

Chapter 2

Comparative Child Well-being across the OECD

This chapter offers an overview of child well-being across the OECD. It compares policy-focussed measures of child well-being in six dimensions, chosen to cover the major aspects of children's lives: material well-being; housing and environment; education; health and safety; risk behaviours; and quality of school life. Each dimension is a composite of several indicators, which in turn have been selected in part because they are relatively amenable to policy choices. This chapter presents the theory, methodology and data sources behind the measures, as well as the indicators for each member country in a comparable fashion. It is at the individual level that the indicators can best inform policy and comparisons can be most readily made. The data is reported by country and, where possible, by sex, age and migrant status. All indicators presented in the framework are already publically available. There has been no attempt to collect new data. Note that no single aggregate score or overall country ranking for child well-being is presented. Nevertheless, it is clear that no OECD country performs well on all fronts.

Introduction

How does child well-being compare across OECD countries? This chapter presents a child well-being framework and compares outcome indicators for children in OECD countries across six dimensions: material well-being; housing and environment; education; health; risk behaviours; and quality of school life.

The first section of this chapter presents a multi-dimensional child well-being framework for OECD countries, before going on to review the theoretical and empirical literature on child well-being from a policy perspective in the second section. The third section explains the dimensions and indicator selection criteria used in the OECD child well-being framework. The fourth and final section presents and discusses the child well-being indicators one by one. It is at this level that the indicators can best inform policy and that countries can be most readily compared. Where data is available, the country indicators are also broken down to look at variations by age, sex and migrant status.

No one country performs well on all indicators or dimensions of child well-being. Where indicators can be compared by sex, age and migrant status, boys often have worse outcomes than girls and non-native children have worse outcomes than native children. However girls' health behaviours are sometimes worse, as they exercise less and smoke more than boys. Results shown by age are mixed; children smoke and drink more and exercise less with age, but rates of bullying decline.

An overview of child well-being across OECD member countries

The policy-focused measures of child well-being are summarised in Table 2.1. The table provides a country-comparison of child well-being measured across dimensions of material well-being, housing and environment, educational well-being, health, risk behaviours, and quality of school life. Each of the six dimensions is a composite of several core indicators. Each country has a colour and rank assigned for each well-being dimension. Blue or dark grey colours are assigned when countries are respectively well above or well below the average for the OECD area. White values indicate countries around the OECD average. The greater the number of white values in a dimension, the closer the clustering of OECD countries across that dimension. Ranks are also assigned that give an order to the countries, with lower numbers reflecting a better child well-being performance along each of the six dimensions. Though more statistically sophisticated algorithms are possible, the clustering of countries into three groups using this simple approach is robust to alternatives.

The well-being indicators are presented in an index by dimensions, but not aggregated into a single over-arching child well-being index. No over-arching index is presented due in part to the limitations in the coverage of available data. In addition there is little theory to guide which aggregation method to use. Given a lack of good theory and data, it was considered that creating an over-arching index would distract the focus towards discussion of the aggregation method, and away from more important practical issues of improving child well-being.

Table 2.1. Comparative policy-focused child well-being in 30 OECD countries
1 ranks the best performing country

	Material well-being	Housing and environment	Educational well-being	Health and safety	Risk behaviours	Quality of school life
Australia	15	2	6	15	17	n.a.
Austria	5	9	18	27	27	11
Belgium	11	11	20	26	13	19
Canada	14	n.a.	3	22	10	16
Czech Republic	18	24	19	5	23	17
Denmark	2	6	7	4	21	8
Finland	4	7	1	6	26	18
France	10	10	23	19	12	22
Germany	16	18	15	9	18	9
Greece	26	19	27	23	7	24
Hungary	20	21	12	11	25	7
Iceland	8	4	14	2	8	1
Ireland	17	5	5	25	19	10
Italy	19	23	28	17	11	20
Japan	22	16	11	13	2	n.a.
Korea	13	n.a.	2	10	2	n.a.
Luxembourg	3	8	17	7	14	23
Mexico	29	26	29	28	30	n.a.
Netherlands	9	17	4	8	9	3
New Zealand	21	14	13	29	24	n.a.
Norway	1	1	16	16	4	2
Poland	28	22	8	14	20	15
Portugal	25	20	26	18	6	21
Slovak Republic	27	25	24	1	22	25
Spain	24	13	21	12	16	6
Sweden	6	3	9	3	1	5
Switzerland	7	n.a.	10	21	5	13
Turkey	30	n.a.	30	30	29	12
United Kingdom	12	15	22	20	28	4
United States	23	12	25	24	15	14

Note: To create the table, each indicator was converted into a standardised distribution. Then a within-dimension average was taken. This within-dimension standardised average was then used to rank countries in each dimension. Using standardised figures each country with half a standard deviation higher than the OECD average is coloured blue on that dimension, whilst countries in dark grey are at least a half standard deviation lower.

n.a.: no country data.

Source: OECD based on analysis in this chapter.

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Twenty-four OECD countries have at least one dimension where a blue value is recorded. Italy, Mexico, New Zealand, Poland, Turkey and the United States have no blues. Thirteen countries record blues on two or more dimensions. On the other hand, 20 countries have a dark grey in at least one dimension. Eleven countries have two or more dark greys. No one country does well across all dimensions. Iceland and Sweden are the strongest performers, with each having five blues and one white. Greece and Mexico, with five dark greys, have the least strong performance.

There are two main reasons to identify differences in country performance across these child well-being dimensions. First, it shows the dimensions of child well-being where countries are comparatively successful or unsuccessful. Table 2.1 consequently highlights where significant improvement in child well-being may be possible and so provides countries with information that can help in developing child policy priorities. Second,

Table 2.1 allows comparative leaders and laggards to be identified. The question of how leaders arise, and why laggards fall behind can then begin to be addressed, and examples of best country practices can be drawn for future policy changes.

What is child well-being?

Child well-being measures the quality of children's lives. However, as simple as the concept sounds, there is no unique, universally accepted way of actually measuring child well-being that emerges from the academic literature.

There are two broad approaches to defining and measuring child well-being. The first approach is to consider well-being as a multi-dimensional concept. Researchers decide on the important life dimensions and populate these dimensions with indicators. The second approach is to directly ask children about how they view their well-being.

In a recent literature survey, child well-being is defined as “a multi-dimensional construct incorporating mental/psychological, physical and social dimensions” (Columbo, cited in Pollard and Lee, 2003, p. 65). This definition, however, omits a material aspect, which is important in many other studies which consider child poverty or child material deprivation. More recently, Ben-Arieh and Frones (2007a, p. 1) have offered the following definition, also indicators-based: “Child well-being encompasses quality of life in a broad sense. It refers to a child's economic conditions, peer relations, political rights, and opportunities for development. Most studies focus on certain aspects of children's well-being, often emphasising social and cultural variations. Thus, any attempts to grasp well-being in its entirety must use indicators on a variety of aspects of well-being.”

Alternatively, child well-being can be expressed in terms of the over-arching self-reported subjective well-being of the child. This approach not only allows children to express their own well-being, but avoids decisions about which life dimensions are covered, which indicators are included, and if aggregation takes place which weights are assigned to each dimension. Some of the multi-dimensional approaches have used over-arching subjective measures as component indicators, rather than as part of a conceptually different approach. A limitation of the subjective approach is that younger children cannot respond to such questions. From a policy perspective a second limitation is that little is known about policy amenability of child measures of subjective well-being.

For the purposes of this report, child well-being is measured using multiple, policy-amenable measures. In practice, and partly for pragmatic reasons, child well-being is usually considered as a multi-dimensional concept. This pragmatism is determined by the limited theory and data and by an understandable scepticism regarding the ability of younger children to respond to questions about their global subjective well-being. The dimensions are identified by consensus, with justifications drawn from the child research literature and the United Nations Convention on the Rights of Children.

Cross-national comparisons of child well-being require decisions about how many and which dimensions to include, how many indicators in each dimension, and the placement of which indicators in what dimensions. There are also aggregation decisions to be made. Various methods can be used to add up indicators within dimensions and then add up dimensions to arrive at country aggregate measures of child well-being. A problem with aggregation approaches is that they infer common priorities for all countries across all dimensions by placing the same country valuation on outcomes.

A closer look at child well-being

This section locates the OECD work by taking a closer look at some critical issues behind existing multi-dimensional measures of child well-being. It starts with a review of positions in the academic literature on child well-being before moving on to review the empirical research undertaken in the cross-country field.

Review of the child well-being literature

There are two prominent divides in the literature on child well-being. The first divide is between what might be termed a “developmentalist perspective” and a “child rights perspective”. The second is between those who consider well-being outcomes from the point of view of socially and individually costly outcomes (that is to say, indicators that measure undesirable things like poverty, ignorance and sickness) and those who wish to take a more positive perspective. The developmentalist perspective is more likely to be associated with a greater focus on poor child outcomes and the child rights perspective with a focus on the positive side of child well-being.

Child well-being today and tomorrow

The developmentalist perspective focuses on the accumulation of human capital and social skills for tomorrow. This long view of child well-being has been described as focusing on “well-becoming”. The child rights perspective, on the other hand, places a strong rights-based emphasis on children as human beings who experience well-being in the here-and-now. The rights perspective also seeks the input of children in the process of deciding what their well-being might be and how it might be best measured (Casas, 1997; Ben-Arieh, 2007a).

In some cases, the differences between the two perspectives are more apparent than real, since what is self-evidently good for the child’s current well-being may also be important for the child’s future. For example, child abuse harms the well-being of children in the here-and-now, as well as damaging their longer-term well-being outcomes as adults (Hood, 2007; Currie and Tekin, 2006). However, in other situations there are clear trade-offs. A child may favour his or her current well-being, for example playing with their friends (which a child rights perspective might support), over learning in school to improve future life-time prospects (which a developmentalist perspective might support).

The indicators chosen in this report place a strong focus on future well-being for children. A future focus is reasonable in child policy given that children have the longest futures of any age group. Nonetheless, the well-being of children today should not be neglected. Childhood is a considerable period of time. If the United Nations age definition of a child as a person under age 18 is used, then during a typical life cycle people in OECD countries spend about one-quarter of their lives as children.

Positive versus negative measures of child well-being

A second divide in the child well-being literature is between those who place a focus on poor child well-being outcomes and those who prefer to conceive of child well-being as a positive continuous variable. The latter group sometimes describe the former approach as a “deficit approach” and their own approach as a “strengths-based” one (Ben-Arieh and Goerge, 2001; Pollard and Lee, 2003; Fattore et al., 2007).

Historically, the measurement of child well-being has focused on children with behaviour problems, disorders, and disabilities rather than attempting to measure a continuum of well-being for all children. A focus on deficits is often criticised in the academic literature. Taking a “deficit approach” is used pejoratively. However, there are some very good reasons why policy makers may choose to focus on well-being for children in terms of so-called deficit measures. These policy reasons encompass both efficiency and equity rationales.

An efficiency rationale for a policy focus on child deficits is that they often generate high costs for the rest of society. These include the monetary and non-monetary costs of crime and anti-social behaviour. These costs can be large for example in countries such as the United States where crime rates are high compared to the OECD average. Preventing the multifarious costs of crime is one of the strong arguments behind intervention early in the life cycle of socially disadvantaged children. Similarly, deficits in terms of human capital formation or health create third-party costs via raising claims made on the welfare state, thus necessitating higher average tax rates (Currie and Stabile, 2007).

A focus on deficits can also be rationalised by equity concerns for the more disadvantaged in society. For example, including indicators of child abuse or child mortality in the measure of well-being may be important in an equity sense, even though such problems do not affect a sizeable majority of children. Considering child well-being as a positive continuous variable directs policy attention away from the less well-off children who are picked up by deficit measures.

However, it certainly remains the case that relying only on deficit measures misses the positive strengths and abilities that children possess, and on which society must build to enhance child well-being.

Child participation in measuring well-being

Theory and measurement work on child indicators has moved to viewing children as acting subjects with their own perspectives. One view is that, “if we are to adequately measure children’s well-being, then children need to be involved in all stages of research efforts to measure and monitor their well-being” (Fattore *et al.*, 2007, p. 5). Such an approach, although well-intentioned, raises serious issues. First, it treats childhood as a lump, as if an 8-month-old were the same as an 8-year-old, and voids childhood of a developmental focus. Second, it does not address the problem of how to involve a newborn, or the youngest children.

In addition, participation is conceived of as taking place only between the researcher and the child. This fails to recognise that children typically have parents who bear the primary legal responsibility for them and, by implication, for their safety and their material, social and emotional well-being. Parents have known their child since birth, across multiple environments. Yet parental participation receives limited consideration in this approach.

Cross-country comparisons of child well-being

In recent years the measurement of child well-being in terms of aggregate international comparisons and country studies has grown rapidly (Ben-Arieh and Goerge, 2001). In addition to the international comparative level, child well-being has also been examined at a national and sub-national level (see Hanifin *et al.*, 2007 for Ireland; Land, 2007a for the United States; and at city level, see Hood, 2007 for London). There is a small literature that combines multiple, dimension-based outcomes into an aggregate overall well-being at a country level and

provides international league tables of child well-being performance (UNICEF, 2007; Heshmati et al., 2007; Bradshaw et al., 2007; Richardson et al., 2008). The most prominent example is the recent UNICEF child well-being report. UNICEF takes a multi-dimensional dimension-based indicator approach. They then use a simple algorithm to derive a child well-being league table for a sample of OECD member states.

The UNICEF league table data are shown in Table 2.2, with the country ranking results from each of the six dimensions, and the overall country result, which is a simple average of the rankings. The results are for 21 out of 30 OECD member countries. Due to insufficient data, nine countries – Australia, Iceland, Japan, Korea, Luxembourg, Mexico, New Zealand, the Slovak Republic, and Turkey – are missing from the table.

High overall levels of child well-being are achieved by the Netherlands and Sweden and low levels by the United States and the United Kingdom. Even at the top performing end, both the Netherlands and Sweden have a dimension along which performance is at best only adequate (material well-being for the Netherlands and Family relationships for Sweden). At the bottom, both the United States and the United Kingdom perform worse than the median country on all dimensions.

The UNICEF data have been re-analysed by Heshmati et al. (2007) using several more complex aggregation algorithms to arrive at a global child well-being index and rich

Table 2.2. UNICEF shows high overall levels of child well-being are achieved by the Netherlands and Sweden and low levels by the United States and the United Kingdom

1 ranks the best performing country

	Dimension number	1	2	3	4	5	6
	Average dimension rank	Material well-being	Health and safety	Educational well-being	Family and peer relationships	Behaviours and risk	Subjective well-being
Netherlands	4.2	10	2	6	3	3	1
Sweden	5	1	1	5	15	1	7
Finland	7.3	3	3	4	17	6	11
Spain	8	12	5	16	8	5	2
Switzerland	8	5	9	14	4	10	6
Denmark	8.2	4	4	8	9	12	12
Norway	8.3	2	8	9	10	13	8
Belgium	10	7	12	1	5	19	16
Italy	10	14	6	20	1	9	10
Ireland	10.2	19	19	7	7	4	5
Germany	11.2	13	11	10	13	11	9
Greece	11.8	15	18	17	11	7	3
Canada	12	6	14	2	18	17	15
France	12.5	9	7	15	12	14	18
Poland	12.5	21	16	3	14	2	19
Czech Republic	12.7	11	10	11	19	8	17
Austria	13.7	8	20	19	16	15	4
Portugal	14	16	15	21	2	16	14
Hungary	14.5	20	17	13	6	18	13
United States	18	17	21	12	20	20	
United Kingdom	18.5	18	13	18	21	21	20

Source: UNICEF (2007), *Child Poverty in Perspective: An Overview of Child Well-being in Rich Countries*, Innocenti Report Card 7, Florence.

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country league table. The different approaches change the league table somewhat, but not greatly. A further feature of Heshmati *et al.*'s approach is that more countries are included as a consequence of relaxing some of the data requirements of the UNICEF Report. The additional four OECD countries included are Australia, Iceland, Japan, and New Zealand. Of these countries, Iceland ranks well, Australia and Japan rank moderately well, and New Zealand ranks poorly.

Dijkstra (2009) also recalculates the child well-being ranks produced by UNICEF, using both new weightings and harmonic means aggregation. Dijkstra finds that the methods applied by UNICEF to group countries (and assign ranks at the higher and lower level) are sufficiently robust.

Overall, while these studies have added considerably to the sum of knowledge on child well-being in rich countries, they share certain problems:

- There is little analytical argument regarding which indicators and what number of indicators are suitable for each dimension. In fact, rather than a comprehensive theory of well-being, the availability of data is a primary driver behind these reports.
- Most approaches rely on surveys that are not designed to monitor child well-being overall. These surveys focus on specific well-being dimensions like health, income and education. These surveys typically also have less-than-full OECD coverage.
- In the absence of any good theory pointing the way, aggregation methods weight indicators and dimensions on statistical or *ad hoc* grounds.
- The indicator data is sometimes out-dated and dates can vary across countries and dimensions.
- The indicator data are mainly adolescent-focused. Additionally, it is often impossible to disaggregate within countries by social grouping (by sex, ethnicity, socio-economic status and so on).
- Lastly, these indexes do not allow a ready disaggregation of child well-being at different points in the child life cycle, a result again reflecting the paucity of purpose-collected information.

Until new data designed for the purposes of monitoring child well-being across countries is collected, not all of the problems identified in previous work can be addressed. However, for the purposes of the analysis undertaken here, some improvements can be made.

Selecting child well-being dimensions and indicators

This section addresses the rationale for selecting the child well-being dimensions and indicators to consider in relation to child policy choices. As discussed above, because there is no obvious rationale for aggregating across dimensions and because of limited data, this report does not present a single aggregate score or overall country ranking for child well-being.

The six dimensions

Six dimensions of child well-being have been identified here to cover the major aspects of children's lives: material well-being, housing and the environment, education, health, risk behaviours, and quality of school life.

Each dimension has roots in the international standards agreed for children in the United Nations Convention on the Rights of the Child (United Nations, 1989). All previous cross-country research uses the UNCRC as a defining text in determining the framework in

which to assess child well-being outcomes (UNICEF, 2007; Bradshaw *et al.*, 2007). The work presented here is no exception. To a large extent, the dimensions covered within the OECD framework follow influential research by UNICEF (2007) and Bradshaw *et al.* (2007).

The advantage of applying the UNCRC to cross-country analysis of child well-being, and specifically to the selection of dimensions within a multidimensional framework, is that disagreements as to which dimensions of children's lives require policy support are reduced. As signatories to the UNCRC, each OECD member country agrees in principle to meet the standards set for children by the Convention. Without the Convention, finding a consensus on a cross-national set of standards for children would be a more complex task, with each country potentially prioritising certain national-specific factors over others.

The approach here contains the same number of dimensions as the UNICEF report. Four of the six dimensions are effectively the same. The “family and peer relationships” and “subjective well-being” dimensions included in the UNICEF report are omitted. The reason is not because they are unimportant for child well-being, but because this report has a strong policy focus. It is unclear how governments concerned with family and peer relationships and subjective well-being would go about designing policies to improve outcomes in these dimensions. On the other hand, the newly included dimensions of “housing and the environment” and “quality of school life” are much more influenced by policy. Governments typically intervene considerably in the housing market, especially for families with children, and fund, provide and regulate the schooling system, with direct implications for child well-being (Box 2.1).

Selection of indicators

Each of these six dimensions of child well-being must be populated with indicators. Across the six dimensions, 21 indicators of child well-being have been selected. A number of ideal selection requirements were borne in mind in choosing indicators.

- *The child is taken as the desirable unit of analysis, rather than the family.* A child-centered approach is now the norm in studies of child poverty and child well-being.
- *Indicators should be as up-to-date as possible.* Indicators cannot reliably inform comparative policy unless they paint a picture of child well-being reasonably close to the here-and-now.
- *Indicators should be taken from standardised data collections which collect comparable cross-country information.* If data is not reasonably comparable, it will fail to meet one of the most basic needs of a cross-country, data-driven study.
- *Indicators should cover all children from birth to 17 years inclusive.* The United Nations definition of a child as a person under age 18 is used here. Given evidence about the importance of the in-utero environment for the child's future health and development and the fact that in most countries a foetus legally becomes a child in utero, it may also be desirable to extend the definition of childhood to the period before birth.
- *Indicators need a policy focus.* As child well-being measures in this chapter are policy-focused, indicators with a relatively short causal chain from government action to improvements in well-being are favoured over indicators for which relationships between policy actions and outcomes were more speculative and the causal chain was longer.
- *Indicators should cover as many OECD member countries as possible.*

Box 2.1. Child well-being by age: what indicators would be desirable?

Structuring the child well-being indicators presented here around the three stages of early, middle and late childhood was carefully considered by the OECD. There are a variety of reasons why such a structure was attractive, including the importance of considering childhood developmentally and the fact that well-being can be measured in different ways for children at different ages. Such an approach has been already taken in, for example, the Australian Institute of Health and Welfare's *Making Progress. The Health, Development and Wellbeing of Australia's Children and Young People* (2008) report.

The reason for not choosing the child-age-based structure was a lack of data. While the period of late childhood can be well-populated with a broad range of indicators, there is almost no good data across the breadth of child outcomes during early and middle childhood for a sufficient number of OECD countries. Moving beyond birth-weight data and breastfeeding data at the beginning of early childhood and vaccination data at age 2, only mortality data meets comparability and country coverage requirements until the end of middle childhood is reached.

Some of the indicators used in this chapter are child-age specific. Where possible, indicators are broken down by the three age stages of childhood. Finally, there are a number of age-specific indicators included such as birth-weight, breastfeeding, vaccination (all early childhood) and indicators in the risk behaviour dimension (late childhood).

In an ideal world, a consideration of well-being could have been organised around the stages of childhood if there were more data available. So what data would be desirable? There is a need for comparable indicators of child cognitive and behavioural development covering the points of entry into pre-school and into compulsory schooling. Equally, cognitive and behavioural indicators several years into the compulsory schooling period, around ages 8-10, would be of value. Data on child nutrition, height and weight, and oral hygiene at the same ages would be of interest. Consistent and comparable data on breastfeeding durations of children from birth would add to the nutrition information. Breaking down child poverty rates by stages of childhood would be informative, and could be done readily enough. Self-assessed life satisfaction data could be collected from about age 8. Data on chronic child physical health conditions such as asthma could be collected. Comparable information on parental time investment in children would be of value, as would information on the proportion of a family's monetary resources that was devoted to children.

There is also an important data gap relating to the pre-natal period. Comparable data on the in-utero environment, including information on pre-natal maternal leave taken and maternal stress, smoking, drinking, drug taking and diet during pregnancy, would be of a great deal of value to policy makers.

Within each of the six child well-being dimensions, the selection of indicators emphasises complementarity. This complementarity comes in a number of distinct forms.

- *Child age.* If one indicator focuses on children of a certain age, other indicators within the dimension should provide information about children of other ages.
- *Efficiency and equity considerations.* Indicators within a dimension should use some measure of the spread of outcomes within a country, which gives an indication of equity, but also provide average country outcomes, which gives a complementary indication of efficiency.
- *Child well-being for today and development for the future.* Indicators within each dimension should have regard to both current child well-being and developmental perspectives of

child well-being, to assess both living standards today and how well a society is preparing for its children's futures.

- *Coverage of outcomes within a dimension.* It is desirable to cover a range of important sub-dimensions within each dimension, such as both mental and physical health within the health dimension. There is little point in having several very good indicators of almost the same outcome.

Practical limitations

A summary of the indicators and a qualitative assessment of their performance relative to the selection requirements is provided in Table 2.3. Despite a desire to cover all the OECD countries, there was incomplete coverage for the majority of indicators. Complete country coverage was possible for eight of the 21 indicators. Equally, in many

Table 2.3. **Selection of child well-being indicators: summary**

	Indicator characteristics					Country coverage	Complementarity in dimension				
	Child centred	Year	Standard collection	Age coverage (years)	Policy relevance ¹		Age coverage (years)	Efficiency measures	Equity measures	Today and tomorrow	Concept coverage
Material well-being							0 to 17	✓	✓	✓	✓
Average disposable income	x	2005	x	0 to 17	High	30					
Children in poor homes	x	2005	x	0 to 17	High	30					
Educational deprivation	✓	2006	✓	15	Med	30					
Housing and environment							0 to 17	✓	✓	x	✓
Overcrowding	✓	2006	x	0 to 17	High	26					
Poor environmental conditions	✓	2006	x	0 to 17	Med	24					
Educational well-being							15 to 19	✓	✓	✓	✓
Average mean literacy score	✓	2006	✓	15	Med	30					
Literacy inequality	✓	2006	✓	15	Med	30					
Youth NEET rates	✓	2006	x	15 to 19	High	28					
Health and safety							0 to 19	✓	✓	✓	x
Low birth weight	✓	2005	x	0	Med	30					
Infant mortality	✓	2003-05	x	0-1	Med	30					
Breastfeeding rates	✓	1998-06 ³	x	0	High	29					
Vaccination rates (pertussis)	✓	2003-05	x	2	High	29					
Vaccination rates (measles)	✓	2003-05	x	2	High	29					
Physical activity	✓	2005-06	✓	11 to 15	High	26					
Mortality rates	✓	2001-06 ²	✓	0 to 19	Med	28					
Suicide rates	✓	2001-06 ²	✓	0 to 19	Med	28					
Risk behaviours							13 to 19	✓	✓	✓	✓
Smoking	✓	2005-06	✓	15	High	24					
Drunkenness	✓	2005-06	✓	13 to 15	Med	24					
Teenage births	✓	2005	✓	15 to 19	Med	30					
Quality of school life							11 to 15	✓	✓	x	x
Bullying	✓	2005-06	✓	11 to 15	Med	24					
Liking school	✓	2005-06	✓	11 to 15	Med	25					

1. *Policy relevance: High:* governments can directly intervene with the family or individual through established policies, or through multiple secondary interventions. *Medium:* government relies on third-party intervention (professional or community [non-familial] actors). *Low:* no established routes for government intervention. In practice, no "low" policy relevant indicators were retained. An example of such an indicator might be, for example, peer relationships.

2. Belgian data is for 1997.

3. Swiss data is for 1994.

"✓" refers to where selection criteria for the indicator or dimension are met.

"x" refers to where selection criteria for the indicator or dimension are not well met.

cases it was not possible to find indicators that gave good coverage of child outcomes across the child life cycle. Only 6 out of 21 indicators cover all children from birth to age 17. No indicators of well-being were available for the pre-natal period on any dimension, few for the period of early childhood (from birth to 5 years) and even fewer for middle childhood (from 6 to 11 years). For good reasons, the available international survey-based data collections tend to follow children during late childhood, with a strong educational emphasis or health emphasis. Unfortunately, this focus creates considerable difficulties for good child age coverage across many dimensions.

Another practical limitation concerns the complementarity of coverage within some dimensions, for example health. Despite acceptable coverage of physical health indicators, there was a lack of complementary mental health indicators available for children.

An ability to break down national indicators by sub-categories was not an explicit criterion for indicator selection in Table 2.4. Nevertheless, such breakdowns can be interesting. Finding common sub-categories to compare, say, differences by child ethnic origin across countries is obviously impossible. More readily available were breakdowns by child age and sex. The indicators able to be broken down by child age, sex, and migrant status are shown in Table 2.4. Age breakdowns in terms of the risk behaviour and quality of school life dimensions are not available across the entire child life course, but just across parts of middle and late childhood (ages 11, 13 and 15).

Table 2.4. **Breakdown of child well-being indicators by sex, age and migrant status**

	Reported by sex	Reported by age	Reported by migrant status
Material well-being			
Average disposable income	No	No	No
Children in poor homes	No	No	No
Educational deprivation	Yes	No	Yes
Housing and environment			
Overcrowding	No	Yes	No
Poor environmental conditions	No	Yes	No
Educational well-being			
Average mean literacy score	Yes	No	Yes
Literacy inequality	Yes	No	Yes
Youth NEET rates	Yes	No	No
Health and safety			
Infant mortality	No	...	No
Low birth weight	No	...	No
Breastfeeding rates	No	No	No
Vaccination rates (pertussis)	No	No	No
Vaccination rates (measles)	No	No	No
Physical activity	Yes	Yes	No
Mortality rates	Yes	Yes	No
Suicide rates	Yes	No	No
Risk behaviours			
Smoking	Yes	No	No
Drunkenness	Yes	Yes	No
Teenage births	...	No	No
Quality of school life			
Bullying	Yes	Yes	No
Liking school	Yes	Yes	No

“...” denotes that the breakdown is not applicable to that indicator.

The OECD child well-being indicator rationalised and compared

The following analysis compares child well-being indicators across OECD member countries by well-being dimension. Each dimension is introduced and rationalised in light of the commitments taken on by signatories of the United Nations Convention on the Rights of the Child (UNCRC). Next, the indicators included are discussed in terms of the selection requirements outlined above. Finally, the cross-country patterns of indicators are considered, indicator by indicator.

Material well-being

The children's rights outlined in the UNCRC commit governments to ensuring that children have a standard of living adequate to ensure physical, mental, spiritual, moral and social development. To this end, governments are not only committed to supplementing the family income, but "in case of need" to provide material assistance (UNCRC art. 27). Further parts of the convention define the right of children to access diverse material for their development, such as educational items, like children's books (art. 17).

Three indicators are chosen to measure the material well-being of children. The first is the average disposable income in families with children under age 18 (median family income would have been more desirable than average family income as a measure, but was not available). The second is a relative poverty rate for children under 18. The third is the proportion of 15-year-old children deprived of the basic necessities for education relevant to school performance.

All three indicators are child-centred, in that the child is the unit of analysis. However, in the case of both the disposable income and poverty measures, it is the family income that is attributed to the individual child. Ideally, it is the material living standards of the child, rather than that of his or her family, which is of interest. In the case of the educational items, the child is asked directly about his or her material situation. This indicator is thus more strongly child-focused than the income and poverty measures.

The material well-being indicators are comparatively up-to-date. Income and poverty data come from national household surveys from 2005 or thereabouts. These surveys, while measuring broadly the same concepts, are not highly standardised across countries. The data on educational items comes from a 2006 international survey, and is thus well-standardised across countries.

The first two indicators cover children in all age groups, whereas educational items data is for 15-year-old children only, which represents an unavoidable compromise.

All OECD countries have cash transfer policies for families with children, providing a short causal chain for reducing income poverty for families with children. In addition, the design of the tax-benefit system and work-related incentives, and the provision of child care and active labour market policies provide other direct routes for governments to influence parental employment, which is in turn strongly related to child poverty. As for educational items, in many cases these can be supplied in schools, or offset in other ways through the school environment, again providing a short causal chain for public policy intervention.

Country coverage of the indicators in the material well-being dimension is excellent. All countries are included in each indicator.

Complementary equity and efficiency indicators are covered by including average family income as a measure of efficiency and child poverty as a measure of equity. The

former identifies how countries achieve good incomes for families with children overall, whilst the latter identifies children in families at the lower end of the income distribution.

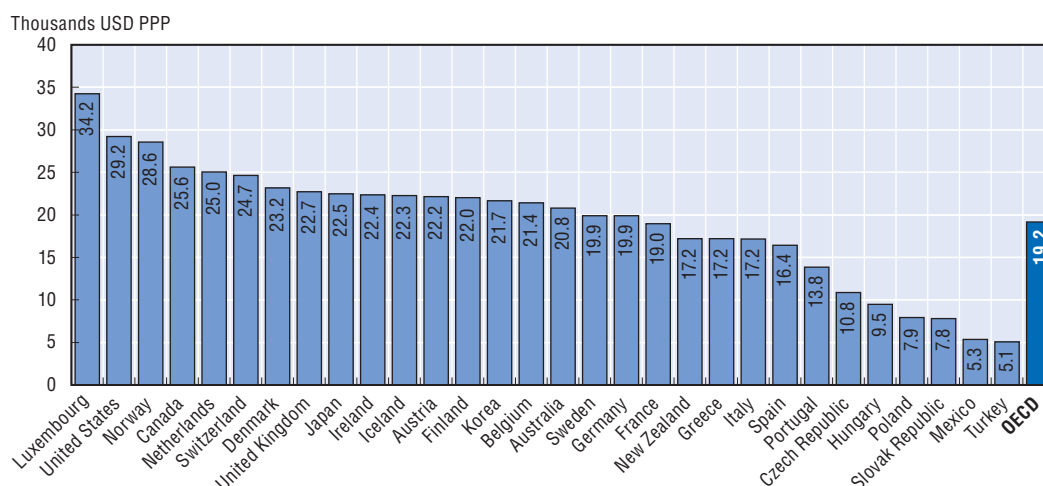
The indicators within the dimension are also complementary in terms of a child rights *versus* a developmentalist perspective. Income and poverty matter for children's current well-being, but they also affect the amount of resources parents have available to invest in the futures of their children, especially their educational futures. The educational items may reflect child well-being in terms of social inclusion in school and peer environments. But more importantly, they give an indication of the future educational development of the child and the degree of parental support for longer-term child outcomes.

The average income of children's families

There is considerable variation in children's average family income across OECD countries (Figure 2.1). Much of the differences in average family income reflects differences in per capita gross domestic product (GDP) (the correlation of family income with per capita GDP is 0.92). Turkey and Mexico are at the lowest income end, while children in Luxembourg and the United States enjoy average family incomes six or seven times higher.

Figure 2.1. Average income of children is seven times higher in Luxembourg than in Turkey

Average equivalised household disposable income (0-17 year-olds), USD PPP thousands, circa 2005



Note: Income data is average family income for children aged 0-17 years. Data is for various years between 2003 and 2005. It is drawn from national household panel surveys of all OECD countries. Data is converted to common USD using OECD purchasing power parity exchange rates, and equivalised using the square root of the family size.

Source: OECD Income Distribution database, developed for OECD (2008b), *Growing Unequal: Income Distribution and Poverty in OECD Countries*

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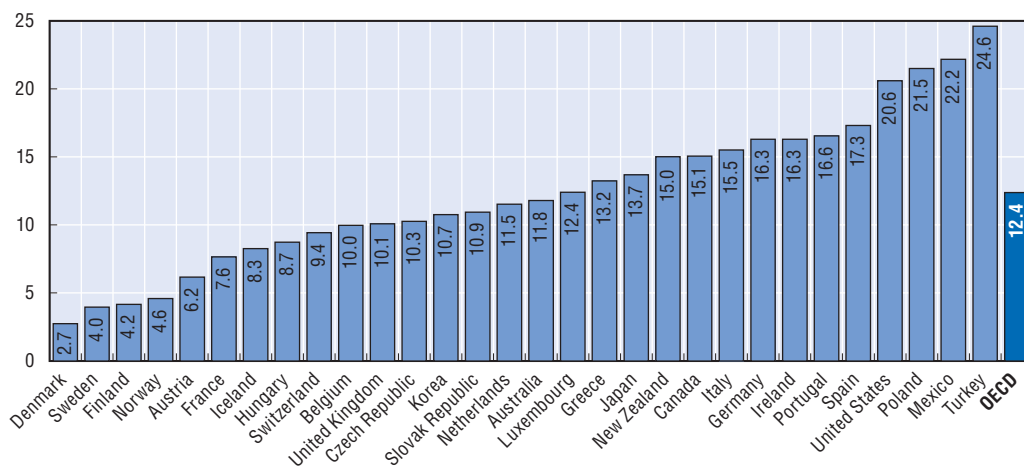
Child income poverty

Child poverty is measured here by the proportion of children who have an equivalised family income below 50% of the median family income of the total population. Child poverty rates across OECD countries vary considerably. Denmark has the lowest proportion of children living in poor families, with around one in 40 children being poor. The other Nordic countries – Sweden, Finland, and Norway – are also outstanding performers on this indicator. On the other hand, as many as one in five or more children in the United States,

Poland, Mexico, and Turkey live in poor families. The United States stands out as one of the richest countries for children (Figure 2.1) but also has one of highest rates of child poverty (Figure 2.2). The chapter's annex shows that high income is more typically associated with low poverty at a country level.

Figure 2.2. Child poverty is nine times higher in Turkey than in Denmark

Percentage of children living in poor households (below 50% of the median equivalised income), circa 2005



Note: The child poverty measure used is the proportion of households with children living on an equivalised income below 50% of the national median income for the year 2005. Children are defined as those aged 0-17 years. All OECD countries are included.

Source: OECD Income Distribution database, developed for OECD (2008b), *Growing Unequal: Income Distribution and Poverty in OECD Countries*.

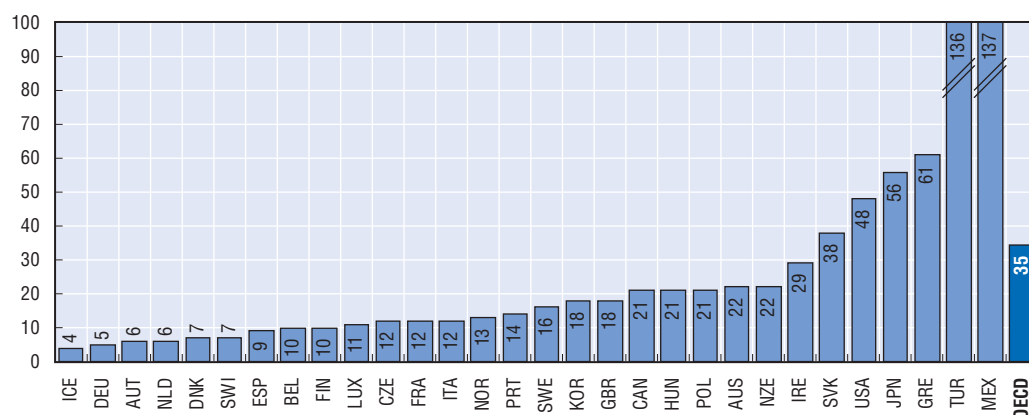
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Educational deprivation

The educational deprivation indicator measures the resources available for children's learning. Fifteen-year-old children are considered deprived when they have fewer than four of eight basic items. The eight items include a desk to study, a quiet place to work, a computer for schoolwork, educational software, an internet connection, a calculator, a dictionary, and school textbooks. As with the variation in child poverty rates, the variation between countries in terms of educational deprivation is large. Only around one in 200 children in Iceland and Germany are educationally deprived. However, more than one in ten children in Mexico and Turkey have fewer than four of the eight basic educational items. The rate of educational deprivation in Mexico is 34 times greater than that of Iceland – much higher than the range of differences in family income or poverty rates across the OECD. It is also interesting to note that several high family income countries, such as the United States and Japan, report relatively high levels of educational deprivation. In those countries, high incomes do not automatically translate into more educational resources for children, at least not of the sort measured here. The country-level correlation between the average family income of a child and educational deprivation is negative, as expected, but this relationship is not especially strong ($r = -0.52$, see annex of Chapter 2).

Finally, it is of interest to observe small but persistent tendencies across the large majority of countries for boys to be more educationally deprived than girls, with the exceptions of Denmark, Iceland and Sweden. Overall across the OECD 3.6% of boys are educationally deprived, compared to 3.3% of girls. It is unclear why such a tendency is found (Figure 2.3).

Figure 2.3. Most 15-year-old children have the basic school necessities
15-year-old children reporting less than four educational possessions per 1 000 15-year-olds
in the school population, 2006



Breakdown by sex

	All	Females	Males
Australia	22	20	24
Austria	6	4	9
Belgium	10	9	11
Canada	21	16	26
Czech Republic	12	11	14
Denmark	7	7	8
Finland	10	8	13
France	12	8	16
Germany	5	4	7
Greece	61	57	65
Hungary	21	20	23
Iceland	4	5	4
Ireland	29	28	29
Italy	12	10	14
Japan	56	44	68
Korea	18	17	19
Luxembourg	11	6	16
Mexico	137	139	135
Netherlands	6	5	7
New Zealand	22	19	25
Norway	13	9	17
Poland	21	19	22
Portugal	14	11	17
Slovak Republic	38	30	46
Spain	9	7	12
Sweden	16	16	16
Switzerland	7	5	9
Turkey	136	106	163
United Kingdom	18	16	21
United States	48	48	49
OECD average	35	33	36

Note: Educational deprivation data are derived from PISA 2006 (OECD, 2008). PISA asks questions about the possession of eight items, including a desk to study, a quiet place to work, a computer for schoolwork, educational software, an internet connection, a calculator, a dictionary, and school textbooks. The proportion of children reporting less than four of these educational items is used (less than four items best represented results for cut off points at three, four, five and six items). PISA collection processes employ standardised questionnaires, translation, and monitoring procedures, to ensure high standards of comparability.

Source: OECD Programme for International Student Assessment database 2006 (OECD, 2008).

StatLink  <http://dx.doi.org/10.1787/108204600666>

Housing and environment

As part of recognising each child's right to a living standard adequate for physical, mental, spiritual, moral and social development, the UNCRC gives a specific role to governments in regard to children's housing conditions (art. 27.3).

Two indicators are included in the housing and environment dimension. The first indicator is a simple measure of the quality of housing for children, recording the number of children living in overcrowded conditions. The second indicator records how many children experience noise in their house and dirt and grime in their local area.

Housing and environment indicators are child-centred insofar as they refer to a child's experienced conditions. The data themselves are not directly collected from the children. The collection of data for the EU countries is standardised. For additional countries, similar items have been drawn from nationally representative surveys and reported for the same age groups. Although the best efforts have been made to ensure comparability, a cautious interpretation of the results is required.

The indicators in the housing and environment dimension are for children aged 0 to 17. Data are representative for all families with children in each country.

Housing and environmental conditions are the defining aspects of the living conditions of children and their families. They are directly amenable to policy, for example through ownership and maintenance of public housing stock, the availability of housing benefits, and laws against local pollution.

Both efficiency and equity are addressed in the housing and environment dimension. While the measures deal with the bottom tail of a distribution, the size of this tail likely correlates strongly with the average child experience of housing and environmental conditions. While Housing and environment indicators may relate to some child developmental outcomes, the dimension has a strong focus on the here-and-now and is not primarily future-focused.

Overcrowding

Children live in overcrowded conditions when the number of people living in their homes exceeds the number of rooms in the household (excluding kitchens and bathrooms). Though the extent of crowded housing for children varies considerably between OECD countries, in every country at least one in ten children lives in an overcrowded home. Overall, on average around one in three OECD children live in crowded conditions. Children in eastern Europe experience overcrowding the most, and crowding is also high in Italy and Greece, while children in the Netherlands and Spain are least likely to suffer from overcrowding.

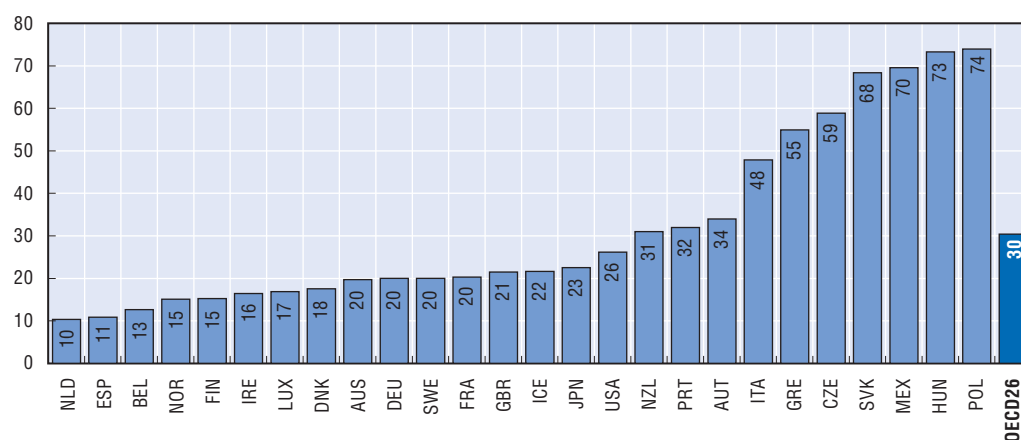
Overcrowding varies by child age. It is highest in families where the youngest child is in early childhood and lowest during late childhood. It is generally more acceptable for younger children (especially infants) to share a room with parents or siblings. Where the focal child is older, siblings are also more likely to be older and have left home, freeing up space. Equally, where the focal child is older, parental labour supply and earnings are also likely to be higher, also leading to better housing and thus less crowding (Figure 2.4).

Quality of the local environment

The quality of the local environment is measured using indicators of noisy conditions at home and in the local area, and dirt, grime, pollution or litter around the home and in the area. On average one in four children in the OECD experiences poor local

Figure 2.4. **On average, one in three children across the OECD lives in overcrowded conditions**

Percentage of 0-17 year-old children living in overcrowded homes by age of the youngest child, 2006



Breakdown by age

	0-17	0-5 years	6-11 years	12-17 years
Australia	20	...	...	...
Austria	34	44	30	20
Belgium	13	20	7	6
Czech Republic	59	65	57	52
Denmark	18	23	16	14
Finland	15	22	12	7
France	20	28	14	10
Germany	20	30	17	8
Greece	55	57	55	51
Hungary	73	80	74	60
Iceland	22	29	15	10
Ireland	16	21	19	6
Italy	48	51	48	40
Japan	23	...	...	...
Luxembourg	17	26	10	4
Mexico	70	...	...	...
Netherlands	10	9	10	11
New Zealand	31	...	...	...
Norway	15	22	10	8
Poland	74	80	75	63
Portugal	32	42	25	21
Slovak Republic	68	76	66	62
Spain	11	14	10	6
Sweden	20	29	16	9
United Kingdom	21	29	20	9
United States	26	...	...	...
OECD26	32	38	29	23

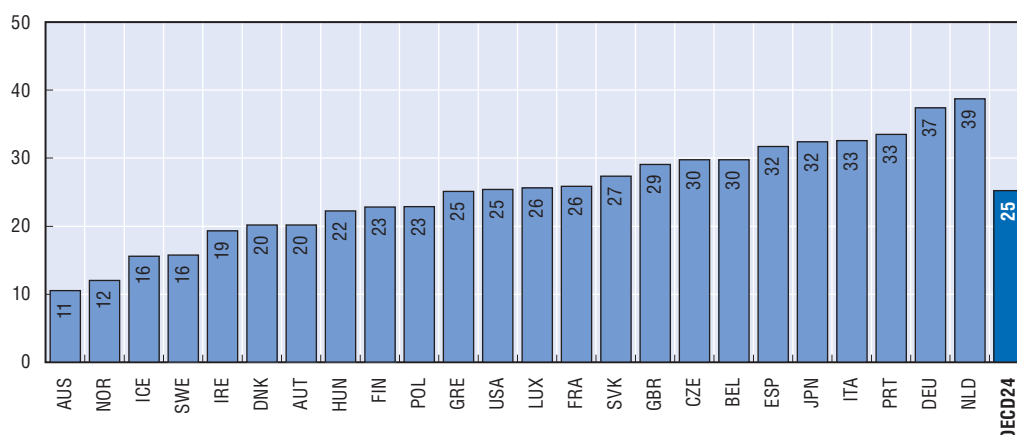
Note: Overcrowding is assessed through questions on “number of rooms available to the household” for European countries from the Survey on Income and Living Conditions (EU-SILC) conducted in 2006; on the “number of bedrooms” in Australia; on whether the household “cannot afford more than one bedroom” or “cannot afford to have a bedroom separate from eating room” in Japan; and on the “number of rooms with kitchen and without bath” in the United States. Overcrowding is when the number of household members exceeds the number of rooms (i.e. a family of four is considered as living in an overcrowded accommodation when there are only three rooms – excluding kitchen and bath but including a living room). Data is for various years from 2003 to 2006. The Japanese survey is an unofficial and experimental survey designed by the National Institute of Population and Social Security Research, with a nationally representative sample limited to around 2 000 households and around 6 000 persons aged 20 years and above. Canada, Korea, Switzerland, and Turkey are missing.

Source: Data for 22 EU countries are taken from EU-SILC (2006). Data for Australia are taken from the survey *Household Income and Labour Dynamics in Australia* (HILDA) 2005. Data for Japan are from the *Shakai Seikatsu Chousa* (Survey of Living Conditions) 2003. Data for the United States are taken from the *Survey of Income and Program Participation* (SIPP) 2003. Aggregate data for Mexico was provided by the Mexican Delegation to the OECD.

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Figure 2.5. Local environmental conditions are poor for a quarter of OECD children

Percentage of 0-17 year-old children living in homes with poor environmental conditions
by age of the youngest child, 2006



Breakdown by age

	0-17	0-5 years	6-11 years	12-17 years
Australia	11	...	...	...
Austria	20	19	21	20
Belgium	30	31	31	26
Czech Republic	30	28	29	33
Denmark	20	19	21	20
Finland	23	21	24	23
France	26	27	25	25
Germany	37	39	36	37
Greece	25	26	23	26
Hungary	22	23	19	24
Iceland	16	15	17	14
Ireland	19	20	19	19
Italy	33	31	34	33
Japan	32	...	...	...
Luxembourg	26	26	27	23
Netherlands	39	39	40	38
Norway	12	13	10	12
Poland	23	21	24	25
Portugal	33	34	31	36
Slovak Republic	27	29	25	28
Spain	32	30	32	35
Sweden	16	16	15	16
United Kingdom	29	31	26	29
United States	25	...	...	...
OECD24	25	26	25	26

Note: Local environmental conditions are assessed through questions on whether the household's accommodation "has noise from neighbours or outside" or has "any pollution, grime or other environmental problem caused by traffic or industry" for European countries; whether there is "vandalism in the area", "grime in the area" or "traffic noise from outside" for Australia; whether "noises from neighbours can be heard" for Japan; and whether there is "street noise or heavy street traffic", "trash, litter, or garbage in the street", "rundown or abandoned houses or buildings" or "odors, smoke, or gas fumes" for the United States. Data is for various years from 2003 to 2006. Canada, Korea, Mexico, New Zealand, Switzerland, and Turkey are missing.

Source: Data for 21 EU countries are taken from EU-SILC (2006). Data for Australia are taken from the survey *Household Income and Labour Dynamics in Australia* (HILDA) 2005. Data for Japan are from the *Shakai Seikatsu Chousa* (Survey of Living Conditions) 2003. Data for the United States are taken from the *Survey of Income and Program Participation* (SIPP) 2003.

StatLink  <http://dx.doi.org/10.1787/710884722515>

environmental conditions. Australia and several Nordics perform well, with between one in ten and two in ten children experiencing problems. However, over one-third of children in the Netherlands and in Germany live in homes that report experiencing poor environmental conditions (both countries have comparatively low crowding within the home). There is no systematic pattern pointing to differences in local environmental conditions for children in different age groups (Figure 2.5).

Education

The UNCRC states that each child has the right to an education, and that this right should be developed on the basis of equal opportunity (art. 28). The UNCRC also commits signatories to providing an education system to develop the child's personality, talents and mental and physical abilities to their fullest potential (art. 29a). Ensuring the highest possible levels of educational achievement for all children addresses this commitment.

Three indicators are chosen to make up the educational well-being dimension. The first indicator is the PISA 2006 country score for education performance, averaged across reading, mathematics and science literacy test scores. The second explores inequality in achievement around these scores using the ratio of the score at the 90th percentile to the 10th percentile averaged across the three PISA literacy measures. The final indicator identifies the proportions of 15-19 year-olds not in education and not in employment or training (NEET).

All three indicators are child centred in that the child is the unit of analysis, and outcomes are directly those of the child. Data for educational achievement is collected directly from children. However coverage is limited to children attending schools and those without physical or learning disabilities. Data is up-to-date. Additionally, PISA data is standardised, as it comes from an international survey. The NEET data come from national labour force surveys, which are intended to be internationally comparable but typically have their own national idiosyncrasies.

Unfortunately, however, the age spectrum covered is only one point in late childhood. PISA surveys only children at age 15. It is not possible to assess educational achievement across the child's life cycle. Nonetheless, the timing of the survey in the child's life cycle means that accumulated learning from a compulsory school career is well represented by this cohort.

Although family factors are predominantly associated with variation in educational achievement in most OECD countries, there are a number of intervention points for governments to address both average educational achievement and educational inequality. Schools provide an important environment for children to prepare for adult life, both socially and economically. School environments are strongly influenced by government policy. In all OECD countries, by the time a child reaches age 15, a considerable amount of government investment has been spent on a child's education. There is a very short chain of causal logic from government educational policy to child educational outcomes. In terms of the policy amenability of NEET, all OECD countries have made policy decisions about the age of compulsory school completion and about the provision of post-compulsory education and training and active labour market policies regarding youth. Furthermore, family benefits may continue for youth, conditional on their taking up post-compulsory education and training.

The country coverage in PISA data is excellent, with all OECD countries being included. NEET data is available for 28 countries, with only Iceland and Korea missing.

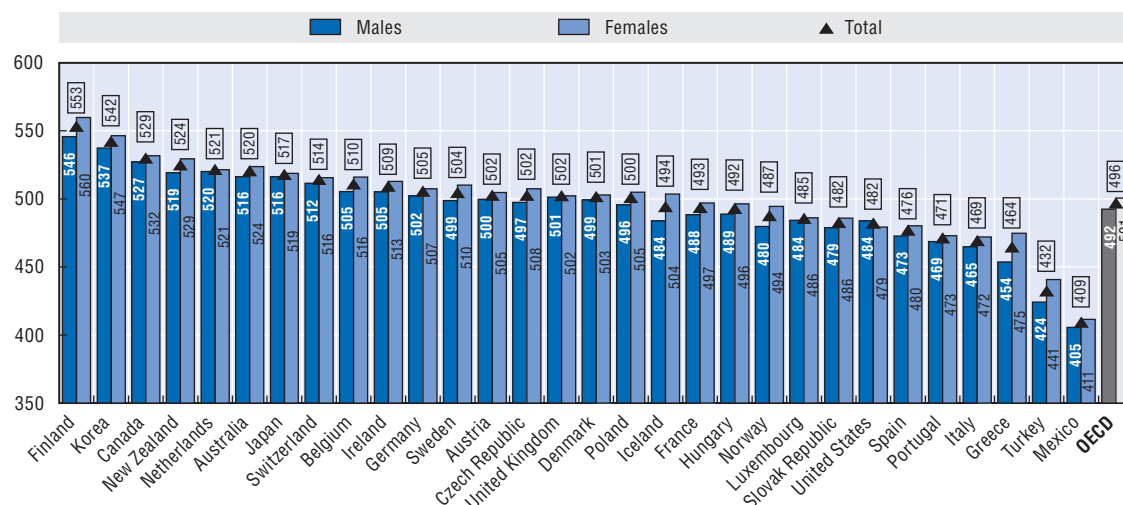
The education dimension contains indicators that complement each other in terms of efficiency and equity. The inclusion of two indicators derived from PISA cover efficiency via the average country performance and also equity, by looking at the inequality of outcomes within the country. Complementarity between the well-being of children today and in the future is achieved by including school performance and measures of NEET immediately following post-compulsory education. That said, education data is predominantly focused on children's future well-being.

Educational achievement

Compared to other indicators, country variation in educational achievement is comparatively low. High-scoring countries on average literacy performance include Finland, Korea and Canada, whilst Greece, Italy, Mexico and Italy score poorly. Turning to inequality, Finland, Korea, and Canada are the most educationally equal countries. The Czech Republic, Mexico and Italy are the least equal countries. The three top performing countries in literacy – Finland, Korea, and Canada – have the most compressed distribution of educational outcomes, indicating it is possible to be both equitable and efficient in educational outcomes at age 15. There is a strong negative relationship between average country educational performance and inequality in educational outcomes (see Annex 2.A1, $r = -0.61$). High country educational performance is thus strongly associated with low educational inequality (Figure 2.6).

Figure 2.6. **Average educational achievement of 15-year-olds across the OECD**

Mean PISA literacy achievement for 15-year-olds by sex, 2006



Note: Mean literacy performance is the average of mathematics, reading and science literacy scores. Data is for 15-year-old students. Reading literacy data was not available for the United States in 2006 results. United States results are therefore averages for mathematics and science literacy only.

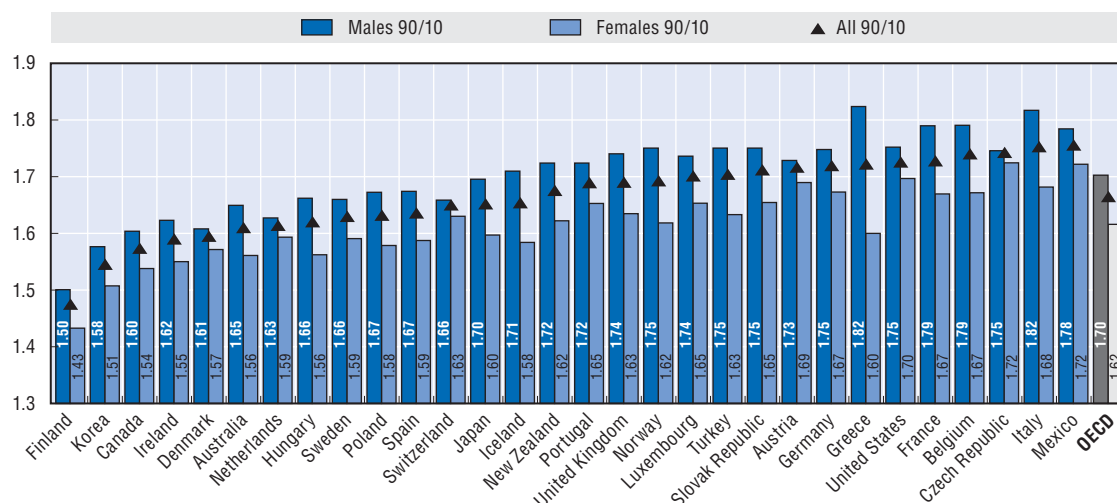
Source: OECD Programme for International Student Assessment database 2006 (OECD, 2008).

StatLink <http://dx.doi.org/10.1787/711016460350>

The average educational performance for girls is systematically better than for boys in 29 OECD countries (the one exception is the United States, where reading was not tested. Reading is an outcome where there is typically a strong female advantage). At the same time, inequality in boys' scores is considerably higher than inequality in girls' scores in all OECD countries (Figure 2.7).

Figure 2.7. Inequality in educational achievement for 15-year-olds across the OECD

Ratio of 90th to 10th percentile score in mean PISA literacy achievement for 15-year-old children by sex, 2006



Note: The measure is of country inequality in scores, averaged across the three literacy dimensions. The measure of inequality used is the ratio of the score at the 90th percentile to that at the 10th percentile. Data is for 15-year-old students. Reading literacy data was not available for the United States in 2006 results. United States results are therefore averages for mathematics and science literacy only.

Source: OECD Programme for International Student Assessment database 2006 (OECD, 2008).

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Youth not in employment, education or training (NEET)

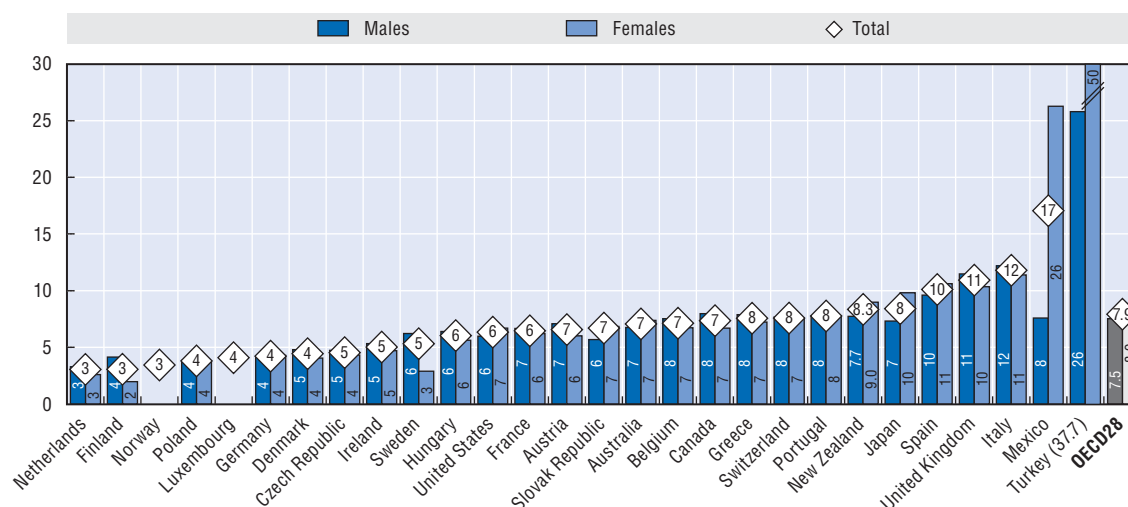
This indicator measures older children who, after compulsory schooling, fail to find employment, training or further educational opportunities. Around one in 12 youth are not in education, training or employment on average across OECD countries. Five OECD countries have more than 10% of children not in education, training or employment between the ages of 15 and 19 (Spain, the United Kingdom, Italy, Mexico and Turkey). Poland, Finland, Norway, and the Netherlands stand out as countries with minimal NEET, at less than 4% of the 15-19 year-old population. There is a considerable variation in NEET across the OECD, with the Turkish rate 12 times higher than the Dutch rate. More often than not NEET rates are higher for boys than for girls in OECD countries, with Japan, New Zealand, Mexico and Turkey being notable exceptions (Figure 2.8).

Health and safety

A basic tenet of children's rights states that all children have a right to life and that governments should ensure, to the maximum extent possible, child survival and development (art. 6). The UNCRC regards child health as an absolute priority, committing governments to investing in health to the highest attainable standard (art. 24). Specific measures in the convention address the reduction of infant mortality, the provision of pre- and post-natal healthcare, preventive health care, access to appropriate information and education on child health and nutrition, and the prevention of accidents. The UNCRC also outlines obligations for countries in regard to the physical and mental development of children (art. 29.1) and the accessibility of recreational pastimes (art. 31.1).

Figure 2.8. **Youth not in education, training or employment (NEET) varies greatly across the OECD**

Percentage of the 15-19 population not in education and unemployed by sex, 2006



Note: Data records children not in education and not in employment or training. The data cover those aged 15 to 19 years of age in 2006. Data for Mexico is from 2004 and data for Turkey is from 2005. Data for Japan is for the population aged 15 to 24. Education and training participation rates are self-reported. Surveys and administrative sources may record the age and activity of the respondent at different times of the year. Double counting of youth in a number of different programmes may occur. Data for Iceland and Korea are missing from this comparison.

Source: OECD (2008), *Education at a Glance*.

StatLink  <http://dx.doi.org/10.1787/711038356861>

The health dimension draws on eight indicators that are organised in line with the child's life cycle. The first three indicators are for infancy – infant mortality, low birth weight and breastfeeding. The following two indicators report the national coverage of immunisation for pertussis and measles by the age of two. Physical activity in mid to late childhood is included in the health dimensions through reporting the proportion of children aged 11, 13 and 15 partaking in at least one hour of moderate to vigorous activity every day in the past week. The final two indicators record mortality rates for children aged 1 to 19, by all causes and by suicide.

Another health indicator considered but not included was child asthma. Data covering virtually all member countries can be sourced from Patel *et al.* (2008). However, data for the majority of countries was from the 1990s, the sample frame typically was not representative of the country as a whole, the date covered a wide variety of different, overlapping child age bands, the respondents were a mixture of children and parents depending on the survey, and the asthma questions differed between many surveys.

All indicators are child-centred in that the child is the unit of analysis. In the case of physical activity, the information was collected by directly asking the child about their experiences.

The data cover a range of years between 2001 and 2006 for many indicators, with some countries being more up to date than others.

Whilst the three mortality indicators come from data sets that have a degree of international standardisation in classification and the physical activity indicator comes from an international survey, data on birth weight, breastfeeding and vaccination are collected

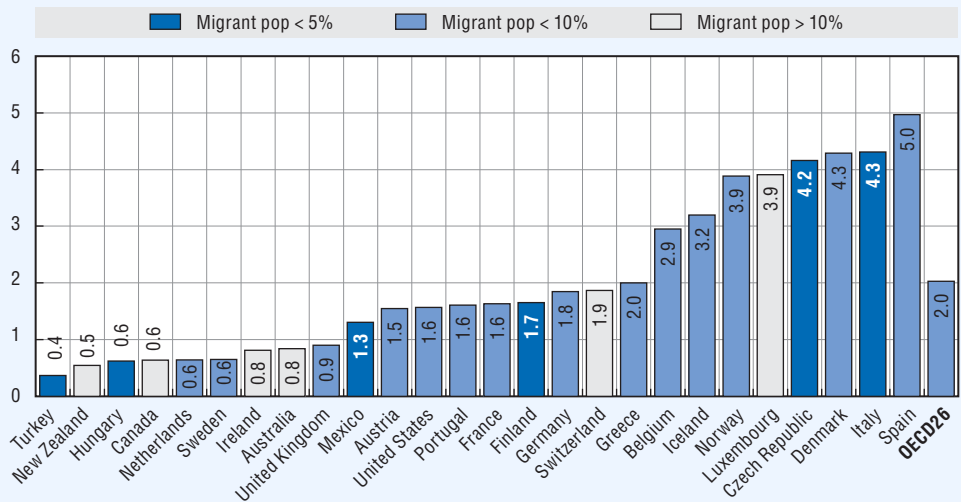
Box 2.2. The well-being of child migrants

In many OECD countries there is a particular concern about outcomes of the children of immigrants. There is little in the way of internationally comparable data on outcomes for these children. However, the PISA survey records the student’s birth place, allowing an exploration of experiences of non-native relative to native-born children for educational deprivation in the Material well-being dimension and for the two indicators in the Education dimension.

The data show that non-native students are more educationally deprived than native children in 17 out of 26 OECD countries. Migrant educational deprivation is particularly marked amongst the Nordic and continental European member countries (with the Netherlands and Sweden as exceptions) and is less strong amongst the Anglophone countries (the United States, Australia, United Kingdom, New Zealand, and Canada).

Migrant students are more educationally deprived than native students

Ratio of non-native students/native students educational deprivation
by migrant student population



Note: Countries where the migrant student population makes up less than 1% of the 15-year-old student population have been excluded from the comparison.

Source: OECD Programme for International Student Assessment database 2006 (OECD, 2008).

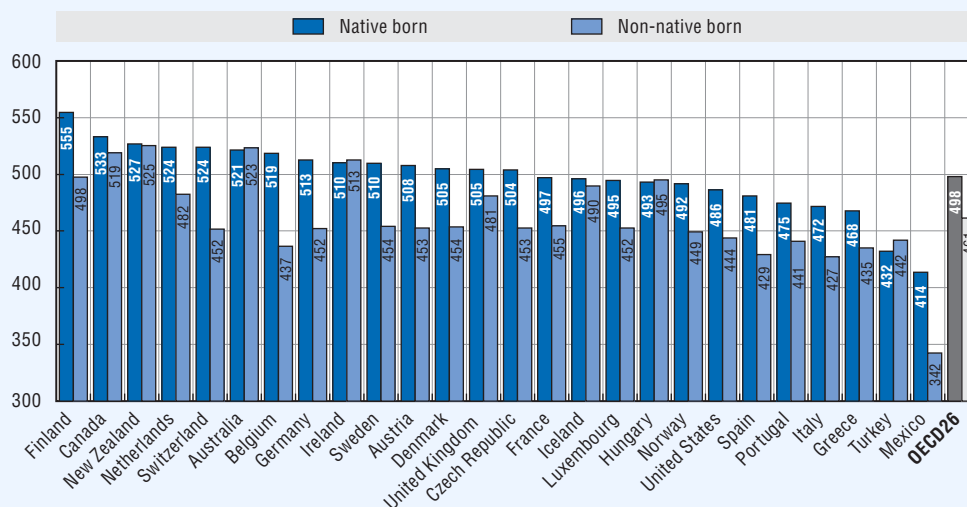
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The greater degree of educational deprivation for non-natives is also echoed in the data on educational achievement. Migrant test score gaps are especially high in Belgium and Mexico. Differences are however positive or negligible in New Zealand, Australia, Ireland, Iceland, Hungary and Turkey. The differences will in part reflect the different processes for selecting migrants in different countries. Finally, inequalities in literacy scores are most marked amongst non-native children, in virtually all countries. It is not clear why this may be so.

Box 2.2. The well-being of child migrants (cont.)

Migrant students often perform worse than their native-born peers

Mean PISA literacy achievement for 15-year-old children by migrant status, 2006



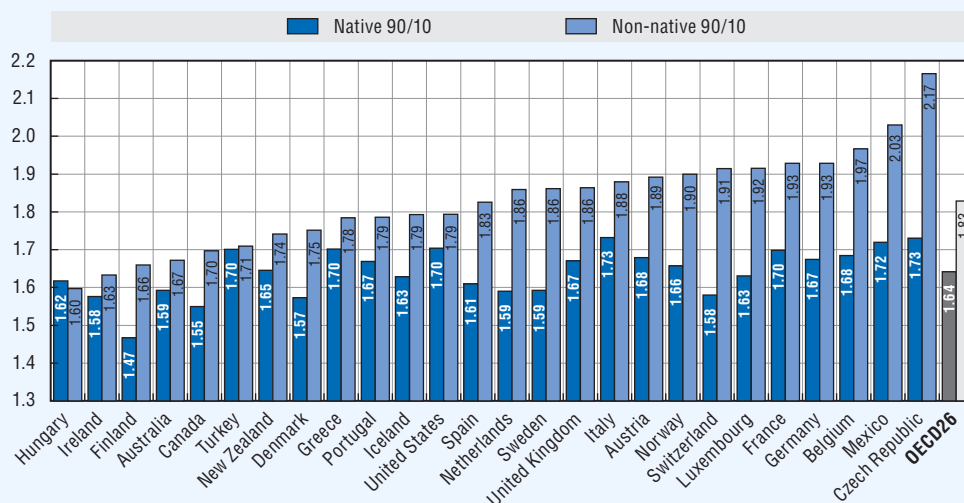
Note: Countries where the migrant student population makes up less than 1% of the 15-year-old student population have been excluded from the comparison.

Source: OECD Programme for International Student Assessment database 2006 (OECD, 2008).

StatLink <http://dx.doi.org/10.1787/711062645363>

Inequalities in literacy scores are most marked in the migrant population

Ratio of 90th to 10th percentile score in mean PISA literacy achievement for 15-year-old children by migrant status, 2006



Note: Countries where the migrant student population makes up less than 1% of the 15-year-old student population have been excluded from the comparison.

Source: OECD Programme for International Student Assessment database 2006 (OECD, 2008).

StatLink <http://dx.doi.org/10.1787/711088506346>

differently in different countries. However, the outcomes are reasonably standardised and unambiguous.

The health dimension has more indicators than any other dimension. Health also provides the best coverage of all the child age groups, with early childhood covered by low birth weights, infant mortality, breastfeeding and immunisations, and with data on physical health for late-middle and late childhood. Avoidable death rates cover the whole of childhood from age 1 to 19.

Country coverage is mixed. Data is complete for birth weight and infant mortality, and coverage is high for breastfeeding and the other mortality outcomes. Physical activity data covers just 25 countries.

Whilst in some cases the measures chosen are from the left tail of a distribution, these measures are likely to correlate highly with the average and thus also provide a good representation of efficiency. For example, the proportion of low birth weight children correlates strongly with average birth weight by country, where such data is readily available. In terms of complementarity, it is noteworthy that all indicators, with the potential exception of suicide, deal with physical health. Apart from youth suicides, there is almost nothing in the way of cross-country comparative data on the state of children's mental health.

All OECD governments provide a range of interventions before, during and after birth during infancy, which are designed to offer the healthiest start in life. A wide range of regulations are in place to promote safe environments for children in order to minimise accidents. In all countries immunisation is highly subsidised or free. Thus immunisation rates also measure the extent to which parents act to promote the well-being of their young children. Primary health care for children is typically highly subsidised or free. Children's physical activity can be changed by changing the school curriculum. Direct public policy mechanisms exist to provide children with the time and space for physical activity during school time, and to provide venues for physical activity like parks and green spaces. Mechanisms also exist to inform parents of basic exercise requirements for children, through primary health care services.

Infant mortality rates

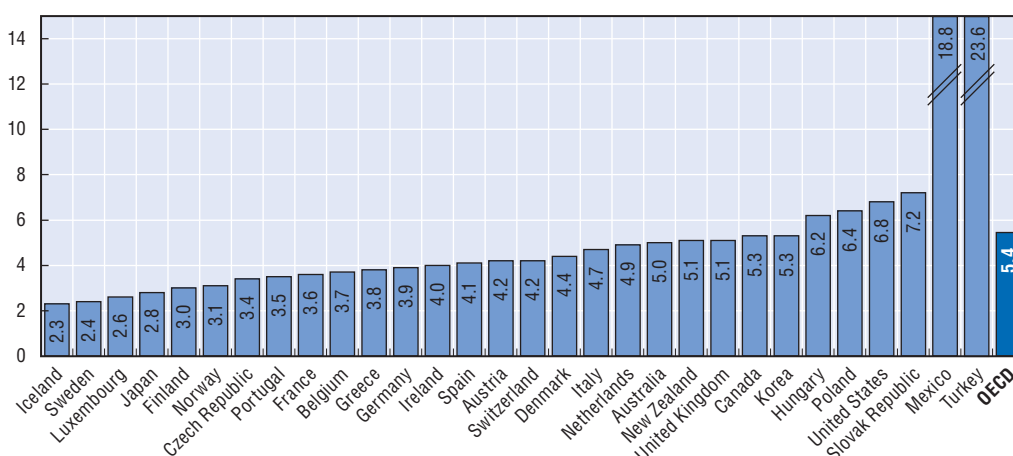
Infant mortality is low or extremely low in most OECD countries. Japan, along with a group of Northern European countries, had the lowest rate of infant deaths in 2005 (2 to 3 per 1 000). Mexico and Turkey are outliers and had substantially higher infant mortality rates than other OECD countries. The United States is a higher-income country that has infant mortality rates above the OECD average. As with most previous indicators, there is a considerable variation between top and bottom performers, with the Turkish mortality rate being ten times the rate of Iceland (Figure 2.9).

Low birth weight

Low birth weight data for the years 2003 to 2005 shows a number of Nordic countries among the countries with the lowest rates. On the other hand, Japan, a good performer in terms of infant mortality, switches position to become one of the countries with a high rate of low birth weight children. Taken together, these results may reflect successful medical care for low birth weight newborns (OECD, 2007, p. 36). Only Turkey reports more than 10% of infants having low birth weight. Compared to a number of other indicators used here, variation in the proportion of low birth weight babies is relatively small across the OECD (Figure 2.10).

Figure 2.9. **There is large variation in infant mortality between Turkey and Mexico and the rest of the OECD**

Infant mortality rates per 1 000 live births, 2005



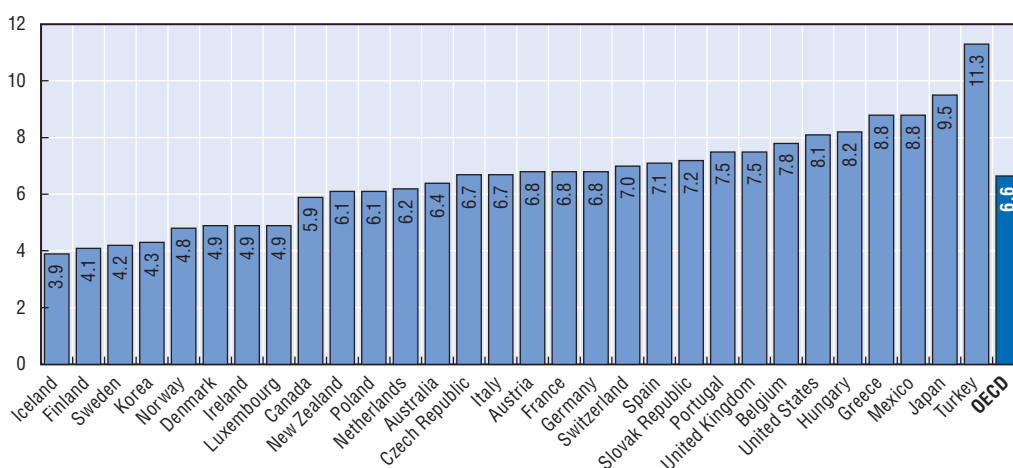
Note: Infant mortality data are for the year 2005. Figures represent the numbers of deaths per 1 000 of the infant population before their first birthday. Data are sourced from administration records.

Source: OECD (2007), *Health at a Glance*.

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Figure 2.10. **Children born in Nordic countries are least likely to be underweight**

Percentage of low birth weight children (< 2.5 kg), 2003-05



Note: The data for low birth weights is for the years 2003 to 2005. The low birth weight indicator is the number of newborns per 100 births who weigh less than 2.5 kilograms. The indicator includes low weight births that are due to multiple births. Additionally, in some countries, because of genetic factors children may be smaller with no associated developmental risk. Exceptions to the use of registered birth data are the Netherlands, where data is taken from a national health interview survey (OECD, 2007, p. 36), and Turkey.

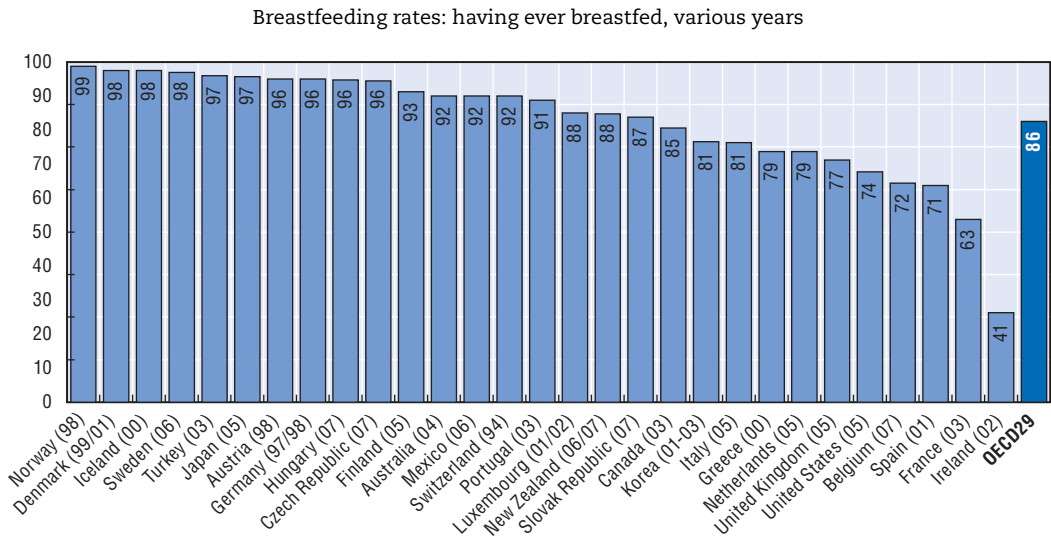
Source: OECD (2007), *Health at a Glance*.

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Breastfeeding initiation rates

Breastfeeding initiation rates exceed 50% for all countries except Ireland, and exceed more than 90% for over half of the OECD. The Nordic countries are top performers and Mexico and Turkey do relatively well. Low performers are found in a swathe of western Europe running through Belgium, France and Spain and extending across the sea to Ireland (Figure 2.11).

Figure 2.11. **The majority of OECD children are breastfed at some point during infancy**



Note: Breastfeeding data are for a variety of years. Data is collected using a wide variety of methods, which may affect comparability. Data for Poland is missing. Breastfeeding initiation rates refer to the proportion of mothers who have ever breastfed their newborn.

Source: OECD Family database 2008.

StatLink  <http://dx.doi.org/10.1787/711167778234>

Immunisation rates

In terms of immunisation, eastern European countries like Hungary and the Slovak Republic are amongst those with the best coverage of pertussis and measles vaccinations. Coverage is effectively total. Mexico and Turkey do relatively well. Coverage in Austria is below 85% for both pertussis and measles. Again, the range of country variation in vaccinations is comparatively low (Figure 2.12).

Figure 2.12. **Eastern European OECD members have the best immunisation rates**

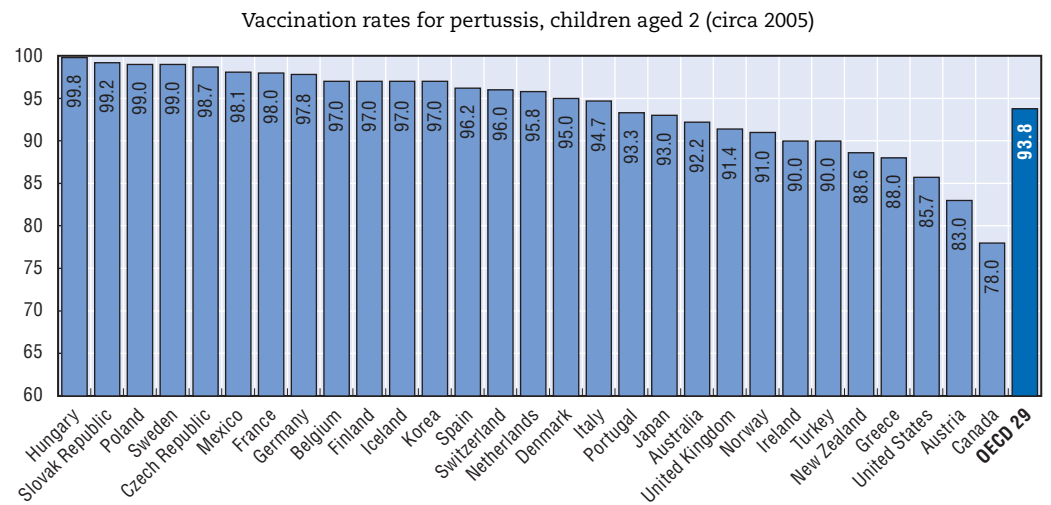
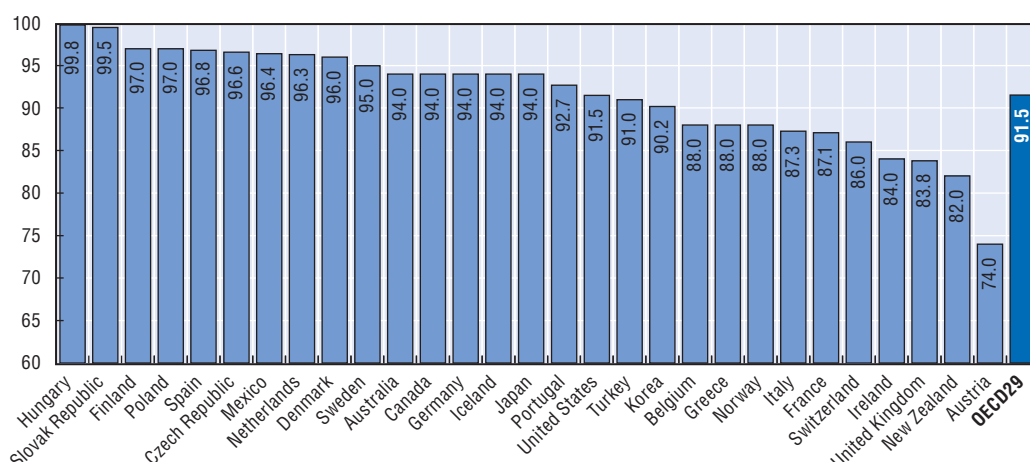


Figure 2.12. **Eastern European OECD members have the best immunisation rates (cont.)**

Vaccination rates for measles, children aged 2 (circa 2005)



Note: Vaccination data are for the years 2003 to 2005. Data are for children at age 2. Data is collected using a variety of methods, which may affect comparability. There is a slight variation in vaccination policies and schedules between countries that may affect comparability (OECD, 2007, p. 120). Data for Luxembourg is missing.

Source: OECD (2007), *Health at a Glance*.

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Physical activity

Physical activity is measured by asking children how much activity they have undertaken during a reference week. In around half of the OECD countries fewer than one in five children undertakes moderate exercise regularly. The country rankings vary according to the child's age. The Slovak Republic stands out across the three age groups as a strong performer. France stands out at the lower end, especially for girls, at all ages. Children in Switzerland and France are least likely to exercise regularly. Boys consistently get more physical activity than girls, across all countries and all age groups. Physical activity falls between ages 11 to 15 for most countries considered, with the United States an important exception for boys (Figure 2.13).

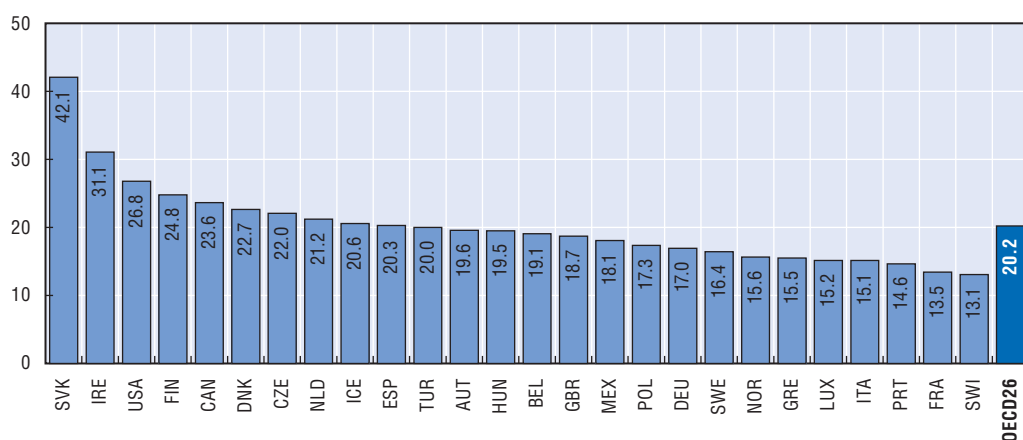
Child mortality rates

Figure 2.14 shows the mortality rates per 100 000 children for all causes. Child mortality rates follow a U shape with age, being relatively high for early childhood, low during middle childhood and peaking in late childhood. There is moderate variation in child mortality across the OECD. Of note is the spread across Europe, with the adjacent comparatively rich countries of Luxembourg and Belgium respectively having the lowest rate of child mortality and the second highest rate. Considering gender patterns, girls have persistently lower mortality rates than boys across all countries and age groups.

Youth suicide rates are of potential value as an indicator of mental health, albeit an extreme one. They are highest in New Zealand and lowest in Greece, with a striking amount of variation between the two. Both Anglophone and Nordic countries are spread throughout the distribution. In all countries male youth are more likely to kill themselves than females (Figure 2.15).

Figure 2.13. **Only one in five older children does the recommended amount of physical activity across the OECD**

Children doing moderate-to-vigorous physical activity daily in the past week by age and sex, 2005/06



Breakdown by age and sex

	11-years-old		13-years-old		15-years-old	
	Males	Females	Males	Females	Males	Females
Austria	29	23	27	14	13	10
Belgium	24	18	23	14	20	15
Canada	29	23	27	14	13	10
Czech Republic	25	19	28	17	27	16
Denmark	31	26	23	18	20	16
Finland	48	37	24	15	15	9
France	24	12	20	5	14	5
Germany	25	20	19	13	16	10
Greece	25	16	21	12	16	7
Hungary	28	19	29	13	19	11
Iceland	29	23	24	14	16	9
Ireland	51	38	39	23	27	13
Italy	23	13	23	9	16	7
Luxembourg	18	13	19	11	19	11
Mexico	...	...	...	...	...	...
Netherlands	30	20	24	20	18	15
Norway	27	17	15	14	13	7
Poland	24	19	21	12	21	10
Portugal	30	12	21	8	15	5
Slovak Republic	51	43	51	35	46	29
Spain	32	24	21	14	19	12
Sweden	23	20	21	14	11	10
Switzerland	19	11	16	10	13	10
Turkey	29	21	22	17	16	12
United Kingdom	28	19	24	14	18	9
United States	33	26	35	21	34	14
OECD25	30	21	25	15	20	11

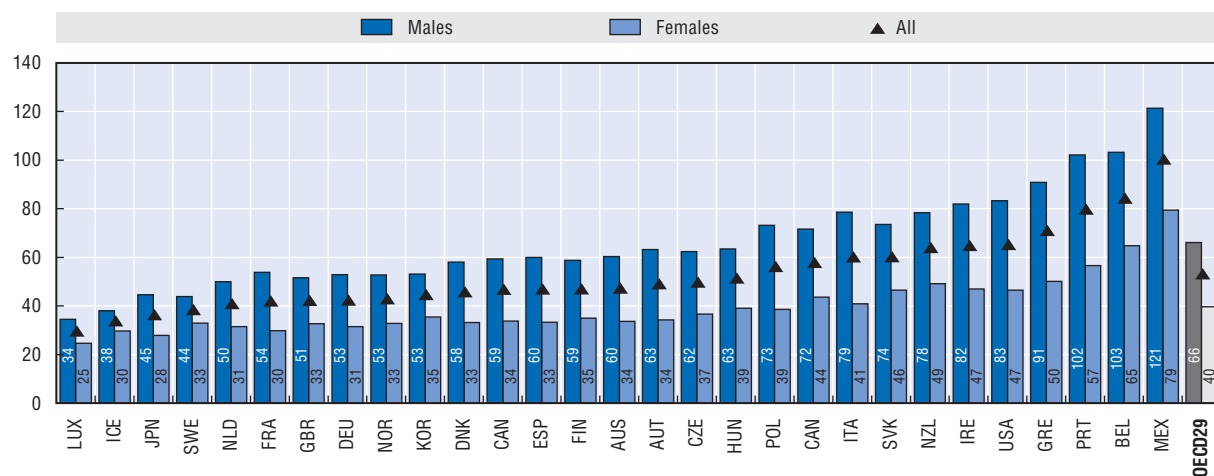
Note: Data for physical activity is calculated based on the regularity of moderate-to-vigorous physical activity as reported by 11, 13 and 15-year-olds for the years 2005/06. Moderate-to-vigorous physical activity as defined by the *Health Behaviour in School-aged Children (HBSC)* report refers to exercise undertaken for at least an hour that increases both heart rate and respiration (and sometimes leaves the child out of breath). Each country estimate uses reported physical activity rates and sample numbers for 11, 13 and 15-year-old boys and girls to calculate country percentages. Data are drawn from school-based samples. Aggregate data for Mexico was provided by the Mexican Delegation to the OECD. Data is for 26 OECD countries, Australia, Japan, Korea and New Zealand are missing.

Source: Adapted from Currie et al. (2008), *Inequalities in young people's health: HBSC international report from the 2005/2006 Survey*, Copenhagen, WHO Regional Office for Europe.

StatLink  <http://dx.doi.org/10.1787/711243651130>

Figure 2.14. There is moderate variation in child mortality across the OECD

Child mortality rates by age and sex per 100 000 children aged 0-19, most recent data



Breakdown by sex and age

		All				Males				Females			
		1-4 years	5-9 years	10-14 years	15-19 years	1-4 years	5-9 years	10-14 years	15-19 years	1-4 years	5-9 years	10-14 years	15-19 years
Australia	2003	51	23	25	90	58	27	29	127	44	19	21	52
Austria	2006	39	24	24	104	43	26	27	146	35	21	21	59
Belgium	1997	87	45	55	150	97	52	61	199	76	36	49	99
Canada	2004	44	21	28	91	47	26	33	124	41	17	23	55
Czech Republic	2005	43	27	32	87	44	31	36	119	41	22	28	52
Denmark	2001	44	26	33	87	46	31	40	123	41	20	25	50
Finland	2006	41	29	26	90	47	29	30	124	34	28	22	55
France	2005	43	20	25	78	48	23	30	111	38	18	19	45
Germany	2004	44	21	23	78	46	24	28	107	42	19	19	47
Greece	2006	59	44	43	128	57	52	53	182	62	36	33	70
Hungary	2005	61	33	32	79	70	35	39	105	53	30	26	51
Iceland	2005	24	18	26	66	16	18	23	91	32	19	29	39
Ireland	2005	65	35	40	115	66	44	45	163	64	26	34	64
Italy	2003	57	33	39	108	61	39	46	158	52	26	31	56
Japan	2006	50	21	20	56	55	25	24	74	45	17	15	38
Korea	2006	59	35	29	62	65	40	34	80	54	29	24	42
Luxembourg	2005	21	16	14	69	29	9	14	91	12	24	15	47
Mexico	2005	145	57	69	140	156	64	81	192	134	50	56	88
Netherlands	2004	50	24	28	65	55	28	33	86	44	20	22	43
New Zealand	2004	60	27	36	133	61	30	46	175	59	24	26	90
Norway	2005	44	22	27	83	50	24	29	112	38	20	24	52
Poland	2005	53	32	36	92	59	37	43	131	46	28	28	51
Portugal	2003	82	49	56	125	92	54	64	181	71	43	47	67
Slovak Republic	2005	85	38	34	86	86	45	40	117	83	31	29	55
Spain	2005	48	24	30	81	52	27	35	115	43	20	23	46
Sweden	2004	39	21	26	69	45	21	28	83	33	22	23	55
Switzerland	2005	57	29	36	108	63	32	40	147	51	26	31	67
United Kingdom	2005	47	21	27	75	50	23	30	100	43	19	23	48
United States	2005	61	29	37	132	67	32	44	183	53	26	30	77
OECD29		55	29	33	94	60	33	38	129	51	25	28	57

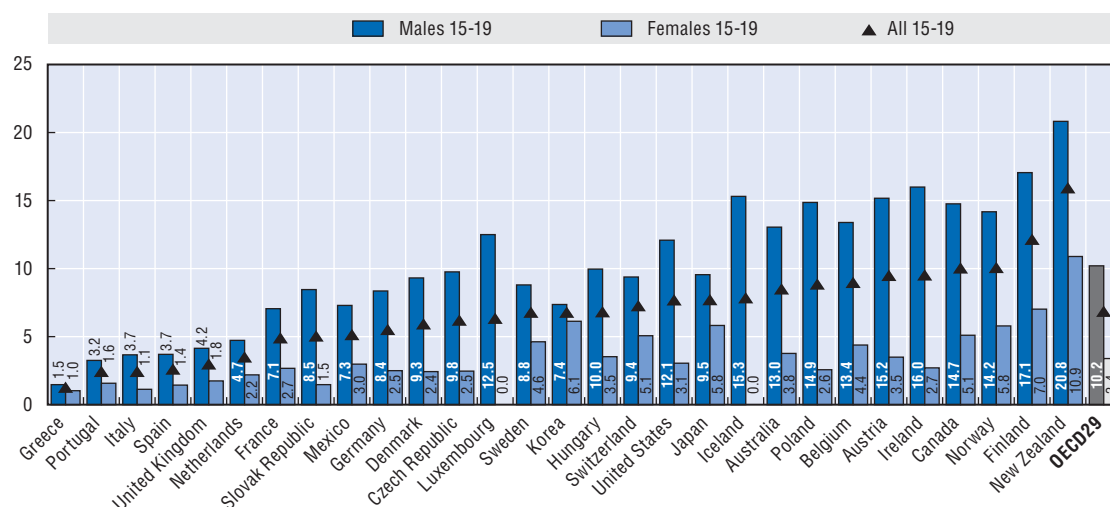
Data source: Data record the number of deaths of children aged 1-19 by each cause per 100 000 of the 0-19 population. Data are averages for the three most recent years (latest years are presented in a separate column in the chart). No data is available for Turkey.

Source: World Health Organisation Mortality database 2008.

StatLink  <http://dx.doi.org/10.1787/711338672403>

Figure 2.15. Rates of suicide are higher among male youth in all OECD countries

Youth suicides by sex per 100 000 youth aged 15-19, most recent data



Data source: Data record the number of suicides of people aged 15-19 per 100 000 of the 15-19 population. Data are averages for the three most recent years as in Figure 2.14. Comparability of suicide statistics is dependent on reporting mechanisms in each country, as varying degrees of social stigma associated with suicide may lead to variations in under-reporting. No data is available for Turkey. There are no reported female youth suicides in Luxembourg and Iceland during the period.

Source: World Health Organisation Mortality database 2008.

StatLink <http://dx.doi.org/10.1787/711357235473>

Risk behaviours

The UNCRC does not explicitly mention risks from which children should be protected. But protection is implicit in rights that cover preventive health, education regarding healthy behaviours, and the provision of recreational activities appropriate to the age of the child. Protecting children from illicit drugs is however explicit (art. 33). The UNCRC stipulates that governments should provide family planning education and services to parents (art. 24.2f). In some cases parents can themselves be children under the age of 18.

Risk taking as a dimension is in part related to health, as it can often have adverse physical health consequences. However, risk taking is also a proxy for externalising or anti-social behaviour, as many risk-taking behaviours have strong negative spillovers and are correlated at an individual level with anti-social behaviours such as alcohol and drug dependence and violence. Such behaviours are also associated with poor educational performance. At the same time, it should be acknowledged that taking some risks may not necessarily be bad, and in some respects are a relatively normal part of growing up.

Indicators of risk taking include 15-year-olds who smoke regularly, 13- and 15-year-olds who report having been drunk on more than two occasions, and rates of birth to females aged 15 to 19.

The three indicators are child-centred, being drawn directly from the children themselves. They are also up-to-date, using data collected during 2005-06, and come from international surveys and series, achieving a high degree of standardisation. The indicators cover an age range of 13-19.

There are a wide range of government policy instruments, including: the legal system, and the age of legal maturity, public information campaigns, laws on advertising, and

taxation to discourage smoking and drinking. Public policy response mechanisms to teenage pregnancy include providing family planning services and public health information to children. Sex education classes are also regular fixtures in schools across the OECD.

Country coverage is limited to the 25 countries covered in the *Health Behaviour in School-aged Children* (HBSC) survey. Although Turkey is part of the survey, they do not collect data on risk behaviours.

The complementarity of indicators within the risk dimension is limited by the age-defined nature of the concept. The indicators do however complement each other in that they cover a range of different risk behaviours. They also deal with child well-being currently as well as in the future, given the longer-term consequences of some risk-taking behaviours. The measures are limited in terms of child coverage because surveys for smoking and drinking are undertaken in schools. It is likely that those at extreme risk do not attend school regularly and are hence not surveyed. Teen births, on the other hand, will capture any girls whose births are registered, which is normally the case in OECD countries.

Smoking and drinking

The variation in smoking and drinking among children in the OECD is moderate by the standards of many of the other indicators. In terms of smoking, rates range from a bit less than 10% to a shade under 30%. Smoking rates are somewhat higher on average for girls than for boys, although the opposite occurs in several countries like Slovak Republic, Poland, and Finland, and equality can be found in Denmark, Switzerland and Italy.

Rates of children reporting being drunk on more than two occasions also vary moderately across countries. Drunkenness rates rise strongly between ages 13 and 15 in all countries. While boys are more likely to have been drunk than girls overall across the OECD, there are exceptions where drunkenness is more common amongst girls, including Canada for both age groups, and for 15-year-olds in Iceland, Norway, Spain and the United Kingdom (Figure 2.16). There are few strong relationships between the risk indicators at a country level (see Annex 2.A1).

Teenage birth rates

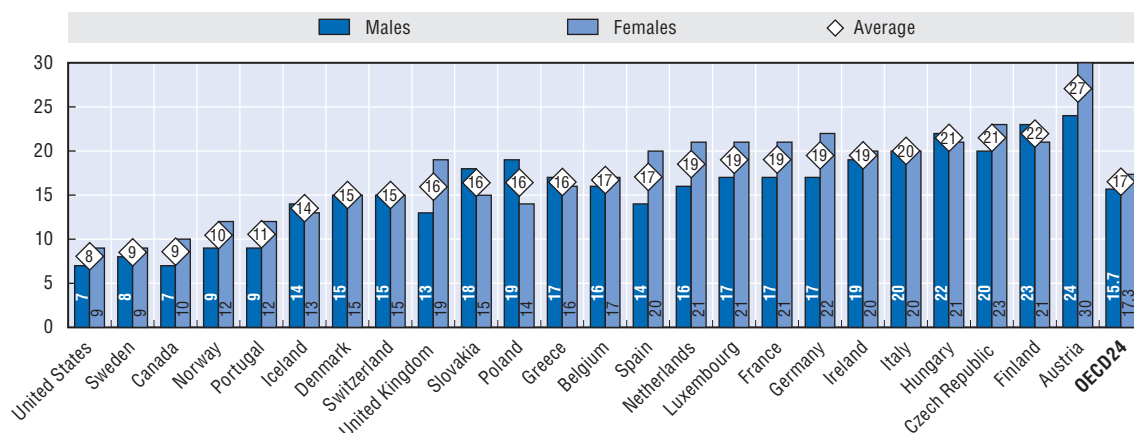
Rates of teen births are particularly high in Mexico, the United States and Turkey, at three to four times the OECD average. Japan, Korea, Switzerland and the Netherlands have the lowest rates of teenage birth rates. The variation in rates of teen births is very high across the OECD. Mexico has rates of teen birth nearly 20 times greater than that of Japan (Figure 2.17).

Quality of school life

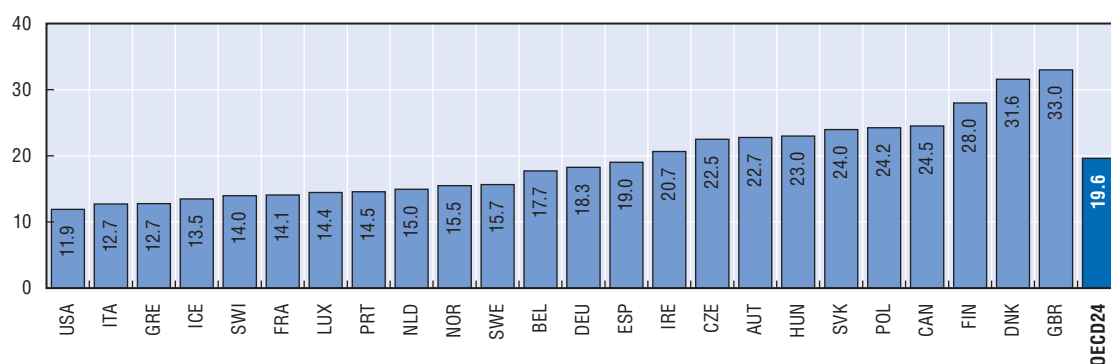
The UNCRC requires governments to provide for children's health and safety in institutions, services and facilities that provide for the care and protection of children (art. 3.3). Schools are also the place where children's freedom of expression and freedom to peacefully assemble (art. 13 and 15) can likewise be promoted or inhibited. Furthermore, the Convention states that the education of the child shall be directed towards preparation for responsible adult life, and towards an understanding of peace, tolerance and equality among genders and peoples (art. 29d).

Figure 2.16. **No country ranks consistently high or low on risk-taking measures**

a. Percentage of 15-year-old children who smoke at least once a week, 2005/06



b. Percentage of 13- and 15-years-old children who have been drunk at least twice, 2005/06



c. Percentage of 13- and 15-years-old children who have been drunk at least twice, 2005/06, breakdown by age and sex

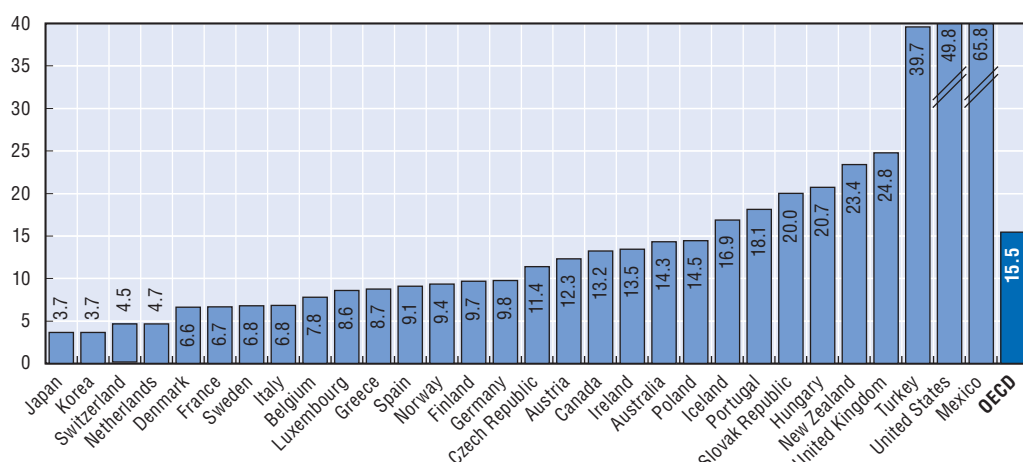
	13-years-old		15-years-old			13-years-old		15-years-old	
	Males	Females	Males	Females		Males	Females	Males	Females
Austria	10	6	41	36	Luxembourg	6	5	27	20
Belgium	9	6	32	22	Netherlands	6	5	30	21
Canada	11	13	35	36	Norway	3	3	25	32
Czech Republic	13	10	36	30	Poland	13	8	42	27
Denmark	15	9	59	56	Portugal	8	7	25	18
Finland	11	11	47	44	Slovak Republic	16	12	39	31
France	5	6	29	18	Spain	5	7	29	33
Germany	7	6	31	28	Sweden	4	4	26	26
Greece	7	4	21	17	Switzerland	6	4	29	18
Hungary	12	9	40	32	United Kingdom	21	20	44	50
Iceland	5	4	31	32	United States	5	5	20	20
Ireland	10	7	36	31					
					OECD24	9	7	33	29

Note: Data for risk behaviour estimates use reported risk-taking rates and sample numbers for 13 and 15-year-old boys and girls to calculate country percentages. Data are for the years 2005/06 from the *Health Behaviour in School-aged Children* report. The variation in 11-year-old risk taking is small and has not been included in the analysis. For 13-year-olds, only drinking statistics are used. Data are drawn from school-based samples. Data is for 24 OECD countries. Australia, Japan, Korea, Mexico, New Zealand and Turkey are missing.

Source: Adapted from Currie et al. (2008), *Inequalities in Young People's Health: HBSC International Report from the 2005/2006 Survey*, WHO Regional Office for Europe, Copenhagen.

StatLink  <http://dx.doi.org/10.1787/711380324185>

Figure 2.17. **Across the OECD there is enormous variation in rates of teen births**
 Adolescent fertility rate: Births per 1 000 women aged 15-19, 2005



Note: Teenage birth rates are measured as births per 1 000 15 to 19-year-old females for the year 2005. It should be noted that teenage fertility is not the same as teenage pregnancy. Countries where abortions are more common will have lower teenage fertility rates. Furthermore, in some OECD countries, such as Turkey, women marry earlier, which probably leads to an over-estimation of the social risks and negative outcomes experienced by girls becoming mothers. Physical risks are still age specific. All OECD countries are covered.

Source: World Development Indicators 2008.

StatLink <http://dx.doi.org/10.1787/711401746455>

Two indicators are included in the quality of school life dimension. The first reports conflicts experienced in school, namely experiences of bullying. The second reports overall satisfaction with school life.

Both indicators are highly child-centred and are drawn directly from the children themselves, and as such meet the criteria for a child-centred approach. They are also up-to-date, using data collected during 2005-06, and come from the *Health Behaviour in School-aged Children* survey's international questionnaire, achieving a high degree of standardisation. However, the indicators only cover a narrow age spectrum of children aged 11-15.

Especially during middle and late childhood, children spend much of their waking time interacting with other children in, going to or coming home from school. The quality of the school experience and the associated interactions with others are critical for children's social skills as well as for their ability to learn. Given that school environments are to a large degree publicly controlled, the scope for policy intervention is considerable. However, whilst governments may have considerable influence on the objective dimensions of the school experience, much bullying is not directly under school control, so children's subjective perceptions of their school experience may be directly connected with aspects outside of the school's control.

Country coverage is comparatively poor, with 25 countries being represented in the survey. Australia, New Zealand, Japan, Korea, and Mexico are missing. Additionally, the Slovak Republic did not respond to questions about bullying.

The indicators chosen complement each another. The first indicator asks about actual experiences at school, whilst the second asks children their overall subjective perceptions. Bullying is defined from the perspective of the victim. It is a negative outcome that is

almost certainly experienced more by disadvantaged children, and thus captures an equity component of school experiences. On the other hand, liking school is a more positive measure that provides more balanced information about the child's overall experience in school.

Bullying

Bullying can take a variety of forms, including physical and mental bullying, as well as more passive exclusion of the child bullied. In terms of comparisons, the broad definition of bullying does not allow for an understanding of which forms are most prevalent in which country or the duration and intensity of bullying. There is a wide variation in bullying rates by country. Figure 2.18 shows that children are most likely to have experienced bullying in Turkey and Greece. Bullying is experienced least by children in the Nordic countries, Spain, Italy, the Czech Republic and Hungary. Bullying typically declines between age 11 and 15. There is a general but not universal tendency for boys to be bullied more often than girls.

Children who like school

The indicator of children who report "liking school" is used as an institutionally-bound indicator of life satisfaction. Whilst the satisfaction response is subjective, by using the school-life satisfaction measure public policy relevance is maintained as governments can influence the environment, curricula, teaching quality and regulations in order to improve both quality of life. The results in Figure 2.19 show that on average Turkish children like school the most, even though they report the most bullying and fighting. Turkey is the only country where the majority of the children surveyed enjoy school. In the Czech Republic, Italy, the Slovak Republic and Finland fewer than one in five children report liking school.

The overwhelming pattern, with very few country exceptions, is for girls to like school more than boys at every age examined. In addition, the proportion of both boys and girls liking school systematically declines between the ages of 11 and 15 (Figure 2.19).

Summary

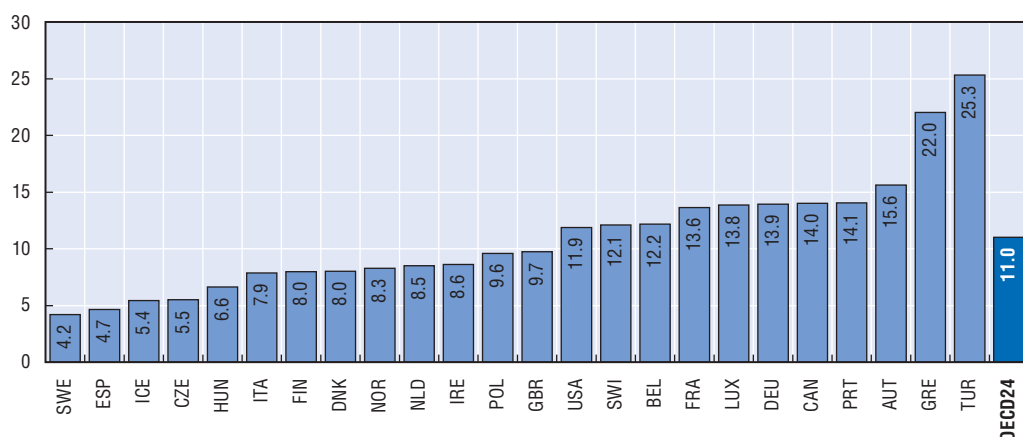
Chapter 2 has presented a new framework for comparing child well-being across OECD countries. A policy-amenable approach has been taken and indicator data has been reported for children by country and by sex, age and migrant status where possible. Indicators presented in the framework are all already in the public sphere. There has been no attempt to collect new data.

There are many competing factors in providing a good childhood. Unsurprisingly, no OECD country performs well on all fronts. Every OECD country can do more to improve children's lives.

Having considered outcomes for children, the question of how to intervene to improve these outcomes naturally arises. To gain a better understanding of the role of governments in forming and changing the sorts of outcomes measured in Chapter 2, the report now turns to explore inputs, and how social spending is distributed amongst children of different ages living in different conditions across OECD countries.

Figure 2.18. High numbers of children experience bullying in some countries

Percentage of 11-, 13- and 15-year-old children bullied at school at least twice in the last two months, 2005/06



Breakdown by age and sex

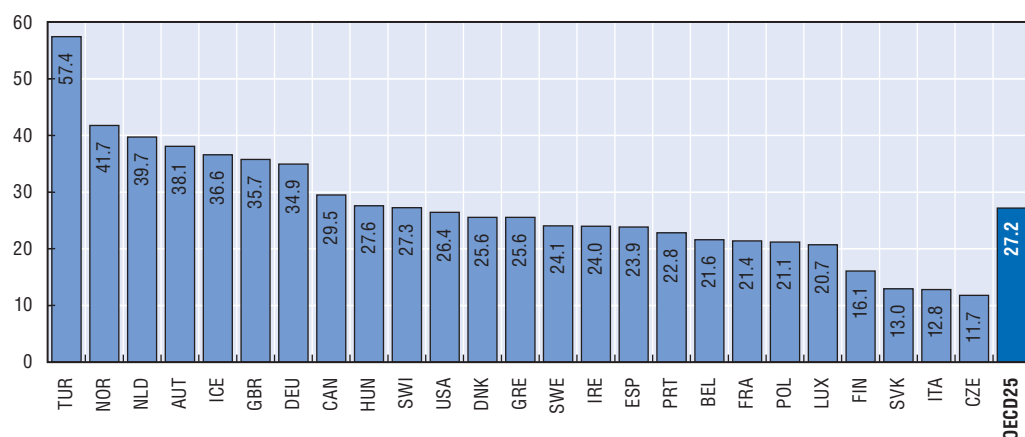
	11-years-old		13-years-old		15-years-old	
	Males	Females	Males	Females	Males	Females
Austria	20	11	20	16	18	9
Belgium	17	12	13	10	14	8
Canada	21	19	18	13	9	9
Czech Republic	6	5	7	5	6	4
Denmark	11	9	8	8	6	5
Finland	11	7	10	9	6	5
France	17	16	15	14	9	10
Germany	16	15	16	13	13	11
Greece	16	23	29	27	21	17
Hungary	9	10	7	8	3	3
Iceland	8	6	6	4	4	2
Ireland	11	8	10	7	9	7
Italy	15	7	10	8	5	5
Luxembourg	15	16	16	13	11	12
Netherlands	12	9	10	8	6	4
Norway	13	9	9	6	7	6
Poland	14	9	13	8	8	5
Portugal	17	15	19	13	13	10
Spain	6	5	6	4	3	4
Sweden	4	4	5	4	5	3
Switzerland	15	12	16	11	10	9
Turkey	37	30	29	26	18	12
United Kingdom	11	9	12	9	9	8
United States	18	15	11	10	8	7
OECD24	14	12	13	11	9	7

Note: Bullying estimates use reported bullying rates and sample numbers for 11-, 13- and 15-year-old boys and girls to calculate country percentages. Data are for the years 2005/06 from the *Health Behaviour in School-aged Children* report. A broad definition of bullying does not make clear which forms of bullying are most prevalent in which country, or how long they last. Data are drawn from school-based samples. Data is for 24 OECD countries. Australia, Japan, Korea, Mexico, New Zealand and the Slovak Republic are missing.

Source: Adapted from Currie et al. (2008), *Inequalities in Young People's Health: HBSC International Report from the 2005/2006 Survey*, WHO Regional Office for Europe, Copenhagen.

StatLink  <http://dx.doi.org/10.1787/711432365387>

Figure 2.19. **Most OECD children do not like school**
Percentage of 11-, 13- and 15-year-old children who report liking school, 2005/06



Breakdown by age and sex

	11-years-old		13-years-old		15-years-old	
	Males	Females	Males	Females	Males	Females
Austria	53	59	23	28	30	32
Belgium	25	39	20	24	10	14
Canada	28	46	20	33	22	31
Czech Republic	14	16	9	12	9	11
Denmark	33	38	21	21	18	18
Finland	14	25	14	22	9	11
France	29	41	13	19	11	13
Germany	55	62	28	32	18	20
Greece	37	49	17	26	13	17
Hungary	23	36	16	20	27	43
Iceland	33	49	29	39	29	37
Ireland	22	33	23	34	13	20
Italy	17	26	7	11	9	8
Luxembourg	25	34	20	25	9	14
Netherlands	41	49	40	51	24	32
Norway	46	51	44	49	29	31
Poland	25	34	17	30	13	14
Portugal	25	39	14	25	17	18
Slovak Republic	16	21	8	9	9	14
Spain	31	44	17	25	9	17
Sweden	30	48	22	22	11	11
Switzerland	31	39	26	31	16	20
Turkey	68	77	50	66	32	45
United Kingdom	49	54	30	32	24	23
United States	27	39	24	27	21	22
OECD25	32	42	22	29	17	21

Note: Liking school estimates use reported rates for “liking school a lot” and sample numbers for 11-, 13- and 15-year-old boys and girls to calculate country percentages. Data are for the years 2005/06 from the *Health Behaviour in School-aged Children* report. Data are drawn from school-based samples. Data is for 25 OECD countries. Australia, Japan, Korea, Mexico and New Zealand are missing.

Source: Adapted from Currie et al. (2008), *Inequalities in Young People's Health: HBSC International Report from the 2005/2006 Survey*, WHO Regional Office for Europe, Copenhagen.

StatLink  <http://dx.doi.org/10.1787/711432783816>

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ANNEX 2.A1

Relationships between the OECD Child Well-being Indicators

Table 2.A1.1 below presents cross-country correlations across the child well-being indicators. The results are presented in dimensional blocks for easier understanding and comparison.

The largest number of significant inter-relationships is found for average literacy and low birth weight, which are both significantly correlated with 13 out of 20 other indicators. Additionally, the three material well-being measures – a child's family income, child poverty, and educational deprivation – are each significantly correlated with 10 or 11 of the 20 other indicators. At the other end of the scale, breastfeeding, physical activity and smoking are not correlated with any of the other 20 indicators.

Table 2.A1.2 below presents the correlation matrix excluding Turkey. The Turkish figures have been removed from the associations because of several unanticipated correlations. Positive significant correlations between liking school, on one hand, with NEET, low birth weight and bullying together on the other hand are found largely because of the very high rate of children in Turkey who report liking school. Unexpected significant associations remain, however, between average literacy and both drunkenness and suicide.

Table 2.A1.1. Correlations between child well-being indicators

	Material well-being	Average disposable income	Children in poor homes	Educational deprivation	Housing and environment	Overcrowding	Poor environmental conditions	Education	Average mean literacy score	Literacy inequality	Youth NEET rates	Health	Low birth weight	Infant mortality	Breastfeeding rates	Vaccination rates for pertussis	Vaccination rates for measles	Physical activity	Youth mortality rates	Youth suicide rates	Risk behaviours	Smoking	Drunkenness	Teenage births	Quality of school life	Bullying	Liking school
Material well-being																											
	Average disposable income	1	-0.42	-0.52		-0.81	-0.16		0.50	-0.23	-0.49		-0.49	-0.59	-0.15	-0.41	-0.36	-0.14	-0.50	0.21		-0.25	-0.22	-0.40		-0.14	0.08
	Children in poor homes		1	0.62		0.34	0.45		-0.52	0.30	0.55		0.57	0.61	-0.25	-0.18	0.09	0.04	0.50	-0.16		-0.15	-0.25	0.59		0.43	0.16
	Educational deprivation			1		0.47	0.00		-0.70	0.29	0.78		0.68	0.89	0.08	-0.12	0.11	0.09	0.60	-0.12		-0.26	-0.13	0.75		0.69	0.44
Housing and environment																											
	Overcrowding					1	0.03		-0.48	0.31	0.29		0.42	0.54	0.23	0.26	0.27	0.14	0.43	-0.16		0.20	0.13	0.39		0.09	-0.40
	Poor environmental conditions						1		-0.12	0.32	0.26		0.52	0.11	-0.18	0.18	0.12	-0.06	0.19	-0.58		0.23	-0.10	-0.09		0.21	-0.18
Education																											
	Average mean literacy score								1	-0.66	-0.64		-0.58	-0.66	-0.06	-0.05	-0.08	0.15	-0.53	0.55		0.15	0.46	-0.64		-0.47	-0.25
	Literacy inequality									1	0.28		0.53	0.23	0.00	0.00	-0.29	-0.23	0.38	-0.35		0.06	-0.45	0.36		0.35	0.01
	Youth NEET rates										1		0.70	0.87	0.11	-0.14	-0.08	-0.07	0.55	-0.31		-0.07	-0.07	0.53		0.59	0.55
Health																											
	Low birth weight												1	0.61	0.02	-0.14	-0.01	-0.07	0.50	-0.38		0.11	-0.12	0.47		0.67	0.29
	Infant mortality													1	0.13	-0.05	0.12	0.09	0.63	-0.10		-0.04	0.29	0.75		0.59	0.55
	Breastfeeding rates														1	0.13	0.29	-0.23	-0.24	0.13		-0.07	0.12	0.04		0.00	0.24
	Vaccination rates for pertussis															1	0.54	-0.07	-0.03	-0.27		0.22	-0.01	-0.14		-0.50	-0.37
	Vaccination rates for measles																1	0.27	-0.09	-0.22		-0.23	0.14	0.09		-0.39	-0.27
	Physical activity																	1	0.07	0.22		0.02	0.38	0.19		-0.21	-0.20
	Youth mortality rates																		1	-0.07		-0.10	-0.16	0.58		0.37	-0.35
	Youth suicide rates																			1		0.01	0.24	0.03		-0.16	0.11
Risk behaviours																											
	Smoking																					1	0.24	-0.33		0.05	-0.16
	Drunkenness																						1	0.04		-0.22	-0.05
	Teenage births																							1		0.32	0.33
Quality of school life																											
	Bullying																									1	0.44
	Liking school																										1

Statistically significant associations at the 95% level

Statistically insignificant associations

Source: OECD calculations.

Table 2.A1.2. **Correlations between child well-being indicators (without Turkey)**

	Material well-being	Average disposable income	Children in poor homes	Educational deprivation	Housing and environment	Overcrowding	Poor environmental conditions	Education	Average mean literacy score	Literacy inequality	Youth NEET rates	Health	Low birth weight	Infant mortality	Breastfeeding rates	Vaccination rates for pertussis	Vaccination rates for measles	Physical activity	Youth mortality rates	Youth suicide rates	Risk behaviours	Smoking	Drunkenness	Teenage births	Quality of school life	Bullying	Liking school
Material well-being																											
Average disposable income		1	-0.31	-0.40		-0.81	-0.16		0.41	-0.21	-0.38		-0.38	-0.51	-0.10	-0.51	-0.40	-0.15	-0.50	0.21		-0.25	-0.22	-0.32		0.19	0.46
Children in poor homes			1	0.51		0.34	0.45		-0.42	0.29	0.45		0.46	0.51	-0.36	-0.14	0.11	0.04	0.50	-0.16		-0.15	-0.25	0.53		0.23	-0.17
Educational deprivation				1		0.47	0.00		-0.61	0.29	0.64		0.53	0.82	-0.03	-0.04	0.16	0.12	0.60	-0.12		-0.26	-0.13	0.74		0.45	-0.21
Housing and environment																											
Overcrowding						1	0.03		-0.48	0.31	0.29		0.42	0.54	0.23	0.26	0.27	0.14	0.43	-0.16		0.20	0.13	0.39		0.09	-0.40
Poor environmental conditions							1		-0.12	0.32	0.26		0.52	0.11	-0.18	0.18	0.12	-0.06	0.19	-0.58		0.23	-0.10	-0.09		0.21	-0.18
Education																											
Average mean literacy score									1	-0.69	-0.62		-0.47	-0.58	0.01	-0.12	-0.09	0.17	-0.53	0.55		0.15	0.46		-0.59	-0.20	0.13
Literacy inequality										1	0.43		0.56	0.24	-0.02	0.01	-0.29	-0.23	0.38	-0.35		0.06	-0.45		0.35	0.35	-0.07
Youth NEET rates											1		0.59	0.65	-0.08	-0.06	-0.14	-0.14	0.55	-0.31		-0.07	-0.07		0.56	0.10	-0.15
Health																											
Low birth weight													1	0.39	-0.07	-0.08	-0.01	-0.08	0.50	-0.38		0.11	-0.12	0.37		0.49	-0.09
Infant mortality														1	0.01	0.09	0.20	0.14	0.63	-0.10		-0.04	0.29	0.82		0.08	-0.10
Breastfeeding rates															1	0.16	0.30	-0.23	-0.24	0.13		-0.07	0.12	-0.01		-0.13	0.17
Vaccination rates for pertussis																1	0.54	-0.07	-0.03	-0.27		0.22	-0.01	-0.11		-0.53	-0.37
Vaccination rates for measles																	1	0.27	-0.09	-0.22		-0.23	0.14	0.10		-0.48	-0.33
Physical activity																		1	0.07	0.22		0.02	0.38	0.20		-0.28	-0.25
Youth mortality rates																			1	-0.07		-0.10	-0.16	0.58		0.37	-0.35
Youth suicide rates																				1		0.01	0.24	0.03		-0.16	0.11
Risk behaviours																											
Smoking																						1	0.24	-0.33		0.05	-0.16
Drunkenness																							1	0.04		-0.22	-0.05
Teenage births																								1		0.03	0.05
Quality of school life																											
Bullying																										1	0.11
Liking school																											1

Statistically significant associations at the 95% level

Statistically insignificant associations

Source: OECD calculations.