

European Region

Ó

30

20

00

6

ó

ľ

Ø

6

6

Childhood Obesity Surveillance Initiative

COSI - FACT SHEET HIGHLIGHTS 2018-2020



Fig. 1. Expansion of COSI, 2007-2020

Overweight and obesity among children remains one of the major public health challenges facing the WHO European Region. As well as affecting a child's immediate physical and mental health, educational attainment and quality of life, unhealthy bodyweight in early life can increase the risk of obesity and noncommunicable diseases later in life.

In order to generate reliable and valid country-level data on the prevalence of overweight and obesity among primary school-aged children, the WHO Childhood Obesity Surveillance Initiative (COSI) was established in 2007. The initiative established a common protocol which enables systematic collection of data on children's weight status, by routine and standardized measurement of bodyweight and height of children aged 6-9 years.

behaviour, family background and school environments are also collected in many countries.

Additional data on dietary intake, physical activity, sedentary

COSI is now the largest childhood obesity surveillance initiative in the world, with participation having increased from 13 countries in 2007 to 45 countries in 2020 (Fig. 1). In total, the first five rounds of data collection have yielded measured anthropometric data on over 1.3 million children.

The fifth round of COSI data collection took place between 2018 and 2020 in 33 countries. In total, almost 411 000 children aged 6–9 years were measured. The full details of the fifth round of data collection are described in a report.^{1,2}

ROUND 1	ROUND 2	ROUND 3	ROUND 4	ROUND 5
(2007–2008)	(2009–2010)	(2012–2013)	(2015–2017)	(2018–2020)
1. Belgium	1. Belgium	1. Belgium	1. Albania	1. Albania (ALB)
2. Bulgaria	2. Bulgaria	2. Bulgaria	2. Belgium	2. Austria (AUT)
3. Cyprus	3. Cyprus	3. Cyprus	3. Bulgaria	3. Belgium (BEL)
4. Czechia	4. Czechia	4. Czechia	4. Cyprus	4. Bulgaria (BUL)
5. Ireland	5. Ireland	5. Greece	5. Czechia	5. Croatia (CRO)
6. Italy	6. Italy	6. Hungary	6. Greece	6. Cyprus (CYP)
7. Latvia	7. Latvia	7. Ireland	7. Hungary	7. Czechia (CZH)
8. Lithuania	8. Lithuania	8. Italy	8. Ireland	8. Denmark (DEN)
9. Malta	9. Malta	9. Latvia	9. Italy	9. Estonia (EST)
10. Norway	10. Norway	10. Lithuania	10. Latvia	10. Finland (FIN)
11. Portugal	11. Portugal	11. Malta	11. Lithuania	11. France (FRA)
12. Slovenia	12. Slovenia	12. North Macedonia	12. Malta	12. Georgia (GEO)
13. Sweden	13. Sweden	13. Norway	13. North Macedonia	13. Greece (GRE)
	14. Greece	14. Portugal	14. Norway	14. Hungary (HUN)
	15. Hungary	15. Slovenia	15. Portugal	15. Ireland (IRE)
	16. North Macedonia	16. Spain	16. Republic of Moldova	16. Italy (ITA)
	17. Spain	17. Sweden	17. Romania	17. Kazakhstan (KAZ)
		18. Albania	18. San Marino	18. Kyrgyzstan (KGZ)
		19. Republic of Moldova	19. Slovenia	19. Latvia (LVA)
		20. Romania	20. Spain	20. Lithuania (LTU)
		21. San Marino	21. Sweden	21. Malta (MAT)
		22. Türkiye	22. Türkiye	22. Montenegro (MNE)
			23. Austria	23. Netherlands (NET)
			24. Croatia	24. North Macedonia (MKD)
			25. Denmark	25. Norway (NOR) ^a
			26. Estonia	26. Poland (POL)
			27. Finland	27. Portugal (POR)
			28. France	28. Republic of Moldova (MDA
			29. Georgia	29. Romania (ROM)
			30. Kazakhstan	30. Russian Federation (RUS) ^b
			31. Kyrgyzstan	31. San Marino (SMR)
			32. Montenegro	32. Serbia (SRB)
			33. Poland	33. Slovakia (SVK)
			34. Russian Federation ^b	34. Slovenia (SVN)
			35. Serbia	35. Spain (SPA)
			36. Slovakia	36. Sweden (SWE)
			37. Tajikistan	37. Tajikistan (TJK)
			38. Turkmenistan	38. Türkiye (TUR)

39. Netherlands

- 39. Turkmenistan (TKM) [°] 40. Armenia (ARM)
 - 41. Azerbaijan (AZE) °
 - 42. Bosnia and Herzegovina (BIH) °
 - 43. Germany (GER) d
 - **44. Israel (ISR)** 45. Uzbekistan (UZB) °

b Data were collected only in Moscow (rounds 4 and 5, RUS–MS) and Yekaterinburg (round 5, RUS–YK). c Data collection, processing and/or analysis were disrupted by the COVID-19 pandemic and hence could not take place.

d Data were collected only in Bremen (GER-BR).

Countries printed in red participated in COSI for the first time. Only countries printed in bold collected data in the relevant COSI round. a Data collected in Norway are not included in the current fact sheet as they were not available at the time of writing. In Data were collected only in Messaw (sough 4 and 5 MIS) MS and Valettrahewere (sough 5 MIS) MS and Valettrahewere).





OVERWEIGHT and OBESITY among children aged 7-9 years

in the WHO European Region – latest available data from COSI 🚿

Since the first round of COSI data collection in 2007, 42 countries have gathered data at least once. When the latest available data from all countries are plotted (including data from previous rounds for countries that did not participate in the fifth round), the highest prevalence of both overweight (including obesity) and obesity was observed in Cyprus, Greece, Italy and Spain (Fig. 2). The prevalence of overweight and obesity for both genders was lowest in Tajikistan, Kyrgyzstan and Turkmenistan. Of 42 countries (43 study locations), there are only six where the proportion of children aged 7–9 years affected by overweight or obesity is less than one in five.

Fig. 2. Overweight and obesity prevalence estimates according to data from COSI round 3 (2012–2013), COSI round 4 (2015–2017) and COSI round 5 (2018–2020)





Overweight (including obesity) % 🚺 Obesity % 🔵



The graphs show the latest available data in each country, including data from previous COSI rounds for countries that did not participate in the fifth round. Data relate to: (i) 7-year-olds in Armenia, Belgium (only Flanders), Bulgaria, Czechia, Denmark, Estonia, Finland, Germany (State of Bremen only), Georgia, Greece, Hungary, Ireland, Israel, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Portugal, Republic of Moldova, Romania, Russian Federation (Moscow and Yekaterinburg), Serbia, Slovenia, Slovenia, Spain, Tajikistan, Türkiye and Turkmenistan; (ii) 8-year-olds in Albania, Austria, Croatia, France, Italy, Norway, Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus and Netherlands Prevalence was calculated based on WHO definitions. R3 - round 3; R4 - round 4; R5 - round 5. COSI FACT SHEET HIGHLIGHTS 2018-2020

% 50

40

30

20

10

0

43 42

39 39

35

CRO SMR MAT

ITA

GRE

OVERWEIGHT among children aged 7-9 years

in the WHO European Region – COSI round 5 (2018–2020) ≥

Overall, 29% of children aged 7–9 years in the participating countries were was observed in Cyprus, Greece, Spain and Italy. Prevalence was living with overweight (including obesity) according to WHO definitions lowest in Tajikistan, Denmark, Israel and Kazakhstan. These (Fig. 3). Prevalence was higher among boys (31%) than girls (28%) (Fig. 4). results appear in line with the north-south gradient previously

There continue to be large differences between countries, with country specific prevalence of overweight (including obesity) among children aged 7-9 years ranging from 6% in Tajikistan to 43% in Cyprus. Among boys, prevalence ranged from 7% to 48%; among girls, from 5% to 40%.

was observed in Cyprus, Greece, Spain and Italy. Prevalence was lowest in Tajikistan, Denmark, Israel and Kazakhstan. These results appear in line with the north-south gradient previously reported and analysis of data from the previous round of data collection which found that, on average, the children of Northern Europe were the tallest, those of Southern Europe had the highest weight and the children living in Central Asia had the lowest weight and were the shortest.

29

TJK Sosi

DEN

21 20

19 19

Highest prevalence of overweight among children (both genders combined)

SWE

SRB

POR

BUL

HUN FIN GEO

MKD

POL



33 33 32 32 31 31 31 31 30 30 28 28 27 27 26 26 26 25 25 25 24 24 23 23

ARM

ROM

EST GGR-BR AUT LTU LTU SVN SVN IRE LVA RUS-MS RUS-YK RUS-YK RUS-YK RUS-YK SCZH

SVK

Fig. 4. Prevalence of overweight (including obesity) in boys and girls aged 7–9 years (%), and difference between genders (boys minus girls, percentage points on horizontal axis); COSI round 5 (2018–2020)



Data relate to: (1) 7-year-olds in Armenia, Bulgaria, Czechia, Denmark, Estonia, Finland, German (State of Bremen only), Georgia, Greece, Hungary, Ireland, Israel, Kazakhstan, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Portugal, Romania, Russian Federation (Moscow and Yekaterinburg), Serbia, Slovakia, Slovenia, Spain and Tajikistari, (1) 8-year-olds in Austria, Croatia, Italy, Poland, San Marino and Swederi, and (11) 9-year-olds in Cyprus. Differences were calculated as estimates among bous minus estimates among airls. Prevalence was calculated based on WHO definitions.

COSI FACT SHEET HIGHLIGHTS 2018-2020

OBESITY among children aged 7-9 years

in the WHO European Region – COSI round 5 (2018–2020)

Overall, prevalence of obesity among children aged 7–9 years in the participating countries was 12% (Fig. 5). Prevalence among boys in this age group was 14%, compared to 10% among girls (Fig. 6). Country-specific prevalence of obesity among children ranged from 1% in Tajikistan to 19% in Cyprus.

Among boys, prevalence ranged from 2% to 24%; among girls, from 1% to 15%. The same north-south gradient emerged as the one observed for overweight. Prevalence of obesity was higher in boys than girls in all countries except in Lithuania, Portugal, Slovakia and Tajikistan, where levels were the same or similar in both genders.



Fig. 5. Prevalence of obesity in children aged 7-9 years (%); COSI round 5 (2018-2020)

Fig. 6. Prevalence of obesity in boys and girls aged 7–9 years (%), and difference between genders (boys minus girls, percentage points on horizontal axis); COSI round 5 (2018–2020)



Data relate to: (1) 7-year-olds in Armenia, Bulgaria, Czechia, Denmark, Estonia, Finland, German (State of Bremen only), Georgia, Greece, Hungary, Ireland, Israel, Kazakhstan, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Portugal, Romania, Russian Federation (Moscow and Yekaterinburg), Serbia, Slovenia, Spain and Tajikistan; (ii) 8-year-olds in Austria, Croatia, Italy, Poland, San Marino and Sweden; and (iii) 9-year-olds in Cyprus. Differences were calculated as estimates among bays minus estimates among girls. Prevalence was calculated based on WHO definitions.

COSI FACT SHEET HIGHLIGHTS 2018-2020

43%



in the WHO European Region – COSI round 5 (2018–2020)

Overall, 43% of children aged 6-9 years consumed fresh fruit daily in the 27 study locations providing data (Fig. 7). The proportion of children consuming fruit daily was highest in Portugal. Ireland and Denmark (around 60%), and lowest in Georgia and Latvia (around 25%).

Only 34% of children ate vegetables daily (Fig. 8). The percentage of children eating vegetables every day varied widely between countries, ranging from 57% to only 13%.

Fig. 9 shows that 22% of children aged 6-9 years consumed soft drinks on more than 3 days per week. There was a wide variation between countries, from 2% in Greece to 41% in Czechia.

Overall, 75% of children ate breakfast every day (Fig. 10). Levels of daily breakfast consumption ranged from 94% in Portugal and Denmark to only 44% in Armenia and 49% in Greece.



%

%

%

Fig. 11. Travelled to and



PHYSICAL ACTIVITY and SCREEN TIME of children aged 6-9 years

in the WHO European Region – COSI round 5 (2018–2020)

Only 41% of children aged 6-9 years travelled to and from school actively (on foot, by bike, by nonmotorized scooter or on skates) in the 28 study locations that provided data (Fig. 11). The percentage ranged from 6% in San Marino to 98% in Tajikistan.

Overall, 53% of children spent at least 2 hours per week doing sports or dancing in the 27 study locations providing data (Fig. 12). Countryspecific values ranged from 27% to 86%. Fig. 13 shows that 87% of children aged 6-9 years in the 27 study locations providing data spent at least 1 hour a day in active or vigorous play. There was considerable variation between countries, from 65% to 96%. In all but three countries, the percentage was 75% or more.

Overall, 43% of children spent at least 2 hours a day watching TV or using electronic devices (Fig. 14). There was a wide variation between countries, ranging from 18% to 74%.



Fig. 12. Spent at least 2 hours/week doing sports or dancing (%)





%

Fig. 13. Spent at least 1 hour/day in active or vigorous play (%)





Fig. 14. Spent at least 2 hours/day watching TV or using electronic devices (%)





0 20 40 60 80 100

35

35

33

29

26 25

19

16

6

MNF

SVK

LVA

LTU

IRE

ITΔ

ΜΔΤ

POR

SMR



Conclusions and next steps

Ending childhood obesity will require a comprehensive approach that includes the promotion of healthy diets and plentiful physical activity in both early childhood and among school aged children, as well as preconception and pregnancy care, and weight management programmes where needed.

The WHO European Office for Prevention and Control of Noncommunicable Diseases is committed to supporting countries to take comprehensive, integrated, multi sectoral action to halt the rise of childhood obesity in the WHO European Region.

Data from the COSI project play a key role in helping to define the problem of obesity, informing action, drawing comparisons between countries and tracking progress over time.

World Health Organization Regional Office for Europe UN City, Marmorvej 51, DK-2100, Copenhagen Ø, Denmark Tel.: +45 45 33 70 00 Fax: +45 45 33 70 01 Email: eurocontact@who.int Website: www.who.int/europe

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.