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**HEALTH BEHAVIOUR IN
SCHOOL-AGED CHILDREN**

WORLD HEALTH ORGANIZATION
COLLABORATIVE CROSS-NATIONAL STUDY



MULTIDIMENSIONAL POVERTY AMONG ADOLESCENTS IN 38 COUNTRIES: EVIDENCE FROM THE HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC) 2013/14 STUDY

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Child Ind Res
DOI 10.1007/s12187-017-9489-0



Multidimensional Poverty Among Adolescents in 38 Countries: Evidence from the Health Behaviour in School-aged Children (HBSC) 2013/14 Study

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Accepted: 14 July 2017
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Abstract This study applied UNICEF's Multiple Overlapping Deprivation Analysis (MODA) framework to adolescents (aged 11, 13 and 15) in 37 European countries and Canada using data from the 2013/14 Health Behaviour in School-aged Children survey. It is one of the first applications of MODA based entirely on data collected from adolescents themselves rather than from household reference persons on their behalf. Unlike most other multidimensional child poverty studies, the present analysis focuses on non-material, relational aspects of child poverty. Substantial cross-country variation was found in the prevalence of adolescent deprivations in nutrition, perceived health, school environment, protection from peer violence, family environment and information access. These single dimensions of poverty did not closely relate to national wealth and income inequality. However, when we looked at deprivation in three or more dimensions (i.e.,

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What can Harry Potter teach us about multidimensional poverty?

- Child poverty is usually measured in terms of income or consumption.
- This approach assumes that children receive their fair share of household resources, **but this is not always the case.**
- It is therefore useful to collect some information about poverty directly from children.



MODA: Multiple Outcome Deprivation Analysis

- A rights-based approach to poverty assessment.
- Based on the UN Convention on the Rights of the Child.
- SDG Target 1.2: reduce poverty by half in all its dimensions, by 2030.

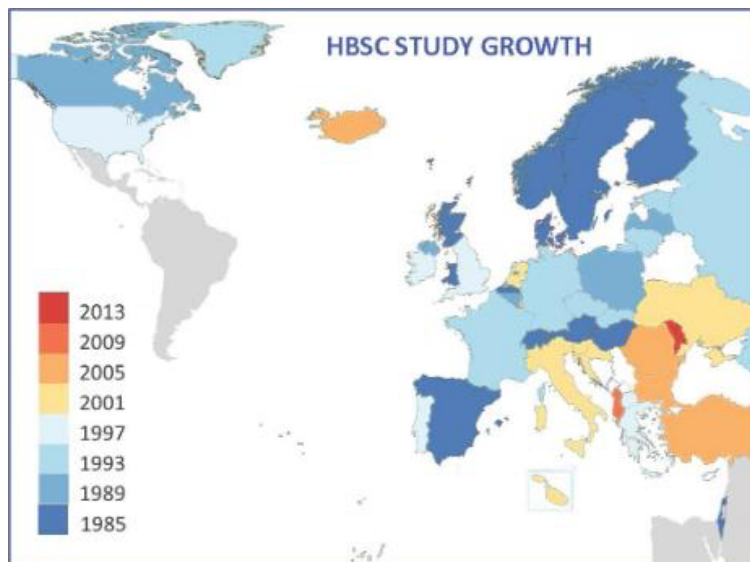
www.unicef-irc.org/MODA/

HBSC: Health Behaviour in School-aged Children study

- School-based survey of adolescents (11-15 years) in 40+ countries
- Measures various aspects of health and health behavior, and social contexts.
- 2013/14 cycle
 - 38 countries (41 regional units) in Europe, Canada, and Israel
 - ~220,000 students
 - Subnational data for UK (England, Scotland, Wales) and Belgium (Flanders and Wallonia)

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About the HBSC



- 1 England
- 2 Finland
- 3 Norway
- 4 Austria
- 5 Denmark^a

1983/1984

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium (French)
- 5 Hungary
- 6 Israel
- 7 Scotland
- 8 Spain
- 9 Sweden
- 10 Switzerland
- 11 Wales
- 12 Denmark^a
- 13 Netherlands^a

1985/1986

1989/1990

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium^a
- 5 Hungary
- 6 Scotland
- 7 Spain
- 8 Sweden
- 9 Switzerland
- 10 Wales
- 11 Denmark^a
- 12 Netherlands^a
- 13 Canada
- 14 Latvia^a
- 15 Northern Ireland^a
- 16 Poland

1993/1994

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium (French)
- 5 Hungary
- 6 Israel
- 7 Scotland
- 8 Spain
- 9 Sweden
- 10 Switzerland
- 11 Wales
- 12 Denmark
- 13 Netherlands
- 14 Canada
- 15 Latvia
- 16 Northern Ireland
- 17 Poland
- 18 Belgium (Flemish)
- 19 Czech Republic
- 20 Estonia
- 21 France
- 22 Germany
- 23 Greenland
- 24 Lithuania
- 25 Russian Federation
- 26 Slovakia

1997/1998

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium (French)
- 5 Hungary
- 6 Israel
- 7 Scotland
- 8 Spain
- 9 Sweden
- 10 Switzerland
- 11 Wales
- 12 Denmark
- 13 Canada
- 14 Latvia
- 15 Northern Ireland
- 16 Poland
- 17 Belgium (Flemish)
- 18 Czech Republic
- 19 Estonia
- 20 France
- 21 Germany
- 22 Greenland
- 23 Lithuania
- 24 Russian Federation
- 25 Slovakia
- 26 England
- 27 Greece
- 28 Portugal
- 29 Ireland
- 30 United States

2001/2002

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium (French)
- 5 Hungary
- 6 Israel
- 7 Scotland
- 8 Spain
- 9 Sweden
- 10 Switzerland
- 11 Wales
- 12 Denmark
- 13 Canada
- 14 Latvia
- 15 Poland
- 16 Belgium (Flemish)
- 17 Czech Republic
- 18 Estonia
- 19 France
- 20 Germany
- 21 Greenland
- 22 Lithuania
- 23 Russian Federation
- 24 Slovakia
- 25 England
- 26 Greece
- 27 Portugal
- 28 Ireland
- 29 United States
- 30 MKD^a
- 31 Netherlands
- 32 Italy
- 33 Croatia
- 34 Malta
- 35 Slovenia
- 36 Ukraine

2005/2006

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium (French)
- 5 Hungary
- 6 Israel
- 7 Scotland
- 8 Spain
- 9 Sweden
- 10 Switzerland
- 11 Wales
- 12 Denmark
- 13 Canada
- 14 Latvia
- 15 Poland
- 16 Belgium (Flemish)
- 17 Czech Republic
- 18 Estonia
- 19 France
- 20 Germany
- 21 Greenland
- 22 Lithuania
- 23 Russian Federation
- 24 Slovakia
- 25 England
- 26 Greece
- 27 Portugal
- 28 Ireland
- 29 United States
- 30 MKD^a
- 31 Netherlands
- 32 Italy
- 33 Croatia
- 34 Malta
- 35 Slovenia
- 36 Ukraine
- 37 Bulgaria
- 38 Iceland
- 39 Luxembourg
- 40 Romania
- 41 Turkey

2009/2010

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium (French)
- 5 Hungary
- 6 Israel
- 7 Scotland
- 8 Spain
- 9 Sweden
- 10 Switzerland
- 11 Wales
- 12 Denmark
- 13 Canada
- 14 Latvia
- 15 Poland
- 16 Belgium (Flemish)
- 17 Czech Republic
- 18 Estonia
- 19 France
- 20 Germany
- 21 Greenland
- 22 Lithuania
- 23 Russian Federation
- 24 Slovakia
- 25 England
- 26 Greece
- 27 Portugal
- 28 Ireland
- 29 United States
- 30 MKD^a
- 31 Netherlands
- 32 Italy
- 33 Croatia
- 34 Malta
- 35 Slovenia
- 36 Ukraine
- 37 Iceland
- 38 Luxembourg
- 39 Romania
- 40 Turkey
- 41 Armenia

2013/2014

- 1 Finland
- 2 Norway
- 3 Austria
- 4 Belgium (French)
- 5 Hungary
- 6 Israel
- 7 Scotland
- 8 Spain
- 9 Sweden
- 10 Switzerland
- 11 Wales
- 12 Denmark
- 13 Canada
- 14 Latvia
- 15 Poland
- 16 Belgium (Flemish)
- 17 Czech Republic
- 18 Estonia
- 19 France
- 20 Germany
- 21 Lithuania
- 22 Russian Federation
- 23 Slovakia
- 24 England
- 25 Greece
- 26 Portugal
- 27 Ireland
- 28 MKD^a
- 29 Netherlands
- 30 Italy
- 31 Croatia
- 32 Malta
- 33 Slovenia
- 34 Ukraine
- 35 Iceland
- 36 Luxembourg
- 37 Romania
- 38 Bulgaria
- 39 Albania
- 40 Republic of Moldova

1. Use MODA to examine cross-national differences in the prevalence of multidimensional adolescent poverty in 38 countries (41 regions)
2. Analyse differences in multidimensional poverty owing to country wealth, income inequality and individual characteristics (age, gender, family structure, perceived family wealth)
3. Identify groups of children in multiple dimensions of poverty and constellations of dimensions that tend to co-occur.

Table 1 Child poverty indicators, dimensions and thresholds

Dimension	Indicator	Indicator threshold: poor if
Nutrition	Breakfast on weekdays	Never eats breakfast on weekdays.
	Consumption of fruits and vegetables	Consumes fruits or vegetables less than once a week.
Perceived health	Self-rated health	Fair or poor self-rated health.
	Health complaints	Reports two or more out of eight health symptoms every day.
School environment	Student support	No classmate support. Disagrees or strongly disagrees with at least one of the following statements: “the students in my class enjoy being together”, “most of the students in my class are kind and helpful” and “other students accept me as I am”.
	Teacher support	No teacher support. Disagrees or strongly disagrees with at least one of the following statements: “I feel that my teachers accept me as I am”, “I feel that my teachers care about me as a person” and “I feel a lot of trust in my teachers”.

MODA indicators



Protection from peer violence	Bullied	Being bullied at school at least once in the past couple of months.
	Cyberbullied	Being bullied by pictures or messages at least once in the past couple of months.
Family environment	Quality of family communication	Poor family communication. Disagrees or strongly disagrees with at least one of the following statements about family: “I think the important things are talked about”, “When I speak someone listens to what I say”, “We ask questions when we don’t understand each other”, “When there is a misunderstanding we talk it over until it’s clear”.
	Family support	Poor family support. Disagrees or strongly disagrees with at least one of the following statements: “My family really tries to help me”, “I get the emotional help and support I need from my family”, “I can talk about my problems with my family”, “My family is willing to help me make decisions”.
Access to Information	Computer at home	No computer at home.
	Computer use on weekdays	No computer use on weekdays in the past week.

- Ranked countries by the share of adolescents deprived in each of the six dimensions.
- Tested whether deprivation headcounts correlate with GDP per capita or Gini coefficient of income inequality.
- Examined within-country variation in the probability of multidimensional deprivation owing to gender, age, family structure, and perceived family wealth
- Calculated multidimensional poverty rates and examined variation both between and within countries.

Nutrition and health deprivation

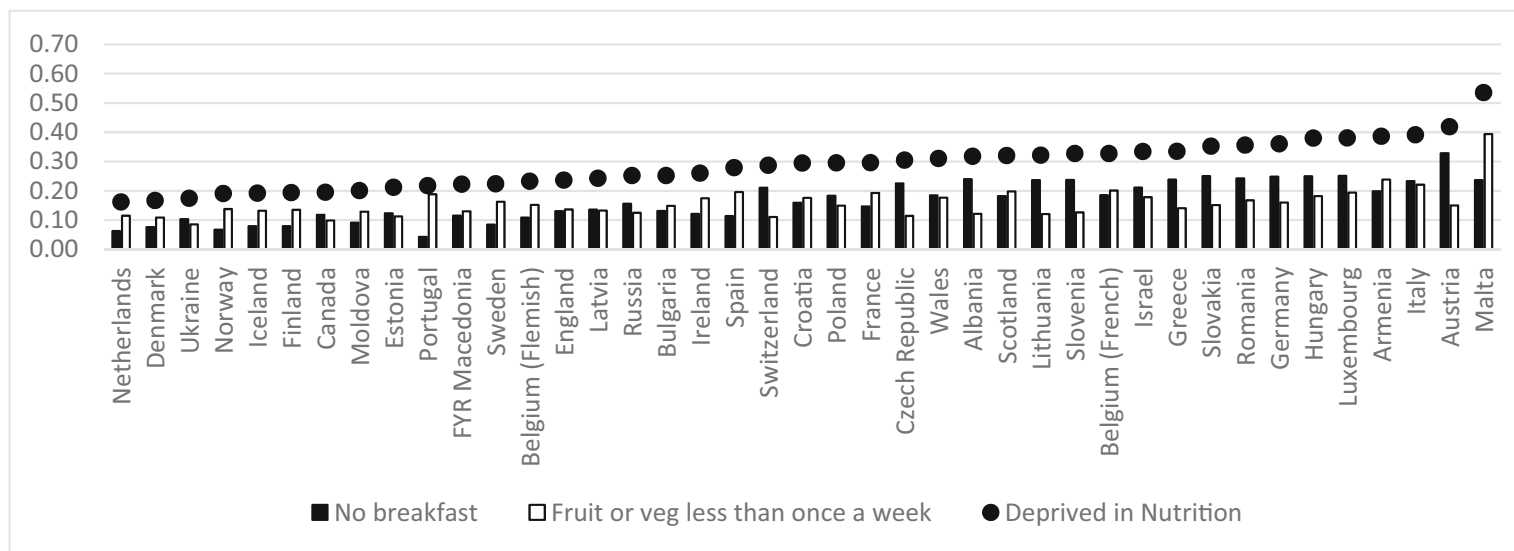


Fig. 1 Nutrition. Source: HBSC 2013/14

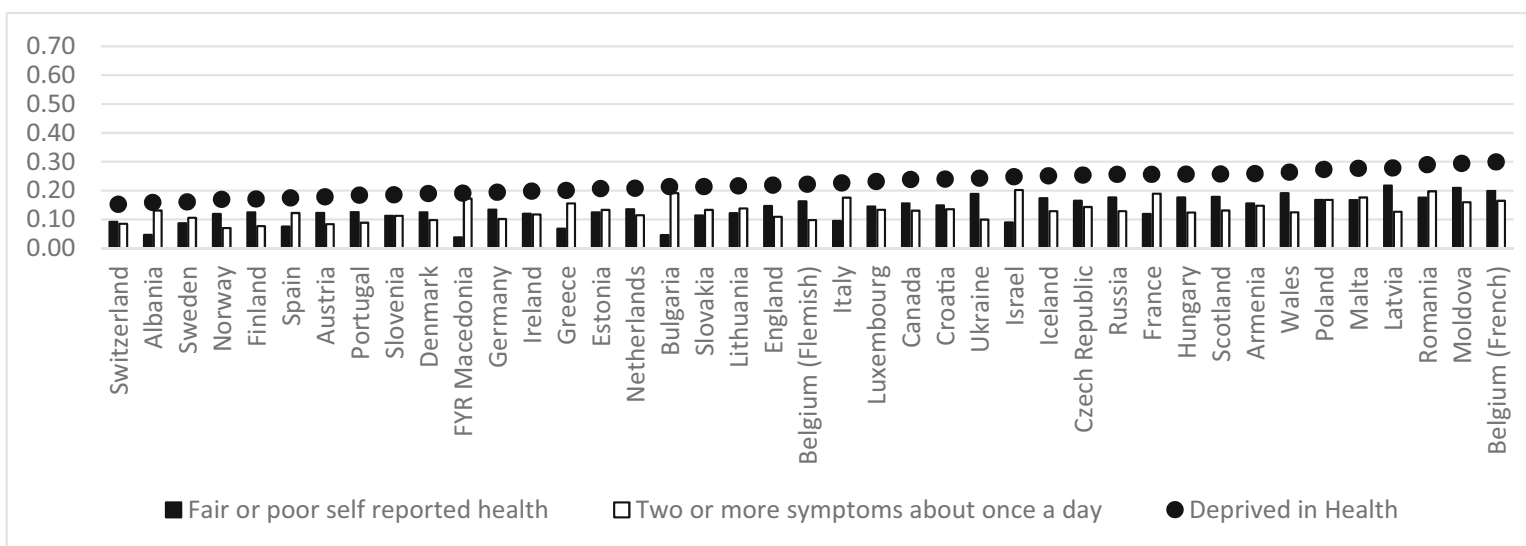


Fig. 2 Perceived health. Source: HBSC 201B793/14

Education and safety deprivation

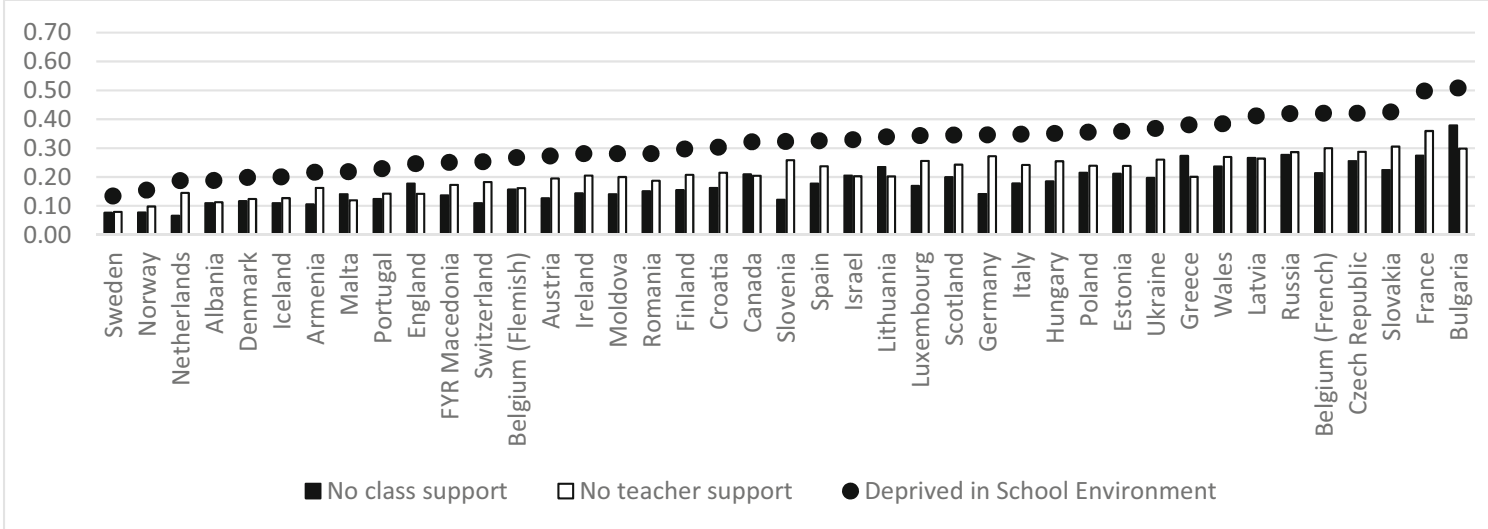


Fig. 3 School environment. Source: HBSC 2013/14

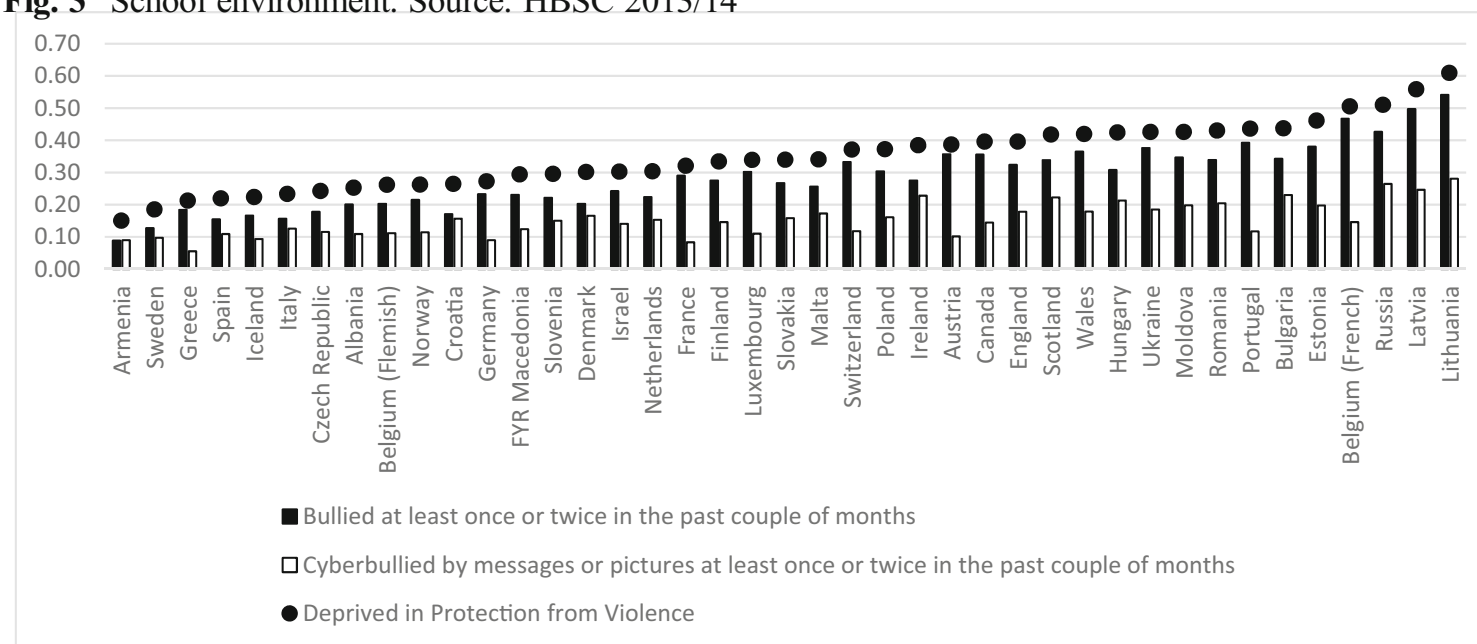


Fig. 4 Protection from peer violence. Source: HBSC 2013/14

Family support and information deprivation

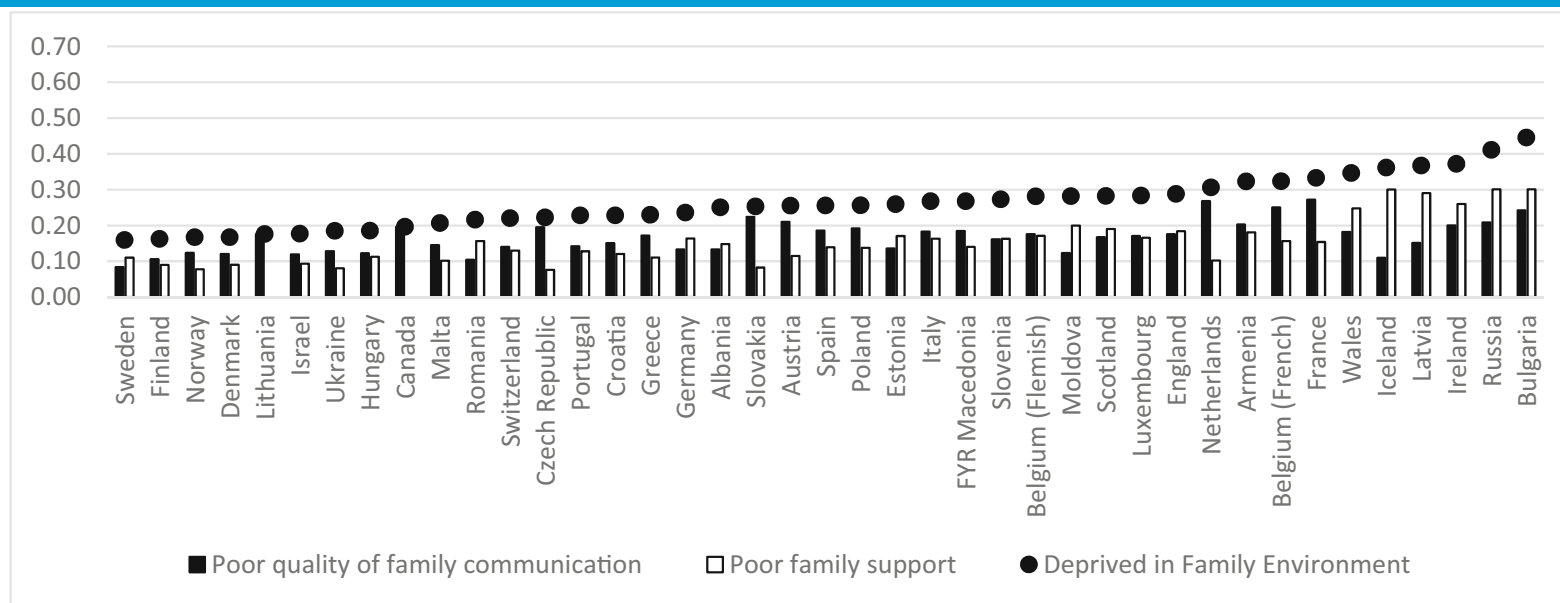


Fig. 5 Family environment. Source: HBSC 2013/14

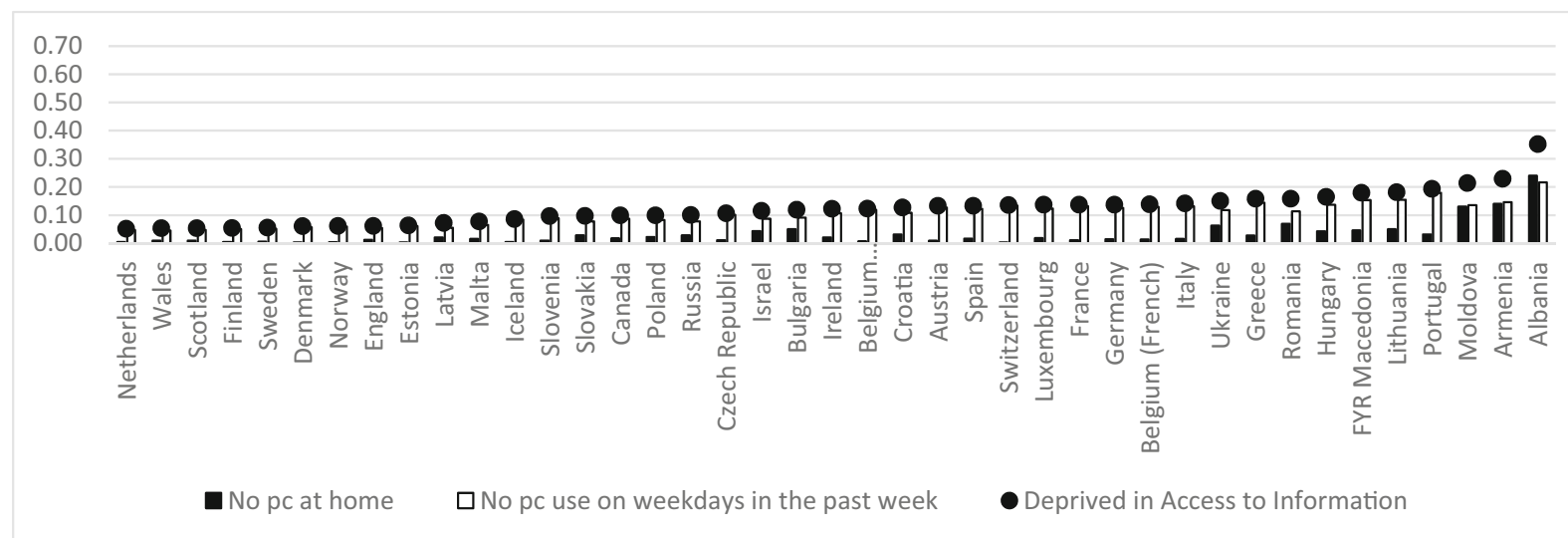
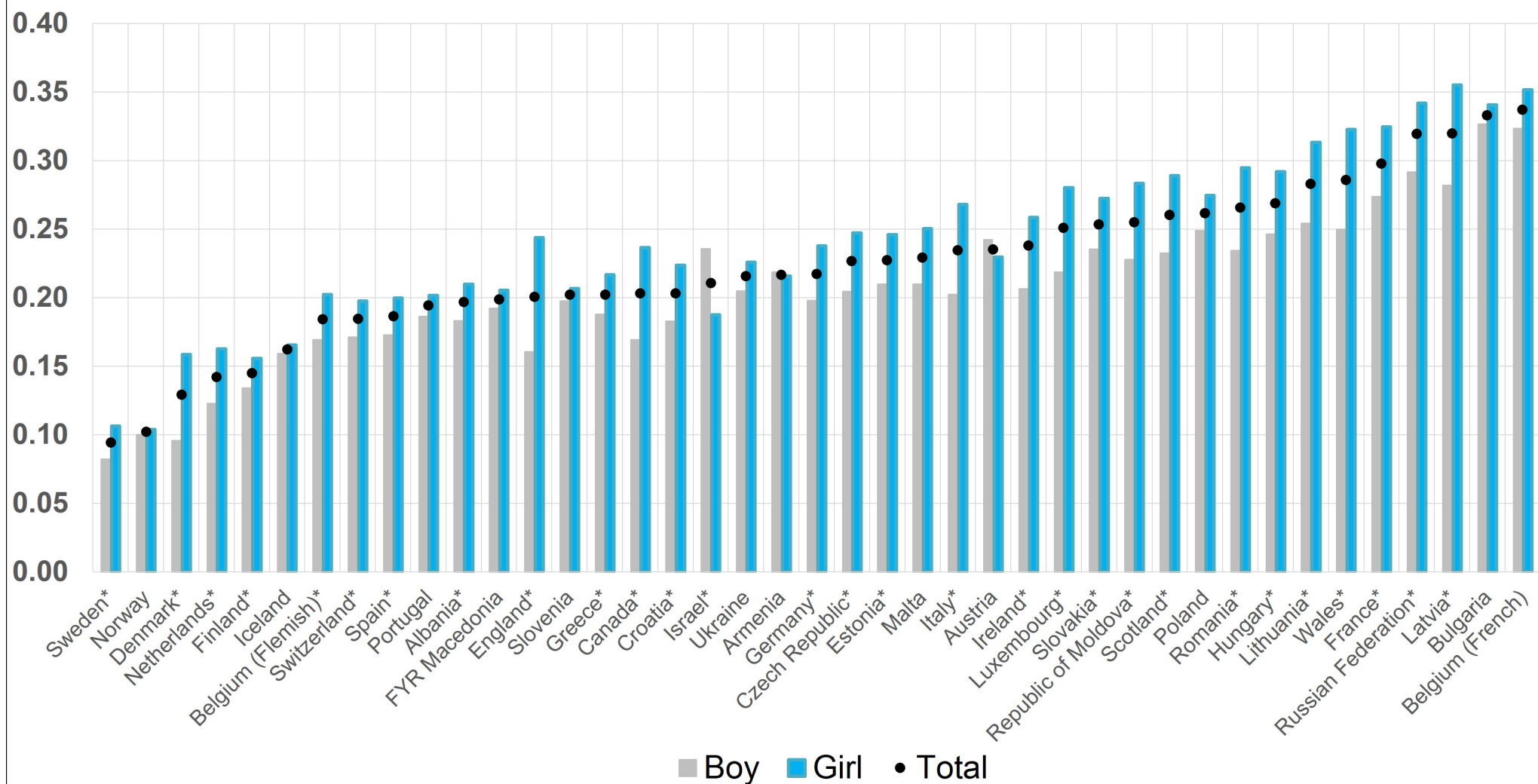


Fig. 6 Information access. Source: HBSC 2013/14

Multidimensional deprivation



**Multidimensional poverty (three or more dimensions),
HBSC 2013/14**



*significant at $p < 0.05$.

Country wealth and inequality

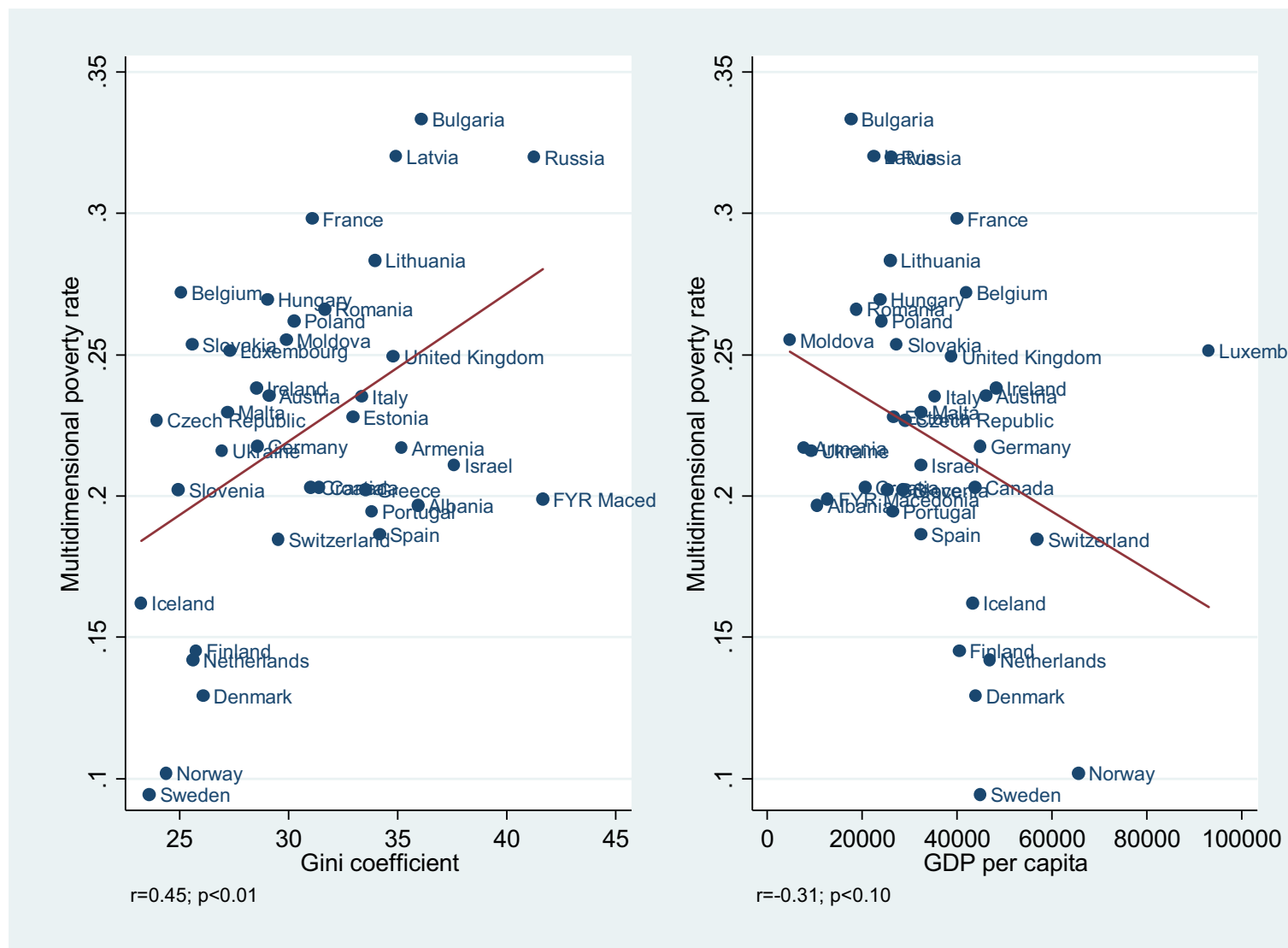


Fig. 8 The relationship between multidimensional poverty and income inequality (left hand panel) and country wealth (right hand panel). Source: HBSC 2013/14; Solt (2014). The Standardized World Income Inequality Database (SWIID) Version 5.0, October 2014

Multidimensional poverty (in four domains)

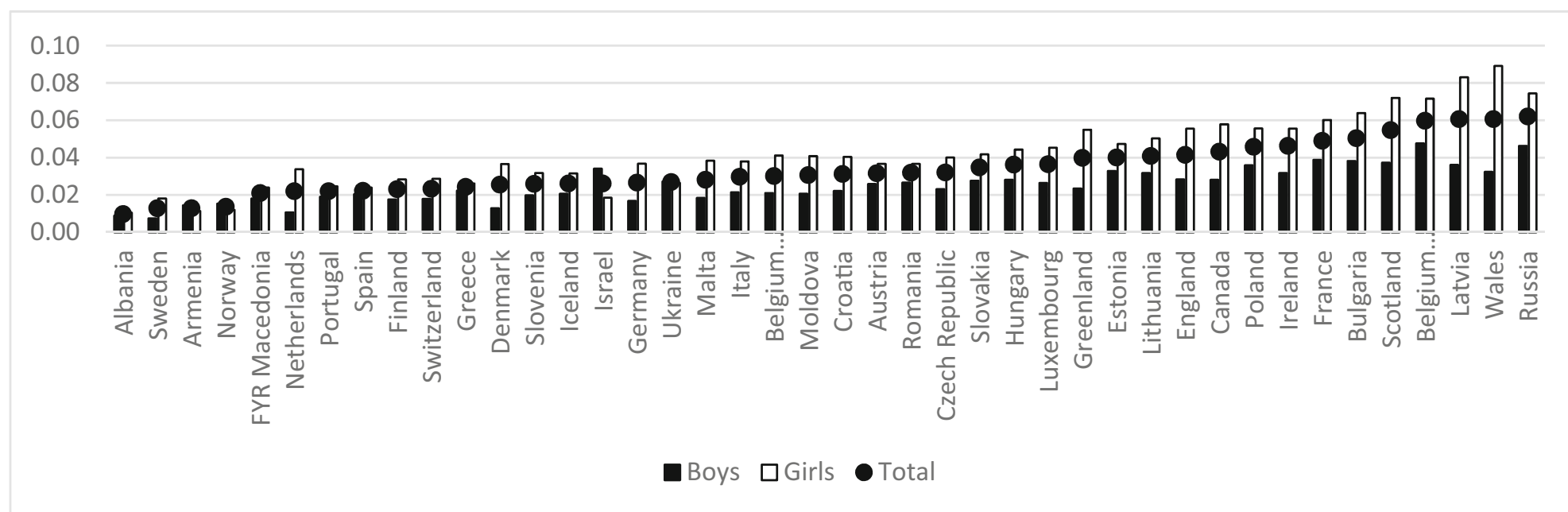


Fig. 9 The share of adolescents deprived in health, school environment, family environment and protection from violence simultaneously. Source: HBSC 2013/14

Key findings: gender

- Girls are more likely than boys to experience multidimensional poverty in 26 countries
 - Only in **Israel** does the difference go the other way: the poverty rate is 5 points higher for boys
 - Perceived health is the most skewed against girls.
 - Poverty also related to higher age, single-parent households, and low perceived family wealth

Key findings: gender

- **England** had greatest difference in the prevalence of multidimensional poverty between girls and boys – 8 percentage points, followed by **Canada, Italy, Latvia** and **Wales** (7 points).
- Among the six countries with the lowest rates of multidimensional poverty, girls are more likely to be poor in **Denmark, Finland, the Netherlands**, and **Sweden**,
 - No statistically significant gender gap in **Norway** or **Iceland**.

Key findings: cross-national differences

- Substantial cross-country variation in the prevalence of deprivations.
 - Ranges from one in ten in **Norway** and **Sweden** to one in three in **Bulgaria, Latvia, Russia** and **Wallonia (Belgium)**.
- Francophone regions (**Wallonia, France**) show a relatively high concentration of poverty
 - Both are top 5 countries in terms of percentages of poverty in 3+ dimensions, comparable only to **Bulgaria, Latvia** and **Russia**
- There is more multidimensional poverty in less wealthy, more unequal countries

- Findings draw attention links between social and psychological deprivations
 - The results, while noisy, reveal that lacking support in school and family contexts coincides most often with bullying and poor health.
- Findings also reflect interdependency of SDGs relating to health, wealth, & equality (1, 2, and 5)
 - Gender differences in health and wellbeing during adolescence are likely to persist in adulthood.
 - This poses a challenge for high-income countries in achieving the universal SDGs

For more information:

Chzhen, Y., Bruckauf, Z., Toczydlowska, E., Elgar, F. J., Moreno-Maldonado, C., Stevens, G. W. J. M., Sigmundová, D., & Gariépy, G. (in press). Multidimensional deprivation among adolescents in 39 countries: Evidence from the Health Behaviour in School-Aged Children (HBSC) 2013/14 study. *Child Indicators Research*. <https://doi.org/10.1007/s12187-017-9489-0>

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