.6–18.5]	12.8 [11.5–14.2]	17.9 [16.6–19.3]	12.0 [10.8–13.3]
GEO	—	—	12.4 [10.6–14.4]	8.5 [6.9–10.5]	—	—	—	—
GER-BR	—	—	—	—	15.5 [10.1–23.0]	7.6 [4.5–12.5]	—	—
GRE	—	—	22.9 [18.8–27.5]	13.2 [9.9–17.4]	—	—	22.4 [18.2–27.4]	14.6 [11.2–18.7]
HUN	—	—	13.3 [10.9–16.1]	10.8 [9.1–12.8]	—	—	—	—
IRE	—	—	8.1 [6.1–10.8]	6.2 [4.6–8.2]	—	—	—	—
ISR	7.0 [6.8–7.1]	7.0 [6.8–7.1]	7.8 [7.5–8.0]	6.7 [6.4–6.9]	—	—	—	—
ITA	—	—	—	—	19.7 [18.8–20.5]	14.0 [13.2–14.8]	18.0 [16.9–19.1]	12.4 [11.5–13.3]
KAZ-AL	—	—	—	—	8.1 [6.0–10.8]	4.7 [3.3–6.6]	—	—
KGZ	—	—	4.9 [3.0–7.7]	2.7 [1.8–3.9]	—	—	—	—
LTU	—	—	9.6 [7.9–11.8]	8.7 [6.9–11.0]	—	—	—	—
LUX	5.7 [4.8–6.8]	6.3 [5.3–7.5]	7.9 [6.9–9.1]	7.1 [6.1–8.3]	12.2 [10.8–13.8]	9.4 [8.2–10.8]	13.2 [11.8–14.8]	9.7 [8.5–11.1]
LVA	—	—	10.6 [8.8–12.8]	6.7 [5.6–8.1]	—	—	14.8 [12.8–17.1]	8.5 [7.1–10.2]
MAT	—	—	19.0 [18.2–19.8]	15.1 [14.3–15.8]	—	—	—	—
MDA	—	—	7.7 [6.3–9.5]	5.8 [4.6–7.2]	—	—	—	—
MKD	—	—	14.9 [12.8–17.4]	12.5 [9.9–15.7]	—	—	—	—
MNE	—	—	18.1 [14.8–22.0]	9.8 [7.8–12.3]	—	—	—	—
POL	—	—	14.3 [10.9–18.6]	7.4 [5.2–10.5]	18.6 [15.9–21.8]	10.7 [8.4–13.5]	19.4 [16.2–23.2]	12.6 [10.1–15.6]
POR	—	—	14.0 [12.1–16.2]	14.2 [12.2–16.5]	—	—	—	—
ROM	—	—	15.6 [13.7–17.9]	8.3 [6.3–10.8]	17.2 [14.3–20.5]	13.6 [11.4–16.2]	—	—
SMR	—	—	—	—	8.9 [7.0–11.2]	10.5 [8.7–12.7]	—	—
SPA	15.9 [13.1–19.1]	12.2 [9.7–15.1]	16.7 [13.8–20.0]	12.6 [10.1–15.7]	15.9 [13.4–18.9]	15.9 [13.1–19.2]	21.4 [17.7–25.6]	15.9 [13.1–19.1]
SVK	—	—	13.3 [11.3–15.6]	8.6 [6.9–10.7]	17.5 [15.3–20.0]	10.9 [8.9–13.2]	—	—
SVN	9.6 [9.2–10.0]	6.4 [5.4–7.6]	11.5 [10.4–12.6]	8.7 [7.7–9.7]	15.3 [13.9–16.7]	10.8 [9.7–11.9]	16.1 [14.1–18.3]	10.9 [9.4–12.6]
SWE	9.5 [9.2–10.0]	7.7 [7.4–8.1]	14.7 [14.1–15.3]	11.6 [11.1–12.2]	15.4 [14.9–15.8]	11.2 [10.8–11.6]	—	—
TUR	—	—	11.7 [10.7–12.7]	8.0 [7.2–8.9]	—	—	—	—
UKR	—	—	9.3 [6.9–12.5]	7.3 [5.2–10.1]	—	—	—	—
UZB	—	—	4.0 [3.1–5.0]	1.8 [1.1–3.0]	—	—	—	—

^a Calculated only for the targeted age groups. Dash (–) = age group not targeted.

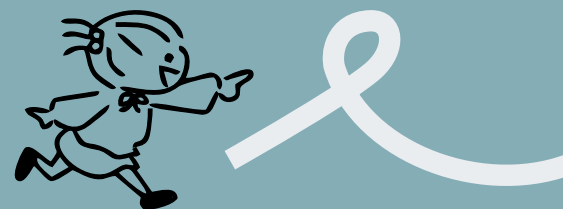


Table A2.4. Country-specific prevalence and 95% CIs of overweight (including obesity) and obesity according to WHO definitions among children aged 6–9, by parental education (%)^a

Country	No. of children included in the analysis	Overweight		Obesity	
		Low-medium	High	Low-medium	High
ALB	4 742	28.8 [27.1–30.5]	31.0 [27.2–35.2]	13.7 [12.4–15.1]	14.4 [11.7–17.7]
AUT	NA	NA	NA	NA	NA
AZE	2 237	27.2 [24.6–30.0]	38.0 [31.6–44.7]	11.1 [9.3–13.1]	18.3 [13.2–24.9]
BUL	3 069	34.0 [31.8–36.2]	30.4 [26.8–34.2]	17.1 [15.5–18.8]	11.9 [9.7–14.5]
CRO	4 888	39.9 [38.1–41.7]	29.7 [27.4–32.2]	17.9 [16.4–19.4]	10.7 [9.1–12.6]
CYP	425	40.7 [29.4–53.2]	35.0 [30.4–39.9]	20.4 [12.8–30.8]	12.5 [9.4–16.6]
CZH	NA	NA	NA	NA	NA
DEN	452	18.4 [13.5–24.5]	14.9 [10.3–21.0]	5.1 [2.9–8.8]	3.1 [1.5–6.1]
EST	1 532	27.3 [24.6–30.0]	21.7 [19.4–24.2]	11.0 [9.4–12.7]	6.3 [5.0–8.0]
FIN	NA	NA	NA	NA	NA
GEO	3 045	27.6 [25.6–29.8]	28.9 [25.8–32.2]	10.6 [9.3–12.0]	10.8 [8.7–13.5]
GER-BR	993	30.3 [25.7–35.4]	14.6 [13.2–16.2]	14.6 [12.2–17.3]	3.1 [1.8–5.4]
GRE	508	42.5 [35.2–50.1]	34.9 [28.0–42.5]	19.5 [14.7–25.5]	16.0 [11.6–21.7]
HUN	4 232	30.5 [28.5–32.5]	21.5 [19.4–23.8]	14.7 [13.3–16.2]	7.5 [6.2–9.1]
IRE	1 019	27.3 [23.4–31.5]	16.2 [13.4–19.6]	7.8 [5.4–11.0]	4.0 [2.5–6.4]
ISR	NA	NA	NA	NA	NA
ITA	39 261	37.8 [37.1–38.5]	29.8 [28.4–31.3]	17.5 [17.0–18.1]	10.4 [9.4–11.5]
KAZ-AL	1 596	18.1 [15.3–21.4]	18.5 [16.4–20.9]	7.2 [5.3–9.7]	6.4 [5.2–8.0]
KGZ	2 740	10.7 [9.5–12.1]	21.2 [16.8–26.4]	2.9 [2.3–3.8]	7.4 [4.4–12.2]
LTU	2 920	27.9 [25.3–30.6]	19.8 [16.9–23.1]	12.2 [10.5–14.1]	6.0 [4.6–7.8]
LUX	NA	NA	NA	NA	NA
LVA	1 264	26.9 [23.4–30.6]	21.9 [18.6–25.6]	11.3 [9.2–13.7]	6.1 [4.5–8.2]
MAT	2 777	39.1 [38.3–39.9]	29.8 [28.6–31.0]	19.8 [19.2–20.5]	12.0 [11.1–12.8]
MDA	2 795	19.4 [17.7–21.2]	20.8 [17.8–24.1]	7.2 [6.1–8.6]	7.2 [5.7–9.0]
MKD	2 488	32.0 [29.4–34.8]	29.4 [24.4–35.0]	15.6 [13.4–18.1]	12.6 [9.6–16.3]
MNE	2 800	32.5 [30.3–34.7]	30.4 [27.0–33.9]	14.7 [13.2–16.4]	11.6 [9.4–14.3]
POL	4 728	37.0 [34.4–39.7]	26.2 [22.9–29.9]	16.9 [15.2–18.7]	9.6 [8.0–11.4]
POR	4 483	34.3 [32.4–36.3]	23.1 [20.6–25.7]	15.6 [14.3–17.0]	6.4 [5.0–8.0]
ROM	7 383	32.2 [30.6–33.9]	25.3 [22.4–28.4]	16.6 [15.4–17.9]	10.0 [8.8–11.3]
SMR	230	26.4 [24.3–28.6]	31.4 [27.2–35.9]	10.0 [8.6–11.5]	4.1 [2.6–6.4]
SPA	11 467	38.4 [36.6–40.3]	27.7 [25.0–30.5]	17.6 [16.1–19.1]	8.8 [7.3–10.7]
SVK	3 837	31.1 [29.1–33.1]	21.3 [18.4–24.6]	14.7 [13.2–16.3]	7.0 [5.4–9.1]
SVN	NA	NA	NA	NA	NA
SWE	NA	NA	NA	NA	NA
TUR	11 821	21.7 [20.5–22.9]	28.2 [26.3–30.1]	9.6 [8.9–10.4]	12.2 [10.7–13.8]
UKR	2 908	22.1 [18.9–25.7]	24.8 [20.7–29.3]	9.8 [7.4–12.9]	10.5 [7.8–14.1]
UZB	3 234	9.6 [8.4–10.9]	8.2 [4.9–13.6]	2.9 [2.3–3.7]	4.1 [2.1–7.6]

^a Data relate to all children aged 6–9 years for whom data about parental education and weight status were available. Estimates for low parental education were not calculated for Cyprus, Denmark and Greece due to the small number of observations

Table A2.5. Changes in prevalence of overweight (including obesity – WHO definitions) and obesity (WHO definitions) in children aged 6–9 years between COSI round 5 (2018–2020) and round 6 (2022–2024)^a

Country	Overweight		Obesity	
	Boys	Girls	Boys	Girls
AUT	3.0	-4.4	0.7	-1.4
BUL ^c	0.6	4.1	1.5	1.7
CRO	1.6	0.6	1.0	0.2
CYP	0.0	-2.8	0.8	-0.4
CZH	-0.7	0.7	0.2	0.5
DEN	0.1	2.5	-0.4	-0.1
EST	1.4	-0.5	1.0	0.0
FIN ^e	0.2	0.1	0.3	1.4
GEO	-1.7	-0.1	-1.5	-0.7
GER-BR	-0.5	-0.2	3.2	-0.6
GRE ^c	-2.9	-6.0	-0.5	1.3
HUN	-2.2	-3.4	-1.7	-1.5
IRE	0.4	-2.1	-0.4	-0.5
ISR ^{b, c}	-1.8	-1.5	0.0	0.3
ITA ^a	-2.6	-0.9	-0.9	0.2
LTU	-0.8	-2.5	0.4	-0.4
LVA	-0.9	-1.6	1.8	1.0
MAT ^{b, c, d, e}	1.1	3.7	1.4	2.8
MKD	2.2	-3.1	-3.0	0.0
MNE	2.3	0.9	2.6	-0.5
POL	0.1	1.2	1.1	1.3
POR	1.0	-0.7	1.1	2.1
ROM	2.9	-0.7	1.2	0.7
SMR ^d	-2.9	2.3	-4.5	1.6
SPA ^c	-2.6	-5.2	-1.1	-0.6
SVK	0.2	0.3	1.3	0.1
SVN ^{b, c, d, e}	1.9	2.2	1.9	1.5
SWE ^{b, c, d, e}	2.7	2.2	1.8	1.6
COSI average	-0.8	-2.1	0.1	-0.1

^a Data relate to children aged 6–9 years who have available information on body weight, height and sex, and who belong to the age group(s) that were targeted in each participating country. The following countries targeted more than one age group in both rounds (all age groups included in the analysis): Estonia, Finland, Greece, Latvia, Israel, Italy, Romania, Slovakia, Slovenia, Spain and Sweden. COSI average estimates were calculated by including only countries with nationally representative data and considering children from only one age group per country. Differences between rounds, expressed as percentage points, were calculated by subtracting the estimates for round 5 from those for round 6.

^b The difference in overweight prevalence among boys across the two data collection rounds is statistically significant ($P < 0.05$).

^c The difference in overweight prevalence among girls across the two data collection rounds is statistically significant ($P < 0.05$).

^d The difference in obesity prevalence among boys across the two data collection rounds is statistically significant ($P < 0.05$).

^e The difference in obesity prevalence among girls across the two data collection rounds is statistically significant ($P < 0.05$).

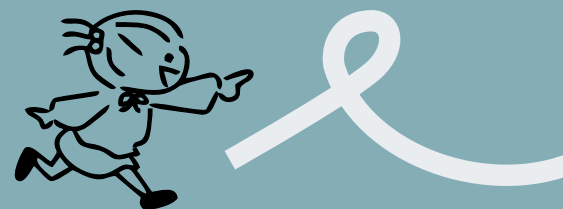


Table A2.6. Country-specific prevalence and 95% CIs of thinness according to WHO definitions among 6–9-year-olds, by age and gender (%)^a

Country	Boys	Girls	Total
ALB	3.3 [2.4–4.5]	2.5 [1.8–3.4]	2.9 [2.3–3.6]
AUT	3.4 [2.2–5.5]	3.0 [1.7–5.3]	3.2 [2.2–4.7]
AZE	4.1 [3.1–5.5]	4.1 [2.9–5.6]	4.1 [3.2–5.2]
BUL	3.8 [2.9–5.0]	2.4 [1.7–3.4]	3.1 [2.5–3.9]
CRO	1.3 [0.8–2.1]	1.4 [0.9–2.2]	1.4 [1.0–1.9]
CYP	2.1 [1.1–4.1]	1.7 [0.7–4.1]	1.9 [1.1–3.2]
CZH	2.4 [1.3–4.5]	1.9 [0.9–4.0]	2.2 [1.3–3.5]
DEN	2.2 [1.3–3.6]	1.3 [0.7–2.6]	1.8 [1.2–2.7]
EST	1.7 [1.2–2.4]	1.8 [1.3–2.4]	1.8 [1.4–2.2]
FIN	2.0 [1.5–2.6]	0.8 [0.5–1.2]	1.4 [1.1–1.8]
GEO	2.2 [1.5–3.3]	1.9 [1.2–3.0]	2.1 [1.5–2.9]
GER-BR	1.9 [0.9–4.0]	1.2 [0.5–2.4]	1.6 [0.8–2.9]
GRE	1.3 [0.5–3.1]	1.0 [0.3–2.7]	1.1 [0.5–2.5]
HUN	3.1 [2.2–4.5]	3.0 [2.0–4.4]	3.1 [2.3–4.1]
IRE	1.0 [0.4–2.3]	0.8 [0.3–1.9]	0.9 [0.5–1.7]
ISR	2.5 [2.3–2.6]	1.3 [1.2–1.4]	1.9 [1.8–2.0]
ITA	2.4 [2.1–2.8]	1.5 [1.3–1.8]	2.0 [1.8–2.2]
KAZ-AL	3.5 [2.2–5.6]	4.5 [2.8–7.0]	4.0 [2.9–5.4]
KGZ	3.5 [2.3–5.1]	3.1 [2.0–4.6]	3.3 [2.4–4.4]
LTU	2.4 [1.6–3.7]	2.6 [1.8–3.7]	2.5 [1.8–3.4]
LUX	3.5 [2.9–4.4]	1.9 [1.4–2.6]	2.8 [2.3–3.3]
LVA	2.6 [1.8–3.7]	2.1 [1.1–3.9]	2.3 [1.5–3.4]
MAT	1.4 [1.2–1.7]	0.4 [0.3–0.6]	1.0 [0.8–1.1]
MDA	3.6 [2.6–4.9]	4.3 [3.3–5.5]	3.9 [3.0–5.0]
MKD	5.2 [3.0–8.8]	4.5 [3.3–6.2]	4.8 [3.3–7.1]
MNE	2.4 [1.5–3.7]	1.7 [1.0–2.8]	2.0 [1.4–2.9]
POL	3.9 [2.7–5.5]	3.8 [2.5–5.7]	3.8 [2.8–5.1]
POR	2.0 [1.4–2.8]	1.4 [1.0–2.2]	1.7 [1.3–2.2]
ROM	6.7 [5.0–8.9]	6.5 [5.0–8.4]	6.6 [5.4–8.1]
SMR	1.3 [0.7–2.4]	1.1 [0.6–2.0]	1.2 [0.7–1.8]
SPA	2.2 [1.3–3.7]	1.8 [1.0–3.2]	2.0 [1.3–3.0]
SVK	2.4 [1.7–3.4]	2.5 [1.8–3.6]	2.5 [2.0–3.1]
SVN	2.4 [1.9–3.1]	1.7 [1.3–2.3]	2.1 [1.7–2.6]
SWE	1.1 [1.0–1.2]	0.7 [0.6–0.9]	0.9 [0.8–1.0]
TUR	3.9 [3.4–4.6]	2.7 [2.3–3.3]	3.3 [2.9–3.8]
UKR	1.5 [0.7–3.0]	2.2 [1.2–3.7]	1.8 [1.2–2.8]
UZB	5.2 [4.1–6.6]	5.0 [3.8–6.6]	5.1 [4.2–6.3]

^a Data relate to: (i) 7-year-olds in Bulgaria, Czechia, Denmark, Estonia, Finland, Georgia, Greece, Hungary, Ireland, Israel, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, North Macedonia, Portugal, Republic of Moldova, Romania, Slovakia, Slovenia, Spain, Türkiye, Ukraine and Uzbekistan; (ii) 8-year-olds in Albania, Austria, Azerbaijan, Croatia, Germany (Bremen only), Italy, Kazakhstan (Almaty only), Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus..

Table A2.7. Country-specific prevalence and 95% CIs of overweight (including obesity) according to IOTF cutoffs among boys and girls, by age (%)^a

Country	6-year-olds		7-year-olds		8-year-olds		9-year-olds	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
ALB	—	—	—	—	25.4 [22.8–28.1]	24.2 [21.8–26.7]	—	—
AUT	—	—	—	—	17.2 [14.0–21.0]	17.5 [14.4–21.0]	—	—
AZE	—	—	—	—	19.1 [16.8–21.6]	21.6 [18.5–25.1]	—	—
BUL	—	—	24.3 [21.9–26.8]	28.7 [26.2–31.3]	—	—	—	—
CRO	—	—	—	—	28.2 [25.6–30.9]	27.7 [25.4–30.0]	—	—
CYP	—	—	—	—	—	—	37.0 [31.2–43.1]	30.8 [26.8–35.0]
CZH	—	—	16.0 [11.4–21.9]	17.5 [12.7–23.7]	—	—	—	—
DEN	—	—	11.0 [8.7–13.7]	17.2 [14.6–20.2]	—	—	—	—
EST	—	—	18.9 [17.0–21.0]	20.5 [18.8–22.4]	20.6 [19.1–22.2]	21.1 [19.5–22.8]	—	—
FIN	—	—	20.5 [19.0–22.1]	26.0 [24.3–27.9]	24.8 [23.2–26.5]	26.2 [24.5–28.0]	26.6 [25.0–28.2]	25.9 [24.3–27.7]
GEO	—	—	20.7 [18.4–23.1]	22.4 [20.0–25.0]	—	—	—	—
GER-BR	—	—	—	—	22.6 [18.4–27.3]	19.9 [15.1–25.8]	—	—
GRE	—	—	31.9 [26.7–37.7]	27.1 [22.1–32.7]	—	—	35.2 [29.7–41.2]	28.6 [24.7–32.8]
HUN	—	—	20.5 [17.8–23.5]	22.7 [20.3–25.4]	—	—	—	—
IRE	—	—	14.2 [11.2–17.7]	17.5 [14.8–20.4]	—	—	—	—
ISR	11.6 [11.4–11.8]	16.3 [16.0–16.5]	12.4 [12.1–12.7]	15.0 [14.6–15.3]	—	—	—	—
ITA	—	—	—	—	28.8 [27.9–29.8]	29.6 [28.6–30.6]	27.7 [26.4–29.0]	28.6 [27.3–29.9]
KAZ-AL	—	—	—	—	16.0 [12.6–20.0]	12.2 [9.4–15.6]	—	—
KGZ	—	—	7.6 [5.3–10.7]	10.0 [7.9–12.5]	—	—	—	—
LTU	—	—	16.1 [13.5–18.9]	18.9 [16.2–21.9]	—	—	—	—
LUX	10.7 [9.5–12.1]	14.8 [11.7–13.7]	14.9 [13.5–16.4]	18.0 [16.4–19.6]	19.4 [17.7–21.3]	22.0 [20.2–24.0]	22.1 [20.3–24.0]	22.4 [20.7–24.3]
LVA	—	—	15.3 [13.2–17.6]	17.0 [14.7–19.6]	—	—	23.1 [20.6–25.9]	19.0 [17.0–21.1]
MAT	—	—	27.3 [26.4–28.2]	29.6 [28.7–30.5]	—	—	—	—
MDA	—	—	13.9 [11.5–16.6]	15.6 [13.5–18.0]	—	—	—	—
MKD	—	—	24.3 [21.7–27.1]	24.5 [21.2–28.1]	—	—	—	—
MNE	—	—	25.7 [22.7–29.0]	26.7 [23.5–30.2]	—	—	—	—
POL	—	—	23.5 [18.9–28.8]	20.4 [15.7–26.1]	27.7 [24.5–31.2]	25.6 [22.1–29.4]	29.8 [25.9–34.2]	26.0 [22.7–29.6]
POR	—	—	21.8 [19.4–24.4]	27.9 [25.2–30.8]	—	—	—	—
ROM	—	—	25.0 [22.7–27.5]	19.4 [16.4–22.8]	24.8 [21.8–28.1]	28.2 [25.5–31.0]	—	—
SMR	—	—	—	—	20.3 [17.5–23.3]	28.4 [25.5–31.5]	—	—
SPA	24.2 [21.2–27.5]	28.8 [25.1–32.7]	26.3 [22.9–30.1]	27.8 [24.5–31.3]	26.7 [23.5–30.3]	31.5 [27.8–35.4]	32.1 [27.8–36.8]	31.4 [27.9–35.1]
SVK	—	—	21.0 [18.5–23.8]	21.1 [18.1–24.5]	25.3 [22.6–28.3]	24.6 [21.9–27.5]	—	—
SVN	15.3 [13.8–17.0]	18.7 [17.1–20.4]	18.2 [16.8–19.7]	20.6 [19.1–22.1]	24.4 [22.8–26.1]	23.8 [22.1–25.5]	24.4 [22.1–26.8]	27.9 [25.6–30.4]
SWE	16.7 [16.2–17.1]	20.0 [19.5–20.5]	22.9 [22.2–23.6]	26.1 [25.4–26.9]	24.0 [23.5–24.6]	25.8 [25.3–26.4]	—	—
TUR	—	—	17.9 [16.6–19.2]	18.2 [16.9–19.5]	—	—	—	—
UKR	—	—	16.7 [13.0–21.3]	17.2 [14.0–20.9]	—	—	—	—
UZB	—	—	6.3 [5.3–7.5]	6.1 [4.9–7.5]	—	—	—	—

^a Calculated only for the targeted age groups. Dash [–] = age group not targeted.



Table A2.8. Country-specific prevalence and 95% CIs of obesity according to IOTF cutoffs among boys and girls, by age (%)^a

Country	6-year-olds		7-year-olds		8-year-olds		9-year-olds	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
ALB	—	—	—	—	9.4 [7.7–11.5]	7.5 [6.2–9.0]	—	—
AUT	—	—	—	—	5.0 [3.4–7.4]	3.1 [2.0–9.4]	—	—
AZE	—	—	—	—	5.9 [4.6–7.6]	5.2 [3.9–6.9]	—	—
BUL	—	—	10.6 [8.9–12.5]	10.7 [9.0–12.7]	—	—	—	—
CRO	—	—	—	—	9.1 [7.6–10.9]	7.8 [6.4–9.5]	—	—
CYP	—	—	—	—	—	—	10.3 [7.2–14.6]	9.1 [6.5–12.7]
CZH	—	—	5.7 [3.4–9.3]	6.5 [3.3–12.3]	—	—	—	—
DEN	—	—	1.8 [1.1–3.1]	3.8 [2.5–5.6]	—	—	—	—
EST	—	—	6.1 [4.9–7.4]	7.0 [6.1–8.1]	6.8 [5.9–7.8]	5.7 [4.9–6.7]	—	—
FIN	—	—	7.3 [6.3–8.4]	9.7 [8.6–11.0]	9.1 [8.1–10.3]	9.3 [8.2–10.5]	8.9 [7.9–9.9]	7.8 [6.8–8.9]
GEO	—	—	7.4 [6.1–9.0]	6.2 [4.8–7.9]	—	—	—	—
GER-BR	—	—	—	—	11.2 [6.6–18.5]	5.3 [3.7–7.4]	—	—
GRE	—	—	11.5 [8.7–14.9]	9.2 [6.8–12.3]	—	—	10.3 [7.4–14.1]	8.4 [6.2–11.3]
HUN	—	—	7.7 [6.2–9.6]	8.9 [7.3–10.8]	—	—	—	—
IRE	—	—	3.6 [2.4–5.3]	4.7 [3.2–6.7]	—	—	—	—
ISR	3.9 [3.8–4.1]	5.9 [5.7–6.0]	4.3 [4.1–4.5]	5.3 [5.1–5.5]	—	—	—	—
ITA	—	—	—	—	10.7 [10.1–11.4]	9.8 [9.2–10.5]	8.6 [7.9–9.4]	8.5 [7.7–9.3]
KAZ-AL	—	—	—	—	4.3 [2.9–6.5]	3.9 [2.6–5.8]	—	—
KGZ	—	—	3.0 [1.7–5.4]	1.9 [1.1–3.1]	—	—	—	—
LTU	—	—	4.6 [3.4–6.2]	6.7 [5.3–8.5]	—	—	—	—
LUX	5.7 [4.8–6.8]	6.3 [5.3–7.5]	7.9 [6.9–9.1]	7.1 [6.1–8.3]	12.2 [10.8–13.8]	9.4 [8.2–10.8]	13.2 [11.8–14.8]	9.7 [8.5–11.1]
LVA	—	—	4.8 [3.7–6.3]	5.8 [4.7–7.1]	—	—	7.0 [5.3–9.1]	6.2 [5.0–7.7]
MAT	—	—	10.3 [9.7–10.9]	12.3 [11.6–13.0]	—	—	—	—
MDA	—	—	3.7 [2.7–4.9]	4.3 [3.3–5.5]	—	—	—	—
MKD	—	—	7.9 [6.1–10.2]	9.1 [6.9–12.0]	—	—	—	—
MNE	—	—	9.3 [7.4–11.6]	7.1 [5.4–9.2]	—	—	—	—
POL	—	—	7.5 [5.1–10.9]	5.4 [3.4–8.5]	10.6 [8.7–12.8]	8.2 [6.4–10.4]	8.6 [6.5–11.3]	8.9 [7.0–11.4]
POR	—	—	7.2 [5.8–8.9]	11.2 [9.5–13.3]	—	—	—	—
ROM	—	—	8.2 [6.6–10.3]	7.1 [5.3–9.3]	10.2 [7.9–12.9]	7.3 [6.1–8.8]	—	—
SMR	—	—	—	—	2.5 [1.6–4.0]	7.4 [5.8–9.3]	—	—
SPA	9.3 [7.3–11.7]	9.3 [7.2–11.9]	9.6 [7.3–12.6]	9.5 [7.5–12]	7.9 [6.4–9.8]	12.5 [10.1–15.5]	10.3 [8.0–13.2]	10.6 [8.3–13.6]
SVK	—	—	8.3 [6.7–10.3]	6.5 [5.0–8.4]	10.5 [8.8–12.5]	7.6 [5.9–9.8]	—	—
SVN	5.4 [4.3–6.7]	5.0 [4.1–6.0]	6.1 [5.2–7.0]	6.4 [5.6–7.3]	8.2 [7.3–9.2]	7.8 [6.9–8.8]	8.4 [7.0–10.1]	7.0 [5.8–8.5]
SWE	4.9 [4.7–5.2]	6.3 [6.0–6.6]	8.1 [7.7–8.6]	8.9 [8.5–9.4]	7.5 [7.2–7.9]	7.8 [7.5–8.2]	—	—
TUR	—	—	6.3 [5.6–7.1]	5.9 [5.2–6.6]	—	—	—	—
UKR	—	—	4.8 [3.2–7.1]	5.7 [3.8–8.5]	—	—	—	—
UZB	—	—	1.8 [1.2–2.6]	1.1 [0.6–2.1]	—	—	—	—

^a Calculated only for the targeted age groups. Dash [–] = age group not targeted.

Table A2.9. Country-specific prevalence and 95% CIs of daily breakfast consumption by child's gender and parental education [%]

Country	Child's gender				Parental education		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	5 196	72.2 [69.8–74.4]	72.2 [69.9–74.3]	72.2 [70.6–73.7]	4 694	70.8 [69.0–72.5]	76.8 [73.2–80.1]
AZE	2 391	65.2 [61.9–68.4]	64.0 [60.5–67.4]	64.7 [62.2–67.1]	2 237	63.7 [61.2–66.2]	72.7 [65.0–79.3]
BUL	3 071	85.4 [82.9–87.6]	86.3 [84.0–88.3]	85.8 [84.2–87.4]	3 017	84.1 [82.0–85.9]	89.4 [86.6–91.6]
CRO	5 195	82.8 [81.2–84.3]	79.9 [78.2–81.5]	81.4 [80.1–82.5]	5 056	79.5 [78.1–80.9]	86.6 [84.6–88.4]
CYP	433	70.2 [62.3–77.0]	71.6 [61.9–79.7]	70.9 [62.9–77.8]	424	62.1 [48.0–74.5]	76.4 [70.5–81.5]
CZH	888	77.4 [72.9–81.4]	73.8 [67.3–79.3]	75.6 [71.9–79.0]	NA	NA	NA
DEN	470	89.3 [84.6–92.7]	89.4 [84.9–92.7]	89.4 [86.5–91.7]	456	85.7 [81.0–89.3]	92.1 [88.5–94.7]
EST	NA	NA	NA	NA	NA	NA	NA
GEO	3 116	25.5 [21.7–29.8]	28.4 [24.4–32.8]	26.9 [23.4–30.7]	2 892	23.7 [20.3–27.6]	34.7 [28.8–41.1]
GER-BR	1 151	84.6 [81.5–87.2]	86.8 [83.1–89.7]	85.7 [83.7–87.4]	994	82.8 [79.6–85.6]	92.6 [89.8–94.7]
GRE	260	37.1 [29.0–46.0]	24.4 [16.4–34.8]	30.6 [24.7–37.2]	251	32.7 [25.3–41.2]	27.0 [19.0–37.0]
HUN	4 487	83.3 [81.3–85.0]	83.5 [81.7–85.1]	83.4 [81.9–84.8]	4 204	81.6 [79.7–83.3]	89.0 [86.5–91.1]
IRE	1 074	94.0 [91.8–95.6]	92.3 [89.0–94.7]	93.2 [91.5–94.6]	1 019	92.0 [88.7–94.3]	93.4 [91.2–95.1]
ITA	40 918	71.1 [70.3–71.9]	66.5 [65.6–67.3]	68.8 [68.2–69.4]	39 081	66.6 [65.9–67.2]	81.1 [79.7–82.5]
KAZ-AL	1 636	78.1 [73.5–82.1]	77.7 [74.9–80.3]	77.9 [75.4–80.3]	1 561	78.3 [75.3–81.1]	77.5 [74.3–80.4]
KGZ	3 138	64.0 [60.5–67.4]	63.1 [57.8–68.1]	63.6 [60.1–66.9]	2 683	64.1 [60.4–67.7]	61.5 [51.1–70.9]
LTU	3 319	61.7 [58.5–64.8]	57.5 [53.7–61.2]	59.6 [56.6–62.5]	3 154	51.2 [48.2–54.1]	67.7 [64.7–70.5]
LVA	1 379	70.4 [66.7–73.9]	69.0 [66.0–71.7]	69.7 [67.4–71.9]	1 350	66.5 [63.6–69.3]	75.5 [71.6–79.0]
MAT	2 827	58.7 [57.7–59.6]	55.9 [55.0–56.9]	57.4 [56.7–58.0]	2 710	53.9 [53.1–54.7]	65.9 [64.6–67.1]
MDA	3 122	68.3 [65.5–71.1]	67.8 [65.2–70.3]	68.1 [65.7–70.3]	2 740	65.4 [62.8–67.9]	77.0 [73.3–80.3]
MKD	2 578	82.4 [79.8–84.7]	81.0 [77.6–84.1]	81.7 [79.3–83.9]	2 414	80.2 [77.1–83.0]	85.6 [82.8–88.1]
MNE	3 099	91.7 [90.2–92.9]	92.1 [90.4–93.5]	91.9 [90.8–92.8]	2 959	90.5 [89.1–91.7]	95.3 [93.4–96.7]
POL	5 244	80.3 [77.8–82.6]	79.8 [77.6–81.8]	80.1 [78.4–81.6]	4 685	77.2 [74.4–79.8]	85.5 [83.6–87.2]
POR	4 818	81.4 [79.6–83.0]	80.4 [78.5–82.1]	80.9 [79.6–82.0]	4 558	79.6 [78.1–80.9]	85.9 [83.8–87.8]
ROM	7 747	71.3 [69.0–73.4]	67.5 [65.1–69.7]	69.4 [67.5–71.2]	7 152	67.2 [64.6–69.8]	73.2 [70.2–76.0]
SMR	239	83.8 [81.3–86.0]	81.3 [79.1–83.4]	82.5 [80.8–84.0]	230	80.8 [78.9–82.7]	85.3 [81.7–88.4]
SPA	11 848	71.2 [69.4–73.0]	68.6 [66.7–70.4]	70.0 [68.6–71.3]	11 481	66.2 [64.7–67.7]	81.6 [79.4–83.7]
SVK	4 108	67.7 [65.0–70.3]	62.2 [59.5–64.7]	65.0 [62.9–67.0]	3 815	61.8 [59.3–64.2]	72.2 [68.6–75.6]
TUR	13 532	83.2 [82.0–84.4]	82.0 [80.6–83.4]	82.6 [81.5–83.7]	12 794	82.0 [80.8–83.2]	88.6 [86.8–90.2]
UKR	3 470	75.0 [71.3–78.2]	70.9 [67.9–73.8]	72.9 [70.2–75.5]	3 217	66.9 [63.1–70.5]	76.6 [73.1–79.8]
UZB	3 531	72.3 [69.1–75.3]	70.8 [66.7–74.5]	71.6 [68.4–74.6]	3 118	71.4 [67.7–74.8]	76.1 [68.8–82.1]

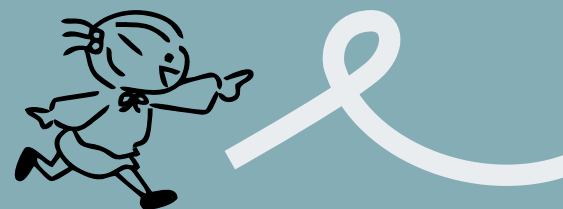


Table A2.10. Country-specific prevalence and 95% CIs of daily consumption of fresh fruit by child's gender and parental education (%)

Country	Child's gender				Parental education ^a		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	5 207	68.0 [65.8–70.1]	69.7 [67.6–71.7]	68.8 [67.3–70.3]	4 714	68.8 [67.2–70.4]	71.0 [68.0–73.8]
AZE	2 391	35.0 [31.4–38.9]	38.8 [35.5–42.1]	36.8 [34.1–39.6]	2 237	34.3 [31.1–37.7]	46.4 [41.6–51.3]
BUL	3 116	50.0 [47.1–53.0]	57.5 [54.1–60.9]	53.7 [51.4–55.9]	3 058	50.3 [47.5–53.1]	61.7 [57.7–65.6]
CRO	5 299	45.5 [43.5–47.4]	50.5 [48.3–52.8]	48.0 [46.3–49.6]	5 153	45.0 [43.1–46.9]	55.4 [52.6–58.2]
CYP	429	42.8 [38.0–47.7]	47.7 [41.7–53.7]	45.2 [40.7–49.8]	421	45.3 [37.8–53.1]	45.0 [40.2–49.9]
CZH	882	60.7 [54.5–66.6]	62.1 [56.2–67.7]	61.4 [56.2–66.3]	NA	NA	NA
DEN	470	62.5 [54.9–69.5]	66.4 [59.9–72.3]	64.3 [59.1–69.2]	456	58.3 [50.9–65.4]	69.7 [63.1–75.6]
EST	1 557	28.9 [26.5–31.5]	33.4 [30.6–36.3]	31.1 [29.0–33.3]	1 532	29.5 [27.1–32.0]	33.3 [30.0–36.8]
GEO	3 215	42.4 [39.7–45.2]	44.8 [41.7–48.0]	43.6 [41.2–46.0]	2 978	40.8 [38.1–43.6]	48.6 [44.4–52.9]
GER-BR	1 148	64.6 [58.9–70.0]	67.4 [62.6–71.9]	66.0 [62.7–69.2]	993	64.5 [59.7–69.0]	71.4 [65.3–76.7]
GRE	520	33.4 [27.0–40.4]	32.1 [24.8–40.4]	32.7 [28.1–37.7]	506	33.1 [26.3–40.6]	32.8 [26.2–40.1]
HUN	4 482	35.7 [33.3–38.2]	41.1 [38.3–44.0]	38.4 [36.3–40.5]	4 207	34.9 [32.6–37.3]	47.8 [44.4–51.1]
IRE	1 070	64.5 [59.8–68.9]	65.6 [61.3–69.7]	65.0 [61.7–68.1]	1 014	54.6 [49.0–60.0]	70.5 [66.7–74.1]
ITA	40 883	42.7 [41.9–43.6]	43.7 [42.8–44.6]	43.2 [42.5–43.9]	39 050	41.2 [40.5–41.9]	53.3 [51.6–55.0]
KAZ-AL	1 643	38.9 [35.7–42.3]	45.9 [40.4–51.5]	42.5 [39.0–46.0]	1 569	38.6 [33.5–43.9]	45.1 [41.2–49.2]
KGZ	3 177	40.4 [37.0–43.8]	40.6 [36.9–44.5]	40.5 [37.6–43.4]	2 718	40.8 [37.6–44.2]	34.8 [29.3–40.8]
LTU	3 325	43.9 [41.2–46.6]	42.9 [40.3–45.6]	43.4 [41.3–45.5]	3 157	39.7 [37.2–42.2]	47.4 [44.4–50.3]
LVA	1 433	36.6 [33.9–39.4]	43.9 [40.4–47.6]	40.1 [37.9–42.3]	1 402	36.2 [33.4–39.0]	46.0 [42.5–49.5]
MAT	2 875	51.1 [50.2–52.1]	53.0 [52.1–54.0]	52.0 [51.4–52.7]	2 759	48.9 [48.2–49.7]	60.5 [59.2–61.7]
MDA	3 136	47.0 [44.3–49.7]	47.7 [44.9–50.5]	47.3 [45.1–49.6]	2 762	42.6 [40.1–45.1]	58.0 [54.9–61.0]
MKD	2 603	24.4 [21.7–27.4]	25.0 [21.9–28.4]	24.7 [22.4–27.2]	2 440	25.3 [22.1–28.7]	25.1 [20.4–30.5]
MNE	3 076	60.5 [57.7–63.2]	66.1 [63.5–68.6]	63.2 [61.2–65.1]	2 942	62.6 [60.6–64.6]	64.9 [60.9–68.6]
POL	5 243	42.6 [39.8–45.5]	45.8 [43.1–48.5]	44.2 [42.1–46.3]	4 685	40.7 [37.5–44.1]	48.6 [45.9–51.3]
POR	4 967	69.6 [67.5–71.7]	72.3 [69.9–74.6]	71.0 [69.1–72.8]	4 703	67.5 [65.5–69.4]	82.7 [79.9–85.1]
ROM	7 965	48.7 [46.6–50.8]	51.4 [48.3–54.4]	50.0 [48.2–51.8]	7 308	47.4 [44.3–50.6]	54.4 [52.0–56.8]
SMR	239	41.9 [38.8–45.1]	54.5 [51.7–57.2]	48.8 [46.7–50.9]	230	45.5 [43.1–47.9]	56.0 [51.3–60.6]
SPA	11 846	46.4 [44.6–48.3]	44.0 [42.0–46.0]	45.3 [43.8–46.8]	11 482	41.5 [40.0–43.0]	57.7 [55.0–60.4]
SVK	4 152	46.5 [43.9–49.1]	52.4 [49.8–55.1]	49.4 [47.1–51.7]	3 824	45.7 [43.4–48.1]	61.1 [57.9–64.2]
TUR	13 040	38.9 [37.4–40.5]	41.9 [40.2–43.6]	40.4 [39.1–41.7]	12 386	38.8 [37.4–40.2]	47.7 [45.3–50.2]
UKR	3 455	54.9 [51.8–57.9]	55.7 [51.9–59.6]	55.3 [53.1–57.5]	3 208	52.1 [47.8–56.4]	57.1 [54.4–59.8]
UZB	3 524	46.2 [42.7–49.8]	46.2 [42.3–50.2]	46.2 [43.0–49.4]	3107	45.5 [42.1–49.0]	57.7 [50.4–64.8]

^a Estimates for low parental education were not calculated for Cyprus, Denmark and Greece due to the small number of observations.

Table A2.11. Country-specific prevalence and 95% CIs of daily consumption of vegetables by child's gender and parental education (%)

Country	Child's gender				Parental education		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	5 158	29.7 [27.7–31.9]	33.4 [31.3–35.7]	31.5 [30.0–33.1]	4 677	29.4 [27.8–31.2]	35.2 [31.8–38.8]
AZE	2 391	26.9 [23.9–30.2]	28.5 [25.0–32.2]	27.6 [25.3–30.1]	2 237	26.3 [23.7–29.1]	32.3 [27.7–37.4]
BUL	3 116	48.8 [45.6–52.0]	51.8 [48.0–55.7]	50.3 [47.8–52.8]	3 058	45.7 [42.9–48.5]	61.0 [56.8–65.1]
CRO	5 281	31.9 [30.1–33.8]	33.6 [31.8–35.4]	32.7 [31.4–34.1]	5 140	30.3 [28.8–31.8]	39.0 [36.1–42.0]
CYP	426	21.1 [15.4–28.3]	27.7 [21.5–35.0]	24.4 [19.7–29.9]	418	22.8 [16.7–30.2]	24.6 [18.9–31.4]
CZH	883	50.7 [45.7–55.7]	61.3 [56.5–66.0]	55.9 [52.5–59.3]	NA	NA	NA
DEN	470	66.4 [59.8–72.4]	62.6 [56.6–68.3]	64.6 [60.0–68.9]	456	54.6 [46.6–62.4]	71.9 [67.2–76.1]
EST	1 558	25.3 [22.8–27.9]	31.4 [28.9–33.9]	28.3 [26.4–30.1]	1 532	25.0 [22.9–27.2]	32.9 [30.1–35.8]
GEO	3 200	22.5 [20.2–25.0]	24.3 [21.9–26.9]	23.3 [21.4–25.4]	2 963	22.4 [20.1–24.9]	25.0 [21.6–28.7]
GER-BR	1 148	47.7 [42.3–53.2]	56.9 [50.6–63.1]	52.3 [49.5–55.1]	993	46.9 [42.4–51.6]	64.8 [55.9–72.8]
GRE	528	15.9 [10.5–23.2]	15.3 [11.2–20.6]	15.6 [12.4–19.4]	508	14.5 [10.3–20.1]	17.7 [13.1–23.5]
HUN	4 484	29.1 [26.6–31.6]	28.1 [25.8–30.5]	28.6 [26.6–30.6]	4 209	25.1 [23.2–27.2]	37.2 [34.0–40.5]
IRE	1 071	46.7 [41.9–51.5]	52.9 [48.3–57.5]	49.6 [46.0–53.1]	1 016	40.8 [35.7–46.1]	54.6 [50.5–58.7]
ITA	40 955	29.6 [28.8–30.4]	31.2 [30.4–32.1]	30.4 [29.8–31.0]	39 123	27.7 [27.1–28.3]	44.3 [42.4–46.2]
KAZ-AL	1 631	32.8 [29.1–36.7]	32.5 [28.5–36.8]	32.7 [29.9–35.5]	1 558	29.5 [25.8–33.5]	34.9 [31.6–38.4]
KGZ	3 160	37.9 [34.5–41.4]	35.9 [32.5–39.6]	36.9 [34.1–39.8]	2 707	37.0 [34.0–40.1]	33.0 [25.8–41.1]
LTU	3 323	44.8 [42.0–47.7]	44.4 [41.5–47.4]	44.6 [42.3–47.0]	3 157	39.6 [37.2–42.1]	49.6 [46.6–52.6]
LVA	1 429	35.9 [32.7–39.1]	42.4 [38.6–46.3]	39.0 [36.6–41.4]	1 398	35.8 [33.0–38.7]	43.6 [39.8–47.6]
MAT	2 864	20.5 [19.8–21.3]	24.2 [23.4–25.0]	22.3 [21.7–22.8]	2 748	17.4 [16.8–18.0]	37.1 [35.9–38.4]
MDA	3 109	37.7 [34.8–40.6]	35.3 [32.6–38.1]	36.5 [34.4–38.7]	2 745	34.0 [31.8–36.2]	40.5 [36.6–44.6]
MKD	2 583	20.8 [18.0–23.9]	21.5 [18.7–24.7]	21.2 [18.8–23.8]	2 427	20.9 [18.3–23.8]	22.0 [17.9–26.8]
MNE	3 059	46.7 [44.3–49.2]	47.8 [45.2–50.4]	47.3 [45.4–49.1]	2 933	45.7 [43.6–47.8]	51.6 [47.6–55.5]
POL	5 215	35.7 [32.7–38.9]	37.9 [35.2–40.7]	36.8 [34.4–39.3]	4 665	32.4 [29.3–35.6]	42.8 [39.9–45.8]
POR	4 951	68.3 [66.0–70.4]	69.7 [67.2–72.2]	69.0 [67.2–70.8]	4 685	66.3 [64.2–68.4]	80.4 [77.4–83.0]
ROM	7 899	45.7 [43.4–48.0]	47.2 [44.5–50.0]	46.4 [44.6–48.3]	7 257	44.2 [42.1–46.3]	50.6 [47.7–53.5]
SMR	239	41.9 [38.8–45.1]	58.2 [55.4–60.9]	50.9 [48.8–52.9]	230	47.6 [45.2–50.0]	62.2 [57.6–66.7]
SPA	11 829	23.8 [22.1–25.6]	23.8 [22.1–25.7]	23.8 [22.4–25.3]	11 470	20.1 [18.8–21.4]	35.2 [32.0–38.6]
SVK	4 147	41.0 [38.2–43.8]	43.7 [41.3–46.0]	42.3 [40.2–44.4]	3 822	39.9 [37.8–42.2]	50.6 [47.4–53.7]
TUR	12 513	17.3 [16.3–18.5]	18.9 [17.7–20.2]	18.1 [17.3–19.1]	11 916	18.2 [17.2–19.2]	17.0 [15.2–18.9]
UKR	3 418	39.1 [36.0–42.3]	43.7 [40.5–46.9]	41.4 [38.8–44.0]	3 177	41.6 [37.0–46.3]	41.1 [36.8–45.6]
UZB	3 404	41.3 [37.6–45.0]	42.1 [38.5–45.9]	41.7 [38.5–44.9]	3 009	41.5 [38.2–45.0]	44.8 [37.8–52.0]

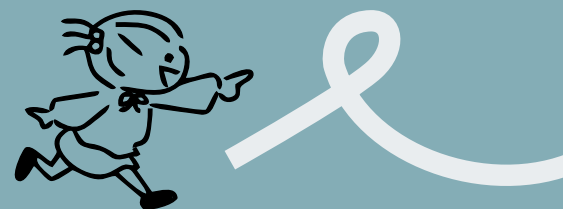


Table A2.12. Number of portions of fresh fruits and/or vegetables consumed on a typical day by 6–9-year-olds (%)

Country	No. of children included in the analysis	At least 1 portion	At least 3 portions	At least 5 portions
ALB	5 173	85.4 [84.2-86.4]	23.0 [21.7-24.4]	3.8 [3.2-4.4]
AZE	2 391	65.3 [62.5-68.0]	14.5 [12.7-16.5]	3.5 [2.7-4.6]
BUL	3 107	81.3 [79.4-83.1]	21.1 [19.3-23.0]	3.3 [2.6-4.2]
CRO	5 300	83.1 [82.0-84.2]	17.2 [16.2-18.4]	3.1 [2.7-3.6]
CYP	NA	NA	NA	NA
CZH	880	89.5 [86.5-92.0]	27.8 [23.9-32.1]	3.1 [2.1-4.5]
DEN	466	91.3 [88.0-93.8]	34.7 [30.3-39.4]	6.0 [4.1-8.7]
EST	NA	NA	NA	NA
GEO	NA	NA	NA	NA
GER-BR	1 148	90.9 [87.9-93.2]	37.8 [33.1-42.8]	7.4 [5.2-10.6]
GRE	NA	NA	NA	NA
HUN	4 490	79.9 [78.3-81.4]	15.4 [14.0-16.9]	1.5 [1.1-2.0]
IRE	1 074	92.9 [90.9-94.5]	57.3 [54.1-60.5]	15.3 [13.3-17.4]
ITA	NA	NA	NA	NA
KAZ-AL	1 662	68.3 [65.0-71.3]	11.1 [9.6-12.7]	1.2 [0.8-2.0]
KGZ	3 076	55.8 [52.7-58.8]	12.1 [9.9-14.6]	1.7 [1.1-2.6]
LTU	3 311	82.6 [81.0-84.1]	17.8 [16.4-19.3]	1.2 [0.9-1.6]
LVA	NA	NA	NA	NA
MAT	NA	NA	NA	NA
MDA	2 832	75.2 [73.3-77.0]	15.1 [13.9-16.5]	3.5 [2.7-4.4]
MKD	2 587	68.9 [66.4-71.3]	12.1 [10.4-14.0]	2.3 [1.7-3.0]
MNE	NA	NA	NA	NA
POL	5 243	82.5 [80.9-84.0]	17.2 [15.7-18.9]	2.7 [2.3-3.3]
POR	4 960	93.4 [92.5-94.2]	37.7 [35.8-39.7]	7.2 [6.4-8.1]
ROM	7 529	81.2 [79.3-83.0]	15.6 [14.1-17.1]	3.2 [2.7-3.9]
SMR	NA	NA	NA	NA
SPA	11 864	84.8 [83.7-85.9]	30.0 [28.6-31.5]	6.0 [5.5-6.7]
SVK	4 093	87.5 [86.3-88.6]	23.2 [21.6-25.0]	3.5 [3.0-4.1]
TUR	13 321	64.2 [62.9-65.5]	10.0 [9.4-10.7]	1.9 [1.7-2.3]
UKR	3 420	79.9 [78.0-81.6]	12.3 [10.5-14.4]	0.7 [0.5-1.1]
UZB	NA	NA	NA	NA

Table A2.13. Country-specific prevalence and 95% CIs of frequent consumption of savoury snacks by child's gender and parental education (%)

Country	Child's gender				Parental education		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	NA	NA	NA	NA	NA	NA	NA
AZE	2 391	19.9 [16.6–23.7]	21.8 [18.8–25.2]	20.8 [17.9–24.0]	2 237	21.5 [18.5–24.8]	13.0 [8.8–18.7]
BUL	3 089	26.9 [23.5–30.5]	26.2 [22.8–29.9]	26.5 [24.1–29.1]	3 035	32.8 [30.1–35.7]	11.7 [9.2–14.9]
CRO	5 275	20.6 [18.9–22.3]	18.8 [17.3–20.5]	19.7 [18.4–21.1]	5 129	22.6 [21.2–24.0]	10.9 [9.4–12.6]
CYP	NA	NA	NA	NA	NA	NA	NA
CZH	879	9.0 [5.9–13.7]	10.1 [6.5–15.3]	9.5 [6.6–13.6]	NA	NA	NA
DEN	469	2.6 [1.2–5.7]	2.1 [0.7–5.6]	2.3 [1.1–5.1]	455	1.6 [0.5–4.8]	3.0 [1.2–7.1]
EST	1 556	4.4 [3.5–5.5]	2.6 [1.9–3.7]	3.5 [2.9–4.3]	1 532	4.4 [3.5–5.5]	2.2 [1.5–3.2]
GEO	3 131	19.6 [17.4–22.0]	18.7 [16.5–21.2]	19.2 [17.4–21.1]	2 910	21.7 [19.6–24.0]	12.7 [10.2–15.8]
GER-BR	1 150	10.4 [7.4–14.4]	6.7 [3.8–11.7]	8.6 [6.4–11.4]	992	10.5 [6.7–15.9]	4.5 [2.5–8.1]
GRE	NA	NA	NA	NA	NA	NA	NA
HUN	4 487	23.5 [20.8–26.4]	23.0 [20.4–25.8]	23.2 [20.9–25.7]	4 216	27.6 [24.9–30.4]	10.1 [8.5–12.0]
IRE	1 076	20.3 [16.9–24.1]	18.3 [15.6–21.5]	19.4 [17.3–21.6]	1 016	22.9 [19.5–26.8]	18.0 [15.1–21.4]
ITA	40 756	11.4 [10.9–12.0]	12.4 [11.7–13.0]	11.9 [11.4–12.4]	38 971	12.9 [12.4–13.4]	6.1 [5.3–6.9]
KAZ-AL	1 662	8.2 [6.2–10.7]	11.4 [8.6–14.9]	9.8 [7.9–12.1]	1 588	12.2 [9.0–16.3]	6.9 [5.1–9.3]
KGZ	3 082	26.9 [24–30.1]	24.7 [21.1–28.6]	25.8 [23.3–28.4]	2 629	25.9 [23.3–28.7]	20.9 [15.4–27.8]
LTU	3 326	6.7 [5.5–8.2]	5.4 [4.3–6.7]	6.0 [5.1–7.1]	3 160	8.3 [6.8–10.0]	3.6 [2.9–4.4]
LVA	NA	NA	NA	NA	NA	NA	NA
MAT	2 858	23.3 [22.5–24.1]	20.9 [20.2–21.7]	22.2 [21.6–22.7]	2 745	23.2 [22.6–23.9]	17.9 [16.9–18.9]
MDA	2 858	4.3 [3.4–5.5]	4.1 [3.0–5.6]	4.2 [3.4–5.2]	2 549	5.2 [4.1–6.6]	0.7 [0.3–1.5]
MKD	2 559	40.6 [36.7–44.7]	38.8 [34.2–43.7]	39.7 [36.2–43.3]	2 413	44.3 [40.3–48.4]	24.9 [20.7–29.6]
MNE	3 050	33.3 [30.9–35.9]	31.9 [28.9–35.1]	32.6 [30.4–35.0]	2 926	37.7 [35.3–40.2]	19.0 [15.9–22.6]
POL	5 176	7.8 [6.6–9.3]	5.7 [4.7–7.0]	6.8 [5.8–7.8]	4 642	9.4 [7.9–11.0]	3.0 [2.1–4.2]
POR	4 935	4.5 [3.6–5.6]	3.3 [2.6–4.2]	3.9 [3.3–4.7]	4 671	4.2 [3.4–5.1]	1.9 [1.2–2.9]
ROM	7 758	22.3 [20–24.7]	18.5 [16.6–20.6]	20.4 [18.7–22.2]	7 179	25.7 [24.0–27.6]	9.4 [7.3–12.0]
SMR	238	3.8 [2.8–5.3]	7.5 [6.1–9.1]	5.8 [4.9–6.9]	229	7.1 [6.0–8.4]	2.1 [1.1–4.0]
SPA	11 807	5.4 [4.5–6.5]	5.2 [4.3–6.2]	5.3 [4.6–6.1]	11 446	6.1 [5.2–7.0]	2.5 [1.8–3.6]
SVK	4 133	7.4 [6.2–8.8]	7.2 [6.0–8.7]	7.3 [6.3–8.4]	3 805	8.1 [6.9–9.4]	4.3 [3.2–5.8]
TUR	12 674	20.5 [19.3–21.8]	19.7 [18.3–21.0]	20.1 [19.1–21.2]	12 067	21.8 [20.7–23.0]	11.2 [9.6–13.1]
UKR	3 396	5.0 [3.8–6.4]	3.5 [2.5–4.7]	4.2 [3.5–5.0]	3 158	4.8 [3.4–6.7]	3.6 [2.8–4.6]
UZB	3 354	32.3 [29.3–35.5]	34.2 [30.8–37.8]	33.2 [30.5–36.0]	2 974	33.9 [31.0–36.9]	18.9 [13.5–25.8]

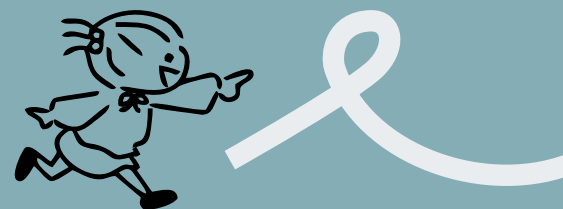


Table A2.14. Country-specific prevalence and 95% CIs of daily consumption of sweets by child's gender and parental education (%)

Country	Child's gender				Parental education ^a		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	NA	NA	NA	NA	NA	NA	NA
AZE	2 391	38.0 [34.7–41.4]	39.8 [36.2–43.5]	38.8 [36.1–41.6]	2 237	39.7 [36.9–42.6]	32.0 [25.9–38.7]
BUL	3 105	56.5 [53.5–59.5]	54.3 [50.3–58.3]	55.4 [52.9–57.9]	3 049	58.3 [55.8–60.8]	49.7 [45.0–54.3]
CRO	5 263	42.6 [40.8–44.4]	42.2 [40.4–44.0]	42.4 [41.1–43.7]	5 120	40.7 [39.2–42.3]	46.7 [44.0–49.4]
CYP	NA	NA	NA	NA	NA	NA	NA
CZH	881	57.8 [52.7–62.7]	53.9 [48.8–58.9]	55.9 [51.7–60.0]	NA	NA	NA
DEN	NA	NA	NA	NA	NA	NA	NA
EST	1 556	49.3 [46.3–52.4]	51.2 [48.5–53.9]	50.3 [48.3–52.2]	1 532	43.2 [40.6–45.8]	59.5 [57.0–61.9]
GEO	3 144	46.7 [43.7–49.8]	46.5 [43.4–49.6]	46.6 [44.1–49.2]	2 918	49.5 [46.7–52.2]	40.1 [35.6–44.7]
GER-BR	1 149	50.8 [45.5–56.1]	46.8 [42.6–50.9]	48.8 [45.4–52.3]	992	47.7 [41.9–53.5]	58.0 [50.8–64.9]
GRE	517	34.0 [27.1–41.6]	29.3 [22.7–36.8]	31.6 [27.5–36.0]	503	30.3 [25.6–35.5]	34.6 [28.3–41.6]
HUN	4 485	44.2 [41.4–47.1]	45.1 [42.2–48.0]	44.6 [42.4–46.9]	4 214	45.0 [42.4–47.6]	43.0 [39.3–46.8]
IRE	1 071	45.5 [40.9–50.2]	38.8 [34.5–43.3]	42.4 [39.5–45.4]	1 016	46.3 [41.7–51.0]	39.8 [36.0–43.8]
ITA	40 786	54.0 [53.1–54.8]	51.6 [50.7–52.5]	52.8 [52.2–53.5]	38 992	53.0 [52.3–53.8]	52.6 [51.1–54.1]
KAZ-AL	1 660	44.8 [40.2–49.5]	49.3 [45.9–52.6]	47.1 [44.0–50.2]	1 590	49.6 [44.4–54.9]	44.6 [40.9–48.4]
KGZ	3 082	47.7 [44.2–51.1]	47.8 [43.5–52.1]	47.7 [44.7–50.7]	2 636	48.0 [44.2–51.8]	43.2 [36.8–49.8]
LTU	3 318	32.6 [30.4–34.8]	33.7 [31.2–36.2]	33.1 [31.4–34.9]	3 152	32.2 [29.8–34.7]	34.5 [32.4–36.7]
LVA	1 429	63.9 [60.6–67.1]	65.9 [62.1–69.4]	64.8 [62.5–67.1]	1 400	64.4 [61.2–67.4]	65.4 [61.5–69.1]
MAT	2 855	45.6 [44.6–46.5]	46.3 [45.3–47.2]	45.9 [45.2–46.5]	2 740	44.9 [44.1–45.7]	48.8 [47.5–50.1]
MDA	2 920	44.5 [41.9–47.0]	41.2 [38.3–44.2]	42.9 [40.7–45.1]	2 596	44.1 [41.5–46.7]	40.0 [36.2–43.9]
MKD	2 567	49.5 [46.0–53.1]	51.8 [47.8–55.7]	50.6 [47.5–53.7]	2 415	51.1 [48.0–54.2]	46.9 [41.2–52.6]
MNE	3 021	39.2 [36.8–41.7]	38.3 [35.5–41.2]	38.8 [36.8–40.8]	2 896	39.4 [37.1–41.7]	37.5 [33.4–41.8]
POL	5 202	28.3 [25.7–30.9]	25.8 [23.4–28.3]	27.0 [25.0–29.1]	4 664	28.1 [25.5–30.7]	26.5 [23.5–29.8]
POR	4 964	24.5 [22.5–26.6]	24.1 [22.0–26.4]	24.3 [22.7–26.0]	4 701	24.2 [22.4–26.1]	24.0 [21.5–26.8]
ROM	7 806	49.5 [47.2–51.9]	51.6 [48.0–55.1]	50.5 [48.1–52.9]	7 222	51.9 [49.9–53.9]	48.3 [43.7–52.8]
SMR	238	47.1 [44.0–50.3]	47.8 [45.0–50.6]	47.5 [45.4–49.6]	229	50.2 [47.8–52.6]	41.7 [37.2–46.4]
SPA	11 830	27.1 [25.4–28.8]	26.5 [24.8–28.3]	26.8 [25.6–28.1]	11 467	26.5 [25.2–27.9]	27.6 [25.1–30.2]
SVK	4 119	30.9 [28.9–33.0]	30.7 [28.3–33.2]	30.8 [29.2–32.5]	3 799	30.3 [28.0–32.7]	33.3 [30.1–36.7]
TUR	12 779	35.2 [33.7–36.7]	33.9 [32.4–35.4]	34.5 [33.4–35.7]	12 171	34.5 [33.2–35.8]	33.7 [31.6–35.9]
UKR	3 393	41.3 [38.1–44.7]	42.6 [38.8–46.5]	42.0 [39.1–44.8]	3 155	42.6 [38.4–46.8]	42.5 [39.1–45.9]
UZB	3 520	61.9 [58.4–65.2]	65.8 [62.5–69.0]	63.7 [60.9–66.5]	3 103	63.3 [60.2–66.3]	61.3 [53.5–68.5]

^a Estimates for low parental education were not calculated for Cyprus, Denmark and Greece due to the small number of observations.

Table A2.15. Country-specific prevalence and 95% CIs of consumption of soft drinks on more than three days a week by child's gender and parental education (%)

Country	Child's gender				Parental education		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	5 097	9.0 [7.7–10.4]	7.5 [6.3–8.8]	8.2 [7.4–9.2]	4 642	9.3 [8.3–10.5]	3.1 [2.2–4.5]
AZE	2 391	27.5 [24.5–30.6]	27.4 [24.2–30.9]	27.4 [24.9–30.1]	2 237	27.5 [24.7–30.4]	20.9 [16.8–25.6]
BUL	3 104	19.8 [16.7–23.3]	15.7 [13.1–18.7]	17.8 [15.7–20.1]	3 046	21.7 [19.0–24.6]	8.9 [6.9–11.2]
CRO	5 261	29.5 [27.6–31.4]	25.3 [23.5–27.2]	27.4 [26.0–28.9]	5 122	30.4 [28.8–32.2]	18.7 [16.6–20.9]
CYP	425	6.1 [2.8–12.9]	1.9 [0.7–4.8]	4.0 [1.8–8.6]	417	6.3 [2.2–16.9]	2.3 [1.3–4.2]
CZH	883	41.3 [36.5–46.2]	46.3 [40.0–52.8]	43.8 [39.7–47.9]	NA	NA	NA
DEN	470	13.7 [9.8–19.0]	8.4 [5.0–14]	11.2 [8.6–14.5]	456	11.3 [7.8–16.2]	11.1 [8.0–15.3]
EST	1 556	5.1 [4.1–6.3]	3.8 [3.0–4.8]	4.4 [3.8–5.2]	1 532	5.7 [4.7–6.9]	3.0 [2.2–4.0]
GEO	3 178	25.6 [23.1–28.3]	21.8 [19.6–24.2]	23.8 [21.9–25.8]	2 944	25.7 [23.4–28.1]	18.0 [15.2–21.1]
GER-BR	1 146	21.6 [16.3–28.0]	15.9 [12.5–20.0]	18.7 [15.9–22]	991	21.9 [18.3–25.9]	11.3 [6.9–18.0]
GRE	527	3.3 [1–9.9]	1.4 [0.4–4.7]	2.3 [0.9–5.5]	507	2.0 [0.6–6.2]	2.9 [1.1–7.8]
HUN	4 470	50.1 [46.9–53.2]	46.7 [43.8–49.7]	48.4 [46.1–50.7]	4 201	53.6 [51.0–56.3]	34.7 [31.9–37.6]
IRE	1 078	4.5 [2.9–6.9]	5.0 [3.4–7.5]	4.7 [3.5–6.3]	1 015	8.0 [5.6–11.2]	2.9 [1.9–4.5]
ITA	40 850	15.1 [14.4–15.7]	12.7 [12.2–13.3]	13.9 [13.4–14.4]	39 061	15.4 [14.9–16.0]	5.8 [5.1–6.6]
KAZ-AL	1 622	23.7 [20.3–27.4]	26.5 [23.5–29.9]	25.1 [22.7–27.7]	1 553	26.9 [24.0–30.1]	23.9 [20.9–27.1]
KGZ	3 110	37.9 [34.4–41.4]	37.1 [33.6–40.8]	37.5 [34.8–40.3]	2 668	38.6 [35.7–41.6]	26.7 [21.5–32.7]
LTU	3 312	5.9 [4.7–7.4]	6.0 [4.8–7.4]	5.9 [5.0–7.0]	3 149	8.5 [7.1–10.1]	3.3 [2.5–4.2]
LVA	1 426	23.8 [21.3–26.5]	18.5 [16.2–21.1]	21.3 [19.5–23.2]	1 396	23.8 [21.6–26.2]	16.2 [13.2–19.7]
MAT	2 876	15.6 [15.0–16.3]	15.6 [14.9–16.3]	15.6 [15.1–16.1]	2 757	18.7 [18.1–19.3]	5.5 [4.9–6.1]
MDA	3 095	17.7 [15.3–20.5]	19.6 [16.8–22.6]	18.6 [16.4–21.0]	2 730	21.9 [19.4–24.6]	8.0 [6.2–10.3]
MKD	2 567	34.3 [31.0–37.8]	30.5 [28.0–33.0]	32.4 [30.0–34.9]	2 417	36.1 [33.4–38.9]	25.2 [20.9–30.1]
MNE	3 021	34.6 [31.8–37.6]	33.0 [30.3–35.8]	33.9 [31.6–36.2]	2 895	38.4 [36.0–40.8]	22.5 [19.3–26.0]
POL	5 183	34.4 [31.4–37.6]	30.0 [27.6–32.5]	32.2 [30.1–34.3]	4 641	35.9 [33.0–38.9]	25.3 [22.7–28.1]
POR	4 941	15.7 [14.1–17.5]	14.9 [13.4–16.6]	15.3 [14.2–16.6]	4 678	17.2 [15.8–18.7]	7.5 [6.0–9.5]
ROM	7 836	17.2 [15.0–19.6]	14.7 [12.6–17.1]	16.0 [14.2–17.9]	7 203	20.7 [18.6–23.1]	4.9 [3.6–6.7]
SMR	238	3.8 [2.8–5.3]	9.0 [7.5–10.7]	6.7 [5.7–7.8]	229	7.7 [6.5–9.0]	2.1 [1.1–4.0]
SPA	11 806	4.5 [3.8–5.3]	3.1 [2.5–3.9]	3.8 [3.3–4.4]	11 445	4.7 [4.0–5.4]	0.8 [0.5–1.6]
SVK	4 133	30.3 [27.7–32.9]	29.7 [27.3–32.3]	30.0 [28.0–32.1]	3 811	33.8 [31.6–36.1]	22.1 [19.2–25.3]
TUR	12 527	43.8 [42.3–45.4]	40.5 [38.9–42.2]	42.2 [41.0–43.4]	11 931	43.3 [42.1–44.6]	36.1 [33.7–38.5]
UKR	3 367	29.5 [26.2–33.0]	32.3 [29.3–35.4]	30.9 [28.6–33.3]	3 139	33.7 [29.9–37.7]	28.2 [25.2–31.4]
UZB	3 332	45.3 [42.0–48.7]	42.9 [39.2–46.6]	44.2 [41.2–47.1]	2 956	45.5 [42.2–48.8]	37.4 [30.8–44.5]

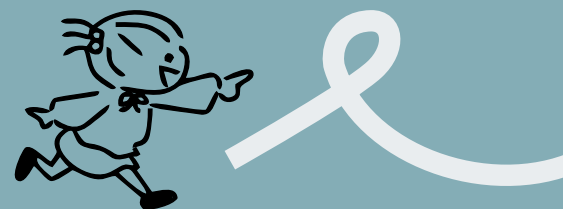


Table A2.16. Frequency of consumption of meals ordered online among families with 6–9-year-old children (%)

Country	No. of children included in the analysis	Never or less than once a month	Once a month	2-3 times per month	At least once a week
ALB	NA	NA	NA	NA	NA
AZE	NA	NA	NA	NA	NA
BUL	3 089	75.2	11.2	7.6	6.1
CRO	5 305	70.2	16.7	10.2	2.9
CYP	NA	NA	NA	NA	NA
CZH	891	63.1	16.1	15.1	5.7
DEN	NA	NA	NA	NA	NA
EST	1 545	43.9	17.5	22.6	16.0
GEO	NA	NA	NA	NA	NA
GER-BR	1 145	58.4	21.4	13.8	6.4
GRE	NA	NA	NA	NA	NA
HUN	4 372	43.1	21.6	24.1	11.1
IRE	NA	NA	NA	NA	NA
ITA	NA	NA	NA	NA	NA
KAZ-AL	1 654	53.7	23.5	15.2	7.6
KGZ	3 124	85.7	6.8	4.8	2.7
LTU	3 316	46.2	20.0	17.5	16.3
LVA	NA	NA	NA	NA	NA
MAT	NA	NA	NA	NA	NA
MDA	2 922	77.9	11.6	6.4	4.0
MKD	2 562	66.7	13.4	12.9	7.0
MNE	2 321	68.1	13.8	12.5	5.7
POL	5 123	72.6	13.8	11.2	2.4
POR	4 885	73.0	12.8	9.8	4.4
ROM	7 783	61.7	15.9	14.5	7.9
SMR	NA	NA	NA	NA	NA
SPA	NA	NA	NA	NA	NA
SVK	4 061	54.1	22.2	16.5	7.2
TUR	12 775	52.4	19.9	1.3	26.4
UKR	3 487	72.3	11.8	10.6	5.2
UZB	NA	NA	NA	NA	NA

Table A2.17. Country-specific prevalence and 95% CIs of children going to and from school on foot or by bicycle or skating by child's gender and parental education (%)

Country	Child's gender				Parental education		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	5 136	52.0 [48.0–56.0]	51.2 [46.8–55.6]	51.6 [48.6–54.6]	4 664	55.1 [52.0–58.3]	36.8 [32.1–41.8]
AZE	2 390	73.3 [68.3–77.9]	72.8 [67.3–77.6]	73.1 [68.1–77.5]	2 236	75.4 [70.3–79.8]	52.8 [43.4–62.0]
BUL	3 094	42.8 [38.8–46.9]	41.3 [37.3–45.5]	42.1 [39.3–45.0]	3 037	44.3 [40.7–48.0]	36.4 [32.2–40.8]
CRO	4 937	47.5 [44.2–50.8]	47.4 [43.9–50.8]	47.4 [44.3–50.6]	4 804	45.7 [42.3–49.1]	52.0 [47.6–56.4]
CYP	423	6.0 [3.1–11.4]	5.3 [2.8–9.7]	5.7 [3.3–9.6]	415	8.8 [4.8–15.6]	2.0 [0.9–4.4]
CZH	876	50.2 [43.3–57.1]	44.8 [36.7–53.3]	47.6 [41.8–53.4]	NA	NA	NA
DEN	466	35.0 [27.6–43.2]	39.1 [32.3–46.3]	37.0 [31.8–42.5]	444	29.4 [23.6–36.0]	42.2 [34.9–49.9]
EST	1 598	36.6 [33.3–39.9]	38.2 [34.9–41.5]	37.3 [34.5–40.3]	1 530	37.4 [34.2–40.6]	37.1 [33.2–41.1]
GEO	3 195	47.0 [42.8–51.2]	45.4 [41.1–49.7]	46.2 [42.5–50.0]	2 963	50.2 [46.3–54.0]	35.5 [30.3–41.1]
GER-BR	955	78.8 [73.0–83.7]	77.8 [72.3–82.4]	78.3 [73.9–82.2]	832	74.0 [67.6–79.6]	82.7 [73.7–89.1]
GRE	513	37.5 [30.1–45.6]	43.5 [35.3–51.9]	40.5 [34.2–47.2]	495	37.1 [29.3–45.6]	44.1 [35.1–53.4]
HUN	4 306	33.8 [30.1–37.8]	32.9 [29.3–36.7]	33.4 [30.0–36.9]	4 054	36.6 [32.7–40.6]	25.0 [21.0–29.3]
IRE	1 073	29.0 [23.5–35.2]	31.7 [26.0–38.1]	30.3 [25.6–35.4]	992	28.3 [22.7–34.7]	31.8 [26.2–37.9]
ITA	37 395	25.5 [24.4–26.6]	25.4 [24.3–26.5]	25.4 [24.5–26.4]	35 775	24.7 [23.8–25.7]	28.1 [25.9–30.5]
KAZ-AL	1 671	48.9 [42.0–55.9]	49.9 [44.8–55.1]	49.4 [43.7–55.1]	1 590	51.3 [42.9–59.7]	48.4 [42.3–54.5]
KGZ	3 138	72.6 [68.6–76.3]	75.9 [72.3–79.2]	74.3 [70.7–77.6]	2 686	75.3 [71.2–79.0]	64.1 [54.4–72.8]
LTU	3 020	27.8 [24.1–32.0]	27.2 [23.4–31.4]	27.5 [24.1–31.2]	2 866	32.5 [28.4–36.8]	22.7 [18.8–27.0]
LVA	1 440	29.1 [24.7–33.9]	29.5 [24.6–34.9]	29.3 [25.1–33.9]	1 404	32.0 [27.8–36.5]	24.6 [19.1–31.1]
MAT	2 793	17.2 [16.5–18.0]	17.1 [16.4–17.9]	17.2 [16.7–17.7]	2 678	18.7 [18.1–19.3]	12.4 [11.5–13.3]
MDA	3 042	55.3 [50.3–60.1]	51.6 [45.9–57.1]	53.5 [48.5–58.4]	2 677	58.9 [54.5–63.2]	34.9 [27.2–43.6]
MKD	2 642	63.5 [59.4–67.4]	63.1 [58.1–67.8]	63.3 [59.2–67.2]	2 461	66.8 [62.2–71.1]	51.1 [44.1–58.1]
MNE	3 034	39.8 [36.0–43.8]	38.3 [34.7–42.0]	39.1 [36.0–42.3]	2 893	39.6 [36.0–43.2]	37.8 [33.7–42.1]
POL	4 968	40.5 [35.3–45.9]	36.9 [32.0–42.0]	38.6 [33.9–43.6]	4 439	39.8 [34.2–45.7]	34.1 [28.8–39.8]
POR	4 838	19.5 [17.0–22.3]	17.7 [15.6–19.9]	18.6 [16.5–20.8]	4 533	19.1 [16.8–21.7]	14.3 [11.7–17.4]
ROM	7 796	40.7 [34.7–47.1]	42.1 [38.8–45.5]	41.4 [37.2–45.8]	7 119	44.4 [40.8–48.2]	34.4 [28.0–41.4]
SMR	229	11.8 [9.8–14.0]	4.7 [3.6–6.1]	7.9 [6.9–9.2]	220	8.6 [7.4–10.1]	4.6 [2.9–7.1]
SPA	11 788	51.4 [48.6–54.1]	51.9 [49.0–54.7]	51.6 [49.2–54.0]	11 414	51.4 [49.0–53.8]	51.1 [46.6–55.7]
SVK	3 763	39.6 [35.6–43.7]	37.7 [33.5–42.2]	38.7 [34.9–42.6]	3 497	38.3 [34.8–41.9]	38.4 [32.5–44.6]
TUR	13 406	65.4 [62.5–68.2]	64.6 [61.7–67.5]	65.0 [62.2–67.7]	12 604	72.5 [70.1–74.8]	29.1 [25.5–32.9]
UKR	3 418	53.9 [47.0–60.7]	52.1 [47.3–57.0]	53.0 [47.6–58.4]	3 158	56.5 [50.6–62.1]	49.5 [42.8–56.2]
UZB	3 536	81.1 [76.5–84.9]	81.3 [77.2–84.7]	81.2 [77.2–84.6]	3 108	82.5 [78.7–85.7]	49.0 [40.3–57.8]

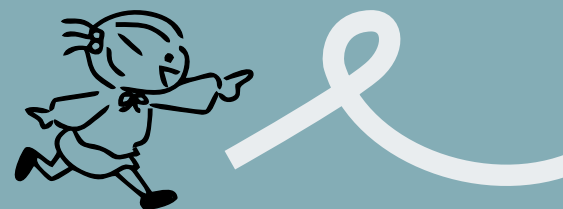


Table A2.18. Country-specific prevalence and 95% CIs of children playing actively/vigorously for at least one hour a day on weekdays and weekends by child's gender (%)

Country	On weekdays				On weekends			
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Boys	Girls	Boys & girls
ALB	4 964	95.2 [94.3–96.0]	93.1 [91.8–94.3]	94.2 [93.4–94.9]	4 809	98.8 [98.1–99.2]	97.5 [96.7–98.1]	98.2 [97.7–98.5]
AZE	2 345	98.2 [96.2–99.1]	98.5 [97.1–99.2]	98.3 [96.8–99.1]	2 389	99.1 [98.1–99.6]	99.3 [98.3–99.7]	99.2 [98.4–99.6]
BUL	2 883	95.4 [94.2–96.3]	92.4 [90.5–94.0]	93.9 [92.8–94.9]	2 853	98.6 [97.8–99.1]	97.7 [96.5–98.5]	98.2 [97.5–98.7]
CRO	4 921	93.3 [92.3–94.2]	90.8 [89.7–91.8]	92.1 [91.3–92.8]	4 873	98.0 [97.3–98.5]	97.4 [96.8–98.0]	97.7 [97.3–98.1]
CYP	378	89.7 [84.8–93.2]	78.2 [72.3–83.2]	83.9 [79.8–87.2]	351	97.6 [94.4–99.0]	90.2 [85.3–93.6]	93.7 [91.7–95.3]
CZH	817	91.0 [88.1–93.3]	89.5 [86.3–92.0]	90.3 [87.9–92.2]	812	97.2 [93.9–98.8]	96.3 [93.9–97.8]	96.8 [95.1–97.9]
DEN	NA	NA	NA	NA	NA	NA	NA	NA
EST	1 578	73.8 [71.1–76.3]	71.7 [69.2–74.2]	72.8 [70.7–74.8]	1 536	94.1 [92.7–95.2]	95.2 [93.9–96.1]	94.6 [93.6–95.5]
GEO	2 729	97.5 [96.4–98.3]	97.3 [96.2–98.0]	97.4 [96.6–98.0]	2 751	98.6 [97.7–99.1]	98.3 [97.3–98.9]	98.4 [97.7–98.9]
GER-BR	1 013	84.1 [78.7–88.3]	83.5 [79.8–86.7]	83.8 [80.1–87.0]	1 004	94.7 [91.7–96.6]	95.7 [93.6–97.1]	95.2 [93.2–96.6]
GRE	NA	NA	NA	NA	NA	NA	NA	NA
HUN	4 229	85.1 [83.2–86.8]	83.0 [81.0–84.7]	84.0 [82.5–85.4]	4 152	98.5 [97.9–98.9]	97.3 [96.5–98.0]	97.9 [97.3–98.4]
IRE	1 044	80.8 [77.4–83.8]	81.8 [78.1–84.9]	81.3 [78.7–83.5]	1 107	87.7 [84.4–90.3]	86.3 [82.2–89.6]	87.0 [84.4–89.3]
ITA	NA	NA	NA	NA	NA	NA	NA	NA
KAZ-AL	1 381	97.7 [96.3–98.6]	96.4 [94.5–97.7]	97.1 [95.9–97.9]	1 365	99.1 [98.0–99.6]	99.0 [98.0–99.5]	99.0 [98.2–99.5]
KGZ	2 855	95.3 [93.2–96.8]	94.4 [92.0–96.1]	94.8 [93.0–96.2]	2 835	95.6 [93.5–97.1]	95.4 [93.4–96.8]	95.5 [93.8–96.7]
LTU	3 004	88.0 [86.4–89.5]	86.6 [84.7–88.4]	87.3 [85.9–88.6]	2 978	97.2 [96.3–97.9]	96.6 [95.7–97.4]	96.9 [96.3–97.5]
LVA	1 238	94.3 [92.8–95.6]	93.6 [90.6–95.7]	94.0 [92.3–95.4]	1 345	98.7 [97.7–99.2]	97.3 [95.5–98.3]	98.0 [97.1–98.6]
MAT	2 435	80.6 [79.8–81.4]	79.2 [78.4–80.1]	80.0 [79.4–80.5]	2 466	94.9 [94.5–95.3]	94.0 [93.5–94.5]	94.5 [94.2–94.8]
MDA	2 749	90.1 [88.2–91.8]	88.7 [86.6–90.4]	89.4 [87.8–90.9]	2 795	95.0 [93.3–96.3]	93.6 [91.9–95.0]	94.4 [92.9–95.5]
MKD	2 228	94.3 [92.3–95.8]	93.0 [90.5–94.9]	93.6 [92.1–94.9]	2 152	97.3 [96.1–98.2]	95.9 [94.2–97.1]	96.6 [95.4–97.5]
MNE	2 515	99.0 [98.2–99.5]	98.2 [97.1–98.9]	98.6 [97.9–99.1]	2 602	98.8 [98.0–99.2]	99.1 [98.2–99.5]	98.9 [98.4–99.3]
POL	4 838	93.1 [91.8–94.3]	93.0 [91.9–94.0]	93.1 [92.2–93.8]	4 797	96.1 [94.6–97.2]	95.2 [94.0–96.2]	95.6 [94.6–96.4]
POR	4 270	90.3 [88.6–91.7]	87.7 [86.1–89.1]	89.0 [87.7–90.1]	4 186	96.8 [95.9–97.5]	95.7 [94.5–96.6]	96.2 [95.5–96.9]
ROM	6 669	96.2 [95.2–96.9]	95.7 [94.5–96.6]	95.9 [95.1–96.6]	6 416	97.5 [96.8–98.1]	97.7 [97.0–98.3]	97.6 [97.0–98.1]
SMR	220	65.3 [62.0–68.4]	61.6 [58.7–64.4]	63.2 [61.1–65.3]	227	76.5 [73.6–79.2]	77.5 [75.0–79.8]	77.1 [75.2–78.8]
SPA	NA	NA	NA	NA	NA	NA	NA	NA
SVK	3 695	98.3 [97.5–98.9]	97.4 [96.6–98.0]	97.9 [97.3–98.4]	3 550	99.5 [99.0–99.7]	98.9 [98.1–99.4]	99.2 [98.8–99.5]
TUR	11 540	94.5 [93.7–95.2]	93.5 [92.6–94.4]	94.0 [93.3–94.7]	11 403	98.1 [97.7–98.5]	97.7 [97.1–98.1]	97.9 [97.5–98.2]
UKR	2 993	93.4 [91.6–94.8]	94.6 [92.4–96.2]	94.0 [92.7–95.1]	3 013	93.9 [92.3–95.2]	94.7 [93.2–95.8]	94.3 [93.1–95.2]
UZB	3 052	97.8 [97.0–98.4]	97.1 [95.9–98.0]	97.5 [96.8–98.1]	2 967	98.8 [97.9–99.3]	99.1 [98.4–99.5]	98.9 [98.4–99.3]

Table A2.19. Country-specific prevalence and 95% CIs of children playing actively/vigorously for at least one hour a day on an average day by child's gender and parental education (%)

Country	Child's gender				Parental education		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	4 652	96.8 [96.0–97.5]	94.9 [93.7–96.0]	95.9 [95.2–96.5]	4 212	96.1 [95.3–96.8]	96.0 [94.1–97.3]
AZE	2 343	98.4 [96.4–99.3]	98.5 [97.1–99.2]	98.5 [96.9–99.2]	2 192	98.5 [96.8–99.3]	99.3 [97.8–99.8]
BUL	2 785	96.6 [95.4–97.4]	93.7 [91.7–95.3]	95.2 [94.0–96.1]	2 743	95.4 [94.1–96.4]	94.5 [92.1–96.2]
CRO	4 740	94.7 [93.7–95.5]	92.2 [91.2–93.2]	93.5 [92.8–94.1]	4 624	94.3 [93.5–95.0]	91.2 [89.6–92.5]
CYP	331	90.5 [86.9–93.2]	79.2 [72.1–84.8]	84.6 [80.6–87.9]	328	86.3 [78.7–91.5]	83.4 [78.4–87.4]
CZH	783	91.6 [87.9–94.3]	90.3 [86.8–92.9]	91.0 [88.4–93.0]	NA	NA	NA
DEN	NA	NA	NA	NA	NA	NA	NA
EST	1 530	79.4 [77.1–81.5]	78.7 [76.2–80.9]	79.0 [77.2–80.7]	1 475	80.9 [78.7–82.9]	76.4 [73.5–79.0]
GEO	2 579	97.9 [96.8–98.6]	97.7 [96.6–98.4]	97.8 [97.0–98.4]	2 413	97.9 [96.7–98.6]	97.5 [96.0–98.4]
GER-BR	945	85.5 [79.7–89.9]	84.5 [80.9–87.6]	85.0 [81.6–87.9]	836	88.2 [83.0–92.0]	77.7 [73.2–81.7]
GRE	NA	NA	NA	NA	NA	NA	NA
HUN	4 050	89.0 [87.3–90.4]	86.5 [84.5–88.2]	87.7 [86.2–89.1]	3 820	88.8 [87.2–90.3]	84.3 [81.6–86.7]
IRE	1 019	82.1 [78.3–85.3]	83.5 [79.5–86.8]	82.7 [80.0–85.1]	909	89.5 [85.4–92.5]	85.0 [81.7–87.7]
ITA	NA	NA	NA	NA	NA	NA	NA
KAZ-AL	1 287	97.8 [96.1–98.8]	97.2 [95.4–98.3]	97.5 [96.4–98.3]	1 239	98.2 [96.6–99.0]	96.9 [95.1–98.1]
KGZ	2 725	95.2 [93.0–96.7]	94.0 [91.5–95.9]	94.6 [92.6–96.0]	2 336	94.6 [92.3–96.2]	93.8 [89.8–96.3]
LTU	2 842	90.9 [89.4–92.2]	89.1 [87.5–90.5]	90.0 [88.8–91.0]	2 716	92.7 [91.2–93.9]	87.6 [86.1–89.0]
LVA	1 188	95.2 [93.6–96.4]	94.7 [92.4–96.4]	95.0 [93.6–96.1]	1 162	95.7 [93.6–97.2]	93.7 [91.9–95.2]
MAT	2 250	84.2 [83.4–85.0]	83.0 [82.2–83.8]	83.6 [83.1–84.2]	2 171	84.9 [84.2–85.5]	79.7 [78.6–80.8]
MDA	2 623	90.7 [88.9–92.3]	89.5 [87.4–91.3]	90.2 [88.6–91.5]	2 327	90.9 [89.0–92.4]	89.6 [86.8–91.8]
MKD	2 062	95.0 [93.3–96.3]	93.1 [90.3–95.1]	94.1 [92.4–95.4]	1 967	93.8 [91.6–95.4]	94.3 [91.0–96.5]
MNE	2 361	99.2 [98.4–99.6]	98.8 [97.8–99.3]	99.0 [98.4–99.4]	2 269	99.0 [98.2–99.4]	99.0 [97.0–99.7]
POL	4 665	93.5 [92.0–94.8]	93.0 [91.6–94.1]	93.2 [92.3–94.1]	4 219	93.0 [91.8–94.1]	93.6 [91.9–94.9]
POR	3 876	92.0 [90.4–93.3]	89.8 [88.1–91.2]	90.9 [89.7–91.9]	3 662	91.7 [90.3–92.9]	89.8 [87.4–91.8]
ROM	6 002	96.9 [96.2–97.5]	96.5 [95.5–97.3]	96.7 [96.0–97.3]	5 616	96.8 [96.0–97.5]	96.5 [95.2–97.4]
SMR	211	68.9 [65.6–72.0]	66.1 [63.3–68.8]	67.3 [65.2–69.4]	203	67.0 [64.5–69.4]	71.5 [66.9–75.6]
SPA	NA	NA	NA	NA	NA	NA	NA
SVK	3 368	98.7 [98.0–99.1]	98.0 [97.4–98.6]	98.4 [97.9–98.8]	3 133	98.4 [97.7–98.9]	98.1 [96.5–99.0]
TUR	10 815	95.5 [94.8–96.2]	94.5 [93.6–95.2]	95.0 [94.4–95.5]	10 332	95.5 [94.8–96.1]	92.8 [91.5–94.0]
UKR	2 849	92.4 [90.6–93.9]	94.9 [93.0–96.2]	93.6 [92.4–94.7]	2 668	92.1 [89.5–94.0]	94.4 [92.7–95.7]
UZB	2 820	98.1 [97.3–98.7]	97.7 [96.5–98.5]	97.9 [97.2–98.5]	2 495	98.0 [97.2–98.6]	97.8 [94.1–99.2]



Table A2.20. Country-specific prevalence and 95% CIs of children watching television or using electronic devices for at least two hours a day on weekdays and weekends by child's gender (%)

Country	On weekdays				On weekends			
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Boys	Girls	Boys & girls
ALB	4 704	42.8 [40.1–45.5]	36.6 [34.0–39.2]	39.8 [37.9–41.7]	4 821	79.8 [77.5–81.8]	75.7 [73.1–78.1]	77.8 [76.1–79.4]
AZE	2 372	48.7 [43.3–54.1]	49.3 [44.2–54.4]	49.0 [44.7–53.3]	2 391	79.5 [74.3–83.8]	79.1 [73.7–83.7]	79.3 [74.7–83.3]
BUL	2 971	35.6 [32.4–39.0]	31.1 [28.0–34.4]	33.4 [31.2–35.8]	3 000	75.8 [73.3–78.2]	69.1 [66.2–71.9]	72.6 [70.7–74.4]
CRO	4 999	42.1 [40.2–44.1]	36.7 [34.6–38.9]	39.5 [37.9–41.1]	5 043	81.0 [79.6–82.4]	74.1 [72.4–75.8]	77.6 [76.4–78.8]
CYP	384	45.4 [35.8–55.3]	31.2 [25.1–38.0]	38.0 [31.9–44.5]	400	83.1 [75.6–88.6]	75.6 [70.7–79.9]	79.3 [75.1–82.9]
CZH	841	29.8 [25.6–34.4]	33.5 [28.0–39.5]	31.6 [28.0–35.5]	854	72.1 [67.0–76.7]	66.2 [60.3–71.6]	69.2 [65.5–72.6]
DEN	NA	NA	NA	NA	NA	NA	NA	NA
EST	1 561	44.8 [42.0–47.7]	38.3 [35.6–41.1]	41.6 [39.5–43.9]	1 571	75.9 [73.3–78.4]	69.5 [66.9–72.0]	72.8 [70.9–74.6]
GEO	2 807	47.5 [44.1–50.9]	42.2 [39.1–45.3]	44.9 [42.4–47.5]	2 883	79.0 [76.5–81.3]	75.0 [72.0–77.8]	77.1 [74.9–79.1]
GER-BR	1 031	25.1 [20.6–30.2]	18.2 [16.0–20.7]	21.6 [19.1–24.4]	1 074	61.5 [55.8–66.9]	53.0 [48.5–57.4]	57.2 [52.8–61.6]
GRE	NA	NA	NA	NA	NA	NA	NA	NA
HUN	4 268	19.5 [17.0–22.2]	18.2 [16.0–20.7]	18.9 [16.8–21.1]	4 329	70.5 [67.9–72.9]	67.6 [65.1–69.9]	69.0 [66.9–71.0]
IRE	1 106	40.3 [35.6–45.2]	37.6 [32.6–42.7]	39.0 [35.5–42.7]	1 132	84.4 [80.7–87.5]	78.8 [73.6–83.3]	81.8 [78.8–84.5]
ITA	36 794	66.8 [65.8–67.7]	58.0 [57.0–59.0]	62.5 [61.7–63.2]	31 983	92.8 [92.2–93.2]	89.2 [88.6–89.8]	91.0 [90.6–91.4]
KAZ-AL	910	46.5 [40.4–52.7]	41.3 [36.0–46.7]	43.8 [39.1–48.6]	948	71.3 [65.0–76.9]	64.5 [58.7–70.0]	67.8 [62.3–72.9]
KGZ	3 010	51.3 [47.6–54.9]	48.2 [45.2–51.1]	49.7 [47.1–52.2]	3 042	73.8 [70.0–77.3]	73.0 [70.0–75.8]	73.4 [71.2–75.5]
LTU	3 188	49.5 [45.4–53.5]	44.9 [41.1–48.7]	47.2 [43.6–50.8]	3 214	85.6 [83.5–87.4]	84.8 [82.7–86.7]	85.2 [83.5–86.7]
LVA	1 346	71.8 [68.4–75.0]	66.4 [62.9–69.8]	69.3 [66.4–72.1]	1 385	92.4 [90.0–94.2]	90.7 [87.7–93.0]	91.6 [89.7–93.2]
MAT	2 415	54.3 [53.3–55.3]	47.9 [46.8–48.9]	51.3 [50.6–52.0]	2 585	84.9 [84.1–85.5]	82.4 [81.7–83.2]	83.7 [83.2–84.2]
MDA	2 906	47.0 [43.7–50.2]	40.1 [37.4–42.8]	43.7 [41.3–46.2]	2 965	81.7 [79.8–83.5]	80.7 [78.6–82.7]	81.2 [79.6–82.7]
MKD	2 288	44.0 [39.7–48.3]	35.3 [31.3–39.6]	39.7 [36.1–43.4]	2 338	69.9 [65.9–73.5]	67.2 [63.1–71.1]	68.6 [65.3–71.7]
MNE	2 773	37.3 [34.4–40.3]	33.0 [30.2–36.0]	35.2 [33.1–37.4]	2 840	61.1 [58.0–64.2]	57.4 [54.1–60.5]	59.3 [57.0–61.5]
POL	4 996	43.5 [40.1–46.8]	32.9 [30.3–35.5]	38.0 [35.5–40.5]	5 041	79.6 [77.4–81.6]	73.5 [70.6–76.2]	76.5 [74.5–78.3]
POR	4 370	30.3 [27.9–32.9]	27.7 [25.3–30.3]	29.0 [27.0–31.1]	4 514	76.5 [74.4–78.4]	74.6 [72.4–76.7]	75.5 [73.9–77.1]
ROM	6 823	50.1 [46.6–53.7]	46.0 [41.0–51.2]	48.1 [44.2–52.1]	7 032	80.7 [79.0–82.3]	74.3 [70.3–77.9]	77.6 [75.2–79.8]
SMR	235	59.4 [56.2–62.5]	55.2 [52.4–58.0]	57.1 [55.0–59.1]	213	94.4 [92.7–95.8]	87.8 [85.8–89.6]	90.7 [89.3–91.9]
SPA	11 357	32.9 [30.7–35.1]	28.6 [26.8–30.6]	30.9 [29.2–32.6]	11 630	83.2 [81.7–84.6]	81.1 [79.7–82.5]	82.2 [81.3–83.1]
SVK	3 919	36.1 [33.7–38.6]	31.1 [28.4–33.9]	33.7 [31.8–35.5]	3 967	75.8 [73.7–77.8]	73.0 [70.7–75.2]	74.4 [72.8–76.0]
TUR	11 969	40.3 [38.6–41.9]	36.7 [35.1–38.4]	38.5 [37.2–39.9]	12 192	78.4 [77.0–79.7]	75.3 [73.9–76.6]	76.8 [75.8–77.8]
UKR	3 273	57.0 [53.7–60.2]	51.8 [48.3–55.3]	54.4 [52.1–56.7]	3 302	84.8 [82.3–86.9]	82.1 [79.3–84.6]	83.4 [81.8–84.9]
UZB	3 036	43.6 [39.9–47.4]	40.9 [37.2–44.7]	42.3 [39.1–45.7]	3 081	74.0 [70.8–76.9]	69.0 [65.3–72.5]	71.6 [68.7–74.4]

Table A2.21. Country-specific prevalence and 95% CIs of children watching television or using electronic devices for at least two hours a day on an average day by child's gender and parental education [%]

Country	Child's gender				Parental education		
	No. of children included in the analysis	Boys	Girls	Boys & girls	No. of children included in the analysis	Low-medium	High
ALB	4 694	45.0 [42.2–47.8]	39.0 [36.3–41.9]	42.1 [40.2–44.1]	4 271	43.3 [41.0–45.7]	39.6 [35.3–44.1]
AZE	2 372	47.5 [42.4–52.7]	48.1 [42.4–53.8]	47.8 [43.4–52.2]	2 218	49.2 [44.4–54.0]	43.4 [35.1–52.0]
BUL	2 971	35.7 [32.3–39.2]	31.2 [28.3–34.4]	33.5 [31.2–35.9]	2 924	36.5 [33.6–39.4]	26.4 [23.2–29.8]
CRO	4 981	42.7 [40.8–44.7]	37.0 [34.9–39.2]	39.9 [38.3–41.5]	4 854	41.9 [40.1–43.7]	34.8 [32.2–37.5]
CYP	381	45.9 [36.1–56.0]	32.8 [27.2–39.0]	39.1 [33.4–45.2]	377	40.4 [31.6–49.9]	38.1 [31.6–45.2]
CZH	841	29.1 [25.1–33.5]	32.4 [27.3–37.9]	30.7 [27.2–34.5]	NA	NA	NA
DEN	NA	NA	NA	NA	NA	NA	NA
EST	1 561	44.3 [41.5–47.1]	38.0 [35.3–40.8]	41.2 [39.1–43.4]	1 523	42.1 [39.6–44.6]	40.3 [37.1–43.6]
GEO	2 802	47.5 [44.1–50.8]	42.4 [39.3–45.5]	45.0 [42.5–47.6]	2 620	45.9 [42.6–49.2]	42.6 [38.6–46.7]
GER-BR	1 021	25.4 [19.9–31.9]	19.2 [16.5–22.3]	22.3 [19.5–25.4]	900	25.4 [21.5–29.7]	14.5 [11.1–18.7]
GRE	NA	NA	NA	NA	NA	NA	NA
HUN	4 268	22.1 [19.6–24.9]	20.3 [18.0–22.7]	21.2 [19.1–23.4]	4 026	24.8 [22.4–27.3]	10.6 [8.8–12.8]
IRE	1 100	43.2 [38.1–48.5]	38.9 [34.1–44.0]	41.2 [37.3–45.3]	979	51.0 [45.0–57.1]	37.8 [33.0–42.9]
ITA	29 757	75.0 [74.2–75.9]	65.6 [64.6–66.6]	70.3 [69.6–71.1]	28 607	72.7 [72.0–73.4]	61.2 [59.3–63.1]
KAZ-AL	908	45.9 [39.5–52.4]	40.3 [34.9–46.0]	43.0 [38.0–48.1]	870	39.8 [33.8–46.2]	46.6 [40.6–52.8]
KGZ	2 986	49.9 [46.0–53.8]	47.9 [44.8–51.0]	48.8 [46.3–51.4]	2 550	48.0 [45.1–50.9]	52.1 [45.1–59.0]
LTU	3 179	50.1 [46.4–53.8]	45.7 [41.7–49.7]	47.9 [44.4–51.4]	3 024	58.2 [55.1–61.3]	38.6 [34.8–42.5]
LVA	1 331	72.4 [68.9–75.6]	67.6 [63.6–71.4]	70.1 [67.0–73.1]	1 302	74.3 [70.9–77.4]	64.8 [59.9–69.4]
MAT	2 380	54.9 [53.9–55.9]	49.2 [48.2–50.2]	52.2 [51.5–52.9]	2 297	56.7 [55.9–57.6]	41.0 [39.6–42.4]
MDA	2 889	47.4 [44.4–50.5]	40.3 [37.8–42.9]	44.1 [41.8–46.3]	2 571	46.3 [43.8–48.9]	37.9 [33.6–42.5]
MKD	2 288	44.1 [39.8–48.4]	35.5 [31.3–39.9]	39.9 [36.2–43.6]	2 181	40.2 [37.3–43.2]	38.2 [29.8–47.3]
MNE	2 770	36.0 [33.0–39.1]	30.2 [27.5–33.0]	33.1 [31.0–35.4]	2 670	33.3 [31.2–35.5]	30.9 [26.0–36.4]
POL	4 987	44.3 [41.2–47.4]	33.1 [30.5–35.7]	38.5 [36.2–40.8]	4 481	43.7 [41.0–46.5]	30.8 [27.5–34.4]
POR	4 327	32.9 [30.4–35.5]	30.0 [27.6–32.5]	31.4 [29.4–33.6]	4 093	32.3 [30.0–34.7]	29.2 [26.2–32.3]
ROM	6794	49.6 [46.0–53.2]	44.8 [40.0–49.8]	47.3 [43.4–51.2]	6 331	52.8 [49.3–56.3]	37.2 [32.6–42.1]
SMR	213	71.1 [67.9–74.1]	56.9 [54.0–59.8]	63.1 [60.9–65.2]	205	64.9 [62.4–67.3]	56.8 [52.1–61.5]
SPA	11 332	33.7 [31.6–35.8]	28.8 [27.0–30.7]	31.4 [29.8–33.0]	10 996	34.3 [32.6–36.0]	22.4 [19.8–25.1]
SVK	3 906	36.3 [33.9–38.8]	31.3 [28.7–34.1]	33.9 [32.0–35.7]	3 624	35.5 [33.3–37.8]	30.1 [27.2–33.2]
TUR	11 888	41.5 [39.9–43.2]	38.2 [36.6–39.8]	39.9 [38.5–41.2]	11 362	42.2 [40.8–43.6]	28.5 [26.2–30.8]
UKR	3 246	57.5 [54.1–60.9]	51.5 [48.0–54.9]	54.5 [52.1–56.8]	3 032	60.9 [55.9–65.7]	51.0 [47.5–54.4]
UZB	3 029	45.1 [41.4–48.8]	41.8 [38.1–45.7]	43.5 [40.3–46.9]	2 693	43.7 [40.2–47.3]	44.0 [35.6–52.6]

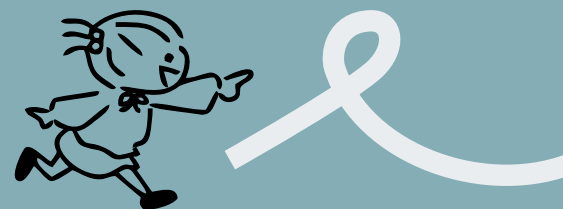


Table A2.22. Country-specific prevalence and 95% CIs of children sleeping at least nine or 10 hours per night by child's gender and parental education (%)

Country	No. of children included in the analysis	At least 9 hours per night						At least 10 hours per night
		Child's gender			No. of children included in the analysis	Parental education		Boys & girls
		Boys	Girls	Boys & girls		Low-medium	High	
ALB	5 226	90.0 [88.3–91.5]	90.5 [89.1–91.8]	90.3 [89.2–91.3]	4 716	91.4 [90.3–92.5]	85.8 [82.9–88.3]	50.3 [47.7–52.8]
AZE	2 391	87.3 [83.8–90.1]	88.5 [85.6–90.8]	87.8 [85.1–90.1]	2 237	88.3 [85.5–90.6]	80.6 [73.2–86.3]	48.0 [41.9–54.2]
BUL	3 123	81.6 [79.3–83.7]	83.0 [80.7–85.1]	82.3 [80.7–83.8]	3 064	82.3 [80.3–84.1]	81.7 [78.5–84.5]	25.4 [23.3–27.6]
CRO	5 318	95.2 [94.2–96.0]	95.5 [94.6–96.2]	95.3 [94.6–95.9]	5 172	95.3 [94.4–96.0]	95.3 [93.9–96.3]	49.2 [47.0–51.4]
CYP	431	87.2 [83.6–90.1]	87.8 [82.0–91.9]	87.5 [84.1–90.2]	424	89.4 [85.4–92.5]	87.1 [83.0–90.3]	NA
CZH	874	98.6 [97.0–99.3]	98.8 [96.2–99.6]	98.7 [97.4–99.3]	NA	NA	NA	NA
DEN	476	100.0	99.7 [97.7–100]	99.8 [98.9–100.0]	455	99.6 [97.4–99.9]	100 [0–0]	NA
EST	1 588	87.1 [84.8–89.1]	89.9 [87.9–91.6]	88.5 [86.9–90.0]	1 532	89.4 [87.5–91.0]	87.7 [85.2–89.8]	28.0 [25.6–30.6]
GEO	3 199	96.8 [95.7–97.6]	97.3 [96.3–98.1]	97.1 [96.3–97.7]	2 977	97.2 [96.2–97.9]	96.9 [95.4–98.0]	76.4 [73.5–79.0]
GER-BR	1 146	99.4 [98.5–99.7]	99.5 [98.1–99.9]	99.4 [98.8–99.7]	990	99.4 [98.0–99.8]	99.9 [98.8–100.0]	89.4 [86.5–91.7]
GRE	523	90.2 [84.9–93.7]	88.3 [84.1–91.5]	89.2 [86.1–91.7]	506	87.5 [82.5–91.2]	90.6 [85.5–94.0]	NA
HUN	4 387	97.2 [96.3–97.9]	98.2 [97.4–98.8]	97.7 [97.1–98.1]	4 123	97.2 [96.4–97.9]	98.8 [97.7–99.4]	53.2 [50.8–55.6]
IRE	1 094	100.0	99.8 [98.9–100.0]	99.9 [99.5–100.0]	1 012	100.0	99.9 [99.2–100.0]	97.0 [95.7–97.9]
ITA	41 077	83.5 [82.8–84.1]	83.2 [82.6–83.9]	83.4 [82.8–83.9]	39 243	82.4 [81.8–83.0]	87.5 [86.5–88.5]	20.2 [19.7–20.8]
KAZ-AL	1 695	73.6 [63.9–81.4]	72.3 [64.7–78.7]	72.9 [65.1–79.5]	1 615	75.3 [65.7–82.9]	70.2 [62.2–77.1]	39.1 [30.1–49.0]
KGZ	3 185	85.3 [82.8–87.4]	84.6 [80.5–87.9]	84.9 [82.4–87.1]	2 725	86.3 [83.5–88.7]	75.4 [66.1–82.9]	42.7 [39.0–46.5]
LTU	3 334	91.5 [89.9–92.9]	90.5 [89.0–91.8]	91.0 [89.9–92.0]	3 162	90.8 [89.2–92.1]	90.8 [89.4–91.9]	31.4 [29.2–33.7]
LVA	1 418	80.0 [76.5–83.1]	76.5 [73.0–79.7]	78.3 [75.8–80.7]	1 384	77.6 [74.2–80.6]	79.5 [75.9–82.7]	19.9 [18.0–22.0]
MAT	2 873	93.4 [92.9–93.9]	92.3 [91.7–92.8]	92.9 [92.5–93.2]	2 756	92.6 [92.1–93.0]	94.1 [93.4–94.7]	51.7 [51.1–52.4]
MDA	3 128	85.6 [82.6–88.2]	86.7 [84.4–88.7]	86.1 [83.7–88.2]	2 746	88.2 [86.2–89.9]	82.4 [76.1–87.3]	27.1 [24.7–29.6]
MKD	2 631	89.1 [86.1–91.5]	88.2 [85.7–90.3]	88.6 [86.2–90.7]	2 455	88.7 [86.1–90.8]	87.6 [82.7–91.3]	52.5 [47.4–57.5]
MNE	3 125	96.5 [95.3–97.3]	96.0 [94.8–97.0]	96.3 [95.3–97.0]	2 977	96.2 [95.2–97.1]	96.2 [94.1–97.6]	69.8 [66.4–73.1]
POL	5 258	91.4 [89.7–92.8]	90.9 [89.3–92.3]	91.1 [90.0–92.1]	4 691	91.5 [90.0–92.8]	89.9 [88.0–91.5]	44.5 [42.0–47.0]
POR	4 989	98.3 [97.6–98.7]	98.0 [97.2–98.5]	98.1 [97.6–98.5]	4 670	97.9 [97.4–98.4]	98.8 [97.8–99.3]	68.7 [67.0–70.3]
ROM	7 911	86.5 [84.7–88.2]	87.5 [85.5–89.3]	87.0 [85.3–88.6]	7 278	87.6 [85.5–89.4]	85.2 [82.7–87.5]	33.4 [30.6–36.2]
SMR	238	92.3 [90.4–93.8]	97.0 [95.9–97.8]	94.9 [93.9–95.8]	229	95.0 [93.8–95.9]	93.7 [91.0–95.6]	20.5 [18.9–22.3]
SPA	11 808	97.8 [97.2–98.3]	98.2 [97.6–98.6]	98.0 [97.6–98.3]	11 439	97.8 [97.3–98.2]	98.4 [97.5–99.0]	72.6 [71.0–74.1]
SVK	4 111	96.1 [95.2–96.8]	96.3 [95.5–97.0]	96.2 [95.6–96.7]	3 789	96.1 [95.3–96.7]	96.7 [95.4–97.7]	51.1 [49.0–53.3]
TUR	8 973	92.4 [91.3–93.3]	91.3 [90.1–92.3]	91.8 [90.9–92.6]	8 514	91.5 [90.5–92.4]	94.0 [92.4–95.2]	52.7 [51.0–54.5]
UKR	3 469	82.6 [79.7–85.1]	84.6 [81.9–86.9]	83.6 [81.6–85.4]	3 211	85.7 [81.3–89.1]	81.6 [79.2–83.7]	29.0 [26.3–31.8]
UZB	3 667	81.7 [79.2–84.0]	82.9 [80.4–85.2]	82.3 [80.2–84.2]	3 217	82.4 [80.2–84.3]	68.1 [61.3–74.2]	38.1 [35.0–41.3]

Suite of interventions and policy options for Member States' consideration

A suite of interventions and policy options for preventing and tackling obesity in the WHO European Region was presented for Member States' consideration in the *WHO European Regional Obesity Report 2022 (1)*. The interventions relevant to childhood obesity are presented below.

► Considerations for interventions across the life course

Diet

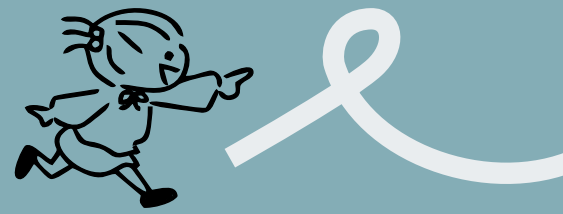
- Implement nutrition labelling to reduce total energy intake (kilocalories/kilojoules), sugars, sodium and fats (2).
- Limit portion and package size to reduce energy intake and the risk of overweight/obesity (2).
- Implement subsidies to increase the intake of fruits and vegetables (2).
- Reduce sugar consumption through effective taxation on sugar-sweetened beverages (2).
- Implement nutrition education and counselling in different settings (e.g., preschools, schools, workplaces and hospitals) to increase the intake of fruits and vegetables (2).
- Implement mass media campaigns on healthy diets, including social marketing to reduce the intake of total fat, saturated fats, sugars and salt, and promote the intake of fruits and vegetables (2).
- Broaden taxes to incorporate unhealthy food products, including those high in fats, sugar and salt (3).
- Restrict multi-buy and other price promotions on unhealthy food (4,5).
- Restrict the marketing of unhealthy foods, tobacco, alcohol and baby formula milk, including through new marketing opportunities, such as social and digital media (6,7).
- Make mandatory clear front-of-pack labelling on all foods (8).
- Regulate where and how food outlets can operate, in terms of geographical areas or buildings, to influence the food environment (9).
- Implement healthy public food procurement and service policies, requiring that all foods and beverages served or sold in public settings contribute to the promotion of healthy diets (9).
- Recognize that the digital environment is a determinant of health (10).

Physical activity

- Provide convenient and safe access to quality public open space and adequate infrastructure to support walking and cycling (2).
- Ensure that macro-level urban design incorporates the core elements of residential density, connected street networks that include sidewalks, easy access to a diversity of destinations, and access to public transport (2).
- Implement a community-wide public education and awareness campaign for physical activity that includes a mass media campaign combined with other community-based education, motivational and environmental programmes aimed at supporting behavioural change in physical activity levels (2).
- Provide physical activity counselling and referral as part of routine primary health-care services through the use of a brief intervention (2).
- Promote physical activity through organized sport groups and clubs, programmes and events (2).

Management

- Provide equitable access to integrated health-care services for the management of overweight and obesity as part of universal health coverage (11).
- Provide equitable access to family-based, multicomponent, lifestyle weight management services for children and young people who are living with obesity (12).



Surveillance/monitoring

- Monitor obesity across the life course to help support policy efforts through systems, such as COSI and the STEPwise Approach to NCD Risk Factor Surveillance (STEPS) (13–16).
- Include other important indicators, such as socioeconomic status, to help inform and monitor policy action to address the social determinants of health (13, 14).
- Continue monitoring food and physical activity environments – including digital environments – and policy actions at country level (14, 17).

► Preconception and prenatal care

Diet

- Provide food vouchers for new parents to subsidize the purchase of healthy foods (3).

Monitoring/counselling

- Provide monitoring and counselling on nutrition and exercise before and during pregnancy, which can be used to improve health literacy as well as diet and physical activity behaviours (18, 19).

► In infancy (0–12 months)

Breastfeeding

- Promote and support exclusive breastfeeding for the first six months of life and continued breastfeeding up to two years and beyond (2).
- Implement the Baby Friendly Hospital Initiative to help mothers to breastfeed babies and provide lactation support training for health professionals (20, 21).
- Implement supporting policies and legislations from the range available to support breastfeeding, including universal paid maternity leave, national labour policies and workplace support for breastfeeding, along with laws to protect breastfeeding in public (22).
- Implement restrictions on the inappropriate marketing of products that compete with breast milk, as detailed in the *International Code of Marketing of Breast-milk Substitutes* (23, 24).

Infant food

- Encourage a healthy introduction to solid food through reformulation of infant food to improve its nutritional profile along with tackling appropriate marketing of infant and baby foods and accurate labelling of these products (25).

Monitoring/counselling

- Monitor children's growth and the micronutrient status of both parent and newborn; provide counselling to improve health literacy and diet and physical activity behaviours (13, 14).

► Childhood (1–10 years)

Physical activity

- Implement whole-of-school programmes that include quality physical education, availability of adequate facilities, and programmes to support physical activity for all children (2).
- Encourage active travel through the provision of safe footpaths and cycle lanes in the local environment and the creation of walking buses¹¹ for children attending local educational facilities (26).

11 A walking bus is a group of children and their parents or carers who walk to school together, picking up more people along the way.

Diet and physical activity

- Support by extending health-promoting frameworks from schools to nurseries and kindergartens (27).

Diet

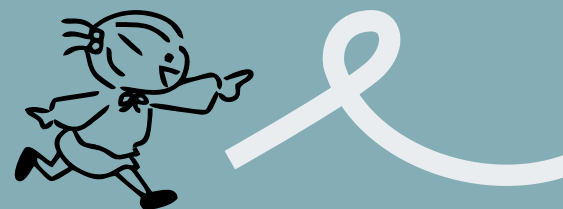
- Implement mandatory national food standards for child-care settings, recreation facilities and schools (28,29).
- Provide free meals in these settings, in particular in early school years or for those from low-income households, thus supporting healthy dietary intake for all children (28, 29).

Education

- Make nutrition education statutory in educational curricula, in addition to the approaches above (2).
- Include the teaching of food and nutrition practical skills in the educational curricula, such as cooking classes.

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The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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