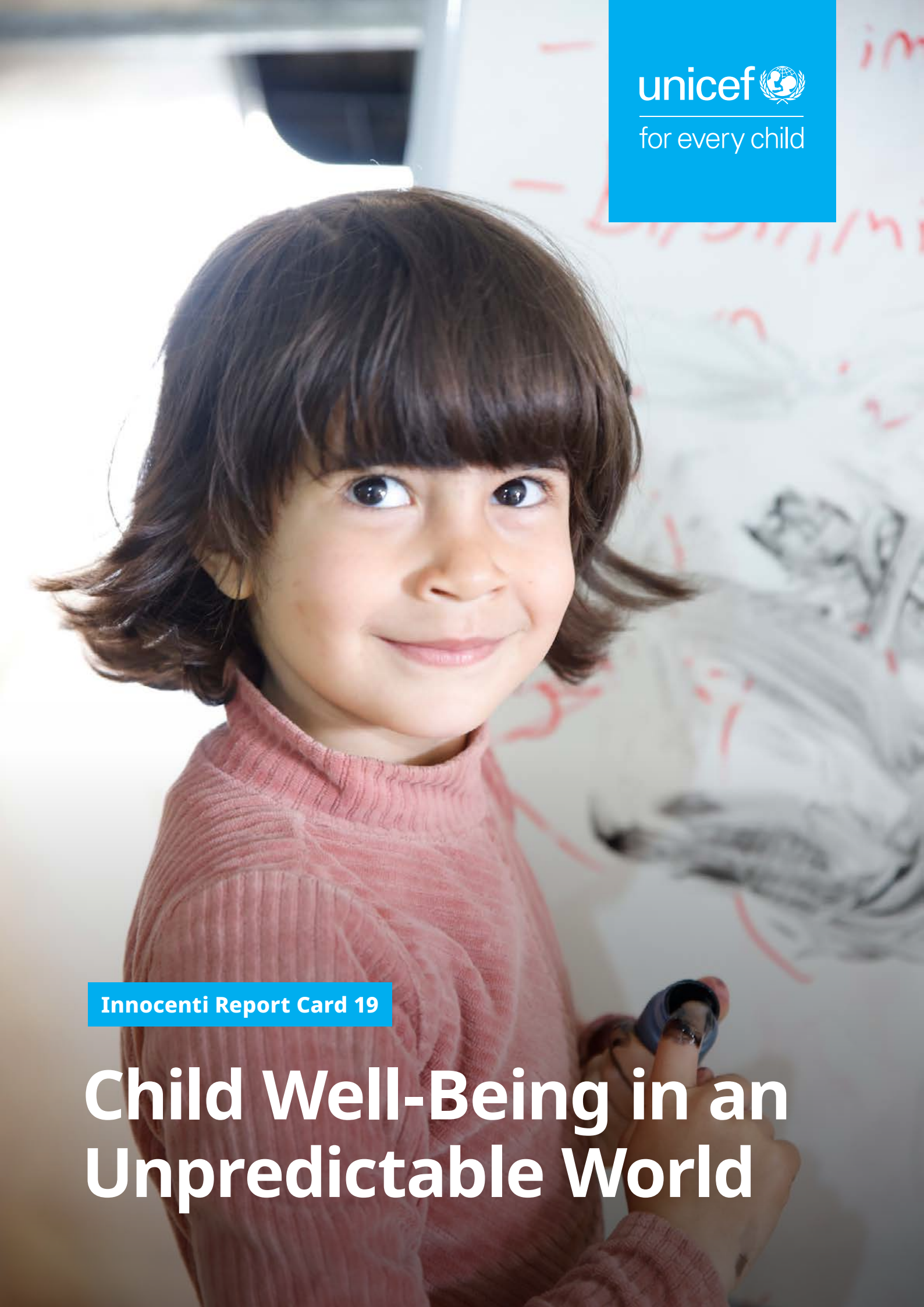

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Innocenti Report Card 19

Child Well-Being in an Unpredictable World

Contents

Introduction

"... with the war, the epidemic, and the weather, times are altogether troublesome."

This quote is not from our era, but from a letter written by a 15-year-old using the name Christabel to a newspaper in New Zealand in 1919, shortly after the end of the First World War and in the midst of a deadly influenza epidemic.[1] It is a reminder of the enduring nature of the challenges that humans face, of the way that global events can affect childhoods, and of children's engagement in public debate.

Christabel would probably agree that children of the 2020s are also growing up in "troublesome" times. Long-standing problems like conflict and pandemics are now merging with new threats posed by rapid climate change.

The world's wealthiest countries are not immune to these challenges. When the COVID-19 pandemic was declared in March 2020, Italy was one of the first epicentres. Subsequently, hundreds of millions of people across the globe were confined to their homes, and schools were often closed for long periods.

Armed conflict continues to directly and indirectly affect children worldwide. Many countries – poor and rich – have received influxes of children and families fleeing conflict.

And while climate events disproportionately affect poor countries, the growing environmental crisis does not respect borders. In 2022, more than a quarter of a million children in high-income countries were displaced within their country because of natural disasters such as floods and wildfires,[2] while periods of extreme heat affected many more children.[3]

Along with these 'three Cs' – COVID, conflict and climate – childhoods are being transformed by the 'two Ds' – digital technology and demographic change. This raises essential questions about children's well-being:

- How have children fared in the face of this rapidly changing and often unpredictable global environment?
- What are the key factors affecting children's lives?
- What can be done to promote child well-being?

This report, the 19th in the Innocenti Report Card series, aims to answer these questions in the context of the 43 countries that are members of the European Union (EU) and/or the Organisation for Economic Co-operation and Development (OECD). This category includes all members of the Group of Seven (G7) as well as many other high-income countries.

Innocenti Report Card 19:

- analyses recent trends in child well-being over a five-year period relating to the same six key indicators that were at the core of Innocenti Report Card 16, published in 2020: life satisfaction, adolescent suicide, child mortality, overweight, academic proficiency and social skills.
- seeks to understand the reasons for these trends and how they can inform actions to improve child well-being.

It also presents a long-term perspective, looking at trends in key indicators of child well-being since 2000, when the first Innocenti Report Card was published.

The last five years have shown warning signs in deteriorating life satisfaction and falling academic skills in most countries.

The report presents a mixed picture. Over the past 25 years, there have been notable improvements in child well-being in the group of countries examined in this report: steady decline in child mortality, overall reduction in adolescent suicide and increase in school completion rates.

But the last five years have shown warning signs in deteriorating life satisfaction and falling academic skills in most countries. Obesity rates are also rising. This combination of trends presents a major challenge to OECD/EU countries in providing children with the conditions for a good childhood and a positive future. The report shows that the hard-won progress in child well-being in this group of countries is becoming increasingly vulnerable to global events and shocks.

Where do rich countries stand in children's well-being?

Each edition of the Innocenti Report Card series begins with a league table that ranks countries on how they are doing on key aspects of child well-being. The ranking makes use of the best available comparable data. It is based on the criteria of quality, relevance, coverage, recency, comparability and variability.

The league table for this report uses six key indicators (*see Box 1*), based on the above criteria. This set of indicators was introduced in Innocenti Report Card 16 with the aim of creating, within the limitations of data availability, a balanced picture of child well-being across three dimensions: children and adolescents' mental well-being, physical health and skills.

BOX 1

Measuring child well-being

The league table summarizes how children are doing in terms of mental health, physical health and skills, using two indicators for each dimension.

Dimension	Components	Indicators	Source
Mental well-being	Life satisfaction	% of children with high life satisfaction at age 15	OECD, PISA 2022
	Adolescent suicide	Suicide rate, age 15 to 19 years	WHO Mortality Database
Physical health	Child mortality	Child mortality rate, age 5 to 14 years	UN IGME project
	Overweight	% overweight, age 5 to 19 years	NCD-RisC data, WHO/ Lancet 2024
Skills	Academic proficiency	% proficient in reading and mathematics at age 15	OECD, PISA 2022
	Social skills	% who make friends easily at school at age 15	OECD, PISA 2022

In 2020, these indicators were selected for Innocenti Report Card 16 as they were the best available based on the outlined criteria. Broadly, this remains the case and updating these indicators provides the opportunity to study trends over time. Additional relevant indicators are discussed in later sections of this report, and the strengths and weaknesses of current data are discussed in an accompanying working paper.[4]

Table 1 presents a league table ranking countries on these six indicators.

- Column 1 shows the overall ranking, from highest to lowest.
- Columns 3 to 5 show the ranking for the three dimensions listed in Table 1.
- The top third of countries overall, and in each dimension, are in the lightest colour, and the bottom third are in the darkest.

The ranking is created using a widely applied statistical method, which balances equally the influence of each indicator and dimension (*see Appendix*).

Countries are given an overall ranking only if data were available for all six of the indicators listed in Table 1. Some countries are also given a ranking for the dimensions where both indicators under the respective dimension were available.

The table presents contrasting patterns:

- The three top-ranked countries – the Kingdom of the Netherlands, Denmark and France – are also in the top third on all three dimensions of child well-being.
- On the other hand, all of the bottom eight countries rank in the bottom third on at least two of the three dimensions.
- Some countries – Bulgaria, Croatia, Hungary, Romania and Slovakia – rank high for mental health, but rank in the lowest third for physical health.
- Japan, the Republic of Korea and Slovenia are in the top third rank for skills, but in the bottom third rank for mental health.
- Czechia and Iceland rank high for physical health, but rank low for both mental health and skills.

The table therefore presents a mixed pattern of relative strengths and weaknesses. There is room for improvement in all countries, even those at the top of the rankings.

Table 1: A league table of child well-being

Rank	Country	Mental health	Physical health	Skills
1	Netherlands	1	4	11
2	Denmark	3	3	8
3	France	11	2	9
4	Portugal	2	10	22
5	Ireland	24	11	1
6	Switzerland	13	7	6
7	Spain	4	25	16
8	Croatia	9	31	3
9	Italy	8	16	23
10	Sweden	14	13	14
11	Hungary	6	30	13
12	Austria	16	20	7
13	Slovenia	28	18	2
14	Japan	32	1	12
15	Lithuania	20	17	17
16	Romania	5	32	26
17	Finland	21	23	18
18	Czechia	25	5	31
19	Canada	23	24	21
20	Slovakia	12	29	27
21	United Kingdom	27	22	15
22	Iceland	26	6	28
23	Latvia	22	15	32
24	Greece	7	27	35
25	Germany	18	14	34
26	Malta	15	21	36
27	Republic of Korea	34	28	4
28	Bulgaria	10	34	33
29	Poland	30	19	30
30	Estonia	33	26	24
31	Costa Rica	17	36	39
32	New Zealand	36	35	25
33	Colombia	29	39	38
34	Mexico	19	41	41
35	Türkiye	35	37	37
36	Chile	31	40	40
	Australia	n/a	33	20
	Belgium	n/a	8	5
	Israel	n/a	12	19
	Norway	n/a	9	10
	United States	n/a	38	29

Source: See Appendix for full details.
Note: Due to lack of availability of data, it was not possible to include two countries in the League Table – Cyprus and Luxembourg. These countries are included in other parts of the report where data are available. Separately, it was not possible to fully rank Australia, Belgium, Israel, Norway and United States because of missing data on the life satisfaction component.

An overview of recent trends

A key focus of this report is to analyse the extent to which child well-being has changed in recent years. In the five years since Innocenti Report Card 16 was published, children have lived through a global pandemic and faced challenges presented by conflict, climate change, digital technology and demographic shifts.

Table 2 presents a summary of recent changes in each of the six child well-being indicators in the league table. In most cases, it covers the period from 2018 to 2022.

- Blue cells indicate countries where the indicator improved by more than 5 per cent between 2018 and 2022.
- Orange cells show countries where the indicator deteriorated by more than 5 per cent.
- Gray cells show relative stability – changes within minus 5 per cent to plus 5 per cent.
- White cells indicate missing data.

Some of the key patterns illustrated in the table are:

- Child mortality has decreased in most countries reflecting a longer term trend in high-income countries.
- Children's social skills are mostly relatively stable or increasing.
- In recent years, there is no clear trend in adolescent suicide rates. There is a mix of increases, stability and decreases across different countries.
- The remaining three indicators – life satisfaction, overweight and academic skills – show stagnation or a deteriorating trend in many countries and an improvement in only a few. As will be seen later these negative trends are considerable in many countries.

The following chapters in the report explore these trends in more detail. They focus on areas where the most substantial changes in children's well-being have been identified: falling life satisfaction, rising obesity and declining academic skills amongst children of this generation. The analysis explores the potential reasons for these trends in order to inform policy and practice that promote child well-being.

Table 2: Changes in six indicators of child well-being, 2018 to 2022

Country	Life satisfaction	Suicide	Mortality	Overweight	Academic	Social
Australia						
Austria						
Belgium						
Bulgaria						
Canada						
Chile						
Colombia						
Costa Rica						
Croatia						
Cyprus						
Czechia						
Denmark						
Estonia						
Finland						
France						
Germany						
Greece						
Hungary						
Iceland						
Ireland						
Israel						
Italy						
Japan						
Latvia						
Lithuania						
Luxembourg						
Malta						
Mexico						
Netherlands						
New Zealand						
Norway						
Poland						
Portugal						
Republic of Korea (the)						
Romania						
Slovakia						
Slovenia						
Spain						
Sweden						
Switzerland						
Türkiye						
United Kingdom						
United States						

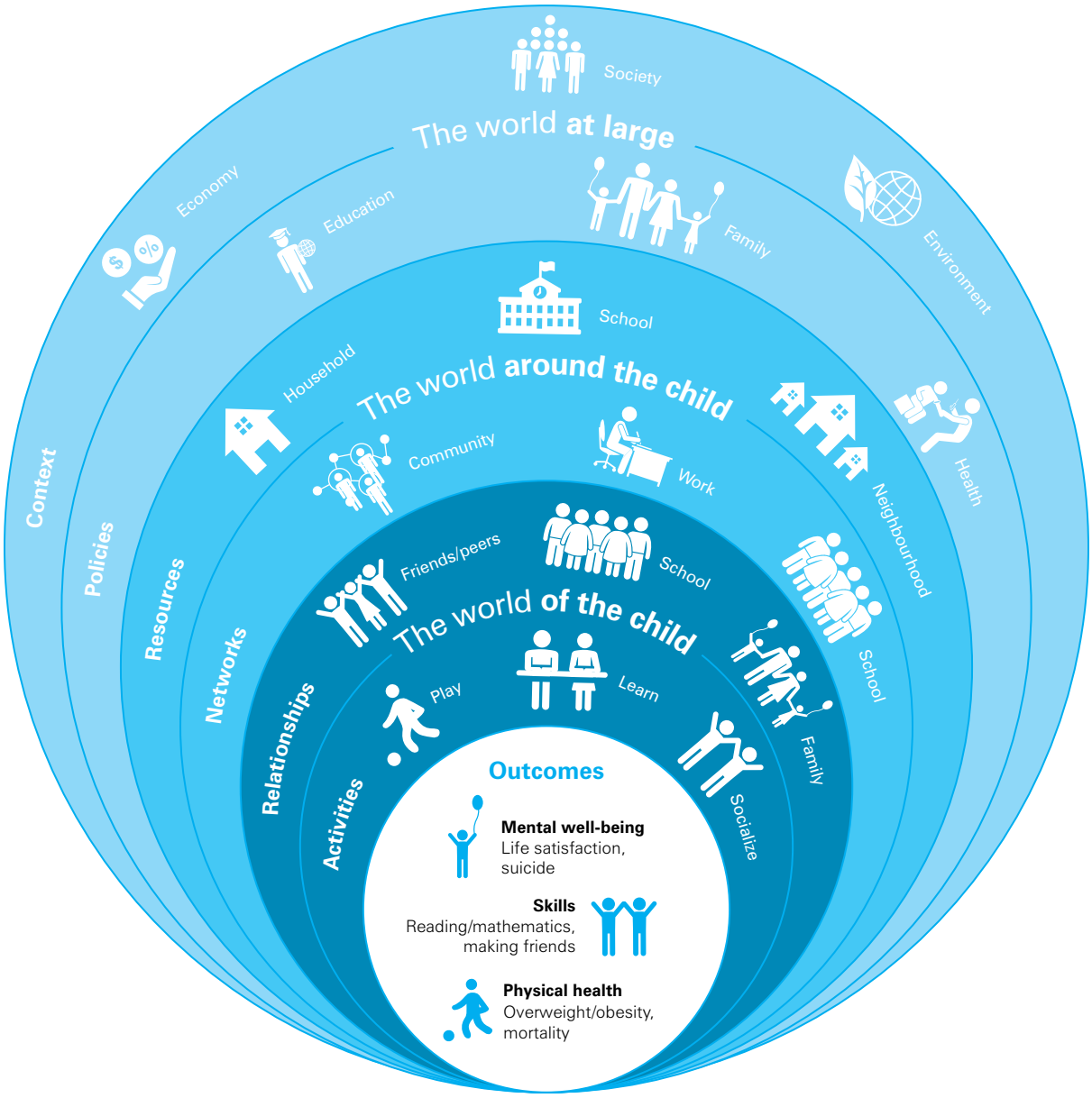
Improving	1	18	33	2	4	7
Stable	17	7	9	27	13	32
Deteriorating	14	17	1	14	21	1
No data	11	1	0	0	5	3

A framework for child well-being

In exploring the above trends, the report will use the framework for child well-being presented in Innocenti Report Card 16, which is based on ecological theories of child development (Figure 1).[5] In the model, children are viewed as being at the centre of a network of systems:

- The immediate world around children that consists of daily activities and close relationships.
- The world around children, including schools and communities.
- The world at large, including government policies and the social, economic, technological and environmental context.

Figure 1: Framework of child well-being



The framework separates cause (the spheres of influence around the children) from effect (the well-being outcomes) and clarifies the roles of different key stakeholders – from parents to governments – in promoting children's well-being. The model is not one-directional but interactive. It recognizes also that children influence and contribute to families, communities and societies.

The framework provides a link between child rights that are connected to the conditions for childhood in each of the systems and child outcomes, which are aspects evaluated at the level of the individual child.

The three outcome dimensions of mental health, physical health and skills are independently important, but they are also inter-related. This issue is discussed in the concluding section of the report.

Growing up in an unsettled world

Today's children are growing up in a world that is complex and fast-changing. The combination of challenges presented by climate change, ongoing conflicts, digital transformation and demographic transitions has been termed a polycrisis.[6] The world is also still recovering from the shock of COVID-19, the first global pandemic in a century. This set of circumstances provides an important context for the trends discussed in this report.

Today's children are growing up in a world that is complex and fast-changing.

The **COVID-19 pandemic** marks a significant turning point between Innocenti Report Card 16, which analysed child well-being in OECD/EU countries up to around 2018, and this report, which updates the picture to around 2022–2023 when the pandemic was nearing its end.[7] Children were the age group that was least seriously physically affected by the virus; they made up 0.4 per cent of the global deaths for all ages.[8] However, COVID-19 related restrictions had a profound impact on children's lives. In addition to lockdowns, schools were closed for long periods in most countries, included in this report (*see Table 3*), causing major disruption to children's learning experiences and social lives. In 2025, the memory of the COVID-19 pandemic is fading and policy and media attention has shifted to current pressing concerns. Yet, as this report highlights, the pandemic had major impacts on children's well-being that continue to reverberate. History suggests that societal recovery from such shocks is slow.[9]

Table 3: Weeks of full and partial school closures due to COVID-19 pandemic, up to March 2022

Length of closure	Country (weeks)
Up to 3 months	Iceland (6), Switzerland (6), Croatia (10), Japan (11), France (12)
Between 3 and 6 months	Luxembourg (15), Spain (15), Malta (21), Portugal (24), Sweden (24), Estonia (26), Ireland (26)
Between 6 and 9 months	New Zealand (27), United Kingdom (27), Cyprus (28), Belgium (29), Norway (29), Kingdom of the Netherlands (31), Finland (33), Israel (33), Denmark (35), Romania (36), Greece (37), Germany (38), Italy (38), Lithuania (38), Slovakia (38), Austria (39), Hungary (39)
Between 9 and 12 months	Poland (44), Australia (46), Czechia (46), Slovenia (47), Bulgaria (48), Latvia (49), Türkiye (49), Canada (52)
More than 12 months	Chile (69), Colombia (77), United States (77), Republic of Korea (79), Mexico (81), Costa Rica (82)

Source: United Nations Educational, Scientific and Cultural Organization, 'Dashboards on the global monitoring of school closures caused by the COVID-19 pandemic', <https://covid19.uis.unesco.org/global-monitoring-school-closures-covid19>, accessed 25 November 2024.

Armed conflicts have had direct and indirect repercussions, stretching across all Innocenti Report Card countries. At the end of 2023, it was estimated that there were 19 million refugee children and asylum seekers globally, many fleeing conflicts.[10] Three Innocenti Report Card countries are among the 10 countries that host the most international refugees – Türkiye (3.3 million people, 48 per cent of whom are children), Colombia (2.9 million, 27 per cent are children) and Germany (2.6 million people, 31 per cent are children). Many other Innocenti Report Card countries host substantial numbers of child refugees. These children have specific needs based on their experiences in their country of origin, while travelling, and in settling in to the host country. More broadly, news about armed conflicts can create worry and anxiety, even among very young children.[11]

Extreme weather events linked to **climate change**, including storms, floods, droughts and wildfires, are becoming increasingly common. The harshest effects of these events are experienced in the world's poorest countries. However, across the 43 countries covered in this report, it is estimated that more than 250,000 children were displaced from their homes during 2022 due to natural disasters that were primarily climate events.[12] In addition, rising temperatures and heatwaves affect many children. It is estimated that almost half of schools in cities in the EU are in 'heat island' areas,[13] which have elevated temperatures putting children's well-being at risk, while around one in ten schools are located in flood-prone areas.

In fact, it is estimated that, in 2024, over 25 million school children in 17 Innocenti Report Card countries experienced disruptions to learning due to climate-related disruptions (Table 4). As with conflicts, worries about climate change affect many more children.[14]

Table 4: Number of students affected by climate-related school disruptions by country and major climate hazard, 2024

Country	Number affected	Hazard causing the greatest disruption
Mexico	13,100,000	Heatwave
Colombia	4,298,929	Drought
Chile	2,738,467	Storm
Costa Rica	1,124,379	Storm
Japan	1,007,142	Tropical cyclone
Italy	916,325	Flood, storm
Romania	703,765	Storm
Croatia	452,318	Heatwave
Czechia	305,936	Flood
Austria	258,981	Flood
France	217,346	Flood
Poland	144,700	Storm, flood
Greece	88,287	Heatwave
Germany	17,756	Flood
Portugal	16,093	Wildfire
Spain	13,000	Flood
New Zealand	5,117	Storm

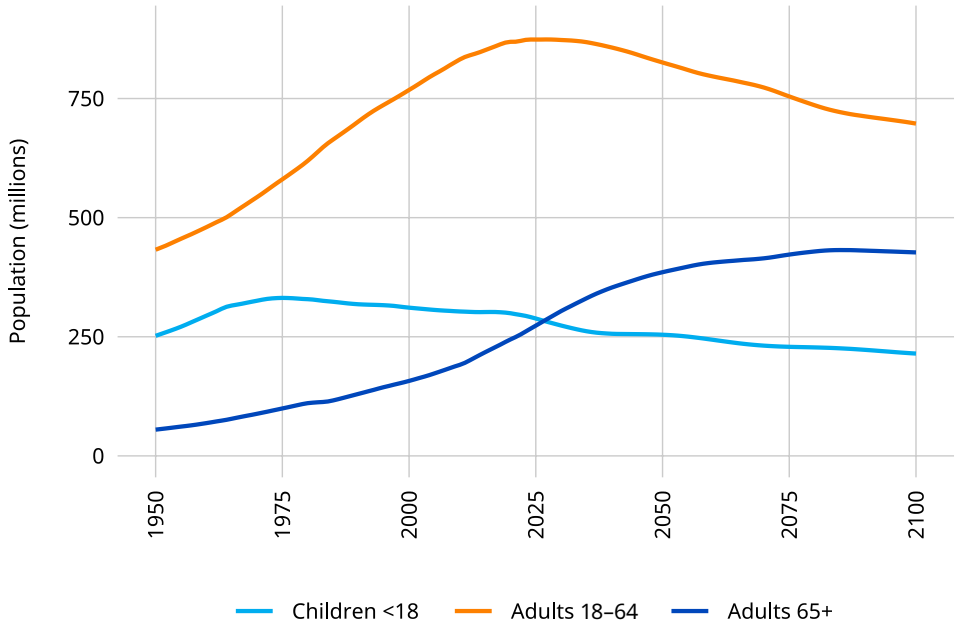
Source: United Nations Children's Fund. (2025). *Learning interrupted: Global snapshot of climate-related school disruptions in 2024*. UNICEF. <www.unicef.org/reports/learning-interrupted-global-snapshot-2024>

Digital technology continues to reshape children's lives bringing both new opportunities and new risks. The Innocenti Report Card countries are among the most digitally connected in the world. In 2022, connectivity rates were over 99 per cent in 37 out of 40 countries for which data were available (the exceptions being Colombia, Mexico and Türkiye).[15] New technologies bring many benefits, including for education as well as for children's freedom of association and access to information (rights under Articles 15 and 17 of the United Nations Convention on the Rights of the Child). On the other hand, there is much debate about the potential negative impacts of smartphone use by children and, in particular, social media. The latest evidence on this

topic, including new analysis, is reviewed in this report. There are also many emerging opportunities and risks of artificial intelligence,[16] although at this stage comparative international data on this issue is not yet available.

Finally, although less frequently discussed, ongoing **demographic change** in Innocenti Report Card countries is profoundly changing the nature of childhoods. As with digital technology, this trend may have both positive and negative repercussions. There is, for example, the potential of a demographic dividend in countries with increasing proportions of young adults.[17] On the other hand, in most countries covered in this report, falling fertility rates (now below the replacement rate of 2.1 in all but one of these countries), along with increasing life expectancy, mean that children are a shrinking minority of the population. These patterns are predicted to continue, and in a few years time, across this group of countries, there will be more people over the age of 65 than under the age of 18 (*see Figure 2*).

Figure 2: Demographic trends in OECD/EU countries



Source: United Nations Department of Economic and Social Affairs, Population Division. See Appendix for further details.

There are two other important ongoing demographic shifts: First, increasing urbanization is changing the nature of childhood both in urban and rural areas. In the latter, depopulation can have a dramatic effect on children's lives.[18]

Second, household composition is also changing. In the EU, between 2013 and 2023, the number of households with children fell by 1.8 million, while the number of households without children grew by 14.9 million.[19]

Other factors including globalization, economic uncertainties and increases in the cost of living, changing food systems and increases in environmental pollutants also affect child well-being.

The connection between trends in child well-being and the factors discussed above are considered throughout this report. The only exception is the impact from increases in the cost of living, which primarily occurred after the latest available child well-being data presented here.

The report also reviews data on inequalities in child well-being according to gender and family socioeconomic status. Due to the lack of consistent comparable international data, it is not possible to cover other aspects of inequality in this report. Instead, Innocenti Report Card 20, the next in the series, will take a different approach and focus in depth on inequalities in child well-being.

Trends in mental health

What does it mean to be mentally well?

The World Health Organization (WHO) states that "mental health is more than the absence of mental disorders".[20] Mental health also includes elements of happiness, life satisfaction and a sense of flourishing. Based on this broad definition, this chapter reviews trends in two key mental health indicators that are widely available across Innocenti Report Card countries – rates of adolescent suicide and life satisfaction.

But two indicators alone cannot represent the range of aspects of mental health. It is estimated that around one in six children aged 10–19 years in these countries lives with a diagnosable mental health condition.[21] Around half of adult mental health conditions begin during childhood,[22] and this can have far-reaching consequences for quality of life in adulthood, including mental health, relationships, education and employment.[23]

Moreover, many more adolescents around the world may report symptoms of psychosocial distress. While the symptoms alone may not meet the epidemiological levels to be considered a mental health condition, they continue to disrupt adolescents' ability to learn, form meaningful relationships, and experience good health and well-being.

The phrase, mental health crisis, is common in public debate in relation to children and adolescents. Evidence,[24] however, points to a long-term deterioration in adolescent mental health rather than a sudden crisis. Long-term studies in Norway[25] and the United States of America[26] indicate that adolescent mental health was already in decline in the early 1990s. In Norway between 1992 and 2019, there was an average 17 per cent increase in mental health symptoms among girls and 5 per cent among boys.

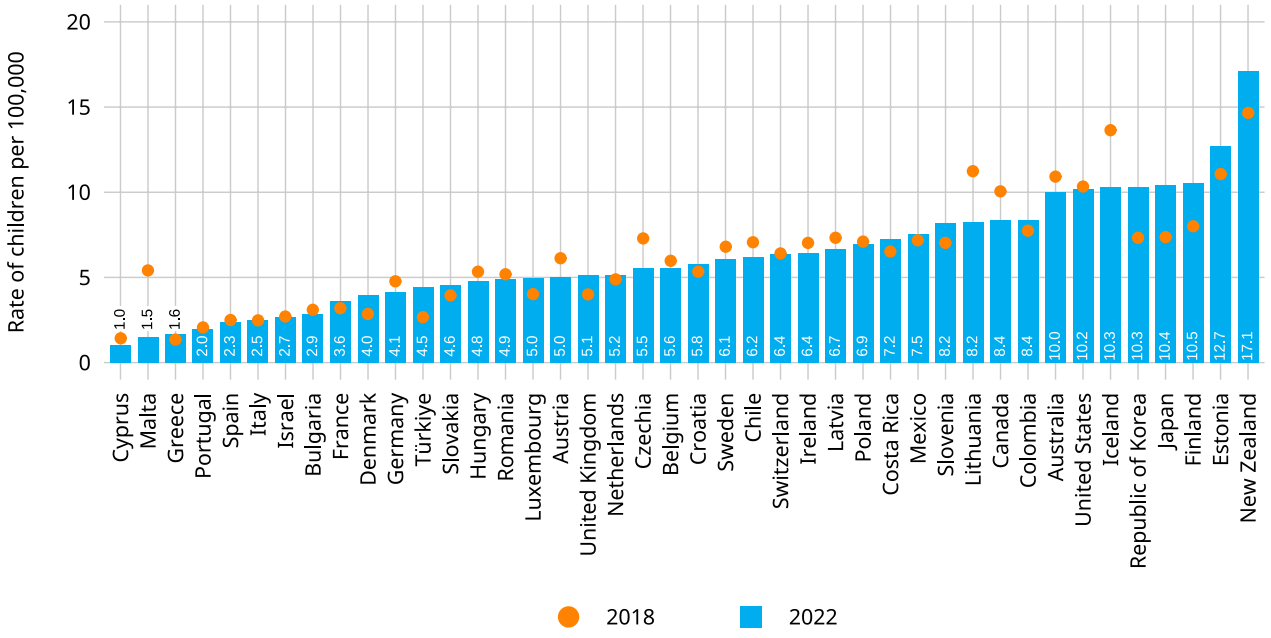
Within this long-term picture, children today undoubtedly face many challenges, old and new, that can affect their mental health. These challenges, including the ongoing impact of the COVID-19 pandemic, uncertainties of climate change and conflict, and the growing use of digital technology, are reviewed in the next sections.

While no two indicators can fully cover the complexity of the mental health issue, the league table offers a comparative perspective on both short- and long-term trends (*see Table 1*).

Adolescent suicide

Suicide is the fourth most common cause of death among adolescents aged 15–19 years.[27] Figure 3 shows adolescent suicide rates in around 2018 and 2022 for Innocenti Report Card countries. Rates fell in 18 countries; they were roughly stable in 7 countries; and they increased in 17 countries (*see Table 2*). The largest increases were in Japan, the Republic of Korea and Türkiye. While there were substantial decreases in Cyprus, Czechia, Iceland, Lithuania and Malta, the small populations in Iceland and Malta mean that rates may be unstable. Additionally it should be noted that, while suicide rates are a practical available comparative indicator, the nature and quality of suicide data can vary.[28]

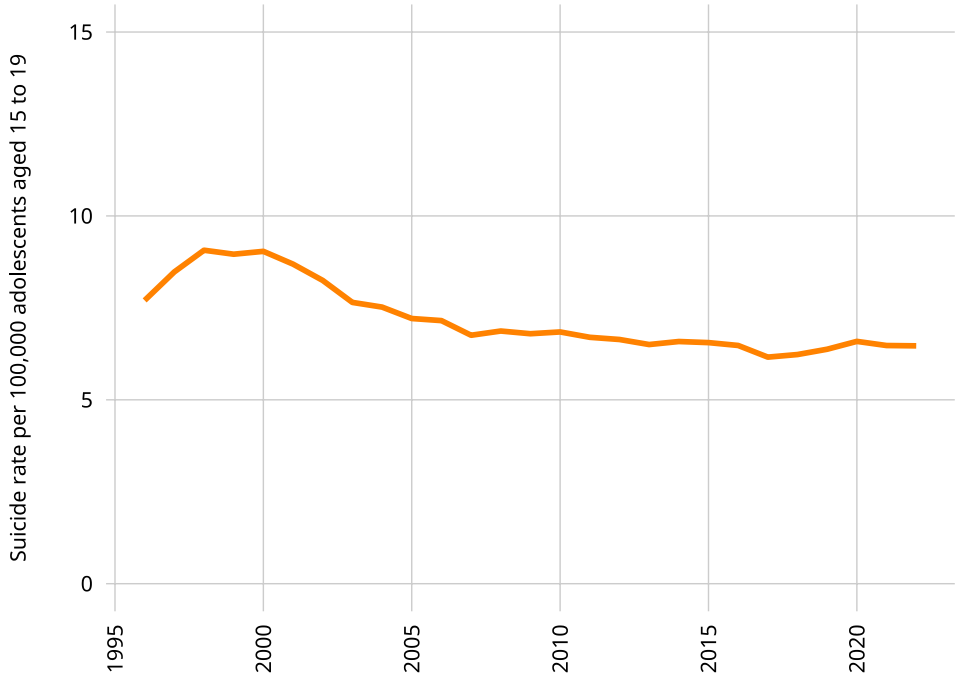
Figure 3: Changes in suicide rates (three-year average), ages 15 to 19 years, 2018 to 2022, OECD/EU countries



Source: WHO Mortality Database. See Appendix for full details.

Taking a longer-term view, there has been notable progress in reducing adolescent suicide rates in this group of countries, from a peak of around 9.3 deaths per 100,000 adolescents in 1996 to around 6.5 deaths per 100,000 adolescents in 2007. Since that year, progress has stalled. The most recent available rate for 2022 was the same (6.5 deaths per 100,000 adolescents) as it was 15 years ago (*see Figure 4*).

Figure 4: Long-term trends in suicide rates, ages 15 to 19 years, 1996 to 2022



Source: WHO Mortality Database. See Appendix for full details.

Suicide rates in this age group are substantially higher among males than females, although this gap appears to be narrowing.[29]

Adolescent life satisfaction

Life satisfaction is an overall evaluation of one's life. The second mental health indicator captures the life satisfaction of adolescents, which shows a significant change in recent years.

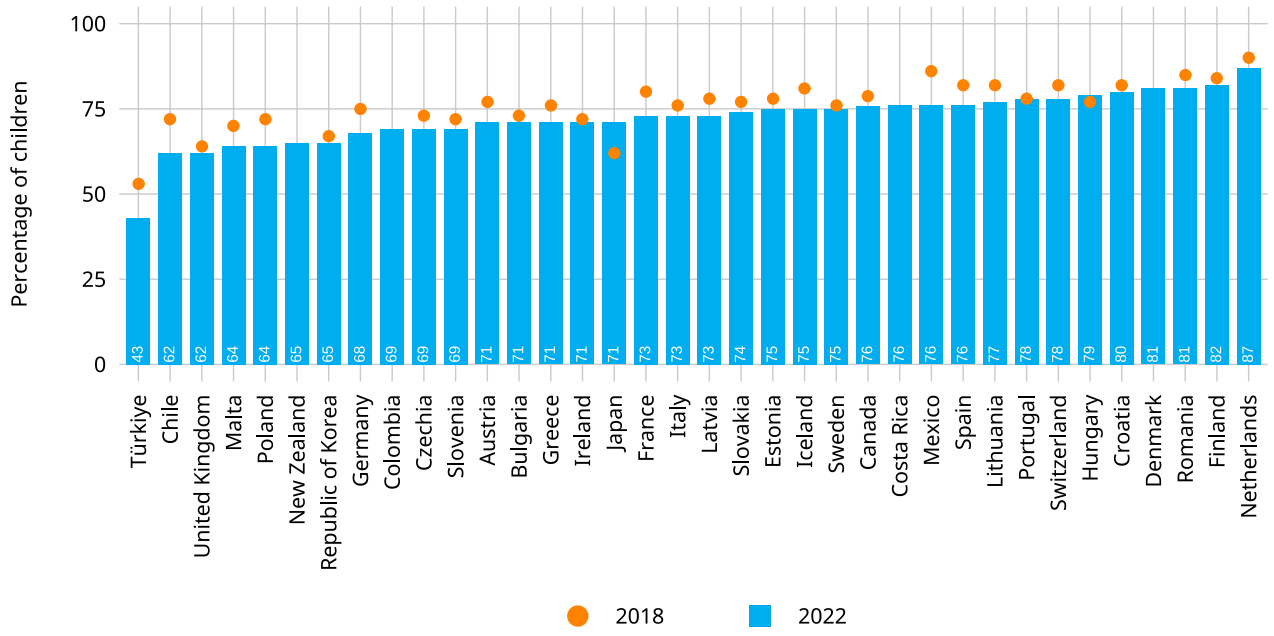
Typically, in surveys of adults and children, most people rate their life satisfaction positively.[30] The Programme for International Student Assessment (PISA) 2022 survey asked children to rate their life satisfaction on

a scale from zero ('not at all satisfied') to ten ('completely satisfied'). Figure 5 shows the proportion of 15-year-olds who scored above 5 out of 10 for this question, and thus feel relatively positive about life.

The most striking thing is that, in the large majority of countries, the proportion of children with high life satisfaction fell between 2018 and 2022.

- In four countries – Chile, Mexico, Poland and Türkiye – the decline in the proportion of children with high life satisfaction was greater than 10 percentage points.
- Japan was the only country where children's life satisfaction increased substantially between 2018 and 2022.
- While both girls and boys experienced a drop in their life satisfaction, the magnitude of this decrease was, in nearly all countries, larger among girls.

Figure 5: Changes in high life satisfaction in 15-year-olds, 2018 to 2022



Source: PISA 2022. See Appendix for full details.

In addition to the statistics in Figure 5, similar data for 15-year-olds in two regions in Belgium are also available from the 2022 Health Behaviour in School-aged Children study. The percentages of children with high life satisfaction were 77 per cent in the French community and 90 per cent in the Flemish community.

The most striking thing is that, in the large majority of countries, the proportion of children with high life satisfaction fell between 2018 and 2022.

What factors affect adolescent life satisfaction?

Why do some people feel more or less satisfied with their lives than others? Much research has been devoted to this topic and has demonstrated that contextual factors in people's lives play a very important role. As illustrated in the Framework of child well-being (*see Figure 1*), these contextual factors include:

- **Activities:** How children spend their time and what they do can make a difference to their life satisfaction. For example, physical activity[31] and mindfulness[32] have been linked with higher life satisfaction, while academic pressure can reduce it.[33] As discussed later in the report, there is mixed evidence on the link between social media use and adolescent life satisfaction. The amount and quality of sleep has also been linked to child and adolescent mental health.[34]

- **Relationships:** This is a fundamentally important aspect of children's subjective well-being.[35] The quality of relationships with family and friends,[36] and experiences of bullying,[37] violence and discrimination, tend to be powerful predictors of life satisfaction.

- **Networks:** The broader community context, for example whether schools[38] and neighbourhoods[39] are safe and friendly, can also affect children's sense of life satisfaction.

- **Resources:** The availability of personal, family and community resources is also important. In high-income countries, individual deprivations experienced by children may be a stronger predictor of their life satisfaction than family economic factors.[40]

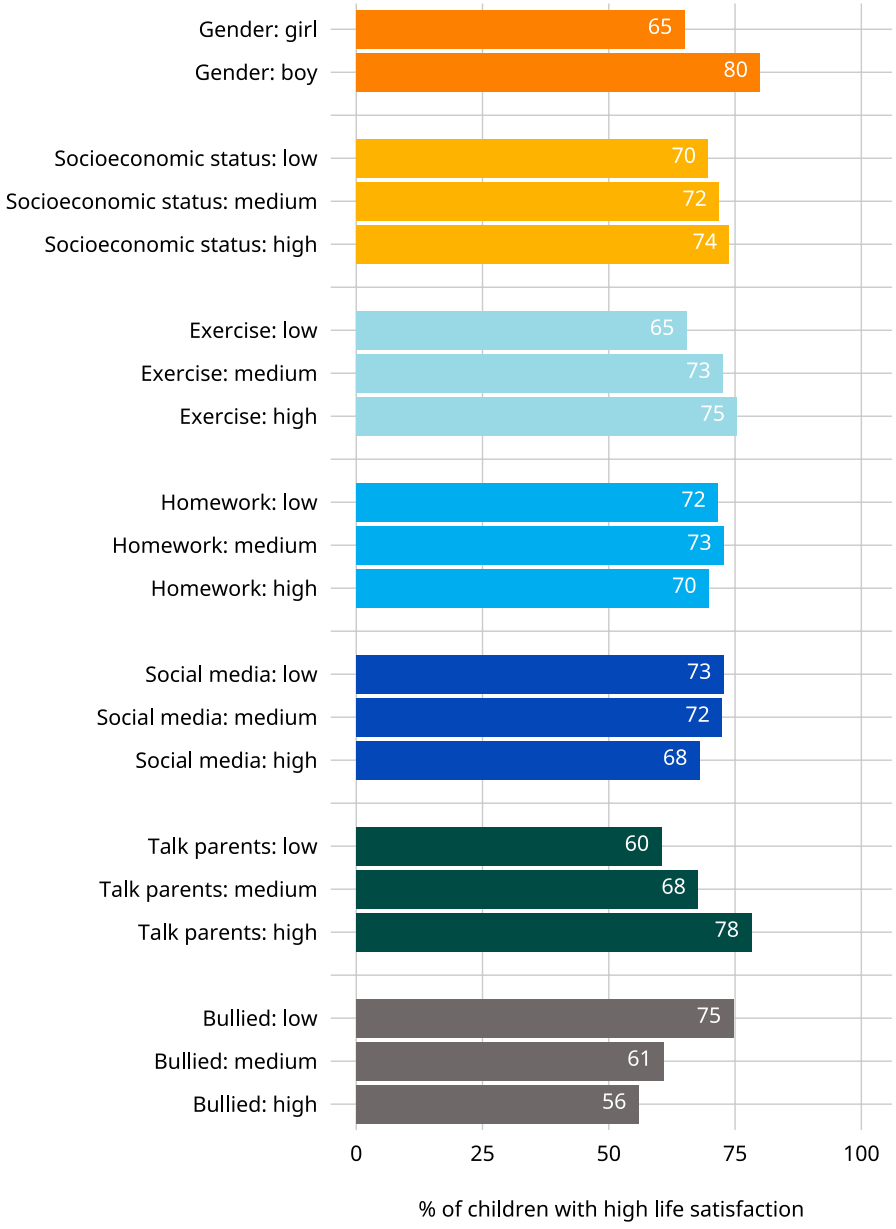
Figure 6 presents a new analysis conducted for this report on the relative importance of a range of these factors for adolescent life satisfaction,[41] using data from the PISA 2022 survey. The key patterns are as follows:

- Girls are much less likely to have high life satisfaction than boys.
- The influence of family socioeconomic status on life satisfaction is relatively weak.
- Exercising regularly is linked with higher life satisfaction.
- There is no clear link between hours spent on homework and life satisfaction.
- High-intensity social media use is linked with lower life satisfaction.

- Frequency of talking with parents is strongly positively associated with life satisfaction.
- Frequency of being bullied has a strong negative association with life satisfaction.

It is also possible to see that gender and factors related to family and peer relationships are associated with the strongest variations in life satisfaction.

Figure 6: Association of different factors with children's life satisfaction, 15-year-olds, 2022



Source: PISA 2022. The above are marginal effects from a regression model. See Appendix for further details.

Why is adolescent life satisfaction decreasing?

The evidence in Figure 6 also provides a starting point for considering a range of reasons why adolescent life satisfaction is declining. The decline may be attributable to changes in some or all of these underlying factors, many of which link to the global issues discussed in the introduction. The next sections consider some of these factors in more detail, although unfortunately, in most cases, data are not available to undertake an analysis over time.

Social media use and children's life satisfaction

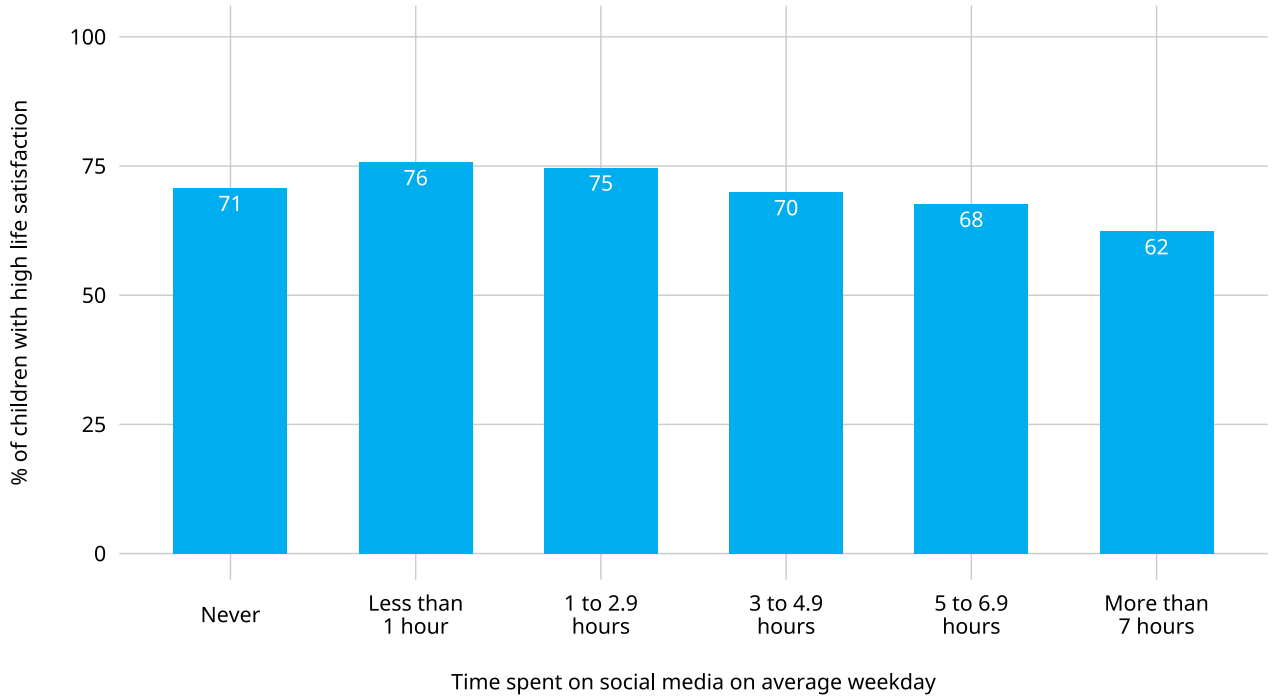
Public debate on the effect of social media use on children's mental health is intense. Some researchers point to sizeable negative impacts.[42] Other reviews of research indicate a weaker and more nuanced picture.[43] Researchers' conclusions also differ based on the aspect of social media use that is being measured. The potential of social media to support children's mental well-being should also be considered.[44] This section focuses on the relationship between social media use and children's life satisfaction.

When it comes to mental health, *what* children experience on social media may be more pertinent than the *amount of time* they spend on it.

There has been a lot of attention on the amount of time children spend on social media. This may not be the most useful or important aspect on which to focus. First, self-reported estimates of time spent on social media are not that reliable.[45] Second, the links between self-reported time use and various aspects of mental health are not consistently that strong.[46]

The complexity of the relationship between social media and life satisfaction is reflected in the analysis of data from PISA 2022 (*see Figure 7*). Moderate social media users tend to have somewhat higher life satisfaction than either intensive users or children who do not use social media at all. The differences are not that large in comparison with other factors that are linked with variations in life satisfaction as already seen in Figure 6. Children who spent more than seven hours a day on social media had significantly lower than average life satisfaction, but this is a small group making up only around 6 per cent of 15-year-olds. Moreover, it is possible either that spending a lot of time on social media causes lower life satisfaction, and/or that children with low life satisfaction tend to turn to intensive social media use. Children who never used social media also had lower life satisfaction than average. This group of children tend to have poor quality relationships with family and peers.[47]

Figure 7: Life satisfaction and time spent on social media by 15-year-old students



Source: PISA 2022. See Appendix for further details.

When it comes to mental health, *what* children experience on social media may be more pertinent than the *amount of time* they spend on it.

Social media use has been linked to negative body image for both girls and boys.[48] Self-comparisons with models and celebrities are one aspect.[49] Daily exposure to idealized and often manipulated content can lead to feelings of inadequacy as adolescents measure their worth against unrealistic portrayals. Appearance-related social media content was identified as a particular risk.[50] It should be noted, however, that academic researchers had highlighted the negative effects of unrealistic beauty standards on young people's body image, even before the rise of social media.[51]

On the other hand, digital technology use (including social media use) has been linked to positive aspects of well-being, such as greater satisfaction with friendships.[52]

Broadening the discussion to internet use more generally, another factor that shows a link with children's life satisfaction is experiencing certain types of content online. The PISA study asked children a question about "encountering discriminatory content online (e.g. about race, gender, sexual

orientation or physical appearance)". The questions were answered by children in 33 of the Innocenti Report Card countries. In all countries, more than half of children said that they had encountered such content ranging from 52 per cent in Sweden to 79 per cent in Estonia. On average, across these countries, more than a third (36 per cent) of children said that they had been 'quite' or 'very' upset by the experience. Further analysis indicated that children who had experienced discriminatory content also were more likely to have lower life satisfaction and emotional well-being.[53]

This range of findings indicates that the impact of the use of social media (and digital technology more generally) on children's life satisfaction is a complex phenomenon. Focusing purely on time spent on social media may not be useful, and instead more attention should be paid to specific experiences and to strategies, which reduce children's risk of harm from such experiences.

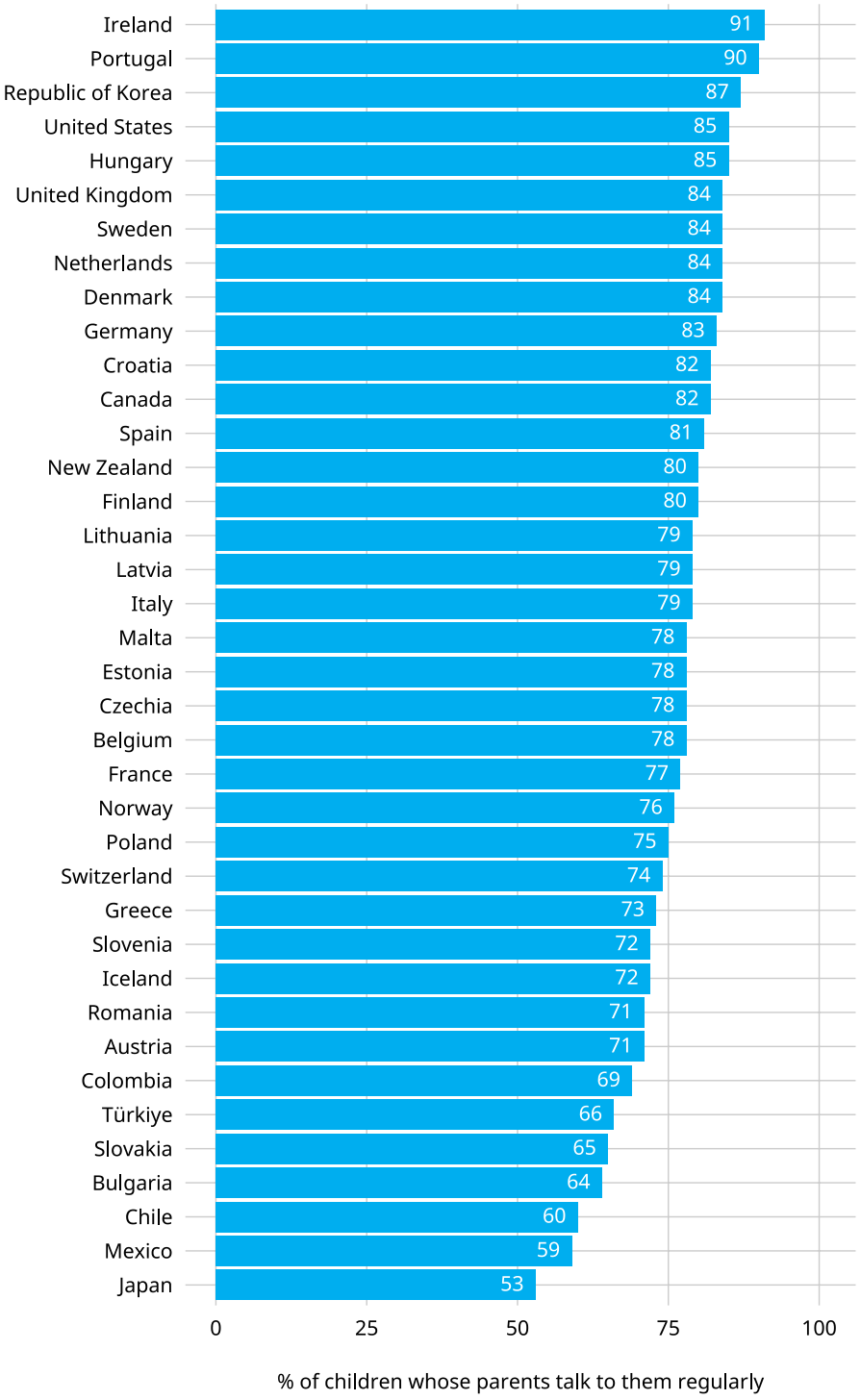
Relationships with family

Adolescence is a period in which children typically move towards greater independence. Nevertheless, teenagers often nominate family relationships as a core factor that affects their well-being.[54] Children are not only influenced by their environment, but also actively influence the world around them. Child-parent relationships and their links to child and parental mental health are reciprocal.[55]

Teenagers often nominate family relationships as a core factor that affects their well-being.

Figure 8 shows the responses of 15-year-old children to a question about how often their parents (or someone close to them) spent time just talking with them.[56] In all countries, more than half of children said that their parents spent time talking with them at least once a week, ranging from 53 per cent in Japan to 91 per cent in Ireland.

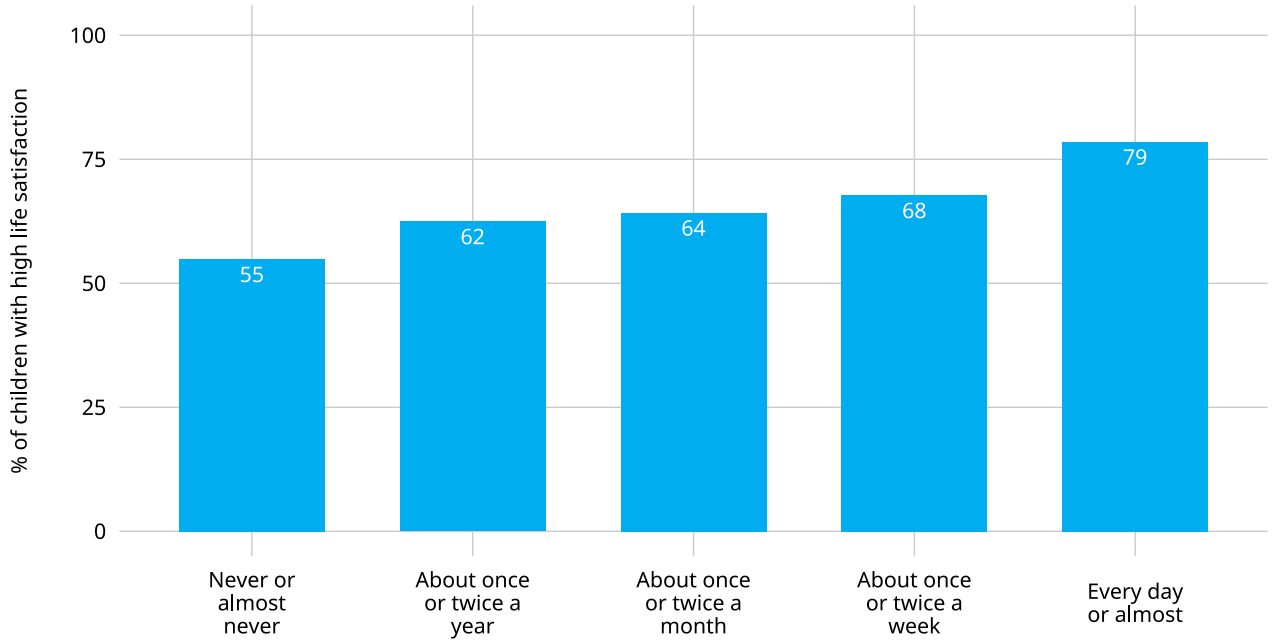
Figure 8: Share of adolescents whose parents spend time talking with them at least once or twice a week



Source: PISA 2022. See Appendix for further details.

Answers to the above question are strongly linked with children's life satisfaction (*see Figure 9*).

Figure 9: Frequency of time spent talking with parents and life satisfaction



Source: PISA 2022. See Appendix for further details.

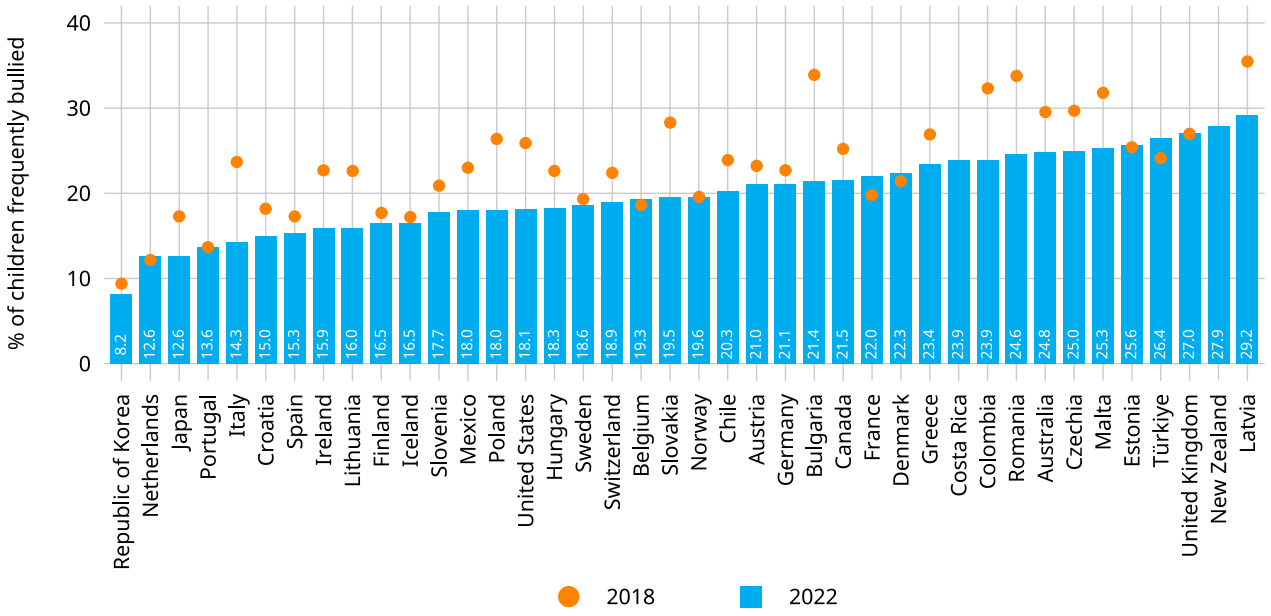
Unfortunately there is a lack of high-quality evidence on trends in the quality of parent-child relationships. For this reason we are unable to explore whether negative trends in this respect might explain the recent decline in adolescent life satisfaction.

Being bullied by peers

Far from being a harmless so-called rite of passage, childhood bullying can be a traumatic experience. It is associated with higher rates of depression, anxiety,[57] suicidal ideation and behaviour.[58] Bullying has been found to have far-reaching effects, including poor mental health outcomes many years later.[59] Being bullied is one of the strongest predictors of children's life satisfaction in many high-income countries.[60]

In view of this link, could an increase in bullying explain the decrease in children's life satisfaction? Evidence from the PISA surveys in 2018 and 2022 suggests not, at least in relation to bullying (including cyberbullying) at school. In fact, in most countries, there has been a decrease in rates of frequent bullying between 2018 and 2022 (*see Figure 10*). This positive news may be attributable to school closures during the COVID-19 pandemic, and it remains to be seen whether it will continue. While the trend appears positive, bullying remains a common experience that is a serious concern for child well-being.

Figure 10: Percentage of children experiencing frequent bullying, 15-year-olds, 2018 and 2022



Source: PISA 2018 and 2022. See Appendix for further details.

The shadow of the COVID-19 pandemic

The COVID-19 pandemic negatively affected children's mental health, at least in the short term. Studies conducted in Germany,[61] the United Kingdom[62] and the United States[63] indicated negative immediate impacts and these appear to have been greater in countries where pandemic restrictions were more stringent.[64] Other global reviews also show a picture of negative impacts.[65]

The longer term repercussions of this impact are not yet known. In the study in Germany, there was a small but not conclusive improvement in mental health after the initial wave of the pandemic. A review of 35 studies in Canada covering children and young people aged 0–25 into the middle of 2021 found that depressive symptoms increased a little during the first stages of the pandemic and then returned to previous levels.[66]

Worries about climate and conflict

In addition to the COVID-19 pandemic, other global factors may also affect children's mental health. Children may feel uncertain about their futures due to armed conflicts and climate change.

Concerns about climate change are a rational response to an evident threat, although in some cases that response may lead to deeper mental health problems,[67] especially when it starts affecting a child's functioning. The most

substantial relevant study of children and young people aged 16–25 included six Innocenti Report Card countries: Australia, Finland, France, Portugal, the United Kingdom and the United States.[68] Rates of feeling very or extremely worried about climate change ranged from 46 per cent in the United States to 65 per cent in Portugal.

While it is clear that direct experiences of war have profound negative effects on children, there is relatively little recent research on the indirect impact of recent armed conflicts on children's mental health. A review in 2012 found evidence that "many children may experience both short- and long-term fear responses as a result of exposure to crises covered by the news".[69] This is likely to be true today as well since there is extensive reporting of the armed conflicts happening in many parts of the world.

Summary and implications

The above discussion covered two key indicators on children's mental health. The first indicator, the rate of suicide, appears to be broadly stable across this group of countries in recent years.

Mental health is a complex and multifaceted phenomenon and there is no single solution to the challenges of maintaining and promoting it.

In contrast, adolescent life satisfaction is declining. The shock of the COVID-19 pandemic together with global trends such as climate change and ongoing conflicts have created a challenging time for children to grow up in. Rapidly evolving digital technologies also present both benefits and risks to mental health.

While the two indicators on mental health have the best available data for international comparisons, they only provide a partial understanding of children's mental health. Broader research on a wider range of mental health conditions suggest a long-term decline in children's mental health that started as long ago as the early 1990s. Clearly, recent factors cannot fully explain this trend. Mental health is a complex and multifaceted phenomenon and there is no single solution to the challenges of maintaining and promoting it.

A range of responses are needed including universal promotion, prevention and specialist high-quality targeted services including multi-agency early intervention (at all ages when issues begin to emerge). All of these components require greater investment as mental health still receives remarkably little funding compared with other sectors, such as physical health and education.[70]

The solutions, however, go well beyond the need for more services. A positive enabling environment for children's mental health is also required through actions at all levels of the well-being framework presented in Figure 1.[71]

- **In the world of the child,** personal relationships and lifestyle can play a key role:
  - There is a need to support the mental health of parents and caregivers and their skills through initiatives such as integrated parenting programmes, and to promote positive relationships between children and those close to them. This solution is aligned with the broader socioecological model.
  - Children should also be encouraged to engage in activities and behaviours that are known to be conducive to mental health, including physical activity, sleep (quality and quantity) and mindfulness.

- **In the world around the child,** schools and communities can play a key role:
  - Social and emotional learning at school can equip children with skills that can promote mental health such as emotional regulation, mindfulness, problem solving, interpersonal skills and stress management.[72]
  - Schools and communities must also tackle violence, bullying and discrimination, risks to children's mental health.
  - A balanced approach must also be taken to protect children from online risks while enabling them to learn how to use new technologies and enjoy the benefits.

- **In the world at large,** governments, businesses, media and public discourse can play a key role:
  - There is a need to tackle the stigma and misconceptions surrounding mental health disorders and promote a broader awareness that can support early identification of issues.
  - There is a need for a stronger regulatory environment for digital technology to protect children from online risks and ensure that they learn how to use age-appropriate technologies and enjoy the benefits that digital technology offers.
  - A positive environment is needed in which children can experience autonomy and are actively engaged and able to make a contribution to society. A sense of control over one's environment, and of purpose, can instil hope and enhance mental health.

Trends in physical health

There has been sustained long-term progress in many aspects of children's physical health in OECD/EU countries. This includes the eradication of many serious diseases, achievement of universal health care coverage, and improvements in water and sanitation. In 1950, the percentage of children who died before the age of 15 years in 15 of the Innocenti Report Card countries for which data are available ranged from just over 3 per cent in Sweden to almost 12 per cent in Spain. By 2022, the percentages were below 1 per cent in all 15 countries.

Nevertheless, new risks to children's health are appearing. The nature and quality of the food that people consume has changed rapidly and is linked to increases in the proportion of the population that is overweight and obese. Climate change brings new threats to physical health, such as those posed by heatwaves. Air pollution continues to be a major problem in urban areas and new evidence highlights the harmful effects of toxicants in the environment. Children are particularly vulnerable to all of these factors.

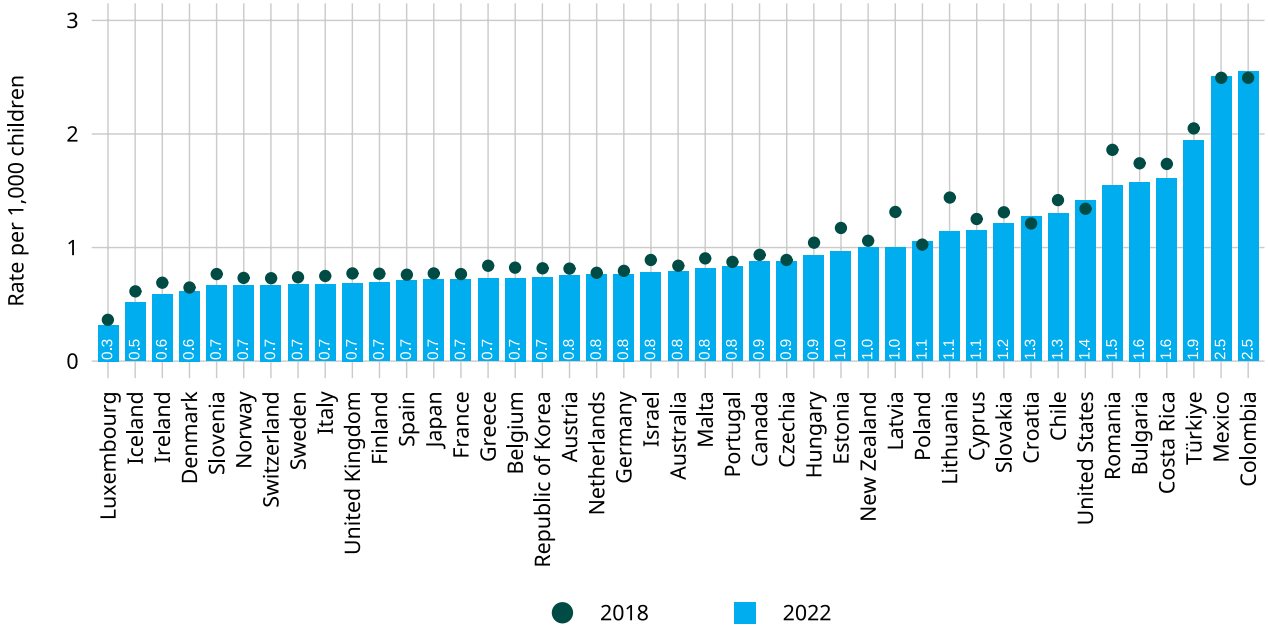
This section considers trends in the two indicators for physical health – child mortality and the prevalence of children being overweight – and the factors associated with them. In addition, it considers emerging environmental risks to children's health.

Child mortality

Trends in child mortality

Figure 11 shows current rates of child mortality per 1,000 children in the 10-year period between ages 5 and 14 years. Rates are lowest in Luxembourg, Iceland and Ireland, and highest in Colombia and Mexico. The short-term trend is generally positive: Rates have fallen substantially in 33 out of 43 countries.

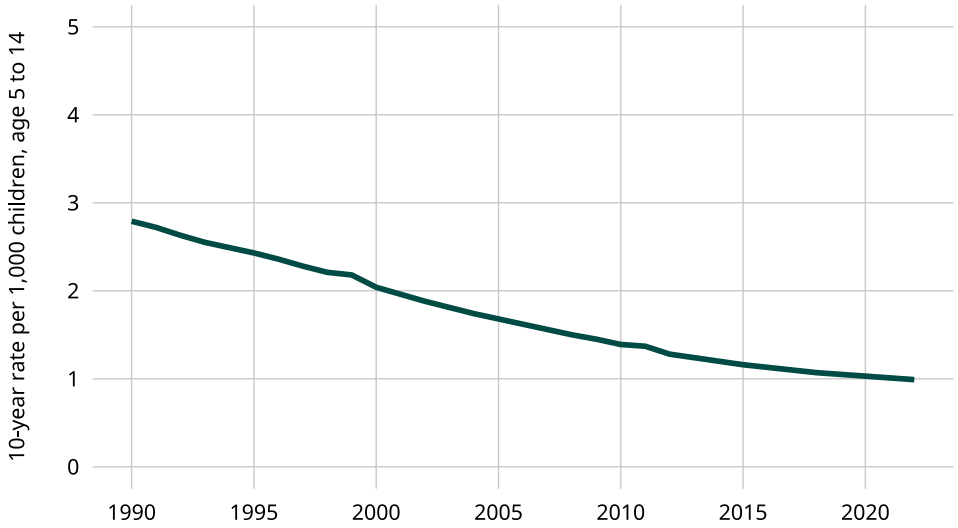
Figure 11: Changes in child mortality, ages 5 to 14 years, 2018 to 2022



Source: United Nations Inter-agency Group for Child Mortality Estimation (UN IGME). See Appendix for full details.

This short-term reduction in child mortality is a continuation of a longer term positive trend in this group of countries. The rate has halved so far in this century from just over 2 children per 1,000 in 2000 to around 1 child per 1,000 in 2022 (*see Figure 12*).

Figure 12: Trends in child mortality, ages 5 to 14 years, 1990 to 2022



Source: UN IGME. See Appendix for full details.

With the reduction in disease-related child mortality in Innocenti Report Card Countries, the most common cause of death in most countries is now external causes – a category that includes traffic accidents, violence, falls, drowning and accidental poisoning.

Inequalities in risks of child mortality

The risk of child mortality is unequal and is linked to family economic factors. While comparative data across Innocenti Report Card countries are unavailable, single-country studies demonstrate the disparate burden on disadvantaged children. In the United States, children whose mothers have not graduated high school were estimated to face a 40 per cent higher risk of early life mortality than children of college graduates.[73] This disparity was partially driven by unintentional injuries and interpersonal violence. In Japan, infant mortality rates were found to be highest in households with unemployed adult members.[74] The gap in infant mortality rates between employed and unemployed households has widened between 2019 and 2022. It is important to remember that, in addition to child mortality, income inequality drives multiple disparities in children's health outcomes.[75]

It is important to remember that, in addition to child mortality, income inequality drives multiple disparities in children's health outcomes.

Average rates of child mortality (in ages 5 to 14 years) across this group of countries are higher among boys (1.09) than girls (0.87). However, progress demonstrates that there is nothing inevitable about these gender differences. The average ratio of mortality has fallen from 1.46 boys for each 1 girl in 1990 to 1.26 in 2021. This drop is in contrast to the global trend which shows increasing gender differences. Finland, Latvia and Norway have now reduced the boy-girl mortality ratio to below 1.1.

Child overweight and obesity: An increasing global concern

Child malnutrition has three dimensions: undernutrition (stunting and wasting), hidden hunger or micronutrient deficiencies, and overweight and obesity.[76] Under-nutrition is relatively rare in OECD/EU countries, and there are a lack of comparable data on micronutrient deficiencies. On the other hand, there are better data and substantial concern about overweight and obesity rates in children, which will be the focus of this section.

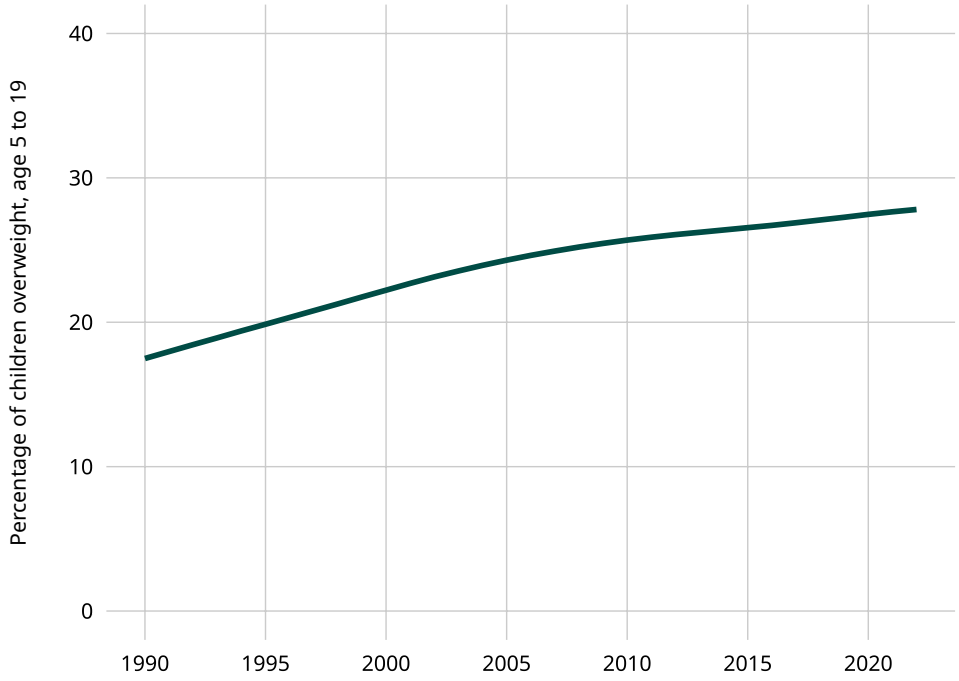
Thresholds for overweight and obesity are defined based on body mass index (BMI). Overweight is defined as a BMI-for-age greater than 1 standard

deviation above the WHO growth reference median. Obesity is defined as a BMI-for-age greater than 2 standard deviation above that median. Obesity can have negative psychological impacts in children as they may be stigmatized, discriminated against and bullied. In the longer term, it is a risk factor for chronic health conditions including Type 2 diabetes and cardiovascular diseases.[77]

Trends in overweight

The prevalence of overweight and obesity in children is growing globally. To provide a direct comparison with Innocenti Report Card 16, Figure 13 shows trends in the percentage of children aged 5 to 19 years in OECD/EU countries who are overweight. There has been a persistent rise in rates of overweight from around 17 per cent in 1990 to around 28 per cent in 2022.

Figure 13: Trends in overweight, ages 5 to 19 years, 1990 to 2022, OECD/EU countries

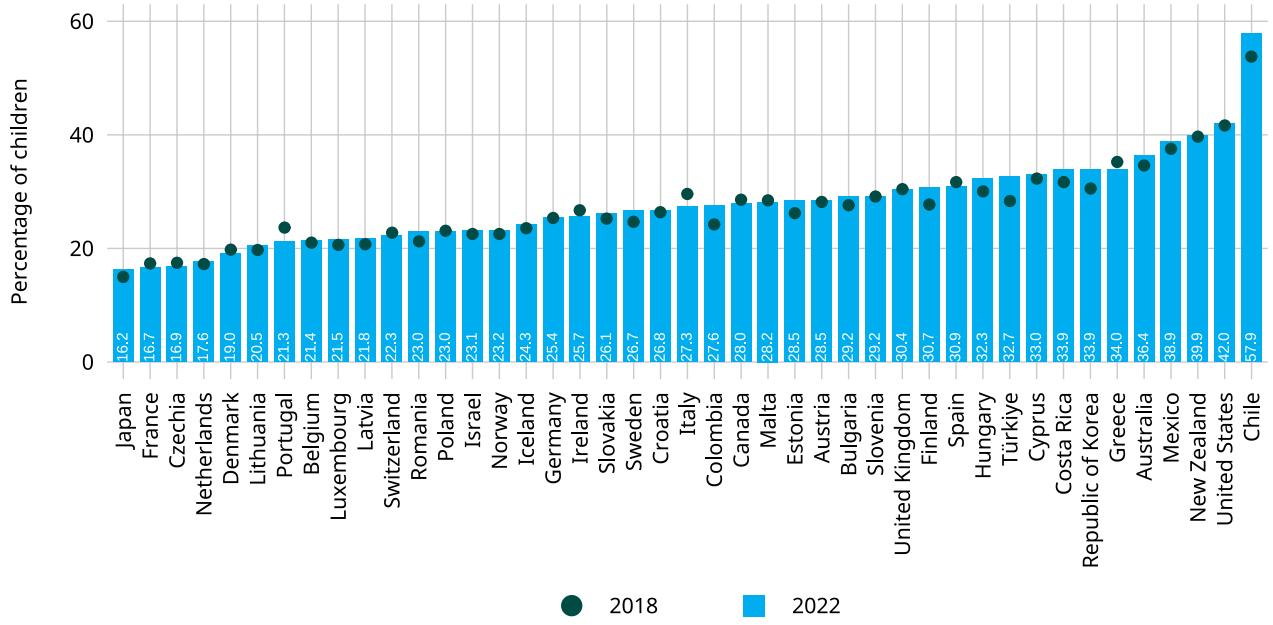


Source: WHO. See Appendix for full details.

In the most recent period for which data are available (2018 to 2022) rates have continued to increase in a third of countries covered in this report (*see Table 2*) and only decreased substantially in two – Italy and Portugal (*see Figure 14*). Rates of overweight children in the Innocenti Report Card countries are higher than the global average of 20 per cent in all but five countries: Czechia,

Denmark, France, Japan and the Kingdom of the Netherlands.[78] The rates are more than twice the global average in Chile and the United States.

Figure 14: Changes in overweight, ages 5 to 19 years, 2018 to 2022



Source: WHO. See Appendix for full details.

Inequalities in risks of overweight and obesity

In 2022, the average obesity rates for girls and boys were 9 per cent and 12 per cent respectively, and this pattern was consistent across all countries except Colombia, where the difference was reversed.[79]

In high-income countries, children in economically disadvantaged contexts are at higher risk of obesity and overweight, although the opposite pattern has been observed in low-income countries.[80] In high-income contexts, one of the ways in which poverty influences child health through diets is food insecurity – a lack of consistent physical and economic access to sufficient, safe and nutritious food. Food insecurity is associated with poorer physical health and development, including in all pillars of the triple burden of malnutrition.[81] In high-income countries, food insecurity affects an estimated 8 per cent to 20 per cent of the population.[82]

Why is childhood overweight and obesity increasing?

The reasons for trends in overweight and obesity are more complex than might be thought.[83] At a basic level, an individual's weight is determined by the balance of energy taken in through food and drink and energy expended, including through physical activity.

Precise data on children's intake of calories over time are not available. However, data are available from the Food and Agriculture Organization (FAO) for the average calories in food available for consumption (all ages) at the end of the food supply chain. According to this data, between 1992 and 2021 (roughly equivalent to the period shown in Figure 13), the average number of calories available per capita per day increased by 175 in the 27 countries of the European Union and by 200 in high-income countries in general.[84]

In high-income countries, children in economically disadvantaged contexts are at higher risk of obesity and overweight, although the opposite pattern has been observed in low-income countries.

While insufficient physical activity is a risk factor for overweight and obesity in children,[85] as in adults, it is also not clear that there has been a clear decline in such activity among children.

The WHO analyzed data on children's physical activity between 2001 and 2016 – a period in which there were substantial increases in overweight and obesity. In high-income countries during this period rates of sufficient physical activity actually increased among boys and remained broadly stable among girls.[86] A new analysis of the same data, undertaken for this report, found little evidence of a consistent link between trends in physical activity and trends in overweight across countries.[87] For example, there were some countries where both physical activity and overweight rates increased.

Turning to more recent times, in the WHO Europe region there is tentative evidence of a drop in children's physical activity during the COVID-19 pandemic period.[88] These reductions, along with changes in eating and sleeping patterns, have been linked to increases in children's body weight during this period.[89] It will be some time before it is clear whether this change will endure.

Another factor that might lead to decreases in children's physical activity is the increasing use of digital technology. However, the evidence on this link is also not clear. As noted above, children's activity levels may not be decreasing. For example, there may have been a transfer of sedentary time use from legacy media, such as television and printed books, to digital devices.[90] Additionally, screen time may not be associated with levels of physical activity. This is a question for which high-quality data using direct observations are needed to provide an accurate answer. A study of this type in Sweden found no association between the time children spent on screens and the time spent being physically active.[91]

It is therefore not clear that the rise in childhood overweight and obesity is due to a decrease in children's physical activity. Nevertheless, sufficient physical activity can be a protective factor against obesity and has many other benefits for children's physical and mental health.[92] The most recent international comparable data (from 2016) suggest that around four in five children in Innocenti Report Card countries did not meet recommended levels of physical activity. More boys (24 per cent) than girls (14 per cent) were sufficiently physically active, which is noteworthy given that overweight and obesity is more prevalent in boys than girls.[93]

Changes in children's diets: Food environments

In fact, the rise in overweight and obesity needs to be seen within a much broader context of the food environments in which children grow up. This is in line with the child well-being framework outlined in Figure 1.

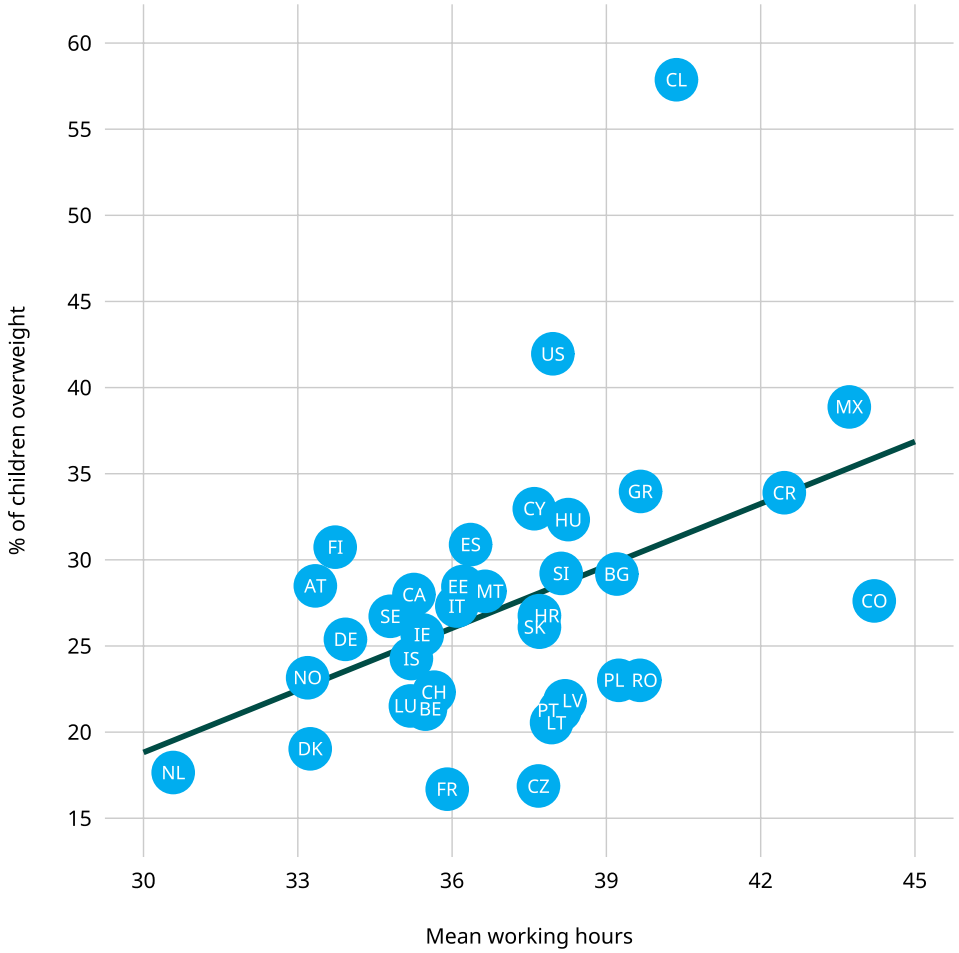
The rise in overweight and obesity needs to be seen within a much broader context of the food environments in which children grow up.

Our diets are changing, and these changes affect children's health. In particular, there is a global pattern of increased consumption of foods high in sugars, salt and unhealthy fat, and low in essential vitamins and minerals. These foods tend to be highly energy dense (high in calories), hyperpalatable, aggressively marketed, highly appealing, convenient and cheap. All of these factors encourage overconsumption, therefore driving excessive calorie intake. This set of factors is referred to as unhealthy food environments.

The complex mechanisms that lead to unhealthy foods being consumed are reflected in various parts of the ecological model presented in Figure 1.

For example, within the world around the child, pre-packaged foods, often with poor nutritional value, represent a convenient solution for families who are short of time. The number of paid working hours has been linked to overweight among children.[94] New analysis conducted for this report supports this idea.[95] Figure 15 shows that, in 2022, countries with higher working hours tend to have higher rates of children who are overweight. An analysis over time found that an increase of around one hour in average weekly paid work in a country was associated with statistically significant increases of 0.2 per cent and 0.3 per cent increase in childhood overweight and obesity respectively.

Figure 15: Average weekly working hours per employed person and rates of overweight (5- to 19-year-olds), 2022



Source: WHO, NCD Risk Factor Collaboration (NCD-RisC), International Labour Organization (ILO). See Appendix for further details.

Another mechanism is food marketing. Digital technology offers a new route for direct marketing to children. A review of studies on this link found that social media users were more likely to skip breakfast,[96] eat fewer fruits and vegetables, and consume snacks and sugary drinks. A key reason for these patterns was identified as images and advertising of unhealthy foods on social media.

Other mechanisms are evident in the broader national context. New analysis conducted for this report explored the associations between three types of economic and social changes at a national level and trends in overweight and obesity:

- The extent of 'cultural globalization'. A measure is used that was developed by the Swiss Economic Institute.[97] It reflects the volume of trade in cultural goods and the global spread of prominent product brands.
- Income inequality, as measured by the Gini coefficient.
- Gross National Income per capita.[98]

The analysis of data over a period of more than two decades, indicates that all three factors are associated with rates of childhood obesity and overweight, which are higher when there is:

- a greater degree of cultural globalization in a country
- a greater degree of income inequality
- a growth in national income[99]

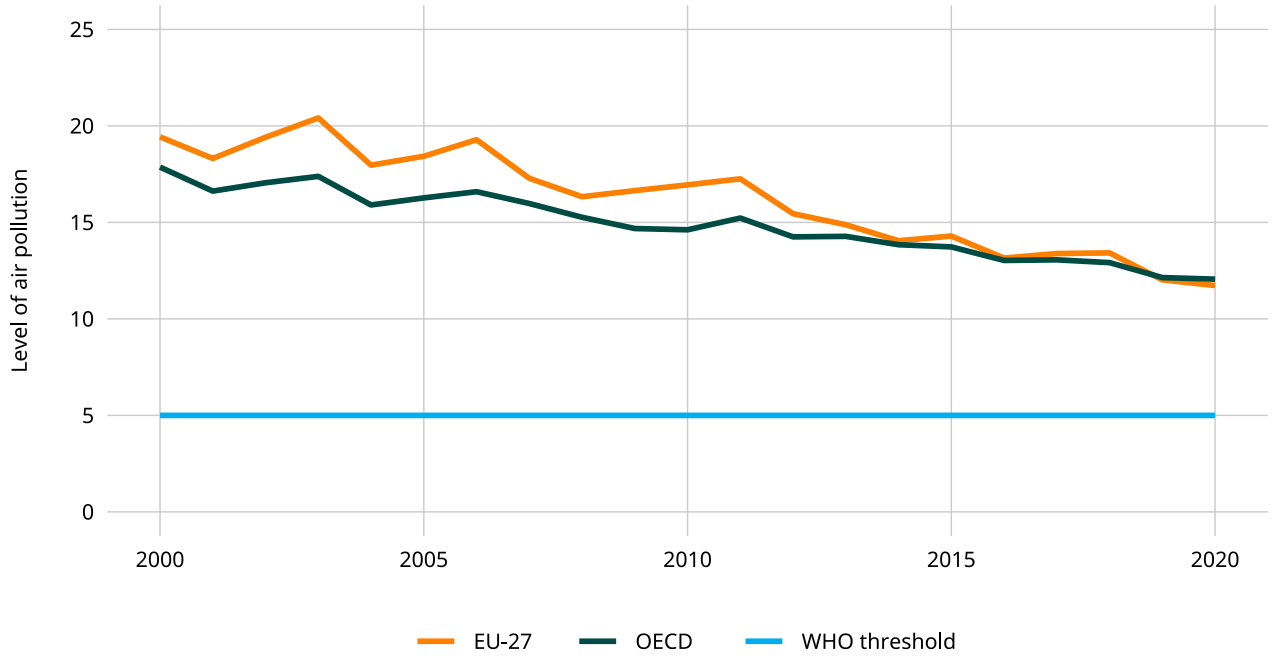
The link between inequality and obesity rates is an important one because of the link between local food environments and obesity.[100] Children living in socioeconomically disadvantaged areas are more likely to be living in poor-quality food environments.

New threats to children's health

While great progress has been made in many aspects of public health for recent generations of children, other issues remain and new threats are emerging.

The level of air pollution in OECD/EU countries has been reduced in the last two decades. Figure 16 shows the drop in fine particle matter (or PM2.5) per cubic metre air (or µg/m3), but values on this indicator still remain well above the average annual threshold recommended by WHO, which is 5 µg/m^3.[101]

Figure 16: Air pollution, mean population exposure to PM2.5, 2000 to 2022



Source: OECD Data Explorer. See Appendix for more details.

Meanwhile, new threats are emerging. Researchers are sounding the alarm on the health dangers posed by synthetic chemicals and plastics. Eight years ago, *The Lancet* noted that "the ubiquity of microplastic contamination can no longer be denied".[102] Nano and microplastics are tiny particles from plastic degradation that can leak into the food children eat, the water they drink and the air they breathe. They are also present in the toys children play with, the clothes they wear and the homes in which they live.

Due to their developing bodies and frequent hand-to-mouth behaviours, children are especially vulnerable to these chemicals.[103] Microplastics can accumulate in the gastrointestinal tract and respiratory systems. Nanoplastics are small enough to cross the brain-blood barrier, which protects the brain from harmful substances. These particles can carry harmful chemicals, also known as endocrine disruptors, that interfere with hormones, brain development and immunity. Some of these chemicals may also increase the probability of obesity.[104]

Early exposure to pollutants is particularly harmful and may be widespread. One study found 10 to 20 times more microplastics in infant faeces than in adults' faeces.[105] Certain plastic feeding bottles expose infants to significant

microplastic levels during formula preparation.[106] Furthermore, children in 'food deserts' may face elevated risks due to reliance on processed, plastic-packaged foods instead of fresh alternatives.

Adolescents are particularly vulnerable to social media-driven fast fashion trends that promote the overconsumption of cheap, synthetic clothing that shed microplastics

Adolescents are particularly vulnerable to social media-driven fast fashion trends that promote the overconsumption of cheap, synthetic clothing that shed microplastics when washed.[107] Cosmetic products are another source of hidden danger. Some cosmetic products contain chemicals that can disrupt hormonal regulation and impact reproductive health. These endocrine disrupting chemicals have also been detected in breastmilk.[108]

Summary and implications

Rates of child mortality – a key physical health indicator considered in this report – continues to fall in OECD/EU countries. In almost all countries, fewer than 1 in 1,000 children dies in the decade between their 5th and 15th birthday. While child mortality rates are generally low, there is still room for more improvement. External causes are the most common reason for child deaths in this age group. These causes include road traffic accidents, and measures to reduce speed limits in built-up areas have the potential to reduce road fatalities.[109]

There has been a steady increase in rates of overweight and obesity stretching back several decades. The factors that contribute to this trend are multiple, complex and at different levels. The solutions to this problem do not primarily lie at the individual behavioural level. A recent comprehensive review of direct interventions aimed at tackling obesity among children aged 6 years and over found very limited evidence of success. Overall, schools-based interventions showed a small positive effect (with moderate certainty) in reducing body mass index, while there was no clear positive evidence for after-school, community-based and home-based interventions, although the authors of this paper note several limitations to the evidence.[110]

In fact, the primary causes and solutions of childhood obesity exist at the structural level. Attention should be focused on implementing measures that lead to population-wide changes in diets and lifestyles. In broad terms, this requires three areas of action:

1. **Ensure that children have access to affordable nutritious food.** This includes actions to support breastfeeding (which has been found to decrease the probability of overweight and obesity),[111] promote eating habits in early childhood and ensure healthy food environments in school. The latter action can include the provision of good quality free school meals, which guarantees one healthy meal a day and can reduce both obesity and food insecurity.[112] It also includes the need to tackle childhood poverty as limited household finances are a key barrier to affording nutritious foods.

2. **Strengthen national regulatory frameworks to improve food environments.** This is an essential component of efforts to prevent and reduce childhood obesity. This can include policies to improve early food environments (Code of Marketing of Breastmilk Substitutes and subsequent World Health Assembly resolutions) and those addressing food environments in general: food labelling, food marketing, food taxes/incentives, food reformulation and school food environments. As highlighted earlier in this section, digital media provides a new route for direct marketing to children and it is important that actions are taken to regulate this practice. Taxes on sugar-sweetened beverages have been shown to significantly reduce consumption.[113]

3. **Implement public policies that promote healthy eating and physical activity.** This can include transport policies that encourage physical activity; ensuring there are sufficient leisure facilities and green space in local areas, particularly in urban settings; and family policies that enable parents and caregivers to balance paid work and family life, including time to shop for and prepare healthy meals as well as physical activity with children.

A combination of the above measures is needed to create healthier food environments for children.[114]

Finally, new threats to child health are emerging due to pollutants in the environment, including chemicals and plastics. Public health authorities, aided by researchers, must monitor the potential scale of these threats and ensure that legislative measures and policies are implemented to reduce them.[115]

Trends in skills

The skills that children acquire as they grow up are fundamentally important for a good childhood and for later life. As will be seen in this section, recent global events, particularly the COVID-19 pandemic, have had an impact on this dimension of child well-being.

The well-being framework introduced in Innocenti Report Card 16 (*see Figure 1*) incorporated two indicators of skills – one social and one academic. This section updates the picture for these indicators by considering trends in the last few years and discusses additional indicators of emotional and digital skills that offer a more complete picture of this dimension of child well-being.

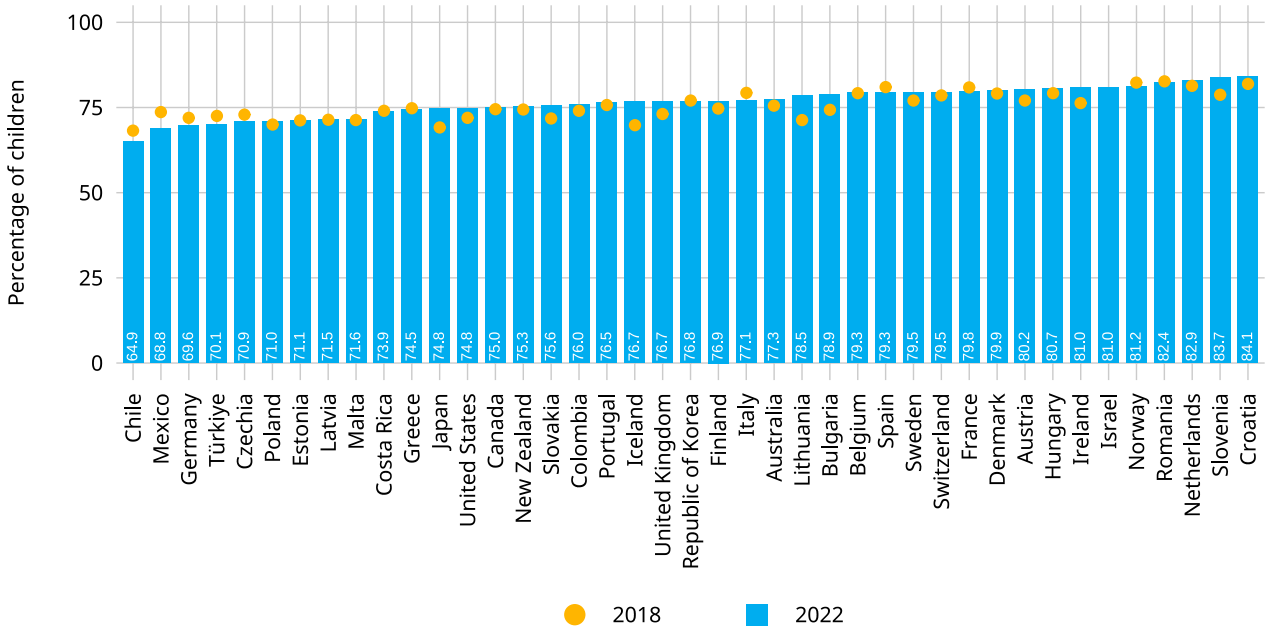
Social skills

Social skills are key to forming meaningful relationships. The key measure selected for Innocenti Report Card 16 to represent social skills was whether children agreed with the statement, "I make friends easily at school".

Trends in social skills

In 2022, the proportion of children who agree that they made friends easily at school varied from 65 per cent in Chile to around 84 per cent in Croatia and Slovenia (*see Figure 17*). This indicator changed relatively little between 2018 and 2022 – increasing by more than 5 per cent in 7 of 36 countries while only decreasing substantially in one. This is a positive sign given the concerns about the potential impacts of school closures during the COVID-19 pandemic.

Figure 17: Children who made friends easily at school, 15 years old, 2018 to 2022



Source: PISA 2022. See Appendix for full details.

Inequalities in social skills

Boys (average of 80 per cent) tended to be more confident than girls (average of 73 per cent) about their skills in making friends.

There was no clear and consistent difference in social skills by family socioeconomic status.

Emotional skills

Forging meaningful relationships with others entails understanding them on emotional and cognitive levels. Perspective-taking and empathy are essential to navigating social interactions. Emotional skills are required to work collaboratively, solve social problems, build positive relationships and coexist peacefully with others. New data on these aspects are available from the PISA study in 2022.

Figure 18 shows the percentage of 15-year-old students who agreed with the following two statements on perspective-taking and empathy:

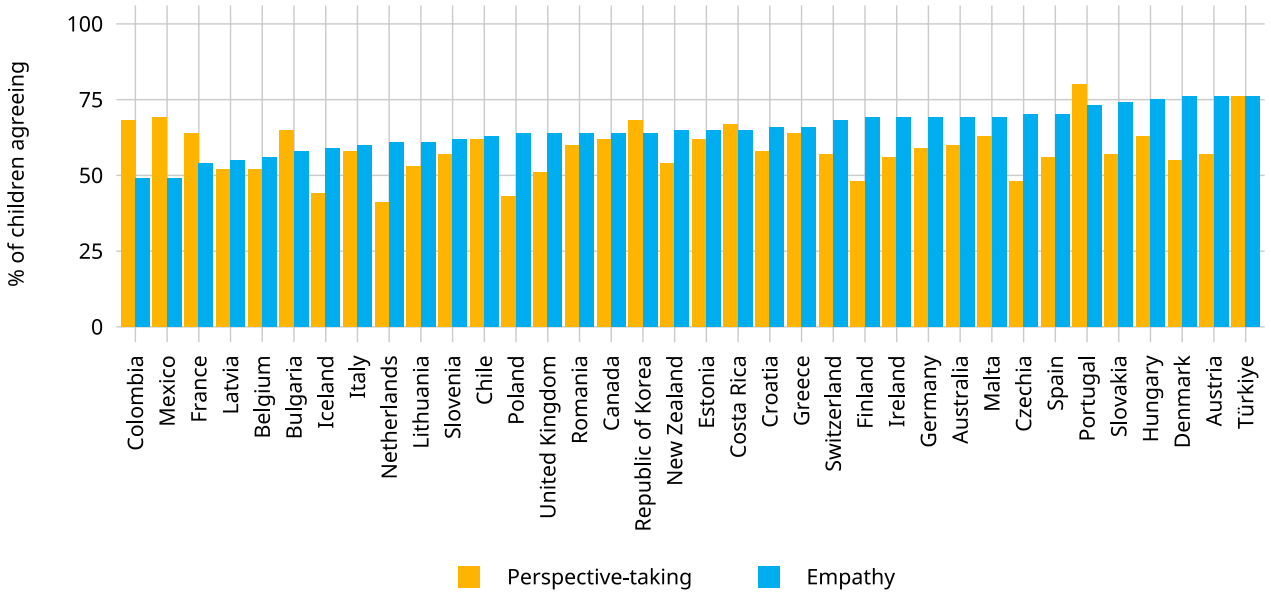
- I can see situations from my friends' perspectives.
- I can sense how others feel.

Across the different countries, between one in five children and three in five children do not feel that they have each of these skills.

- The percentages for perspective-taking were highest (above 75 per cent) in Portugal and Türkiye; and lowest (below 50 per cent) in Czechia, Finland, Iceland, the Kingdom of Netherlands and Poland.

- For empathy, more than three quarters of children in Austria, Denmark, Hungary and Türkiye agreed that they could sense how others feel. But fewer than half of children in Colombia and Mexico felt that they could be empathetic.

Figure 18: Ability to understand other people cognitively and emotionally: Perspective-taking and empathy, 15-year-olds



Source: PISA 2022. See Appendix for full details.

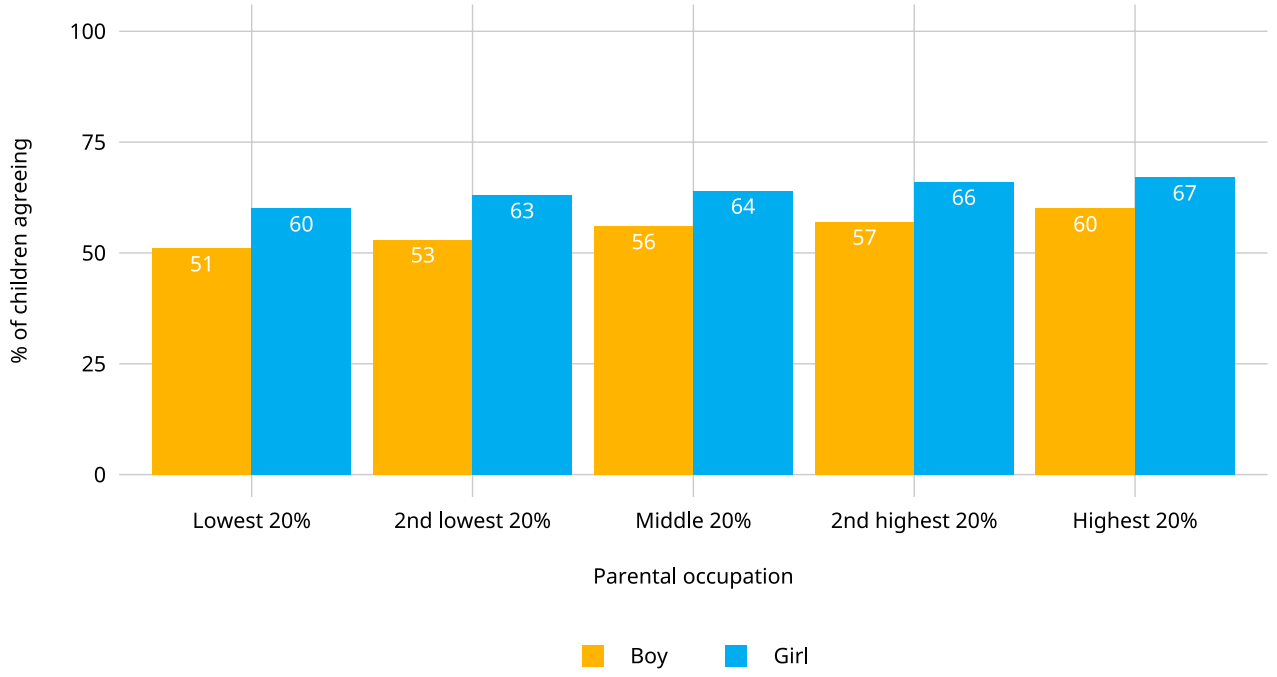
Inequalities in emotional skills

The questions on emotional skills may be difficult to translate accurately between languages and may therefore have somewhat different meanings. This could explain some of the above differences between countries. On the other hand, comparisons across different groups within countries may be more reliable.[116]

There were some significant patterns according to gender and socioeconomic status (measured here by parental occupation). Girls and children from

higher socioeconomic groups tended to be more confident in each of these skills (*see Figure 19*). Two thirds of girls whose parents were in the highest occupation group agreed that they could consider the perspectives of others, while only around half of boys whose parents were in the lowest occupation group could do so. If some children lack the ability to understand other people's perspectives, it can have consequences for societies as a whole.

Figure 19: Ability to see others' perspectives by gender and parental occupation, 15-year-olds



Source: PISA 2022. See Appendix for full details.

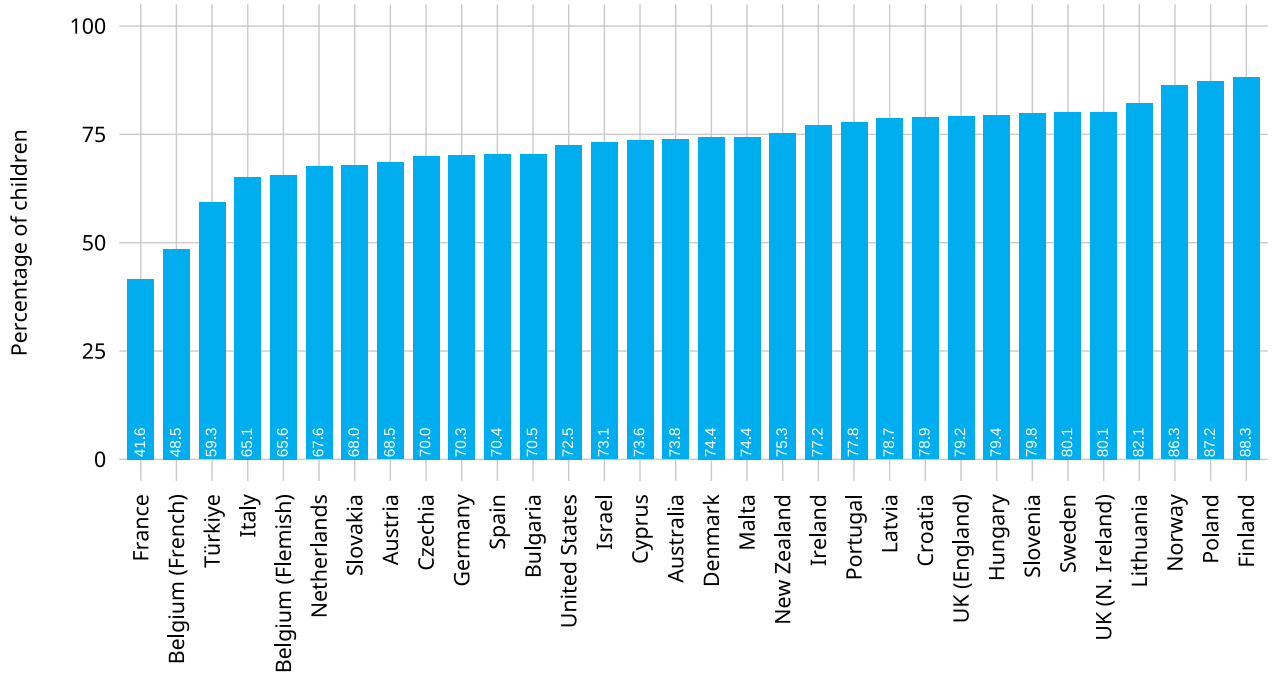
The above analysis highlights aspects of emotional skills that could be important to explore further, ideally with more sophisticated measures.

Digital skills

The acquisition of digital competencies is becoming increasingly important for children, for their current and future well-being. Figure 20 shows that, in 26 out of 32 countries/jurisdictions with available data, more than one in five 10-year-old schoolchildren did not feel that they could tell if a website was trustworthy. Lacking this skill may expose children to misinformation, identity theft and other serious risks. Thus even in wealthy countries, where access to technology is almost universal, there is still a long way to go to ensure that children have the basic skills needed to navigate the digital world safely.

The wide variation in children's answers across countries is noteworthy and the reasons for this (e.g. if some countries are providing more digital skills education than others) would be worth further exploration.

Figure 20: Children who felt they could tell if a website is trustworthy, 10-year-olds



Source: PIRLS 2021. See Appendix for full details.

Academic skills

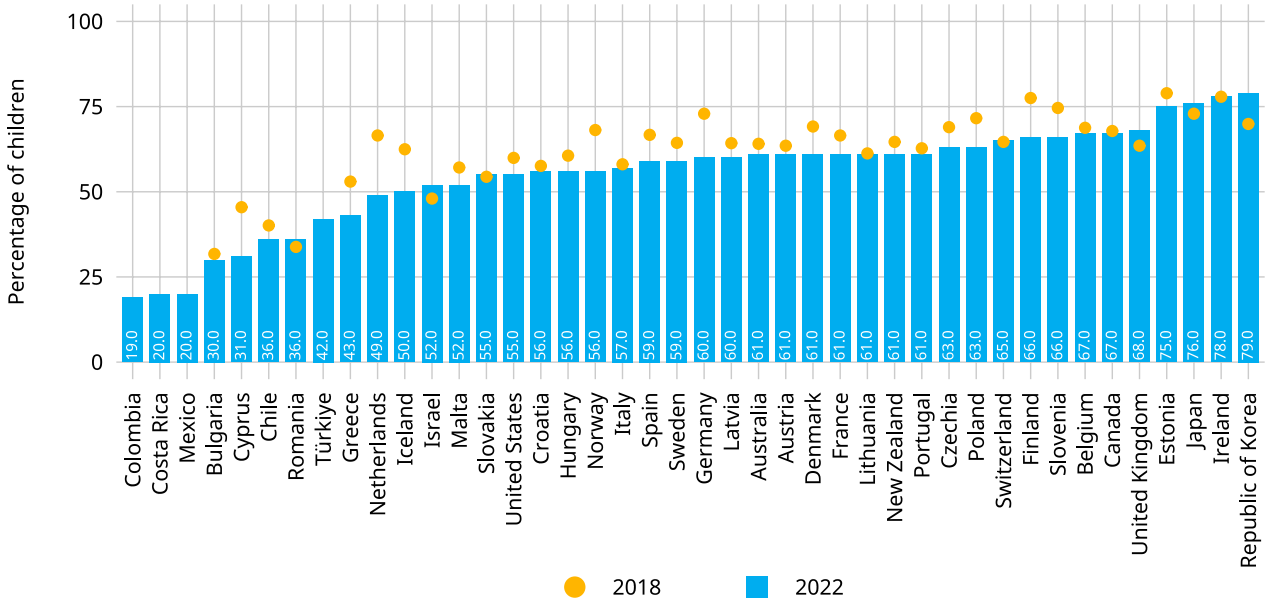
The second indicator, academic skills, is the proportion of children who are still at school at age 15 and have reached basic proficiency in both reading and mathematics. These proficiencies are functionally useful for everyday life (e.g. being able to confidently understand a medicine leaflet), and are essential for children to gain agency and a sense of independence.

Trends in academic skills

Figure 21 shows the proportion of children who have these skills ranging from 19 per cent in Colombia to 79 per cent in the Republic of Korea and averages at around 55 per cent. Even in the highest ranked country, more than one in five children close to compulsory school-leaving age have not reached the basic skills threshold. It means that, in 2022, across this group of countries, over 8.4 million children (out of 17.2 million) aged 15 years lacked either basic mathematics and/or reading skills.[117]

The proportions of children with these basic skills declined substantially (by more than 5 per cent) between 2018 and 2022 in 21 out of 38 countries and only increased substantially in 4 countries.

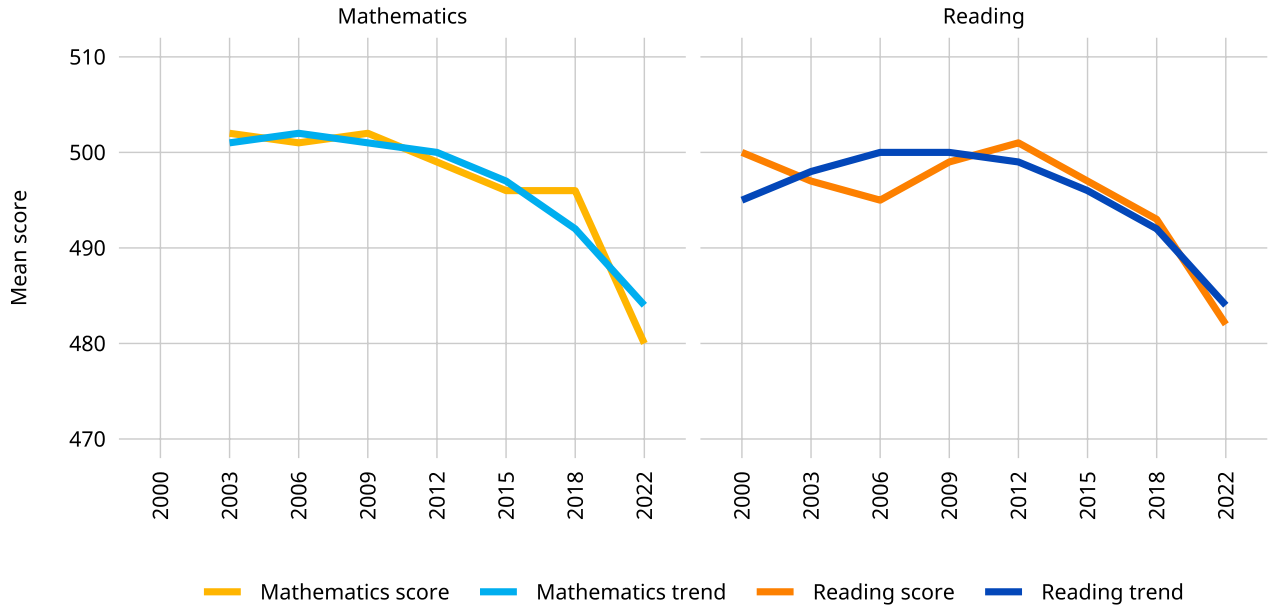
Figure 21: Changes in academic proficiency, 15-year-olds, 2018 to 2022



Source: PISA 2022. See Appendix for full details.

The size of the above changes is remarkable. The 2022 survey witnessed by far the biggest drop in test scores in the OECD-23 group of countries, a sub-group of OECD countries that have consistently participated in PISA since 2000: a decrease of 15 points in mathematics and 10 points in reading (*see Figure 22*).

Figure 22: Trends in PISA test scores for reading and mathematics, 15-year-olds, 2000–2022



Source: OECD, PISA 2022 Database. See Appendix for further details.

Inequalities in academic skills

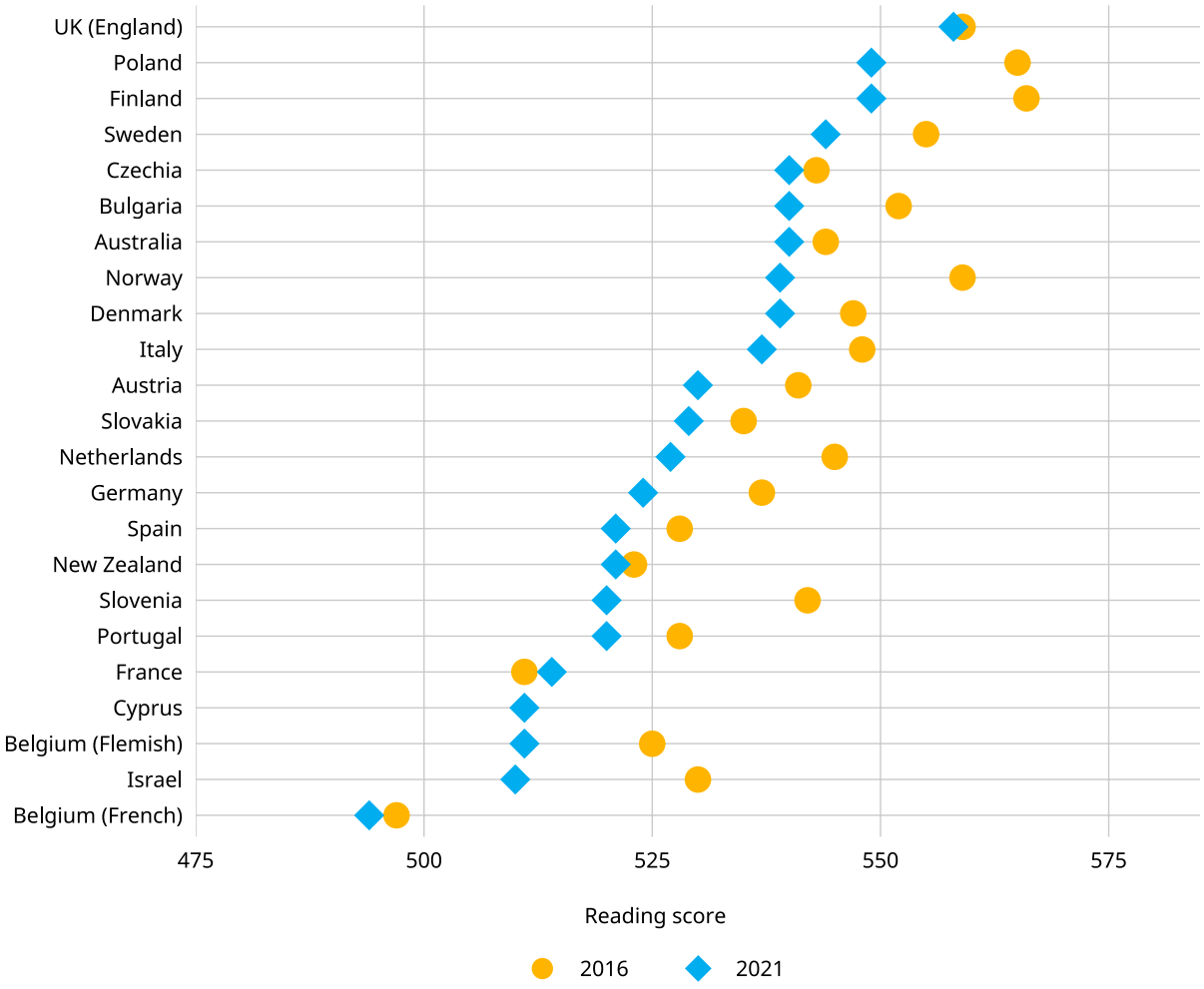
In the PISA survey, at 15 years old, girls scored higher in reading than boys in every country, while boys scored higher than girls in mathematics in most countries. The gender gap in reading, in favour of girls is, on average, three times larger than the gender gap in mathematics in favour of boys.

As will be discussed further in a later section, there are substantial differences in academic skills of 15-year-olds according to family socioeconomic status.

Trends in academic skills before and after COVID-19

A year before the PISA survey, in 2021, the newest round of the Progress in International Reading Literacy Study (PIRLS) was undertaken. PIRLS assesses children's reading skills at an earlier age than PISA – typically around age 10.[118] The 2021 study was undertaken while COVID-19 restrictions were still in place in many countries. Figure 23 shows reading scores in 2021 and in the previous study in 2016 for countries or regions that had data available for both time points. Reading scores dropped in 21 out of 22 countries/regions. The average drop in reading scores was 10 points. Analysis of trends concluded that this drop was statistically significant in 14 countries.[119]

Figure 23: Reading skills at around age 10 years, 2016 and 2021



Source: PIRLS 2016 and 2021. See Appendix for further details.

More recently, data have been released for the latest study undertaken in 2023 of a third regular study – the Trends in International Mathematics and Science Study (TIMSS). TIMSS evaluates fourth and eighth grade performance in mathematics and science across 71 education systems. At the time of writing (February 2025), because the data have just been released, detailed analysis is limited. However, some early findings are available for all 71 countries, which include many of the Innocenti Report Card countries.[120] The analysis indicates an average global decline in student achievement consistent with the pattern seen in the PIRLS and PISA studies.

The impact of the COVID-19 pandemic on academic skills

Two hypotheses have been proposed to explain the sizeable drop in academic skills: the impact of the COVID-19 pandemic and the increase in children's use of digital technology. When the pandemic first hit, it was feared that school closures might further exacerbate socioeconomic inequalities, especially affecting the academic skills of children who do not have equal access to the internet and digital devices.

Did the COVID-19 pandemic affect academic skills?

At the beginning of the COVID-19 pandemic, there were already concerns that school closures and the switch to online learning would hinder children's academic progress. Indeed recent analysis suggest that these factors explain a large part of the recent decline in academic skills.

Two hypotheses have been proposed to explain the sizeable drop in academic skills: the impact of the COVID-19 pandemic and the increase in children's use of digital technology.

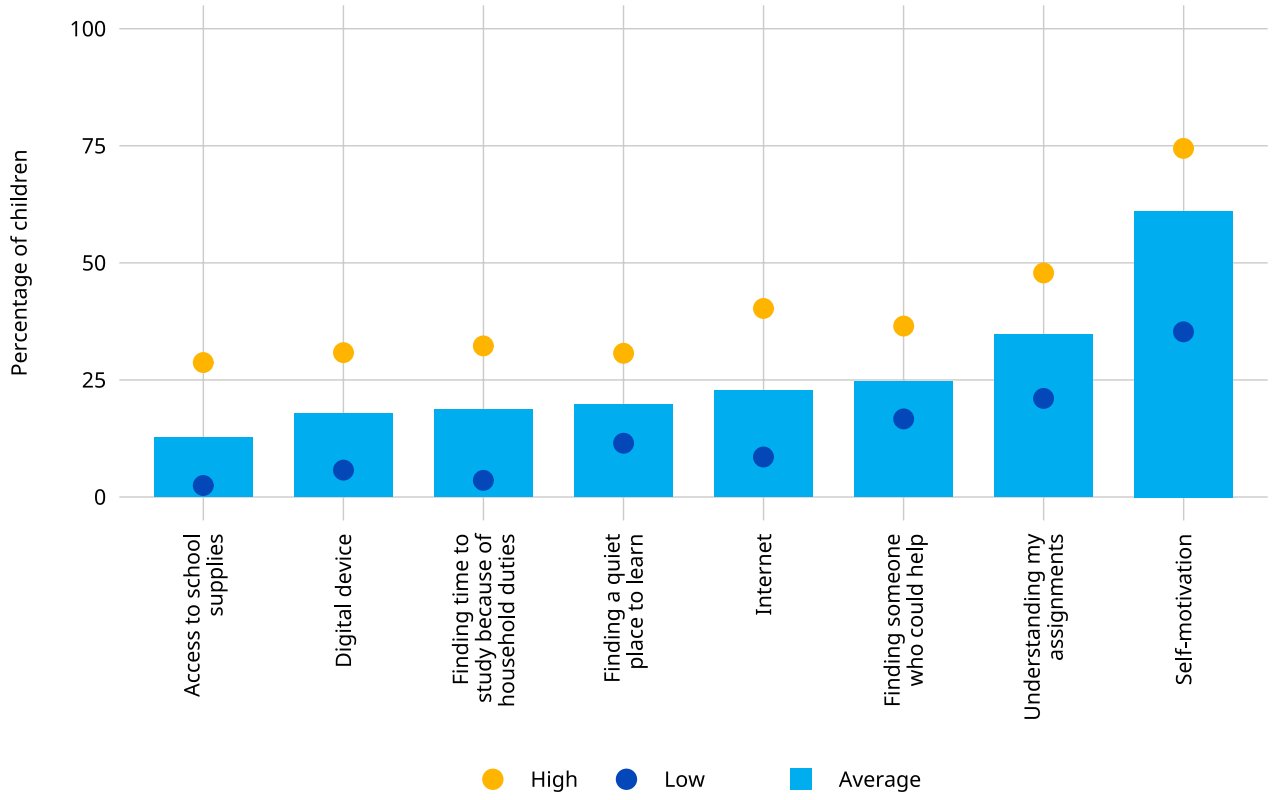
- The 2021 PIRLS study of children around age 10 years indicates that across all countries in the study there was a substantial average learning loss, and that a significant explanatory factor was school closures.[121]

- The PISA 2022 study with 15-year-olds showed a similar pattern.[122] Mathematics scores declined by an average of 12 points across all PISA countries, which is equivalent to a learning loss of 7 months. In countries with long closures, the learning loss was of as much as 9 to 12 months. The analysis found similar patterns in learning loss for reading as for mathematics.

- The TIMSS study of mathematics and science achievement at around ages 10 and 15 years also indicated substantial drops comparing before and after the pandemic, and analysis indicates that these were connected with the lengths of school closures.[123]

In view of these findings, it is interesting to look at how 15-year-old children who experienced school closures recall the experience of remote learning. From children's perspective, key challenges were social and psychological: a lack of self-motivation, difficulties in understanding assignments and an inability to find someone to help with learning (*see Figure 24*). Although remote learning required logistical adaptation, technical issues – access to supplies (12 per cent), digital devices (18 per cent) or the internet (22 per cent) – were viewed as less of a problem.

Figure 24: Problems with remote learning during COVID-19 identified by children



Note: 'High' refers to a country with the highest value. 'Low' to a country with the lowest value. 'Average' to the mean value for all Innocenti Report Card countries.
Source: PISA, 2022. See Appendix for details.

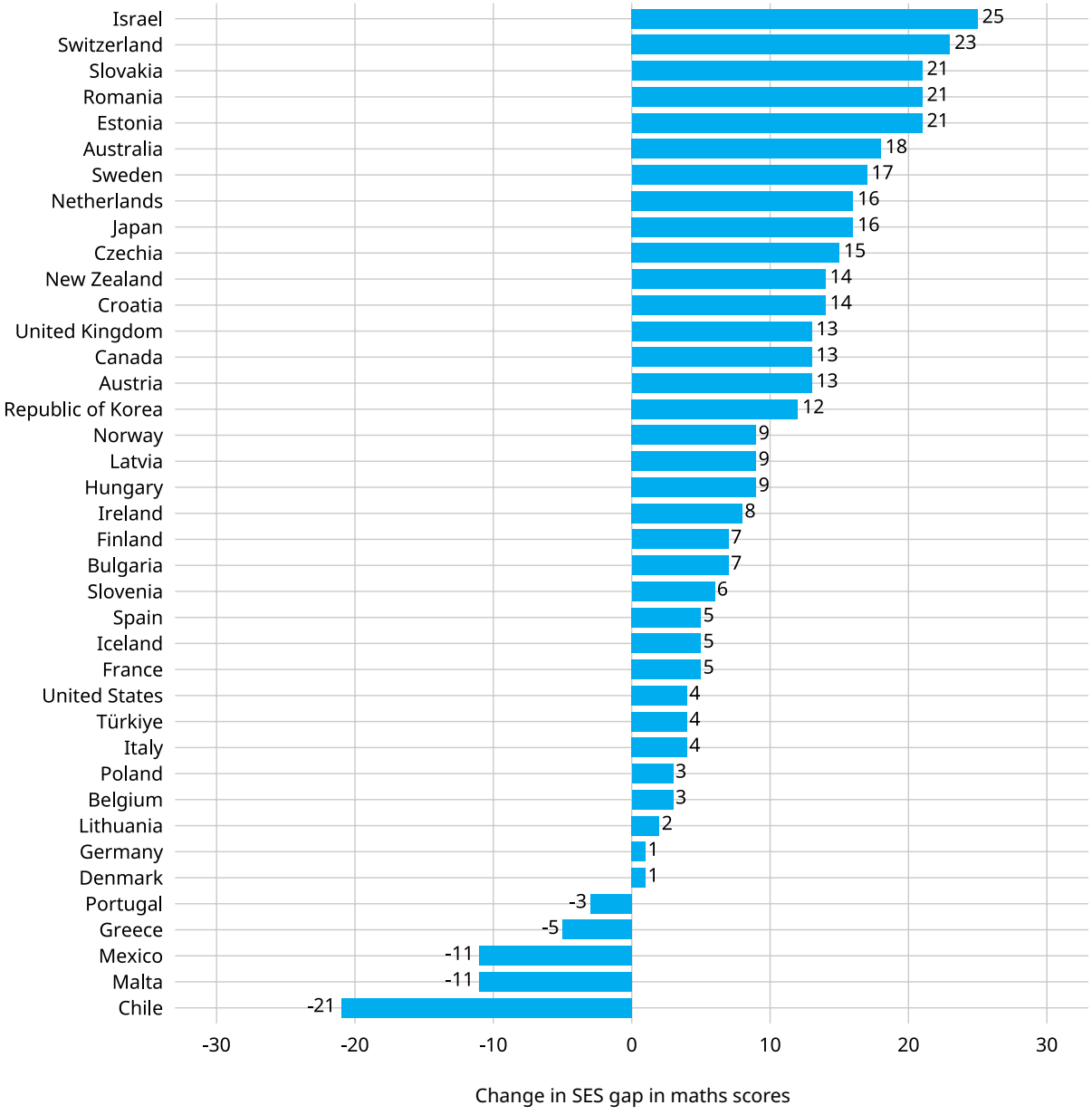
Did the COVID-19 pandemic deepen inequalities in academic achievement?

A concern during the period of school closures was that remote learning would be particularly detrimental to disadvantaged children. These children may lack the space and connectivity to engage effectively in remote learning, and whose parents may feel less able to support them academically.

In general, academic outcomes are strongly linked to family socioeconomic status. The 2018 PISA study found that, on average across OECD countries, the mean reading test score was around 400 points among the bottom 10 per cent of children in terms of socioeconomic group,[124] compared with a mean score of around 550 points among the top 10 per cent of children in terms of socioeconomic group. This difference is enormous considering that an average student increases their test score by around 20 points in a school year.

On average, there was a small increase in socioeconomic differences in PISA mathematics and reading scores between 2018 and 2022. The gap between the top and bottom 20 per cent of children according to socioeconomic status increased on average by seven points in the countries covered in this report. This pattern varied across countries (*see Figure 25*). The gap decreased by more than 10 points in three countries – Chile, Malta and Mexico – while it increased by more than 10 points in 16 countries.

Figure 25: Changes in the socioeconomic status (SES) gap in mean mathematics scores, 2018–2022



Source: PISA, 2018 and 2022. See Appendix for details.

How does digital technology affect children's academic progress?

The potential negative consequences of digital technology on child well-being are the subject of intense public debate, in particular in relation to social media. Traditional academic outcomes, such as maths and reading scores, are often negatively associated with frequency of social media use. On the other hand, social media use has been linked with better academic performance in some studies.[125]

More importantly, most of the available evidence measures both factors at the same point in time and cannot test the direction of the link. Unfortunately, studies of the progression of the two factors over multiple time points are scarce. One such study in Canada found no significant relationship over time between social media use and academic performance.[126] Another study in Norway found varied and opposing effects of the expansion of broadband internet coverage on school grades according to gender, socioeconomic status and migration background.[127] For example, as broadband became more available, in lower socioeconomic groups, the boys' school grades improved whereas those of girls declined. On the other hand, increased broadband access appeared to benefit the school grades of girls with a migration background.

It remains unclear whether the use of mobile phones in the classroom has a net positive or negative impact.

A more direct link may be between digital technology use (including mobile phones and social media) during school time and academic achievement. Many countries are currently implementing or considering mobile phone bans in schools. The evidence on this topic is explored using data for children aged 15 years from PISA 2022, using three variables that are available for almost all Innocenti Report Card countries:

- children who said they felt anxious at least half of the time when they did not have their phone near them (26 per cent of the overall sample);
- children who said they were distracted by their phones during most lessons (31 per cent of the overall sample); and
- children who went to a school with a phone ban – regardless of the level of enforcement (32 per cent of the overall sample).

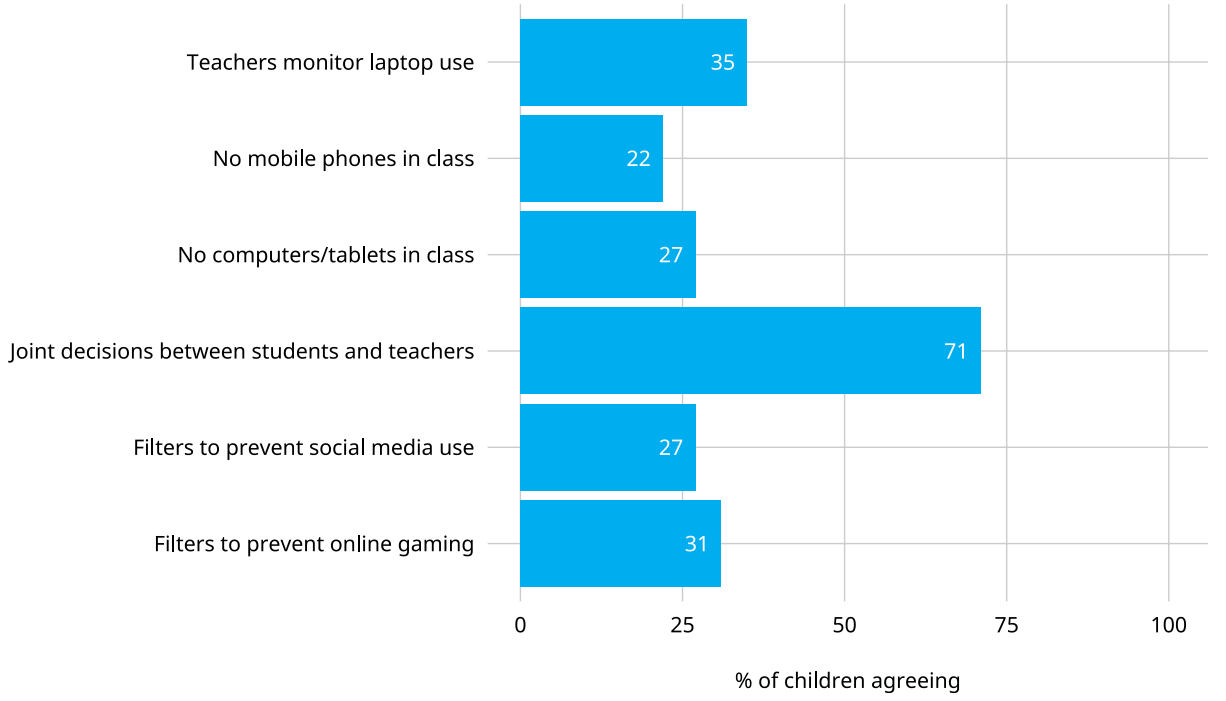
Children who felt anxious without their phone had significantly lower academic competence (by between 3 and 15 percentage points) in 32 countries. Children who were regularly distracted by their phones also had lower competence.

New analysis conducted for this report suggests that phone bans, by contrast, may yield inconclusive results. The analysis did not show a significant association with PISA test scores in 21 countries and worked in opposite directions in the rest,[128] although this limited association may be due to the incomplete or inconsistent implementation of the measures.

Nevertheless it remains unclear whether the use of mobile phones in the classroom has a net positive or negative impact. A review of 60 studies between 2011 and 2020 concluded that the evidence supported "the introduction of mobile phones in classrooms as beneficial for educational purposes provided that certain preliminary work is carried out and a certain development is achieved of the digital and media skills of both students and teaching staff."[129] There are also findings from recent studies suggesting the opposite.[130]

In the PISA study, 15-year-old children were asked about their views on six optional actions for addressing the issue of digital technology use in schools. Average levels of agreement across Innocenti Report Card countries are shown in Figure 26. The only statement that received majority agreement (71 per cent) was that of collaboration between students and teachers to decide on rules.

Figure 26: The views of 15-year-olds on measures to control digital technology use at school



Source: PISA, 2022. See Appendix for details.

Summary and implications

The school closures enforced to contain the spread of COVID-19 had a detrimental impact on children's academic skills. Action is needed to help all children who lived through the pandemic to catch up on lost learning. But this effort must not place undue stress on children, harm their mental health, or overshadow the importance of developing a wide range of skills (social, emotional, digital, etc.) that are essential for a good childhood and for a positive adulthood.

The school closures enforced to contain the spread of COVID-19 had a detrimental impact on children's academic skills.

One strategy is the RAPID framework.[131] This framework promotes a pathway to ensure that all children acquire foundational skills – the basic literacy, numeracy, and social and emotional competencies – that provide the building blocks for all other learning, knowledge and higher-order thinking skills. The RAPID framework contains five principles:

1. Reach every child and keep them in school.
2. Assess learning levels regularly.
3. Prioritize teaching the fundamentals.
4. Increase the efficiency of instruction, including through catch-up learning.
5. Develop psychosocial health and well-being.

Foundational skills are essential for children to develop the full range of other skills to be prepared for the future, including digital, entrepreneurial and job-specific skills.[132]

The report has highlighted gaps in digital skills, which are important to address through harnessing the advantages of digital technology. As with other aspects in this report, this entails actions at various levels of the framework presented in Figure 1. Key actions include:

- ensure that information technology requirements are included in education policies and financing;
- ensure the availability and usability of digital learning platforms and content; and
- support teachers to be able to promote children's effective and safe use of digital technologies.[133]

The question of the appropriate use of digital technology within schools, including mobile phone bans, is currently hotly debated. Children aged 15 years are generally against bans, but are supportive of solutions which are jointly created by staff and students. Article 12 of the United Nations Convention on the Rights of the Child gives children the right to be consulted on matters that affect them and for their views to be given due weight in accordance with their age and maturity. An approach based on this principle can yield a shared and sustainable approach to the issue of technology use in schools.

Conclusions and implications

Discussion of key findings

This report shows a mixed picture in terms of trends in child well-being in OECD/EU countries. Ongoing improvements in many of the conditions for child well-being have enabled some fundamental problems to be mostly eliminated.[134] By and large children's basic survival needs are being met. Child mortality is low and no longer primarily driven by disease; relatively few young children experience undernutrition (stunting and wasting); and most children receive educational support from the early years and attend school until at least mid-adolescence. These are important ingredients of a good childhood that, from a global perspective, cannot be taken for granted.

But children in wealthy countries are becoming less happy with their lives, more likely to be overweight and obese, and are not doing well at school. The trends that are now emerging present different challenges and require different solutions. It is tempting to propose simple solutions for these trends and focus on topical debates, such as children's use of digital technology. The analysis in this report shows that the situation is far more complex. There is no single cause for these trends, either individually or in combination. A number of factors are at play and may also interact to reinforce one another. This means that solutions also need to be multifaceted.

More than four years after the start of the **COVID-19 pandemic** it is beginning to be possible to understand not only its immediate impacts but also the potential longer term repercussions. The analysis presented in this report shows that the pandemic has contributed to recent negative trends in child well-being:

- Children's mental well-being worsened during the peak of the pandemic, although the longer-term picture is, as yet, unclear.

- The rates for overweight and obesity in childhood rose during this period, but again it is not clear yet whether this will persist.
- School closures contributed to the sharp decrease in children's academic skills, with substantial learning losses. Socioeconomic gaps in academic skills have also increased as a result of school closures.

Children's use of **digital technology** has triggered legitimate concerns that its excessive use of can be detrimental to children's mental well-being and academic outcomes. Marketing and promotion of unhealthy foods through digital channels (including social media) may also contribute to rising obesity levels among children.

On the other hand, digital technology was also instrumental in maintaining learning during school closures. When used in a structured way, digital technology can improve children's academic progress. It can also bring a number of advantages for children's well-being. Moderate use of social media can support children's social connections. An upcoming report on children's use of digital technology shows that children who do not use social media at all tend to be less satisfied with life and have poor-quality relationships with family and friends.[135]

Children in wealthy countries are becoming less happy with their lives, more likely to be overweight and obese, and are not doing well at school.

In fact, screen time is not the most useful indicator and more attention should be paid to the nature of children's online experiences.[136] The report also highlights limitations in children's digital skills, which have become key competencies.

Children need support in their use of digital technology that is safe and positive. This can include a stronger regulatory framework incorporating appropriate safeguards while enabling them to develop the digital skills they need today's world. The increasing power of artificial intelligence is bringing new opportunities and risks that will need to be considered in this context.

Evidence is also accumulating on the impact of **climate change** on child well-being in these countries. This includes direct effects on many children who are displaced from their homes or experience disruptions to their education.

Both **climate change** and **armed conflict** may also have broader impacts. With reference to the quote from Christabel, the 15-year-old from New

Zealand whose letter from 1919 was quoted at the start of the report, and other documentary evidence, it is clear that children are affected both directly and indirectly by global events, and that these events are likely to have an impact on their mental well-being.

Wealthy countries are also experiencing a **demographic transition**. With falling fertility rates and longer life expectancy, the demographic shift is a major force that will reshape societies in the coming years.[137] Up until now, there has been relatively little attention specifically to the ways that this trend will transform childhoods. Yet, growing up in ageing societies with fewer peers and the ongoing urban drift will fundamentally change children's experience of childhood.

There is a need for a coherent, holistic, whole-childhood approach that will require a shift in accepted thinking and in priorities for policies and interventions.

There are both opportunities and risks. Increased life expectancy means that children have more opportunity to spend time with grandparents and other extended family members, which can be positive for their social connections, support networks and sense of well-being. On the other hand, as children become a smaller minority of the population, there is a risk that facilities and services for them may become scarcer. This is an aspect that requires further research and consideration of its policy implications.

However, a recurring theme of this report is that recent events and trends do not tell the whole story. The three key trends in mental well-being, obesity and academic skills highlighted in the report were all evolving long before the current decade: Negative trends in mental well-being and rates of obesity started in the early 1990s.

Policy solutions to these issues that focus only on the latest attention-grabbing debate will fail to address the challenges affecting overall well-being in children. Instead, there is a need for a coherent, holistic, whole-childhood approach that will require a shift in accepted thinking and in priorities for policies and interventions.

Solutions for sustaining child well-being in an uncertain world

This report focuses on trends in three dimensions of child well-being: mental health, physical health and the development of skills. It identifies important deteriorating trends in all three dimensions. Reversing these trends requires

specific interventions in each category – interventions that recognize the spheres of influence outlined in the framework of child well-being (*see Figure 1*) as well as four overarching principles that form a coherent approach. The picture presented in Tables 1 and 2 of the report shows that countries have different strengths and weaknesses across the three dimensions of child well-being. Policymakers can use this information to consider the balance of strategies needed in their national context.

1. Improving mental health

The concluding section of Section 2 delineated a range of actions that can reverse the downward trend in children's mental health, reflecting the ecological approach presented in Figure 1 of this report. It includes a three-tier approach including promotion, prevention and specialist services. All components are substantially under-funded and require investment.

In addition, the following actions are proposed:

- Support the mental health and skills of parents and caregivers, including parenting programmes.
- Encourage activities and behaviours that enhance mental health, including physical activity, sleep (quality and quantity) and mindfulness.
- Promote social and emotional learning through schools to equip children with skills that can promote mental health.
- Tackle violence, bullying and discrimination in schools, communities and online.
- Reduce the stigma and misconceptions about poor mental health through awareness raising efforts.
- Create a positive environment that facilitates children's sense of agency, purpose and engagement in society.

2. Improving physical health

Rising rates of overweight and obesity represent a major public health challenge. To reverse these trends, it will be necessary to create healthier food environments for children. As described more fully on pages 26–27, this goal also requires a multilayered ecological systems approach. Countries should:

- Ensure that nutritious food is available and affordable at home and at school.
- Regulate the promotion and marketing of unhealthy foods, improve front-of-package food labelling, and raise taxes on selected foods.

- Implement public policies that promote healthy eating and physical activity, including the provision good public transport, leisure facilities and green spaces as well as family policies that enable parents and caregivers to balance paid work and family life.

Separately, children's health is also at risk from the many pollutants in the environment, including chemicals and microplastics. Reducing environmental pollution requires immediate attention, monitoring, research and policy action.

3. Supporting the development of a range of skills

Section 4 highlighted how the COVID-19 pandemic negatively affected children's education. There is a need for targeted actions to ensure that all children are able to catch up on missed learning, including children from disadvantaged backgrounds who were the worst affected. Key actions needed to improve skills are to:

- Ensure that foundational skills in numeracy, literacy and social and emotional competencies are prioritized through ongoing implementation of the RAPID framework (*see page 49*).
- Create a well-resourced and enabling environment to promote children's digital skills, which are essential for their well-being and safety.
- Engage children in finding the most effective strategies to maximize the benefits of utilizing digital technology for learning within and outside school.

4. Recognizing the connecting issues, strengthening synergies and avoiding tensions

Mental health, physical health and skills development are interconnected as children move through childhood. Issues in one area can affect others, either positively or negatively.

- Mental well-being and physical health are closely linked. Poor physical health can lead to social exclusion, feelings of isolation and anxiety in children. Conversely, stress and depression can negatively impact physical health by influencing sleep patterns, eating habits and physical activity.

- The relationship between mental well-being and skill development is also complex and bidirectional. Good mental health creates a conducive environment for learning. It fosters concentration and creativity. Issues

like anxiety and depression can hinder academic performance while an excessive focus on academic performance can place undue pressure on children. Conversely the development of social and emotional skills can promote mental health.

- Good physical health can also enable skill acquisition, facilitating both academic and extracurricular activities. Physical activity, for example, can improve cognitive function, attention and academic performance.

These connections can result in both virtuous and vicious cycles. Solutions to these different challenges should be developed harmoniously to maximize mutual reinforcement. This can prevent the gains made in one area from creating new problems in another.

5. Preparing for an uncertain future

The COVID-19 pandemic provided an important reminder of the way in which global events can impact children's lives. The evidence in this report demonstrates that, even in many of the richest countries in the world, these impacts were felt in children's health, life satisfaction and learning.

In the current global context, the pandemic should not be seen as an isolated event of the past. It is not difficult to anticipate similar impacts from climate change and conflict in the future. In fact, many children are already experiencing disruptions to their education and living conditions due to climate-related events.

There is therefore a need to use foresight to support policymakers in developing anticipatory measures to mitigate the impact of shocks on children's well-being.

6. Tackling inequalities

The report noted variations in children's well-being based on gender and family socioeconomic status. There are important inequalities to tackle in both respects.

However, clearly there are also other sources of inequality and groups of children that face specific disadvantages. Comparative international data on such inequalities are scarce, although there is often data for individual

countries on some topics. For example, Innocenti Report Card 18 used individual country studies to demonstrate inequalities in poverty risks for children whose families have an immigrant background, for indigenous children and for children with disabilities.

The next Innocenti Report Card, to be published in 2026, will address this issue in more detail by reviewing the best evidence and generating new material on a wide range of aspects of inequality in child well-being.

7. Engaging children

Christabel's words from 1919, which introduced this report, demonstrate that children's engagement in issues of global importance is not a new phenomenon. Children can, and want to, be involved in decisions that affect their lives and their futures, and in finding solutions.

In this respect, an excellent example is children's engagement in the climate debate. The child-friendly version of the United Nations Committee on the Rights of the Child's *General Comment 26 (2023) on children's rights and the environment with a special focus on climate change*[138] recommends: "Include children in the development of adaptation plans, decisions and solutions [to] the effects of climate change". This is an example of the principle of engaging children that can and should be applied to the many challenges to child well-being discussed in this report.

Understanding children's experiences, listening to their views and ideas and working with them are essential steps to finding solutions that will promote child well-being.

Endnotes

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2 United Nations Children's Fund. Data Warehouse. https://data.unicef.org/resources/data_explorer/unicef_f/?ag=UNICEF&df=MG&ver=1.0&dq=.MG+MG_INTERNAL_DISP_PERS+MG_NEW_INTERNAL_DISP..SH_DISASTER+POP_DISASTER&startPeriod=2010&endPeriod=2024. Accessed 25 November 2024.

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4 Rees, G., Gromada, A., Timar, E. & Carraro, A. (2025). *Conceptualizing and measuring child well-being: An ecological systems approach.* UNICEF Innocenti – Global Office of Research and Foresight.

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Appendix

Sources for the data in the figures and tables in the report are as follows:

All tables and figures

- The Kingdom of the Netherlands is referred to as 'Netherlands' for brevity.
- All charts show available data for all countries (irrespective of whether they are included in the league table).

Table 1: A league table of child well-being

- **Note:** A light blue background indicates a place in the top third of rankings, medium blue denotes the middle third and dark blue the bottom third. The rankings in the table were produced as follows: (1) a z-score was calculated for each indicator (reversed where necessary so that a higher score represents a more positive outcome); (2) the mean of the two z-scores within each dimension was calculated; (3) the means for each dimension were converted to a z-score; and (4) the overall ranking is based on the mean of the z-scores for each dimension. The league table ranking includes the 36 OECD/EU countries that had data of sufficient quality across all six indicators. Five countries with completed data on two dimensions are included at the bottom of the table, but they are not in the overall ranking. It was not possible to include two countries – Cyprus and Luxembourg – due to missing data across several dimensions.
- **Sources:** See Box 1 on measuring child well-being.

Table 2: Changes in six indicators of child well-being, 2018 to 2022

- **Note:** This table uses the same data as for Table 1, and all countries are included for each indicator that was available for both 2018 and 2022. The colour shading of the boxes is as follows:
  - Orange represents a deterioration in the indicator of more than 5 per cent.*
  - Gray represents no substantial change.
  - Blue represents an improvement in the indicator of more than 5 per cent.
  - White indicates missing data for one or both years.

  * Changes of just above 5 per cent in the mortality rate are not shaded orange due to the published confidence intervals in these estimates.
- **Sources:** See Box 1 on measuring child well-being.

Figure 2: Demographic trends in OECD/EU countries

- **Note:** Chart includes all 43 OECD/EU countries covered in the Innocenti Report Card. It uses population on 1 July, medium estimates (1950–2023) and projections (2024–2100).
- **Source:** United Nations, Department of Economic and Social Affairs, Population Division.

Figure 3: Changes in suicide rates (three-year average), ages 15 to 19 years, 2018 to 2022, OECD/EU countries

- **Note:** Suicide rate per 100,000 population aged 15 to 19 years old. Numbers presented are 3-year averages (2018 refers to the average of 2016 to 2018, 2022 refers to the average of 2020 to 2022).
- **Source:** WHO Mortality Database.

Figure 4: Long-term trends in suicide rates, ages 15 to 19 years, 1996 to 2022

- **Note:** Numbers presented are 3-year moving averages, as for Figure 3. The indicator used is the probability of dying between exact age of 5 years and exact age of 15 years, expressed per 1,000 children aged 5 years old.
- **Source:** WHO Mortality Database.

Figure 5: Changes in high life satisfaction in 15-year-olds, 2018 to 2022

- **Note:** 'High life satisfaction' refers to the share of students who scored more than 5 on a scale of overall life satisfaction from 0 ('not at all satisfied') to 10 ('completely satisfied'). Authors' analysis using weighted microdata.
- **Source:** PISA 2022.

Figure 6: Association of different factors with children's life satisfaction, 15-year-olds, 2022

- **Note:** The chart shows predicted probabilities obtained from a multivariate logit regression model with high life satisfaction as the dependent variable, also including country fixed effects. All presented effects are statistically significant at the 95 per cent level. Own analysis using PISA 2022 microdata, using senate weights.
- **Source:** PISA 2022.

Figure 7: Life satisfaction and time spent on social media by 15-year-old students

- **Note:** Own analysis using PISA 2022 microdata. Bivariate analysis. Within-country weights applied. Each country weighted equally.
- **Source:** PISA 2022.

Figure 9: Frequency of spending time talking with parents and life satisfaction

- **Note:** Own analysis using PISA 2022 microdata. Bivariate analysis. Within-country weights applied. Each country weighted equally.
- **Source:** PISA 2022.

Figure 10: Percentage of children experiencing frequent bullying, 15-year-olds, 2018 and 2022

- **Note:** Own analysis using PISA 2018 and 2022 microdata, weighted. Frequent bullying was defined as experiencing at least one of six forms of bullying at least a few times a month, based on the question: During the past 12 months, how often have you had the following experiences in school? with the possible experiences listed as: other students left me out of things on purpose, other students made fun of me, I was threatened by other students, other students took away or destroyed things that belonged to me, I got hit or pushed around by other students and other students spread nasty rumours about me.
- **Source:** PISA 2018 and 2022.

Figure 11: Changes in child mortality, ages 5 to 14 years old, 2018 to 2022

- **Note:** The indicator used is the probability of dying between exact age of 5 years and exact age of 15 years, expressed per 1,000 children aged 5 years old.
- **Source:** United Nations Inter-agency Group for Child Mortality Estimation (UN IGME) <https://childmortality.org/all-cause-mortality/data/download?indicator=MRY5T14>.

Figure 12: Trends in child mortality, aged 5 to 14, 1990 to 2022

- **Note:** The indicator used is the probability of dying between exact age of 5 years and exact age of 15 years, expressed per 1,000 children aged 5 years old. The rate shown is the population-weighted rate for all countries.
- **Source:** UN IGME, <https://childmortality.org/all-cause-mortality/data/download?indicator=MRY5T14>.

Figure 13: Trends in overweight, age 5 to 19 years, 1990 to 2022, OECD/EU countries

- **Note:** The percentage of 5–19 years old children with a body mass index (BMI) greater than 1 standard deviation above the median, according to the WHO references for school-age children and adolescents.
- **Source:** World Health Organization, <www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-overweight-among-children-and-adolescents-bmi-1-standard-deviations-above-the-median-(crude-estimate)-(-)>.

Figure 14: Changes in overweight, ages 5 to 19 years old, 2018 to 2022

- **Note:** The annual change in the prevalence of 5–19 years old children with a body mass index (BMI) greater than 1 standard deviation above the median, according to the WHO references for school-age children and adolescents.
- **Source:** World Health Organization, <www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-overweight-among-children-and-adolescents-bmi-1-standard-deviations-above-the-median-(crude-estimate)-(-)>.

Figure 15: Average weekly working hours per employed person and rates of overweight (5- to 19- year-olds), 2022

- **Note:** The data on working time refer to the "Mean weekly hours actually worked per employed person" as reported by ILO.
- **Source:** Mean weekly working hours, ILOSTAT, <https://ilostat.ilo.org/topics/working-time/>, accessed July 2024; The prevalence of overweight is retrieved from the World Health Organization, <www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-overweight-among-children-and-adolescents-bmi-1-standard-deviations-above-the-median-(crude-estimate)-(-)>.

Figure 16: Air pollution, mean population exposure to PM2.5, 2000 to 2022

- **Source:** OECD Data Explorer.

Figure 17: Children who made friends easily at school, 15 years old, 2018 to 2022

- **Note:** The percentage of children aged 15 years who agreed or strongly agreed that they make friends easily at school. Own analysis from PISA microdata. Within-country weights applied.
- **Source:** PISA 2018 and 2022.

Figure 18: Ability to understand other people cognitively and emotionally: Perspective-taking and empathy, 15-year-olds

- **Note:** The percentage of children aged 15 years who agreed or strongly agreed to the following statements: "I try to consider everybody's perspective before I take a position" and "I can sense how others feel". Own analysis from PISA microdata. Within-country weights applied.
- **Source:** PISA 2022.

Figure 19: Ability to see others' perspectives by gender and parental occupation, 15-year-olds

- **Note**: The percentage of children aged 15 years who agreed or strongly agreed to the following statements: "I try to consider everybody's perspective before I take a position" and "I can sense how others feel". Own analysis from PISA microdata. Senate weights applied.
- **Source**: PISA 2022.

Figure 20: Children who felt they could tell if a website is trustworthy, 10-year-olds

- **Note**: Data taken directly from PIRLS 2021 almanac.
- **Source:** PIRLS 2021.

Figure 21: Changes in academic proficiency, 15-year-olds, 2018 to 2022

- **Note**: The percentage of children meeting or exceeding basic proficiency in both reading and maths tests multiplied by the coverage index 3 of the PISA survey. Data taken directly from PISA supplementary tables.
- **Source**: PISA 2018 and 2022.

Figure 22: Trends in PISA test scores for reading and mathematics, 15-year-olds, 2000-2022

- **Source**: OECD, PISA 2022 Database, Tables I.B1.5.4 and I.B1.5.5.

Figure 23: Reading skills at around age 10 years, 2016 and 2021

- **Note: Data taken directly from PIRLS 2021 report. Mullis, I. et al.. (2023)** *PIRLS 2021 International Results in Reading*. Boston College, TIMSS & PIRLS International Study Center. <https://pirls2021.org/results/>.
- **Source:** PIRLS 2016 and 2021.

Figure 24: Problems with remote learning during COVID-19 identified by children

- **Note**: 'High' refers to a country with the highest value. 'Low' to a country with the lowest value. 'Average' to the mean value for all Innocenti Report Card countries. Own analysis from microdata. Within-country weights applied.
- **Source**: PISA 2022.

Figure 25: Changes in the socioeconomic (SES) gap in mean mathematics scores, 2018–2022

- **Note:** The analysis is based on the top and bottom within-country quintiles of the index of economic, social and cultural status (ESCS). Own analysis from microdata. Within-country weights applied.
- **Source:** PISA 2018 and 2022.

Figure 26: The views of 15-year-olds on measures to control digital technology use at school

- **Note:** Percentage agreeing (including strongly agreeing) with each measure. Only covers countries that used the optional ICT questionnaire, therefore excludes: Canada, Colombia, Cyprus, France, Luxembourg, Mexico, the Kingdom of the Netherlands, New Zealand, Norway and Portugal. Own analysis from PISA microdata. Senate weights applied.
- **Source:** PISA 2022.

Country names and codes

AU	Australia
AT	Austria
BE	Belgium
BG	Bulgaria
CA	Canada
CH	Switzerland
CL	Chile
CO	Colombia
CR	Costa Rica
CY	Cyprus
CZ	Czechia
DE	Germany
DK	Denmark
ES	Spain
EE	Estonia
FI	Finland
FR	France
GB	United Kingdom of Great Britain and Northern Ireland
GR	Greece
HR	Croatia
HU	Hungary
IE	Ireland
IS	Iceland
IL	Israel
IT	Italy
JP	Japan
KR	Republic of Korea
LT	Lithuania
LU	Luxembourg
LV	Latvia
ME	Mexico
MT	Malta
NL	Kingdom of the Netherlands
NO	Norway
NZ	New Zealand
PL	Poland
PT	Portugal
RO	Romania
SK	Slovakia
SI	Slovenia
SE	Sweden
TR	Türkiye
US	United States of America

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