



**hbsc**

**HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN**  
WORLD HEALTH ORGANIZATION COLLABORATIVE CROSS-NATIONAL STUDY

# *Health Behaviour in School aged Children, results of an international study*



University of  
St Andrews

*Dorothy Currie*  
*Senior Statistician*  
*HBSC International Coordinating Centre*  
*University of St Andrews*



## Aim of presentation

Background to HBSC

Why adolescence?

Patterns of health among 11, 13 and 15 year olds in 39 countries

- Social determinants and inequalities in health according to family affluence, gender and age

[Looking forward; the next 30 years of HBSC]





## HBSC Background

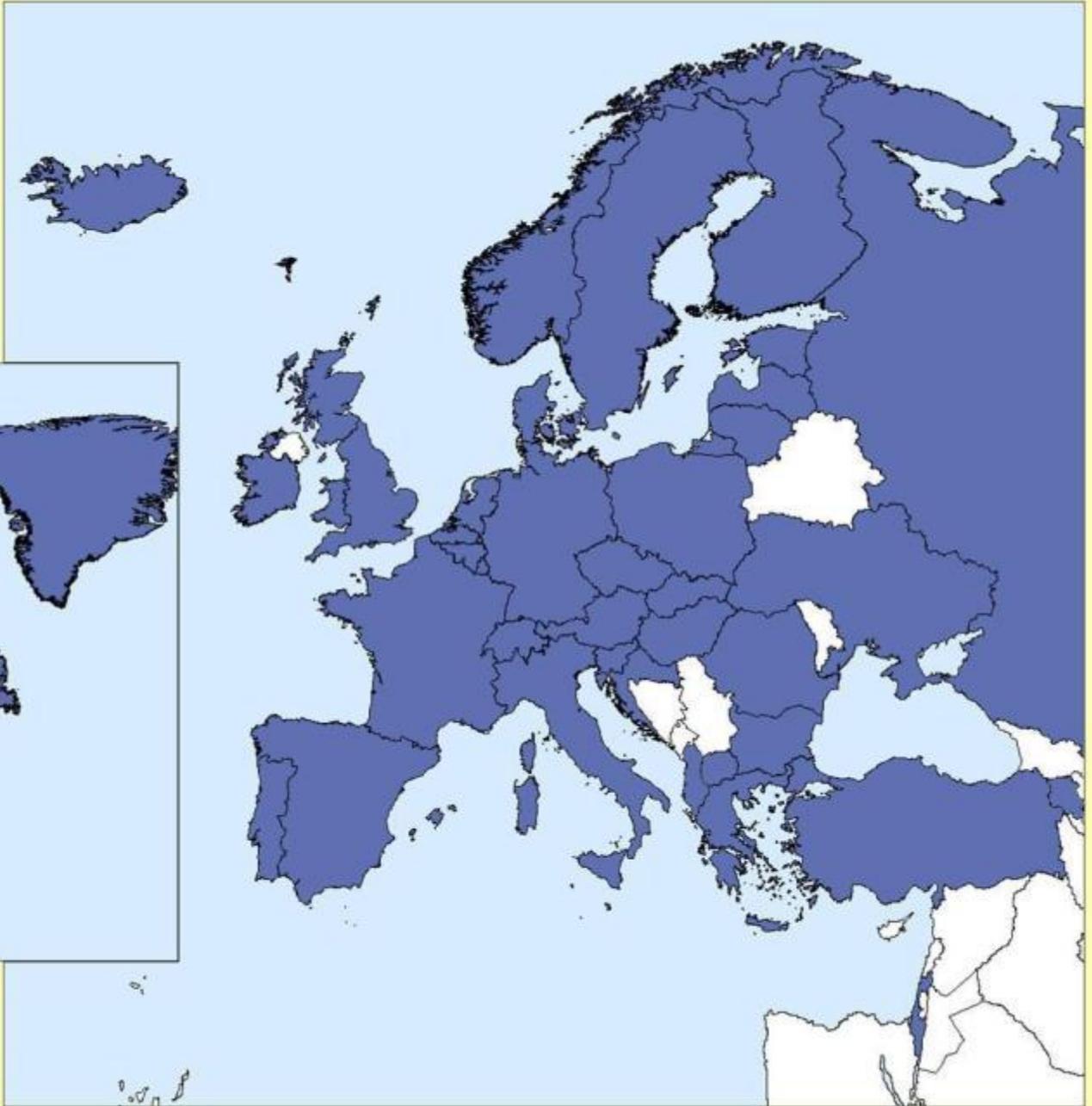
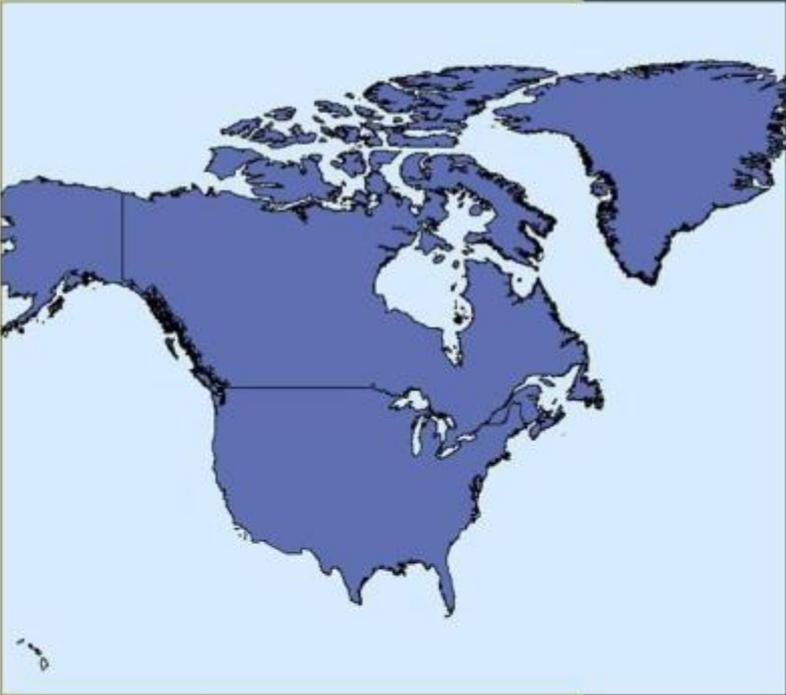
- Founded in 1982 in 3 countries and soon adopted as a **WHO Collaborative Study**
- First international survey in 1983/4 in 5 countries
- 3 decades later we have 43 member countries in Europe and North America
- HBSC international network of more than 350 scientists
- Growing interest in HBSC globally
- 8 cross-national surveys conducted; 6 major international reports published by WHO in *Health Policy for Children and Adolescents* series

### 2009/2010 survey

- 39 countries submitted national data for international report
- More than 200,000 young people were surveyed
- Data cover more than 60 topic areas



2009/2010





## Why Adolescents?

- Often perceived as a time of good health
- Also a time of change
  - Developmental – physical and cognitive
  - Social – changing role of family and friends, school transitions, transition to work and adult life
- Emerging health risks (e.g. violence, injuries, substance use, sexual initiation, mental health)
- Establishment of patterns of health behaviour that can track into adult life (e.g. eating behaviour, physical activity, obesity, smoking)
- Increasing recognition that this phase of the lifecourse is important and distinct from childhood or adulthood, with its own health policy requirements



## Adolescence

### Global focus on child and adolescent health and social determinants of health

- Lancet adolescent health series *'Adolescents: From the Margins to the Mainstream of Global Health'* launched on 26 April in New York
- UNICEF published *'Progress for Children: A report card on adolescents. No.10'*, April 2012
- UN Commission on Population and Development 45th Session chose adolescents and young people as their central theme, NY, 23-27 April 2012
- UNICEF launched its flagship report *'The State of the World's Children 2012: Children in an Urban World'* 28 February 2012
- UNICEF report on *'The State of the World's Children 2011: Adolescence: An Age of Opportunity'*
- In context of WHO's Global commitment to addressing social determinants of health; WHO Europe established a Commission on SDH in 2005 - informs new European health policy, Health 2020



## HBSC Development

### **Drivers**

Perceived need for comparative data on adolescents

To describe how health varies among young people in different countries

To understand determinants of health and patterns of health and behaviour

Need for reliable research evidence to inform policy and practice for health improvement



## HBSC Development

### **Scientific Challenges**

Development of common indicators (e.g. mental health, alcohol use, school environment)

Development of common measures translated to produce comparable data

Systematic methods of data collection

Quality control at all stages

Production of a detailed common protocol

Management of a large network of independent scientists



## HBSC Surveys

Surveys conducted every four years in each country  
(repeat cross-sectional)

School based surveys of 11, 13 and 15 year olds: nationally representative random samples

Over 1500 per age group ( 4500 total-many countries considerably more)

Self-complete questionnaire administered in class time

National data files combined to create international data file



## HBSC Survey Instrument

### Self-complete Questionnaire (in school)

- Mandatory questions
- Optional packages – for deeper focus on specific areas
- National measures- targeting health issues of national importance



## HBSC Scope

Includes measures on physical, emotional and social health and well-being

Measures comprehensive range of behaviours that both risk and promote/ protect health

Examines social and developmental context of young people's health

## Health related behaviours measured in HBSC

- Tobacco, alcohol and cannabis
- Physical activity
- Consumption of food and drinks
- Toothbrushing
- Weight control behaviour
- Fighting and bullying
- Sexual behaviour
- TV and computer use
- Electronic communication



## Health and well-being measures in HBSC

- self-rated health
- life satisfaction
- health complaints
- body image
- Body Mass Index (BMI)
- injuries



## Social context measures in HBSC

### Family:

- family socioeconomic status
- family structure
- family relationships



# Social context measures in HBSC

## School environment:

- liking school
- academic pressure
- academic achievement
- support from classmates



# Social context measures in HBSC

## Peer relations:

- spending time with friends
- having close friend
- numbers of friends
- communication

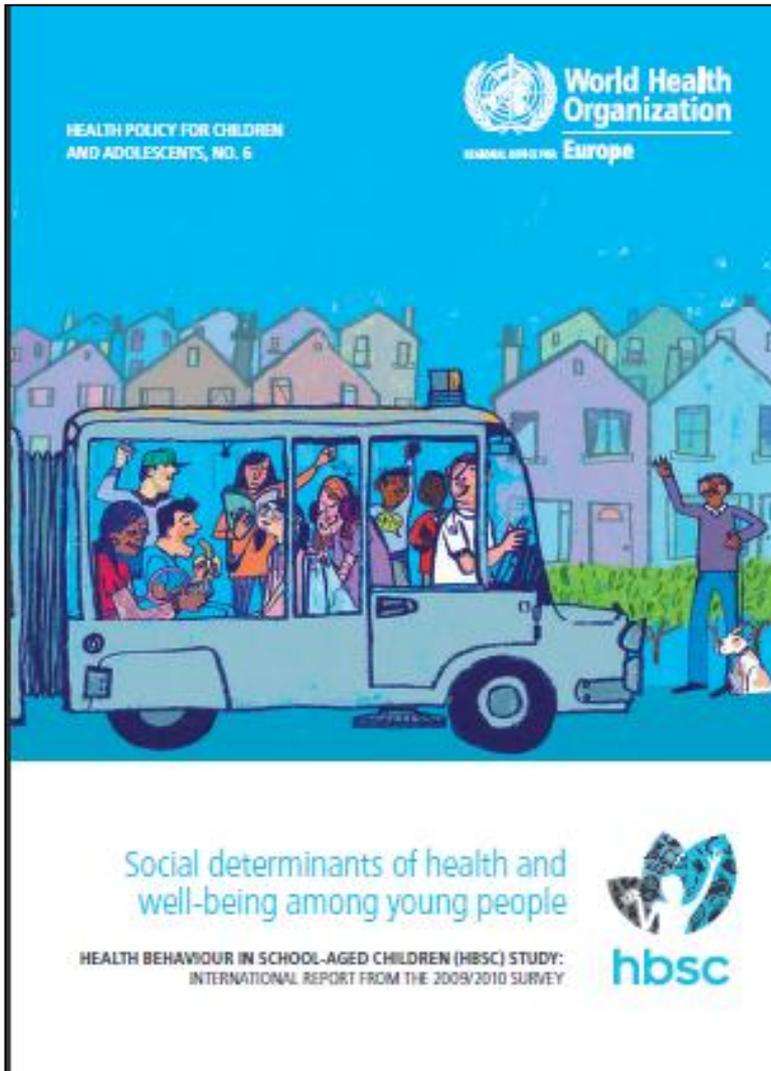


2009/10

## Social determinants of health and well-being among young people

Edited by:

Candace Currie, Cara Zanotti, Antony Morgan, Dorothy Currie, Margaretha de Looze, Chris Roberts, Oddrun Samdal, Otto R.F Smith, Vivia Barnekow





## Report details

### Report focus

- Provides comprehensive, up to date comparative data on health and wellbeing of young people growing up in almost 40 countries across Europe and North America
- Examines social determinants of health – highlighting extent to which young people's health is shaped by inequalities according to age, gender and family affluence

### Information for action

- Indicates that adolescence is a critical developmental stage in the life course
- Helps to identify opportunities for health improvement and points for intervention
- Shows need to strengthen efforts to build on early years investment

## Comparative data: value for policy makers

- Allows countries to see how they are doing on any particular measure of health
- Ascertain whether the issue is common to all countries
- Or, whether there is evidence of strong cultural/ social differences between countries
- Similarities between countries at one age may not be replicated at another showing the importance of examining developmental trajectories

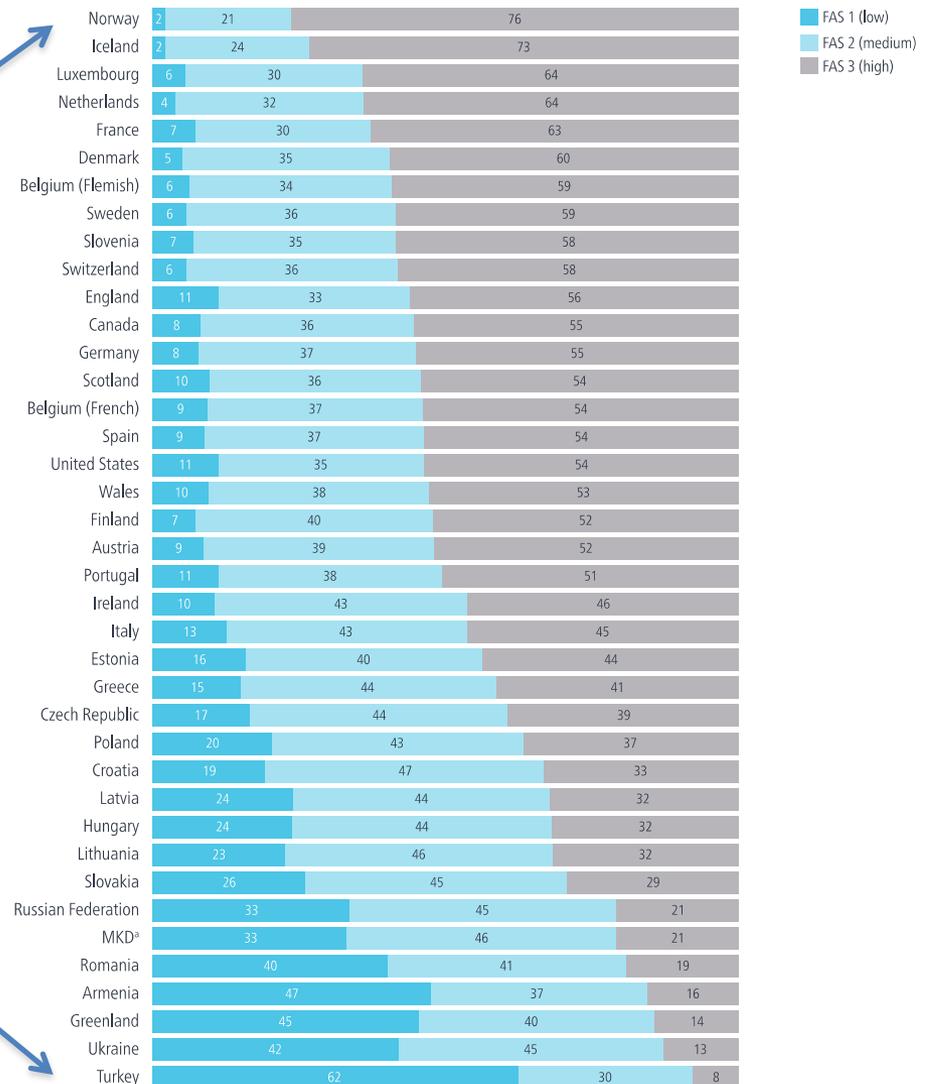
## Key findings: Inequalities

**Where do we see the greatest inequalities related to family affluence, gender and age?**

- In social contexts of health
- In health outcomes
- In health behaviours
- In risk behaviours



FIGURE. FAMILY AFFLUENCE ACCORDING TO FAS COMPOSITE SCORES (ALL AGES)



## FAMILY AFFLUENCE (FAS) distribution by country

Norway

2% low affluence  
76% high affluence

Turkey

62% low affluence  
8% high affluence



## Key findings: family affluence

### Health outcomes

Many aspects of health appear to be affected by family affluence with better outcomes generally\* associated with better material conditions:

- Self-rated health
- Life satisfaction
- Health complaints
- Medically attended injuries – *higher prevalence associated with higher affluence\**
- Overweight and obesity – *higher prevalence associated with lower affluence (but opposite in some poorer countries\*)*

### Gender effects

- **Larger FAS differences for self-rated health and life satisfaction among girls than boys**

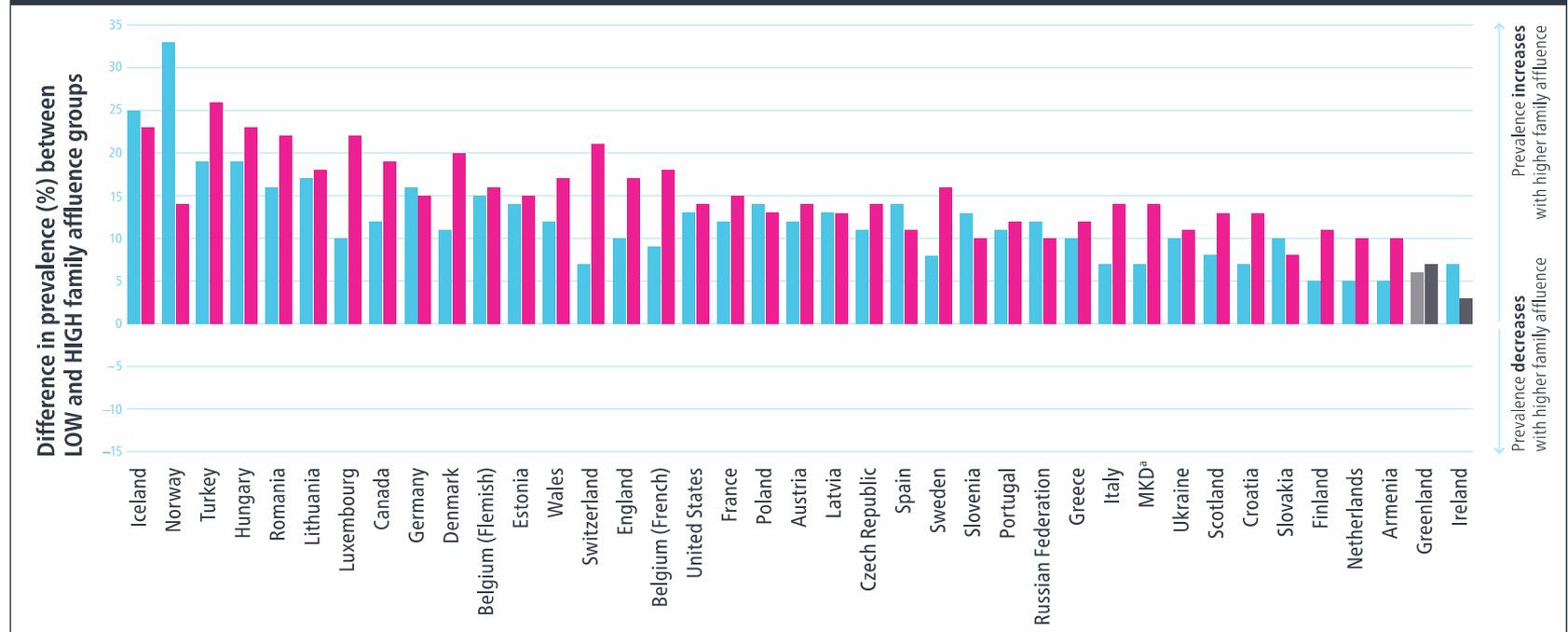
# Key findings: family affluence

## Family affluence and life satisfaction

Associations between family affluence and indicators of health, by country/region and gender:  
HIGH LIFE SATISFACTION

BOYS  
GIRLS

SIGNIFICANT  
TRENDS



<sup>a</sup> The former Yugoslav Republic of Macedonia.



## Key findings: family affluence

### Health behaviours

Positive health behaviour tends to be associated with better material conditions:

- Eating fruit daily
- Eating breakfast on school days
- Toothbrushing more than once a day

### Gender effects

- For daily fruit greater effect of FAS for girls
- For toothbrushing greater effect of FAS for boys

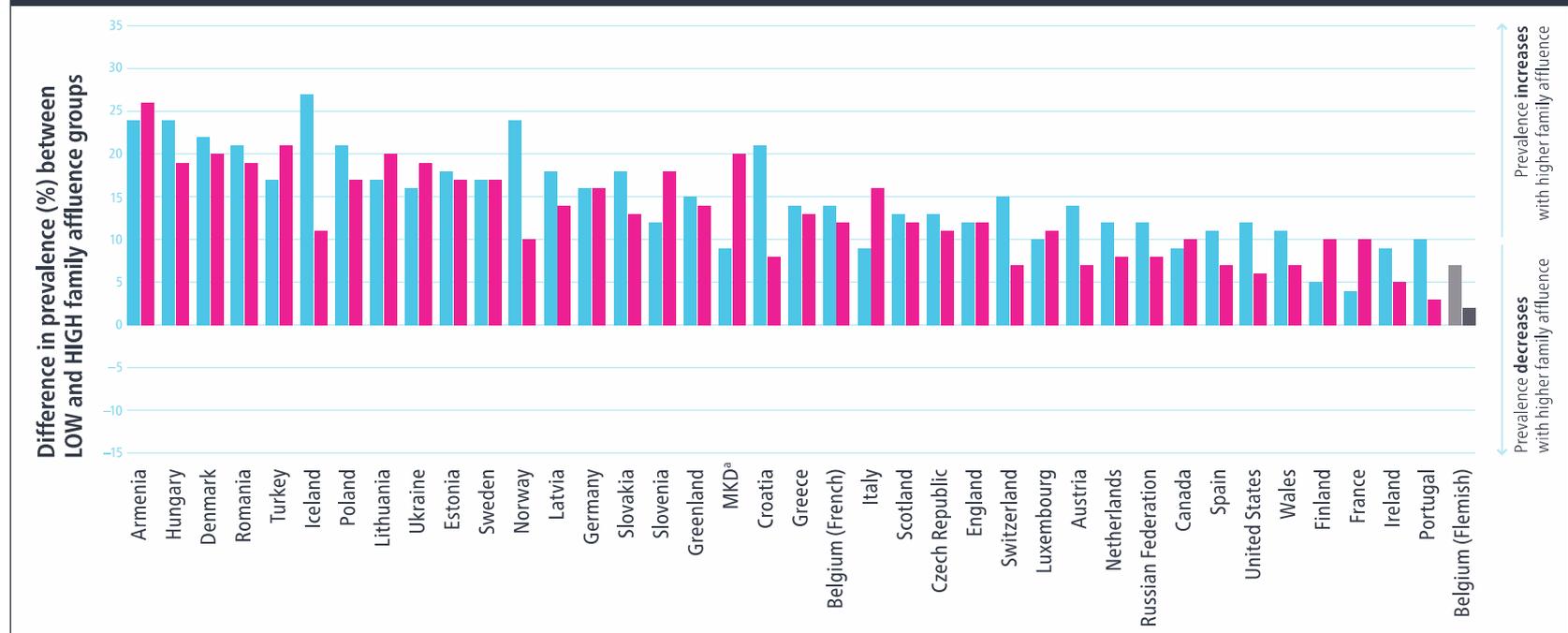
# Key findings: family affluence

## *Family affluence and brushing teeth more than once a day*

Associations between family affluence and indicators of health, by country/region and gender:  
BRUSHING TEETH MORE THAN ONCE A DAY

BOYS  
GIRLS

SIGNIFICANT  
TRENDS



<sup>a</sup> The former Yugoslav Republic of Macedonia.



## Key findings: family affluence

### Social context

Positive social contexts and connections associated with better material conditions:

- Easy to talk to mother
- Easy to talk to father
- Having 3+ close friends
- Daily electronic media contact
- Good school performance

### Gender effects

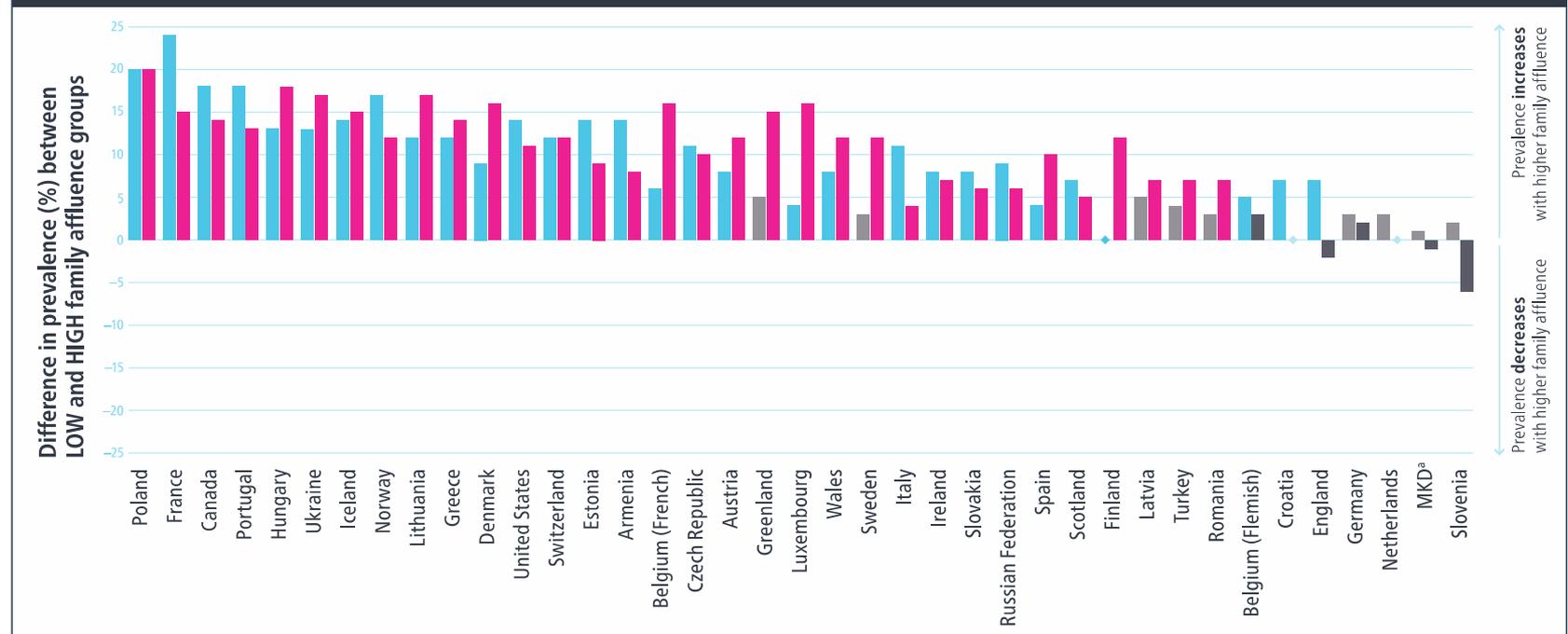
- Both easy to talk to mother and to father show greater effects of FAS for girls

# Key findings: family affluence

## School: Family affluence and perceived school performance

Associations between family affluence and indicators of health, by country/region and gender: REPORTING GOOD OR VERY GOOD PERCEIVED SCHOOL PERFORMANCE

BOYS  SIGNIFICANT  
GIRLS  TRENDS



<sup>a</sup> The former Yugoslav Republic of Macedonia. ♦ Indicates less than +/-0.5%.

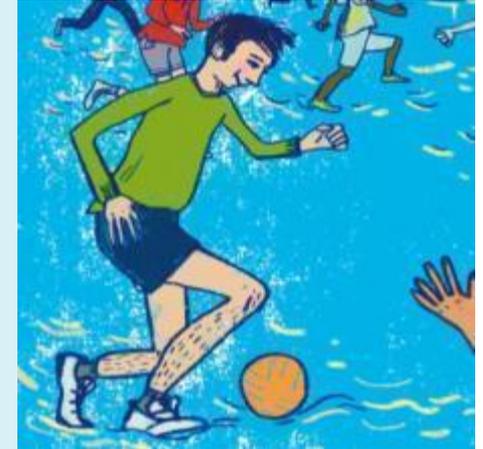


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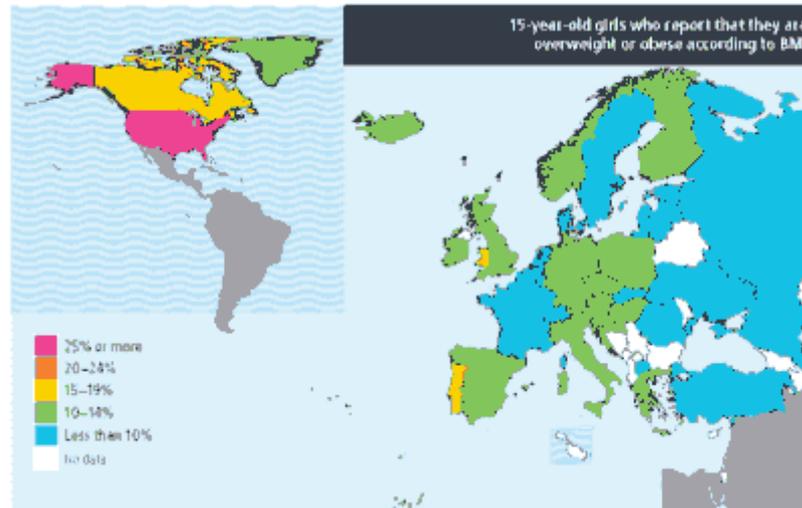
## Key findings: gender

Gender differences  
&  
Gender equalisation

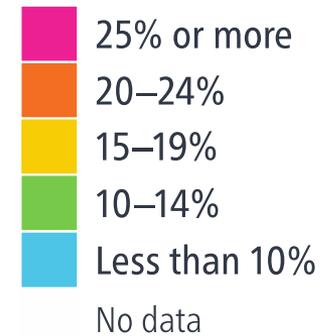
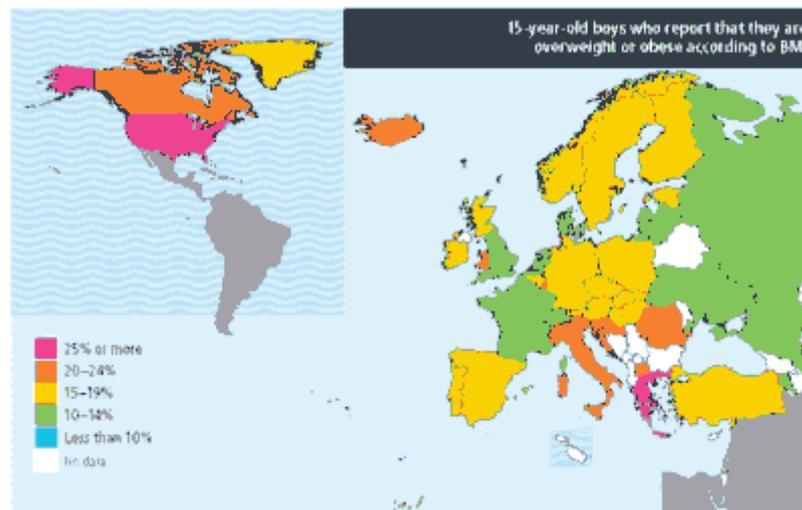


# Gender differences: overweight/ obese

Girls:  
range 5%-27%

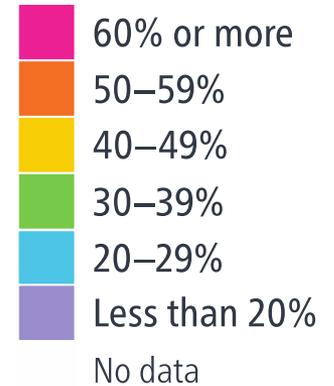
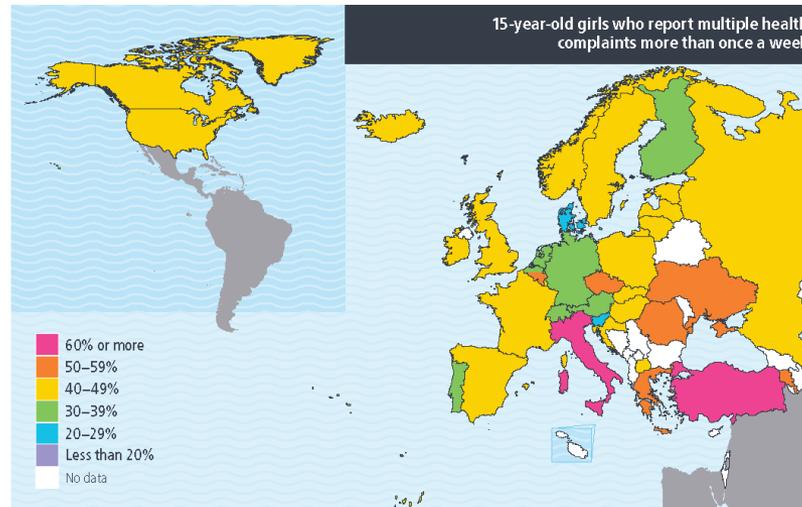


Boys:  
range 11%-34%

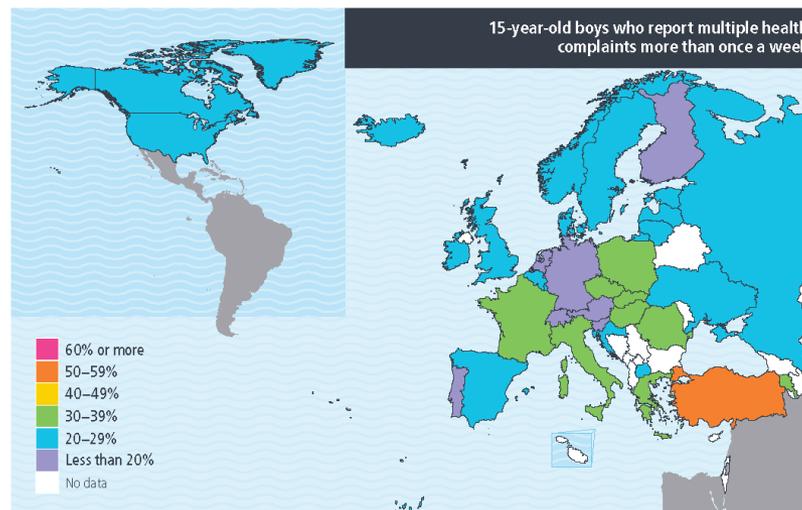


# Gender differences: multiple health complaints

Girls:  
range 25%-65%



Boys:  
range 14%-54%



## Key findings: gender differences

### Girls do better:

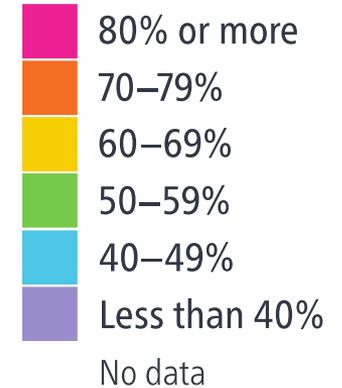
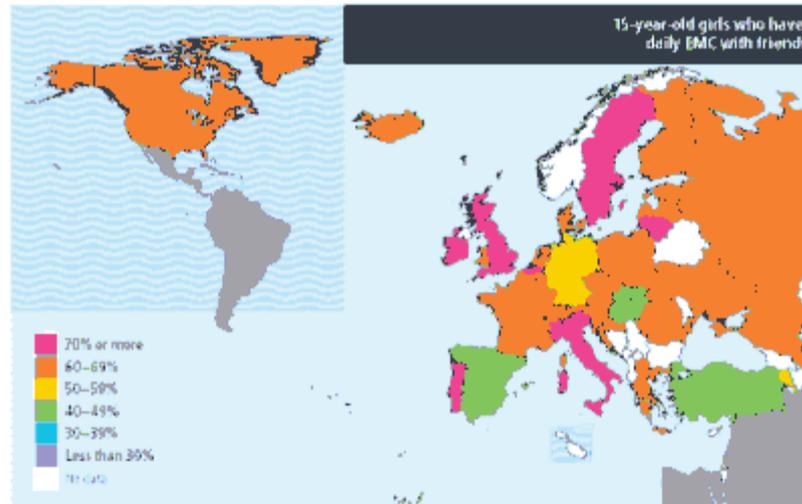
- *injuries, overweight/ obese, fruit, soft drinks, oral health*
- *early tobacco initiation, weekly drinking, drunkenness, sexual health, fighting, bullying*
- *electronic media communication with friends, liking school, perceived school performance*

### Boys do better:

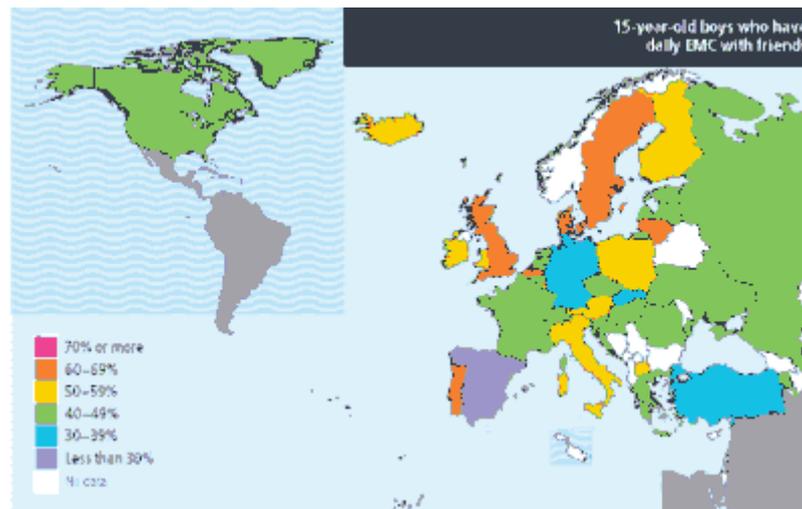
- *self-rated health, life satisfaction, health complaints, body image, breakfast, physical activity*
- *Easy communication with father, 3+ close friends, evenings out with friends, feel less pressured by schoolwork*

# Gender differences: electronic media communication

Girls:  
range 48% - 81%



Boys:  
range 25% - 66%



## Key findings: gender differences

### Gender equalisation

- Where we see equalisation it is in girls adopting ‘male patterns’ of risk, seen in a few countries, for example:
  - smoking in Czech Republic, Spain, Wales, England
  - drunkenness in Denmark, Wales, Greenland, Scotland and Finland
  - sexual intercourse by 15 in Greenland, Wales, Scotland, England, Germany
- But we do not see corresponding equalisation in health perceptions ie girls improved well-being/ body image; or increase in physical activity

## Key findings: age changes

Health outcomes: all worsen with age especially for girls

- Fair/poor health
- Life satisfaction
- Health complaints
- Body image: *worsens in girls (not boys)*
- Weight control: *increases in girls (not boys)*



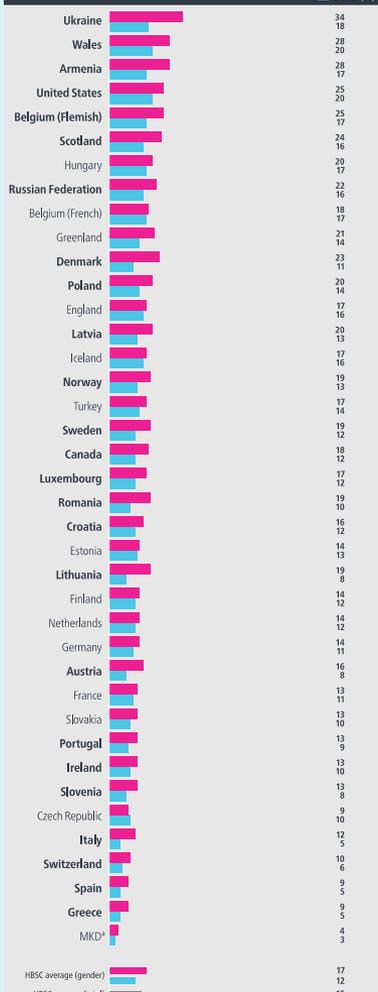
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# Health fair/poor: 11, 13 and 15 years

11-year-olds who rate their health as fair or poor



13-year-olds who rate their health as fair or poor



15-year-olds who rate their health as fair or poor



## Key findings: age changes

### Health behaviours: worsen in boys and girls\*

- Breakfast
- Fruit
- Physical activity
- Toothbrushing: *increases in girls\*/decreases in boys*

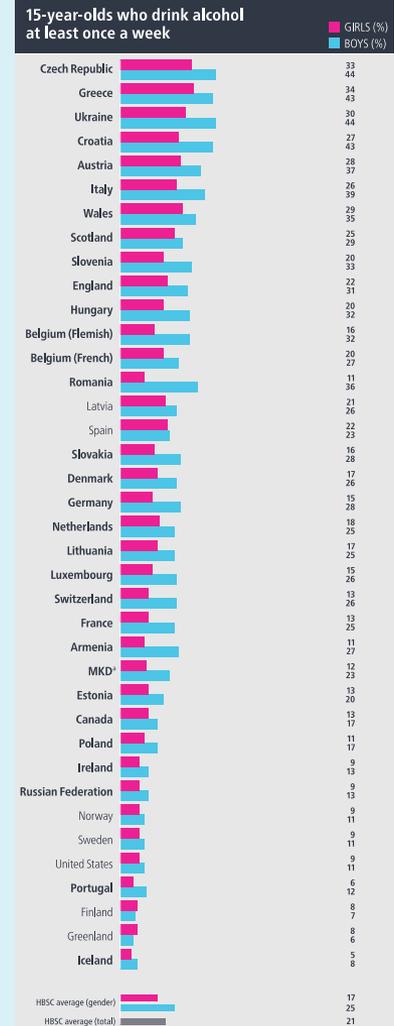
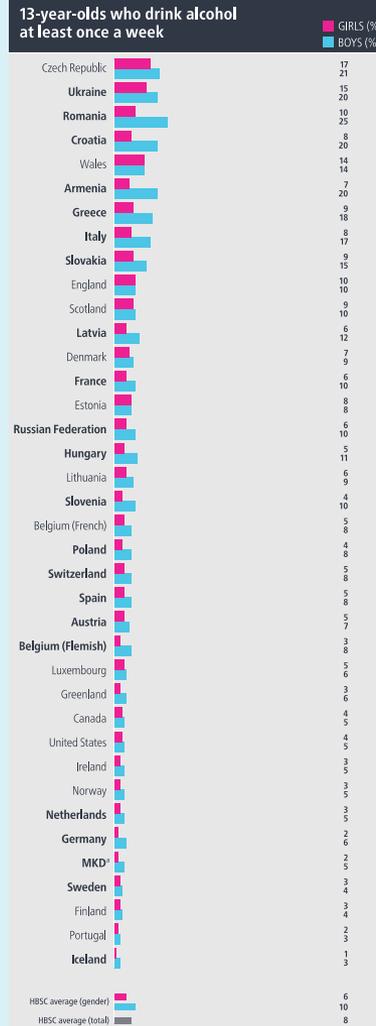
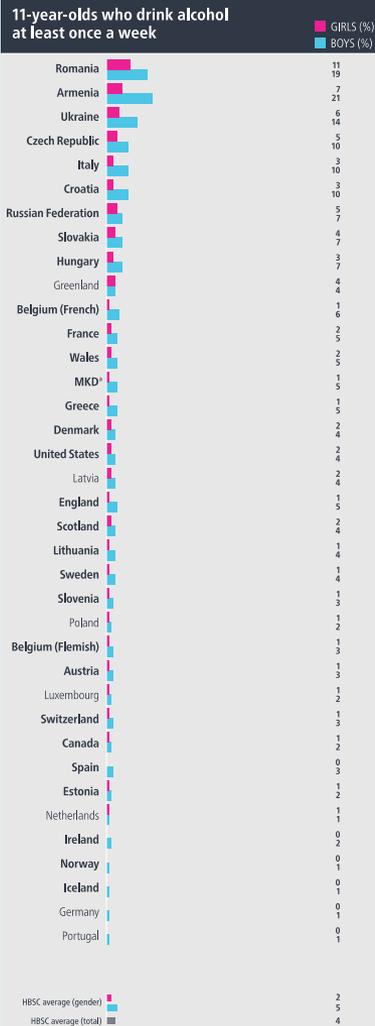
### Risk behaviours: worsen in boys and girls

- Smoking, drinking and drunkenness

### Social contexts and connections: critical changes

- family and school support declines
- peer support increases

# Drink alcohol weekly: 11, 13 and 15 years



## Key findings: age changes

### Adolescence a critical period for intervening

- probably no period in lifecourse where health, behaviour and social environment are all changing so rapidly
- at same time, important neurological, cognitive, hormonal, and physical changes occurring
- critical time for positive inputs to support, and set on track, health of young people for best current and future outcomes



## Discussion points: age

- Health compromising behaviours increase especially between ages 13 and 15 but extent and pattern of change varies across countries suggesting that social, cultural, economic and legislative factors play an important role
- Important changes in social contexts are experienced by young people as they transition through puberty, changing relationships and new social structures (e.g. school systems) – programmes need to focus on helping to build assets in order that adolescents can negotiate healthy pathways
- Patterns of change commonly differ for girls and boys with evidence that during transition girls are susceptible to poorer health and well-being



## Discussion points: gender

- Gender differences in patterns of health and social relations vary from country to country and are related to cultural differences in gender socialisation. Social expectations and social restrictions have a role to play as do gender roles in adult society.
- Underlying girls' poorer self-rated health and wellbeing may be higher levels of stress which may be linked to physical changes at puberty as well as perceived pressure to do well in different spheres
- Patterns of risk taking are also changing – traditionally males had higher rates but in some western countries girls have overtaken rates among males which have seen a decline
- Equalisation however is not seen around mental health where boys maintain better self-perceptions, even if unfounded as in body image!



## Discussion points: family affluence

- Evidence that affluence impacts on social contexts as well as health and well-being with advantage for those growing up in more affluent families
- Various explanations have been proposed relating to family affluence conferring social status, economic power to purchase healthy foods and activities, or being linked to higher levels of education/ occupation. Material capital may translate to social capital.
- Risk behaviours are less influenced by family affluence than healthy behaviours, being susceptible to other social factors (eg friendship group), wider cultural norms
- Positive experiences of education and schooling, as well as support of key adult figure, are known to reduce the impact of low family affluence on a young person's school achievement
- Inequalities within a country as well as at family level are known to affect adolescent health and well-being



## Final word

HBSC provides a rich source of data that can be translated into useful intelligence:

- to inform and guide policy and practice
- to improve the health of all young people
- to limit the impact of social inequalities
- and invest sufficiently to build on early years



## HBSC : The next 30 years

- Continue to expand no. of countries in WHO Eurozone
- Go global?
- Younger children – lack of data on 6-10 year olds
- Vulnerable groups (Roma, disability, Migrant)
- Longitudinal
- Data linkage



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## THANKS

All the young people who participate in HBSC

WHO

Country funders

HBSC network members

Colleagues from ICC in St Andrews

In particular Candace Currie (International Co-ordinator)



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## Contact details

**Dorothy Currie**

Email: [dbc2@st-andrews.ac.uk](mailto:dbc2@st-andrews.ac.uk)

Child and Adolescent Health Research Unit (CAHRU)

Email: [cahru@st-andrews.ac.uk](mailto:cahru@st-andrews.ac.uk)

International HBSC Study

Email: [info@hbsc.org](mailto:info@hbsc.org)

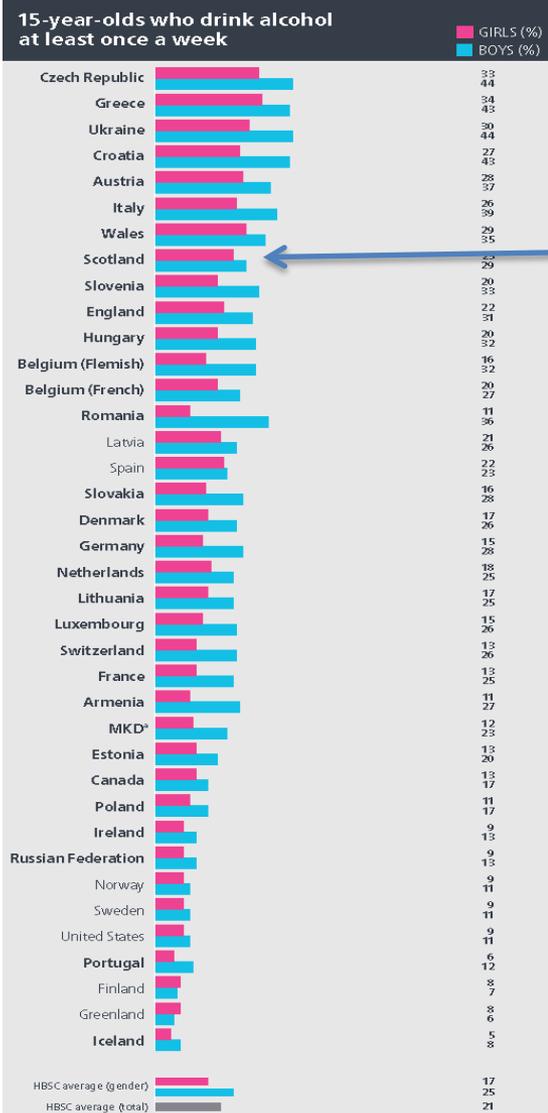
Twitter: [@HBSCStudy](https://twitter.com/HBSCStudy)

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## % Weekly drinking, 15 yr olds

HBSC survey 2009/2010



29% Boys and 25% girls drink weekly



40% Boys and 47% girls have been drunk at least twice

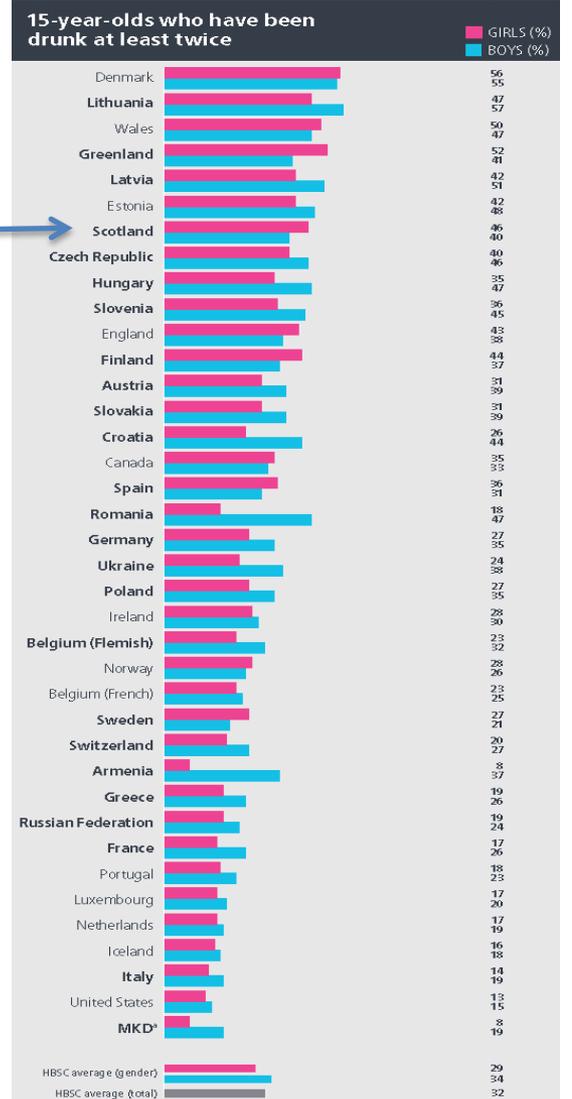
HIGH ranking in HBSC countries

Unusual to have drunk prevalence higher among girls

Gender equalisation ?

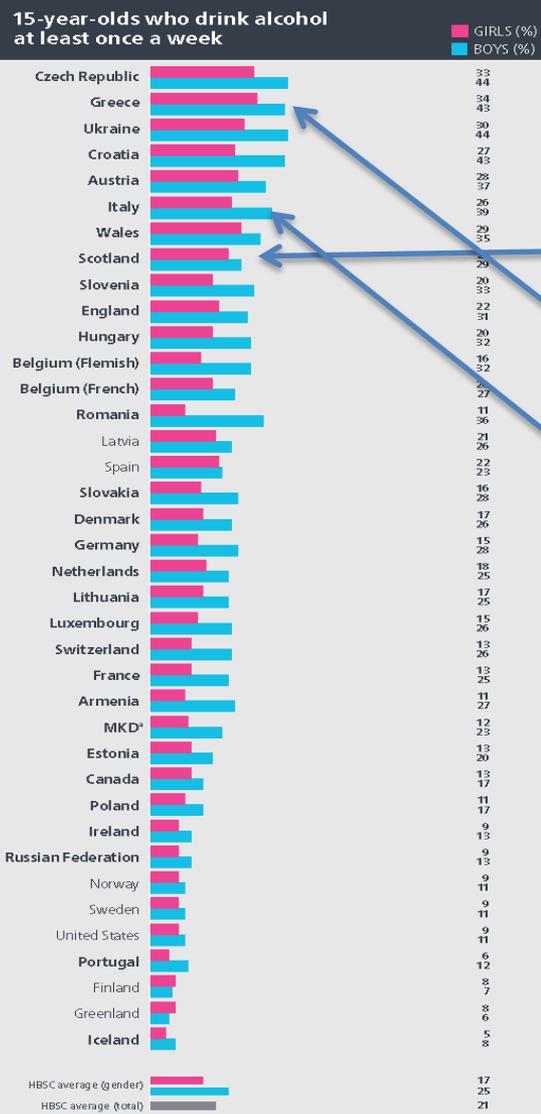
## % Drunkenness, 15 yr olds

HBSC survey 2009/2010



## % Weekly drinking, 15 yr olds

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## % Drunkenness, 15 yr olds

HBSC survey 2009/2010



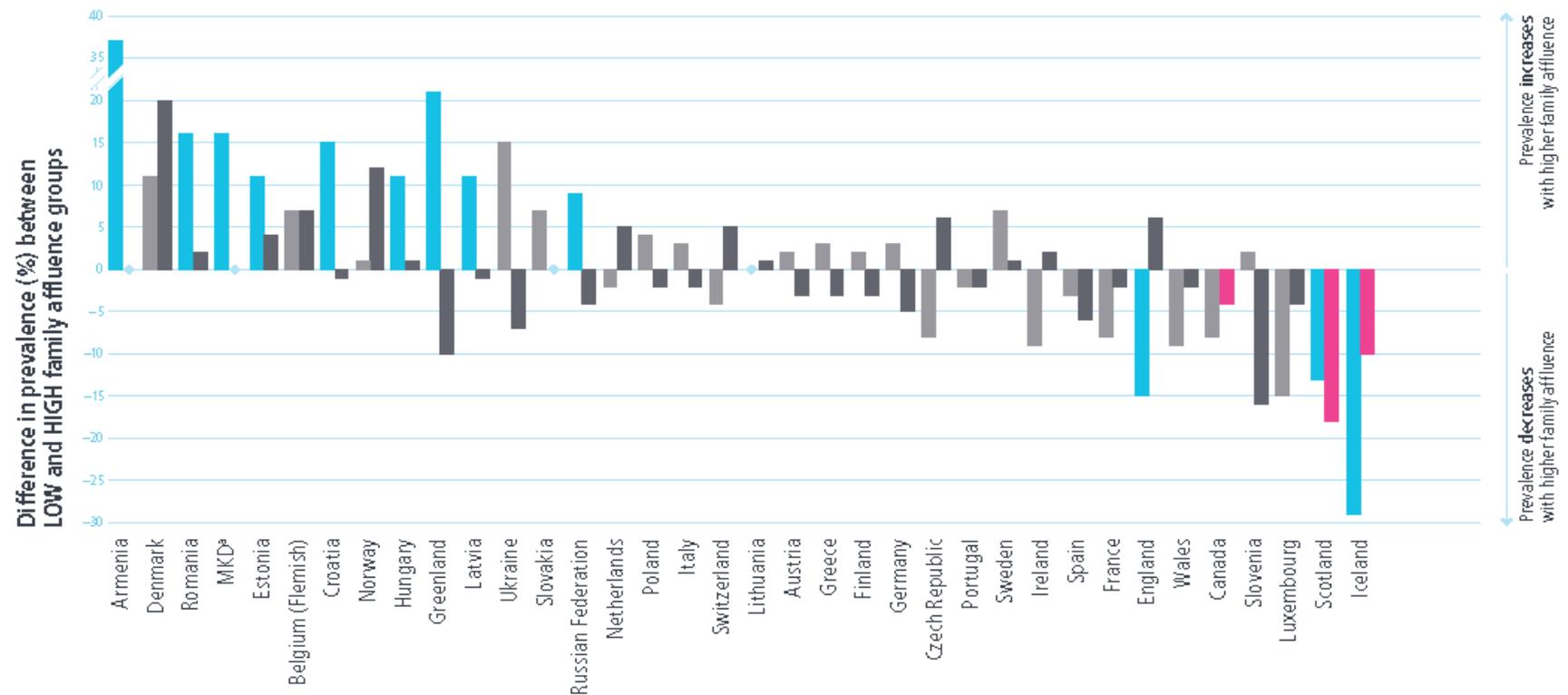
Behaviours not coupled

# Socio-economic patterning of health – Sexual Intercourse

HBSC survey 2009/2010

Associations between family affluence and indicators of health, by country/region and gender:  
HAD SEXUAL INTERCOURSE

BOYS GIRLS SIGNIFICANT TRENDS



\*The former Yugoslav Republic of Macedonia. ♦ Indicates less than +/-0.5%. Note: No data for Turkey, United States and Belgium (French). Data not presented for girls in MKD as there were too few cases.

