A SNAPSHOT OF THE HEALTH OF YOUNG PEOPLE IN EUROPE

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WORLD HEALTH ORGANIZATION
EUROPE

A REPORT PREPARED FOR THE EUROPEAN COMMISSION CONFERENCE ON YOUTH HEALTH, BRUSSELS, BELGIUM, 9–10 JULY 2009

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European Commission Conference on Youth Health
Brussels, Belgium
9–10 July 2009

Abstract
This report has been prepared by the WHO Regional Office for Europe to support the European Commission conference, *Youth health initiative: be healthy, be yourself*, held in Brussels, Belgium on 9 and 10 July 2009. The report offers a "snapshot" of the health of young people in Europe with data drawn from an extensive range of sources, but in particular the 2006 Health Behaviour in School-aged Children (HBSC) survey report. The HBSC Survey covers health behaviours of 11-, 13- and 15-year-olds; data on 16–25-year-olds, who are the main focus of the European Commission Conference on Youth and Health, are more difficult to find. This snapshot report nevertheless presents valid and informative data on a wide range of health issues that are important to young people, including injuries and accidents, mental health, overweight and obesity, physical activity and sedentary behaviour, substance misuse and sexual health.

Keywords
ADOLESCENT BEHAVIOUR
CHILD WELFARE
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SOCIOECONOMIC FACTORS
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1 BACKGROUND AND CONTEXT

INTRODUCTION

1.1

INTRODUCTION

This report has been prepared for the European Commission conference, *Youth health initiative: be healthy, be yourself*, held in Brussels, Belgium on 9 and 10 July 2009. More than 400 delegates, including young people from across Europe, representatives from youth organizations, health professionals working with and for young people, national and international organizations and European Union (EU) institutions will be represented.

The conference reflects the high priority given to youth health by the European Commission. This is a vital commitment, because securing the health and well-being of young people today is an essential investment in securing the health, well-being and prosperity of the Europe of tomorrow.

The primary aim of the conference is to listen to young people and to involve them in decision-making processes about their health. It also aims to generate commitment from stakeholders to improve the health of young people.

The European Commission asked the WHO Regional Office for Europe to prepare this report to support the conference. An editorial board was formed to oversee production of the report, and expert writers were commissioned to make specific contributions.

The decision was taken early in the process to produce a "snapshot" report, rather than one which would provide comprehensive detail. This partly reflected the time scale available in which the report could be produced, and partly because of gaps in the data on young people's health. While individual countries compile national reports on youth health trends and issues, these are seldom consolidated in international reports. This highlights the worrying problem of both lack of data and lack of availability of existing data on youth health in Europe.

The report focuses on EU27 countries (those belonging to the EU after January 2007) but also includes data from other European countries. It relies heavily on the valid and reliable information on the health status of 13- and 15-year-olds produced by the Health Behaviour in School-aged Children (HBSC) study, whose most recent report reflects the survey carried out in 2005/2006. It has been more challenging, however, to access valid, relevant data on health issues among 16–25-year-olds, who are the main focus of the European Commission Conference on Youth and Health. Much of the information that does exist on health, such as the EUROSTAT and WHO Health for all databases, is often not age and gender disaggregated.

There are consequently limitations on the scope and completeness of the data presented in this report. The report does, however, present a wide range of valid and useful data on important health issues for young people, particularly for those aged 13 and 15 years.

The primary underpinning of the report, and the "lens" through which its content is presented, is awareness of the growing inequalities in societies that are having significant impacts on the health and life opportunities of young people. Socioeconomic factors are key considerations that must come into the equation when considering how the health of young people in Europe can be protected and improved.

The report shows that in general, young people do not suffer from serious and life-threatening communicable and noncommunicable diseases. Although deaths and disability caused by suicide and accidents in young people are considerable, the overall morbidity and mortality patterns of young people compare very favourably to, say, those of men aged 50–60 years.

But many of the health problems young people will encounter as adults – problems such as cardiovascular disease, diabetes, stroke, cancers and mental disorders – will have their genesis in the child and adolescent years, even if they do not manifest at that time. There are therefore enormous opportunities for – and a clear responsibility to take – positive action on young people's health to reduce these causes of adult morbidity and mortality. This points to the need for multisectoral action across Europe to address these important issues.

It is hoped that the information and data presented in this report and the four main recommendations below will be useful in different contexts in Europe and, in particular, will be helpful to policy-makers, decision-makers, researchers, teachers, people working in youth programmes and young people themselves.

RECOMMENDATIONS

- There is a need to analyse where gaps in data exist and identify all sources of currently available data on young people's health in Europe.
- More data is required to identify the key determinants of ill health in children and young people, supported by resources to enable effective interventions to be developed.
- There is a need for work to enable a better understanding of the links between socioeconomic factors and health among young people.
- There is a need for comprehensive national health and development policies and action plans based on a life-course perspective and with a focus on youth.

YOUNG PEOPLE'S HEALTH: THE EQUALITY LENS

1.2

YOUNG PEOPLE'S HEALTH: THE EQUALITY LENS

Any presentation or synthesis of data aiming to promote the health of young people should examine the differences in health status and its related determinants. Each chapter in this report therefore attempts to present data which describe the differences in health experience using recognized dimensions of inequalities including age, gender and socioeconomic status.

The issue of health inequalities is firmly embedded in contemporary international policy development due to the growing body of evidence gathered over the last two decades which indicates the increased health risks associated with disadvantaged social circumstances (1–3). The WHO Commission on the Social Determinants of Health claims that the vast majority of inequalities in health between and within countries are avoidable *(4)*, yet across Europe, young people of all ages experience inequalities in health, in social and economic determinants of health *(5)* and, indeed, in poverty *(6)*.

Social and economic disadvantage can have a range of impacts on the health of young people. Processes and effects include: social exclusion and lack of opportunity in activities that promote or support health; impacts of perceived low social and economic status on well-being; direct effects of material deprivation and poverty on social and living conditions; and lack of social support to withstand and cope with hardship.

As well as economic disadvantage, other dimensions of inequality are manifested as: gender and age differences; differences stemming from family structure and from neighbourhood and living areas; and differences due to ethnic and cultural issues. Labour market influences are also important, especially in the transition from school to work and from home to independent living. Local and global economic conditions may affect the material resources that young people have access to and may have a direct impact on their aspirations and sense of achievement, which may manifest in mental health outcomes.

Access to health care may not be evenly distributed according to age, gender, socioeconomic background, ethnicity, area of living and country. In addition to access to general medical services, this population group has a particular need for easily accessible specialist services, including those that provide sexual health advice and treatment and mental health services.

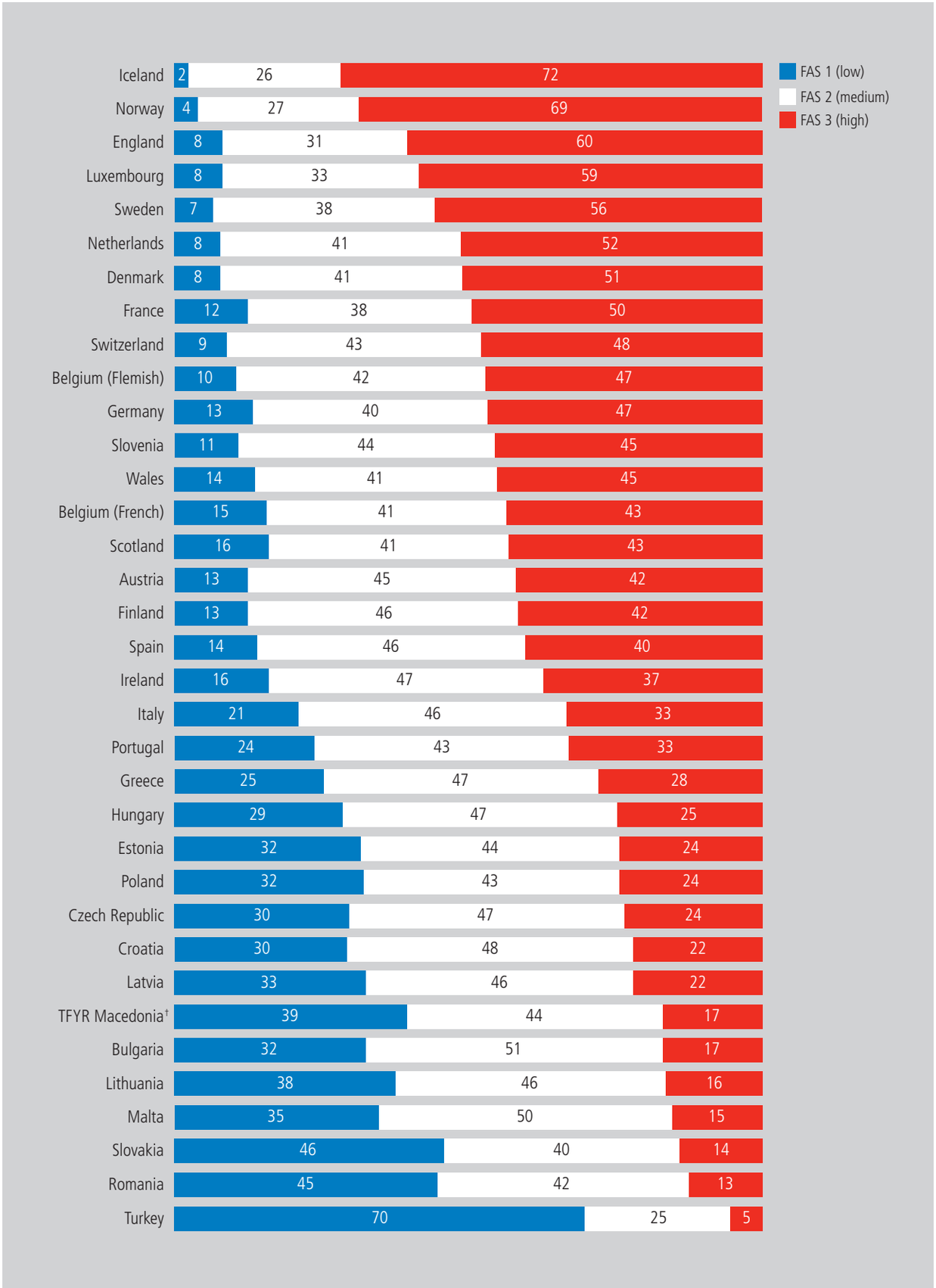
The impact of inequalities may be immediate, with poor outcomes being apparent in a range of health indicators and health behaviours during childhood and adolescence. These may reduce young people's ability to participate fully in many aspects of life and affect, for example, school attendance and academic achievement, social functioning, sports participation and uptake of employment opportunities. Quality of life and mental well-being may consequently be affected. Poor material circumstances may affect purchasing power of families, reducing access to healthy foods and affecting nutritional health.

Previous understandings of child health placed future health as adults as a priority within a perspective that saw early stages in the life-course as transition phases to adulthood. Within this paradigm, experience of poor health in childhood is of primary concern as a predictor of poorer health status in adulthood. While this approach remains vitally important, a more child-centred approach developed over recent years has placed children's health at a premium, giving emphasis to positive well-being and quality of life in this age group as a goal for public health. An analysis of the perspectives of children and young people (in the age range 5–17 years) on their experiences of economic adversity suggests that their concerns focus not so much on lack of resources per se, but on being excluded from activities that other children appear to take for granted. They experience embarrassment and shame at not being able to participate on equal terms with other children *(7)*.

The *Policy paper on the health and well-being of young people (8)* places high importance on the issue of inequalities and states that "all young people, regardless of their economic situation or residence status , of their sexual orientation or ethnic and religious background, marital status, gender, age or disability, should be entitled to health care and social protection". Access to health care should be free to all young people under the age of 18 and affordable to those above to ensure universal access.

Fig. 1.2.1
FAMILY AFFLUENCE ACCORDING TO FAMILY AFFLUENCE SCALE (FAS) COMPOSITE SCORES (ALL AGES)

2005/2006 HBSC survey



†The former Yugoslav Republic of Macedonia

Evidence from the Health Behaviour in School-aged Children (HBSC) study shows wide variations in social circumstances according to age, gender, socioeconomic status and geography across Europe *(5)*. One way of measuring socioeconomic status in the HBSC study is to assess family affluence using the HBSC Family Affluence Scale (FAS) *(9)*. Data collected in 2006 show wide variations between European countries in levels of affluence (Fig. 1.2.1).

These data collected from young people allow ranking of countries on the basis of families' material resources, including car ownership, child having own bedroom, family holidays and family computers. Rankings match closely with country levels of gross domestic product (GDP) *(10)*. This is therefore a useful device for gaining a view of the material circumstances of young people who are not themselves in the labour market.

Family affluence is associated with a wide range of social as well as health outcomes for adolescents. Young people from more materially well-off families tend to report closer relations with parents and peers; they are more likely to use electronic media to communicate with friends and to be doing well at school. Almost all perceived health measures, including self-rated health and life satisfaction, show positive associations with higher levels of family affluence (Table 1.2.1).

Many aspects of health promoting behaviour, such as fruit eating, regular breakfast consumption and toothbrushing, are more frequent among adolescents from more affluent families, and injuries are less common.

Table 1.2.1 *2005/2006 HBSC survey*

Associations between family affluence and indicators of health, by country/region and gender:
HIGH LIFE SATISFACTION *(5)*

NORTH	Boys	Girls	**SOUTH**	Boys	Girls
Denmark	+	+	Croatia	+	+
England	+	+	Greece	+	+
Estonia	+	+	Italy	+	+
Finland	+	+	Portugal	+	+
Iceland	+	+	Slovenia	+	+
Ireland	+	+	Spain	+	+
Latvia	+	+	TFYR Macedonia†	+	+
Lithuania	+	+	Turkey	+	+
Norway	+	+			
Scotland	+	+			
Sweden	+	+			
Wales	+	+			
WEST	Boys	Girls	**EAST**	Boys	Girls
Austria	+	+	Bulgaria	+	+
Belgium (Flemish)	+	+	Czech Republic	+	+
France	+	+	Hungary	+	+
Germany	+	+	Poland	+	+
Luxembourg	+	+	Romania	+	+
Netherlands	+	+	Slovakia	+	+
Switzerland	+	+			

Where family affluence is statistically significant at $p < 0.05$, countries are identified with +/−

+ indicates that higher levels of life satisfaction are significantly associated with higher family affluence

− indicates that higher levels of life satisfaction are significantly associated with lower family affluence

†The former Yugoslav Republic of Macedonia

With respect to gender, it is found that there are consistent and widespread differences in health determinants and health outcomes between boys and girls across Europe. School experience is known to be an important determinant of adolescent health and, generally, girls report higher levels of academic achievement, classmate support and school satisfaction. However, school pressure increases with age for girls: at 15 years, they experience higher levels of school-related stress, which can have a negative impact on well-being. Girls' perceptions of their health and well-being are poorer than those of boys on most outcome measures, including life satisfaction, health complaints and self-reported health, but boys are more likely to have poorer outcomes for overweight and injuries (Fig.1.2.2, 1.2.3).

Inequalities are also seen in relation to age, with consistent patterns that have important implications for the timing of health interventions. Between the ages of 11 and 15 years, the prevalence of a range of risk behaviours, including smoking, alcohol use, drug use and sexual risk, increases. Preventive strategies therefore need to take into consideration the fact that interventions need to precede onset. Other health habits, such as those related to oral health, eating habits and physical activity, have already become established by age 11; these generally worsen across the teenage years. Interventions addressing the early years of childhood are therefore implied.

Fig.1.2.2
15-YEAR-OLDS WHO RATE THEIR HEALTH AS FAIR OR POOR

2005/2006 HBSC survey

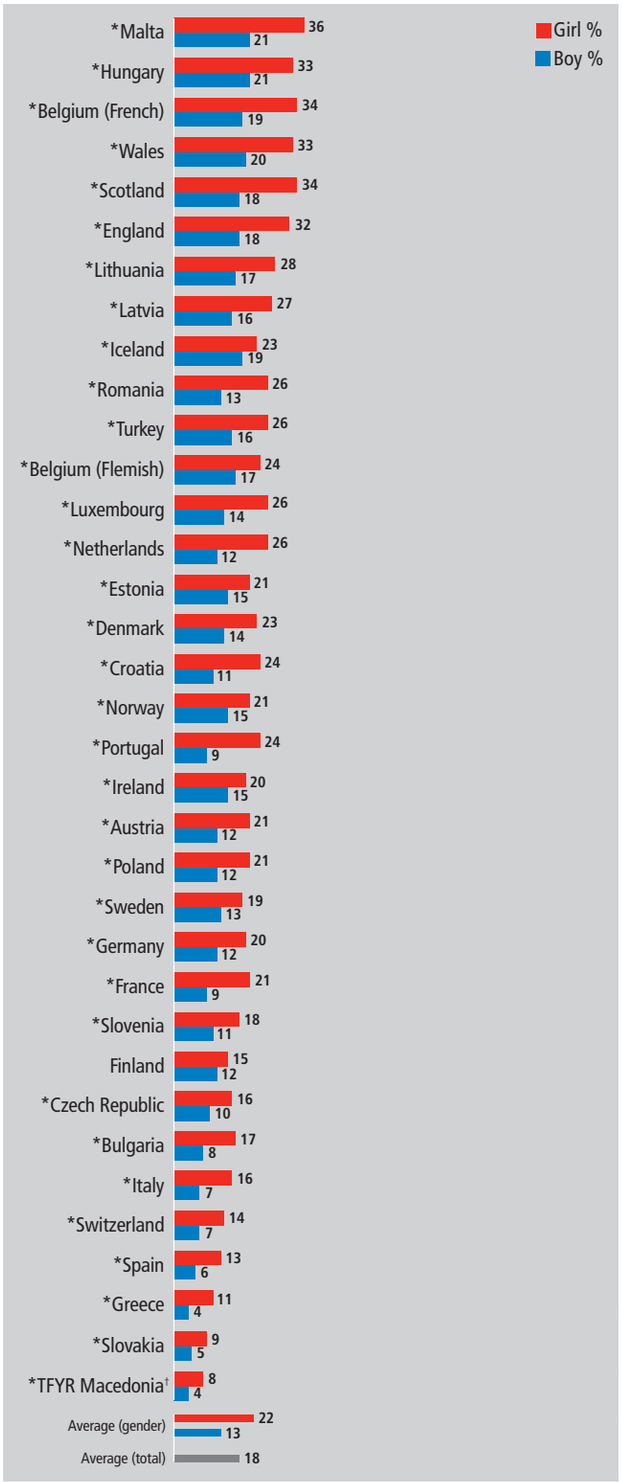
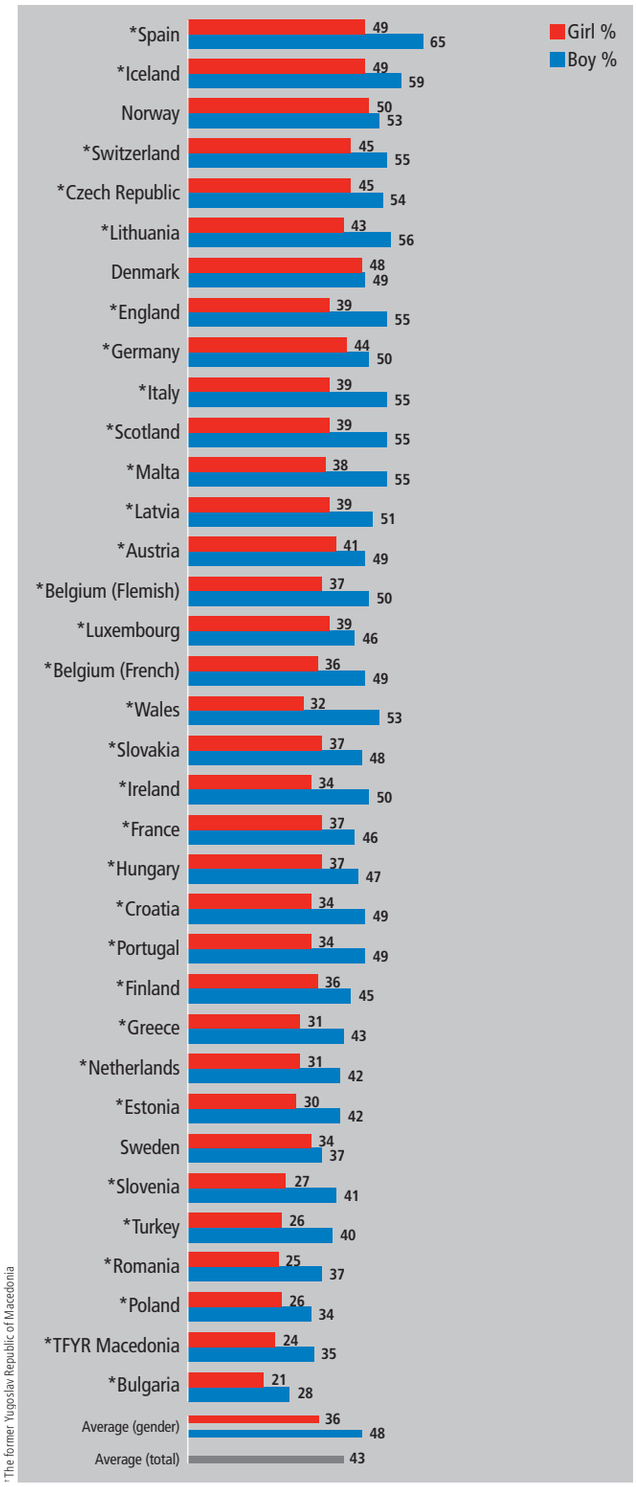


Fig.1.2.3
15-YEAR-OLDS WHO REPORT AT LEAST ONE MEDICALLY ATTENDED INJURY IN THE LAST 12 MONTHS

2005/2006 HBSC survey



* indicates a significant gender difference (at p<0.05)

Transition from school to work

The life-course approach is a useful tool in enabling understanding of the health inequalities that may be experienced and accumulated by young people as they grow up *(11)*. The transition from school to work is particularly important and may provide a means of understanding how social advantages and inequalities are handed down from one generation to the next *(8)*. Changing patterns of education, family life and new forms of flexible working in the labour market all have an influence on young people's ability to sustain health as they move into young adulthood. The risk of becoming homeless also has its health consequences for young people as they make that transition into adult life, particularly through poor access to services and higher risk of engaging in risk-taking behaviour. Increased migration also adds to the complexity of understanding health inequalities and how they might change over time.

Unfortunately, there are gaps in our knowledge on some of these determinants. While some data may exist within countries, systematic collection of these important influences on health has not yet been achieved at the European level. Recent recommendations from the Measurement and Evidence Knowledge Network of the Commission on the Social Determinants of Health *(12)* may provide a useful framework for moving towards a more systematic approach to introducing an "equality lens" on monitoring the health of young people as they move into adulthood. The examples given below relating to poverty, employment and access to services provide illustrations of the types of data that are useful to include in an equality-focused monitoring framework.

Poverty

Three aspects of disadvantage are used to examine the experience of poverty among 16–29-year-olds in the 15 countries belonging to the European Union (EU) before May 2004 (EU15) – income poverty (the net income of the household is less than 60% of the average income of the country), monetary deprivation (a relative measure based on income in relation to total population) and non-monetary deprivation (based on assessment of economic well-being of the household to which the individual belongs, such as having basic household facilities and appliances, condition of housing, environmental problems etc.) *(6)*.

As well as individual poverty experience, the welfare support that young people may receive to alleviate their condition depends on the country in which they live. Countries have been grouped into welfare state typologies *(13,14)*. Young people living in "social democratic" regime types may have high levels of state support – these countries include Scandinavian countries and the Netherlands. While the emphasis in these countries is on the individual rather than the family, in the "conservative" regime types such as France, Germany, Belgium and Luxembourg, there is an emphasis on insurance-based benefits for families rather than individuals.

In "liberal" welfare states, there is modest welfare provision which tends to be means-tested. This is found in, for example, the United Kingdom and Ireland. In the southern group of "residual" welfare states, including Italy, Spain, Portugal and Greece, there are low levels of welfare provision and a reliance on family as a locus of support. Poverty therefore impacts at both individual and country level, which might help to explain some of the differences in health outcomes seen across Europe.

Youth poverty rates vary greatly across Europe. Iacovou & Aassve *(6)* have developed a summary of various data sources to create a table of contemporary poverty in three age groups (Table 1.2.2).

Table 1.2.2 **POVERTY RATES BY COUNTRY, AGE GROUP AND WHOLE POPULATION** *Iacovou et al, 2007*

	16–19 years	20–24 years	25–29 years	Whole population
Finland	12.5	29.9	13.0	10.8
Denmark	8.4	21.7	9.7	10.3
Netherlands	18.1	27.1	12.1	10.5
United Kingdom	22.7	20.3	14.3	18.8
Ireland	24.2	11.5	14.3	22.1
France	21.1	21.0	11.4	15.0
Germany	13.1	13.6	11.2	11.1
Austria	9.8	8.2	8.4	11.4
Belgium	17.9	13.9	9.5	15.4
Portugal	15.4	9.6	9.3	16.4
Spain	24.6	17.4	13.3	18.2
Italy	27.0	24.7	19.4	18.6
Greece	20.5	18.6	13.2	19.4

Four factors that are associated with youth poverty are: living away from the parental home; living alone; having children; and not having a job. A critical point for young people is leaving the family home: living away from home has the greatest influence on poverty risk of all the above factors.

The age that young people leave home varies across Europe. In the youngest age group, the highest proportion of young people who have left home (12%) is in the United Kingdom, with 7% in Scandinavian countries and 3% or less in southern Europe. For the 20–24 age group, the highest proportion of young people who have left home is found in the social democratic countries and the lowest in the southern European countries. This correlates with levels of welfare available to young people themselves.

There is also a strong relationship between poverty rates and age at leaving home, which is somewhat counter intuitive. Where there are large differences in poverty rates within a country between young people living with their parents and those living away from home, leaving home tends to be earlier. The possible reasons for this are complex and are beyond the scope of this report *(6)*.

Employment

The *Youth poverty in Europe* report *(6)* states that a young person's risk of poverty is affected by his or her employment status. Having work is associated with lower poverty among those over 20 years, but for the 16–19 age group, poverty levels for those in work are higher than for older age groups, and in some countries students are better off than their peers who are in work. Countries vary in the distribution of poverty among employed, unemployed and student populations of youth. This complex picture relates to a number of factors, including welfare systems, living arrangements and wage levels among others. In all countries, the risk of poverty declines with age across the twenties.

In terms of employment, stable long-term employment is critical to financial stability and avoiding poverty.

The recent report *Pathways to work: current practices and future needs for the labour market integration of young people (15)* categorized countries according to how youth friendly their labour markets are (Table 1.2.3).

Table 1.2.3 **YOUTH FRIENDLINESS OF COUNTRIES LABOUR MARKETS** *Institute for the Development of Vocational Training, 2008*

FRIENDLY LABOUR MARKETS Highest human development indicators and best performer in youth employment **Austria, Denmark, Netherlands, Sweden, Finland, United Kingdom and Ireland**	**The main challenges** i) Reductions of the high level of youth unemployment ii) Social inclusion of the weaker young groups iii) Reduction of the share of young people not in education, employment or training iv) Completion of the education system reforms
RIGID LABOUR MARKETS Low youth employment and good capability indicators **France, Belgium, Germany, Luxembourg and Slovenia**	**The main challenges** i) Flexibility of the education and training system ii) Labour market flexibilization iii) Integration and personalization of life-cycle oriented policies and services iv) Development of workforce approaches v) Cooperation among public and private employment services vi) Participation of young females in the labour market
STRONGLY SEGMENTED YOUTH LABOUR MARKETS **Greece, Italy, Portugal, Spain and Poland**	**The main challenges** i) Creation of a competitive, pluralistic, integrated, personalized,market-oriented and high-quality system of lifelong learning ii) Promotion of economic independence for young adults iii) Integration of labour-market flexibilization measures with security components iv) Extension of public and private employment services network v) Encouragement of women's greater participation in the labour market
LOW EMPLOYMENT AND SKILL MISMATCHES IN THE CONVERGENT/TRANSITION ECONOMIES **Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia, Cyprus, Malta, Romania and Bulgaria**	**The main challenges** i) Conclusion of economic restructuring processes and the convergence of the economies with those of the EU15 ii) Introduction of new national strategies and new structures for the education and training system iii) Increase of labour-market flexibility iv) Extension of the Active Labour Market Policy v) Modernization of the social security system

Access to health services

Youth, as a category, is under particular threat of being excluded from social protection systems. Some young people face multiple discrimination and disadvantage in terms of access to health care *(8)*. Strategic evidence-based information is needed to plan and monitor national programmes and promote youth-friendly policies. Experiences and lessons learned need to be documented and widely disseminated.

In 2004, *Entre Nous*, the European magazine for sexual and reproductive health, dedicated an issue to the topic of youth-friendly services in Europe. Systematic information is not available, and this issue of the magazine presents country case studies from the Netherlands, Estonia, the Russian Federation and some other parts of Europe. These data represent some of the few sources of information available. Cross-nationally comparable information on the proportion of young people accessing youth-specific health services and on how young people access health information and advice is currently lacking.

1.2

YOUNG PEOPLE IN THE 21ST CENTURY

2

DEMOGRAPHIC TRENDS

2.1

SUMMARY

- In general Eastern Europe has a higher proportion of young people aged 0–14, whereas Western Europe has a higher concentration of young people 14–24 years.
- An increased "age drift" in Europe will be seen over coming decades.
- Fertility rates in most of Europe are inadequate to maintain natural replacement levels.
- Further detailed investigations of youth migration and mobility in Europe are required.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Knowledge of the present situation in relation to numbers, dispersal and population growth rates of young people in Europe is vital in enabling an understanding of key health issues such as sexual behaviour, alcohol abuse, socioeconomic inequalities and mental health. Demographic data describe the current situation, enable estimations of future trends and identify "blind spots" where crucial data are missing.

WHAT DO WE KNOW?

There are apparent differences in the proportion of young people in Europe from east to west. In general, eastern European countries with a high percentage of young people aged 0–14 years had a lower percentage of those aged 14–24 years. (Fig. 2.1.1, Fig. 2.1.2). In some countries such as the United Kingdom, Ireland and Norway, young people aged 0–24 years account for almost a third of the total population.

The fertility rate of Europe's youth is central to the development of populations. The fertility rate provides an indication of the reproduction rate within a population and is calculated as the number of live births per 1000 females of a specific age group *(1)*. For most industrialized countries, a total fertility rate of 2.1 is considered to be the replacement level necessary to maintain the natural population (without migration) over the long term *(2)*.

Fig. 2.1.3. presents the change in fertility rates for the EU27 population between 16 and 25 years in 1996 and 2006. It shows that the fertility of Europe's youth is in decline, a trend that has been evident since the 1970s. Since then, the fertility rate for women below 30 years has declined while the rate for those above 30 has risen *(3)*. While a decline in fertility among 16–18-year-olds may be welcome, as it represents a decrease in teenage pregnancies, the decrease in fertility rates for 23–25-year-olds means a shift in the age at first birth to 30 and above.

Fig. 2.1.1
PERCENTAGE OF POPULATION AGED 0–14 *EUROSTAT*

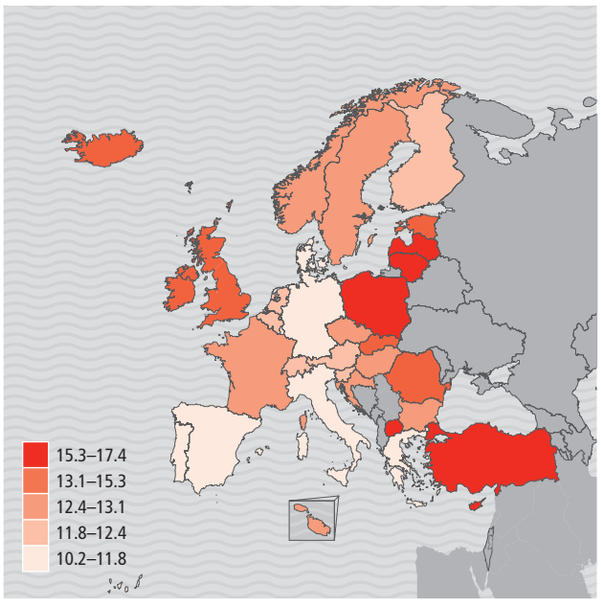
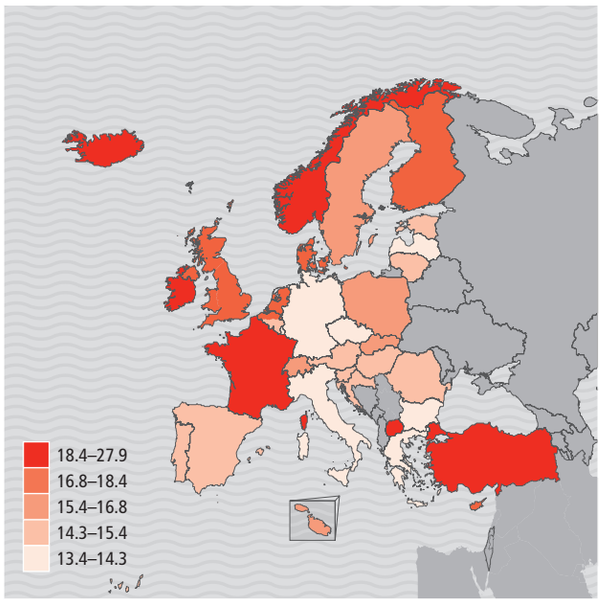


Fig. 2.1.2
PERCENTAGE OF POPULATION AGED 14–24 *EUROSTAT*



* Only data for 2007 were available for the United Kingdom and Turkey.

Fig. 2.1.3
COMPARISON OF THE FERTILITY RATE OF 16–25-YEAR-OLDS IN 1996 AND 2006

EUROSTAT

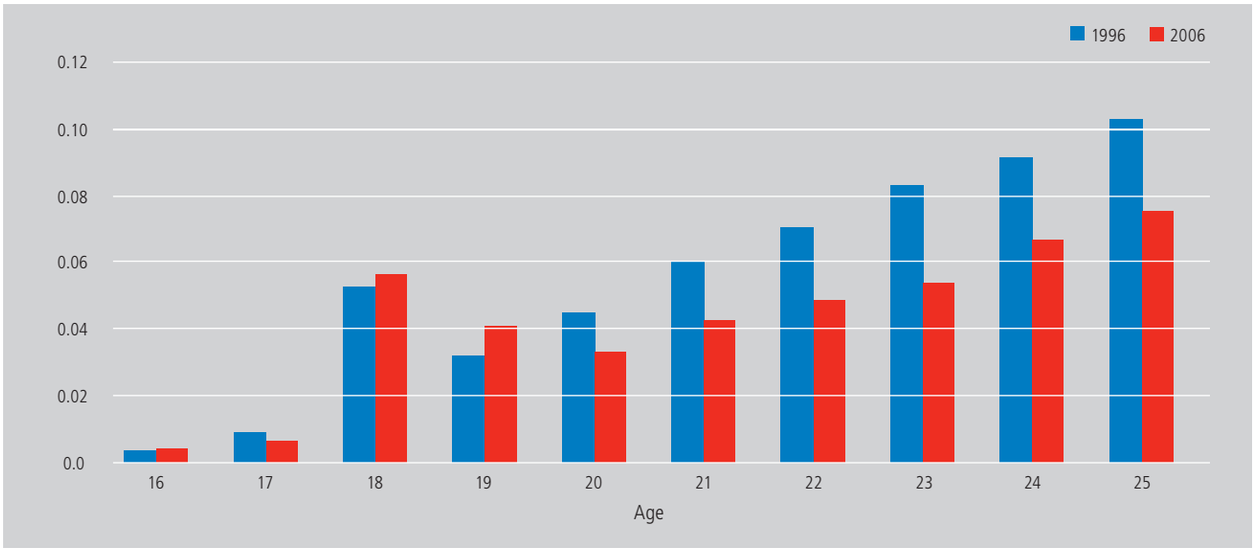
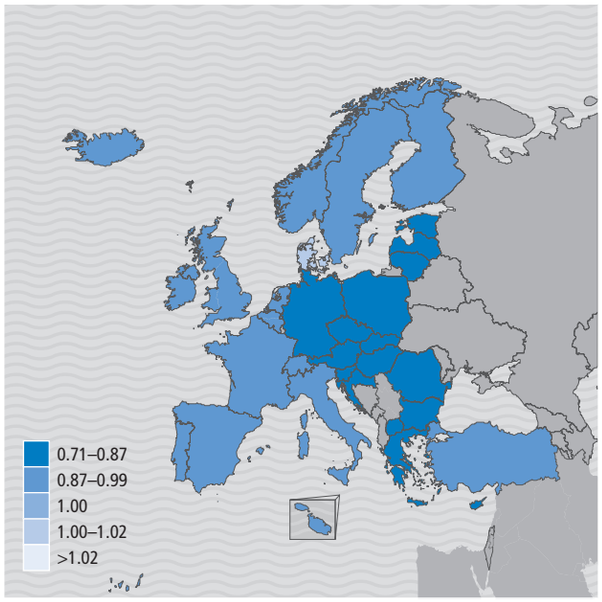


Fig. 2.1.4
COMPARITIVE RATIO: PRECENTAGE OF 0–14-YEAR-OLDS 2008 TO PERCENTAGE OF 0–14-YEAR-OLDS 1998

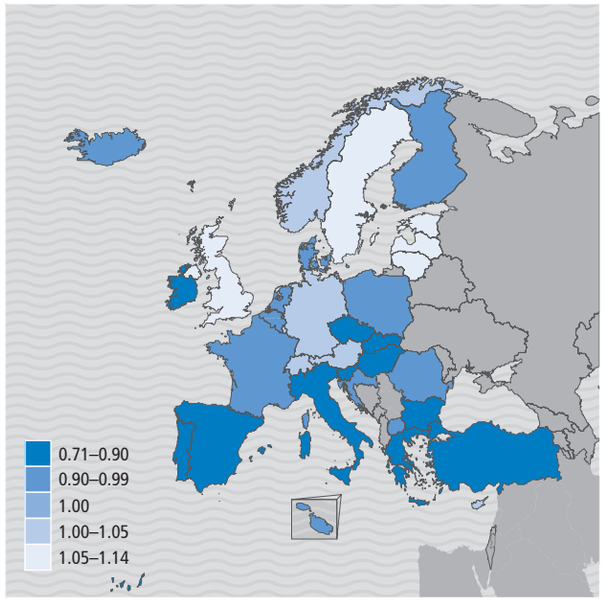
EUROSTAT



A value less than one indicates a decrease. A value greater than one indicates an increase.

Fig. 2.1.5
COMPARITIVE RATIO: PRECENTAGE OF 14–24-YEAR-OLDS 2008 TO PERCENTAGE OF 14–24-YEAR-OLDS 1998

EUROSTAT



A value less than one indicates a decrease. A value greater than one indicates an increase.

WHAT ARE THE CHALLENGES?

Over the last ten years the percentage of young people aged 14–24 years has fallen in most countries. The population aged 14 and under has decreased in all countries, with the exception of Denmark, suggesting that the proportion of young people in Europe will continue to decline (Fig. 2.1.4, Fig. 2.1.5).

There are many reasons behind this, but two issues – fertility rate and socioeconomic changes – can be identified as having significant effects. The overall key trend for the population of people between 11 and 24 years in the EU27 is that the population of those below the age of 24 will be in uninterrupted decline, while that of people over 50 years will rise *(4)* (Fig. 2.1.6).

At the present time, Europe's total population is on the rise despite an overall low fertility rate (1.41 for the whole EU) because of migration from countries outside of Europe.

Reliable statistics and comparable data about migration within Europe, particularly for those between 11 and 24 years, appear to be hard to find. Important data about the structure of Europe's population are therefore missing, which constitutes a serious omission given the significance of migration as a major source for the growth of Europe's population.

Examination of the overall age structure of migrants in the EU shows that 11–24-year-old migrants are a population that cannot be ignored (Fig. 2.1.7). This, linked with the fact that migration is a resource for Europe's population that will affect its future growth, makes it necessary to compile accurate data for this population.

Fig. 2.1.6
AGE DRIFT OF EUROPE'S POPULATION FROM 1996 TO 2006

EUROSTAT

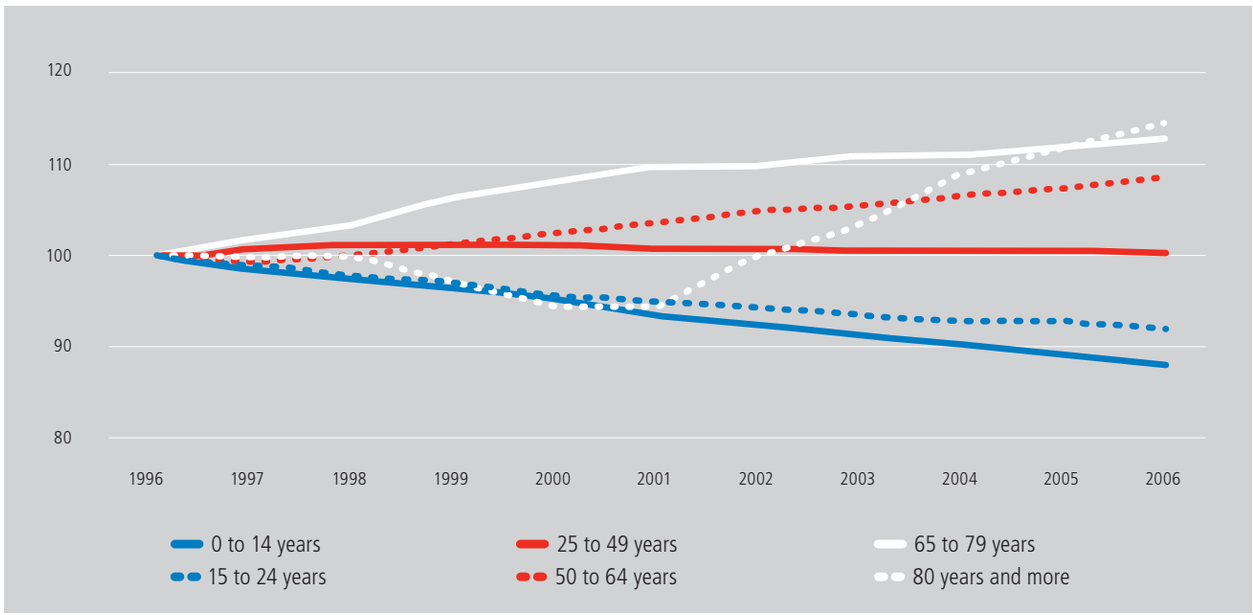
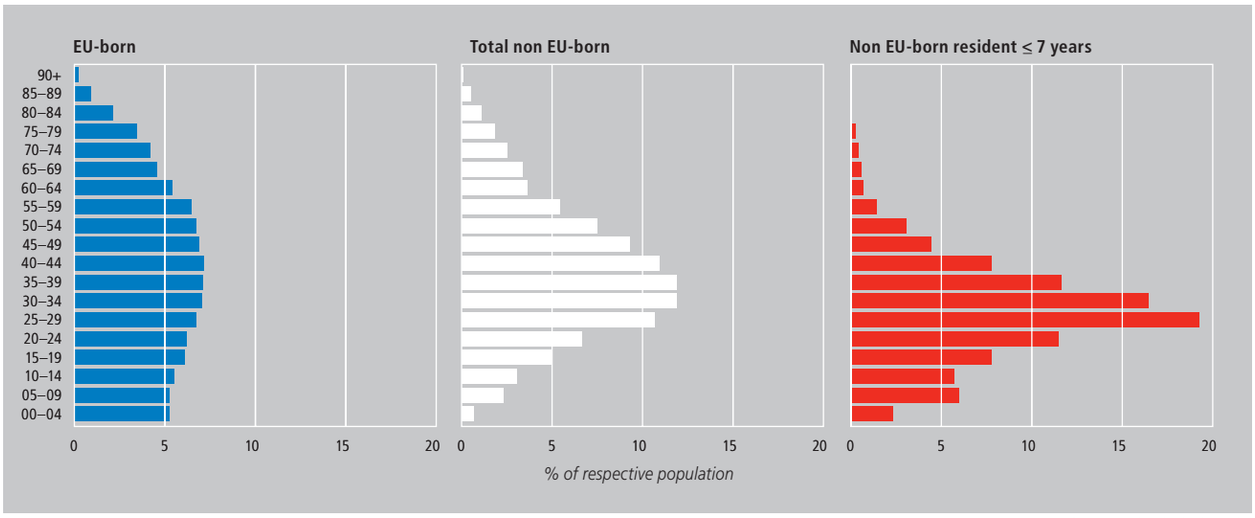


Fig. 2.1.7
AGE STRUCTURE IN THE EU OF EU-BORN AND NON EU-BORN MIGRANTS

EUROSTAT



Note: Belgium, Denmark and Ireland excluded

EDUCATION

2.2

SUMMARY

- Gaining an understanding of school related health issues is vital for governments.
- An upward trend in enrolment rates can be seen in eastern Europe.
- Social inequalities and socioeconomic factors such as family affluence are significant influences on academic performance, but issues such as self-efficacy are also important in determining overall school performance.
- Findings from the HBSC survey *(1)* indicate high coherence between subjective health status and the perceived school performance of students.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Improving the quality of education is an issue that involves many stakeholders – students, parents, teachers and governments. All of these stakeholders, in particular governments, need information about the overall performance of the education system to enable them to take adequate actions to reflect changing needs and social developments *(2,3)*.

Central to this is the need for reliable data about the current situation and developing trends. Data on academic performance and achievements are important indicators, but they are not sufficient in themselves to describe the effectiveness of education systems. Modern education is not only focused on academic achievement and academic output rates, but also concentrates on ensuring students achieve a good quality of education experience and are enabled to cope adequately with school-related issues, such as stress, that can develop into health problems.

Health and education are linked. With, according to 2005 figures, 98.3 million students attending schools in the EU27 at International Standard Classification of Education (ISCED) levels 1–3 (Box 2.2.1) *(4,5)*, it is clear that gaining an understanding of school-related health issues is vital for governments.

Box 2.2.1 **INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED) LEVELS** *(4)*

The ISCED is as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally. There are seven levels of defined education:

- **level 0:** pre-primary education
- **level 1:** primary education or first stage of basic education
- **level 2:** lower secondary or second stage of basic education
- **level 3:** (upper) secondary education
- **level 4:** post-secondary, non-tertiary education
- **level 5:** first stage of tertiary education (not leading directly to an advanced research qualification)
- **level 6:** second stage of tertiary education (leading to an advanced research qualification).

Young people experience stress to varying degrees as a product of their daily school life. School-related stress has a significant impact on the health behaviours of young people. Those who experience high levels of pressure are at risk through the adoption of health-compromising behaviours and are more liable to report health and psychological complaints *(6–10)*.

The Programme for International School Assessment (PISA) study, initiated by the Organisation for Economic Co-operation and Development (OECD), provides an overview of academic performance of young people, while the HBSC survey focuses on young people's behaviours, lifestyles and social context changes as they grow through the adolescent years. These offer valid, cross-national, comparative data sources to inform debate and decision-making.

WHAT DO WE KNOW?

Of the students enrolled in education establishments in EU27 countries in 2005, the highest share was in the United Kingdom, with 16.7 million; this was 2.2 million higher than the next largest student population, registered in Germany *(5)*.

Fig. 2.2.1–2.2.3 show the proportion of students at ISCED levels 3–5 in the education system as a percentage of all students: all figures in the graphs are approximate.

These data from 1998 and 2006 show some significant changes in the population of students at ISCED levels 3–5. This is especially the case in Poland, Greece, Latvia, Slovenia and the Czech Republic, with a significant change between 1998 and 2006 in the numbers of people in education. With a few exceptions, the figures reflect an overall upward trend.

Fig. 2.2.1
PERCENTAGE OF STUDENTS AT ISCED LEVEL 3 1998–2006 *EUROSTAT*

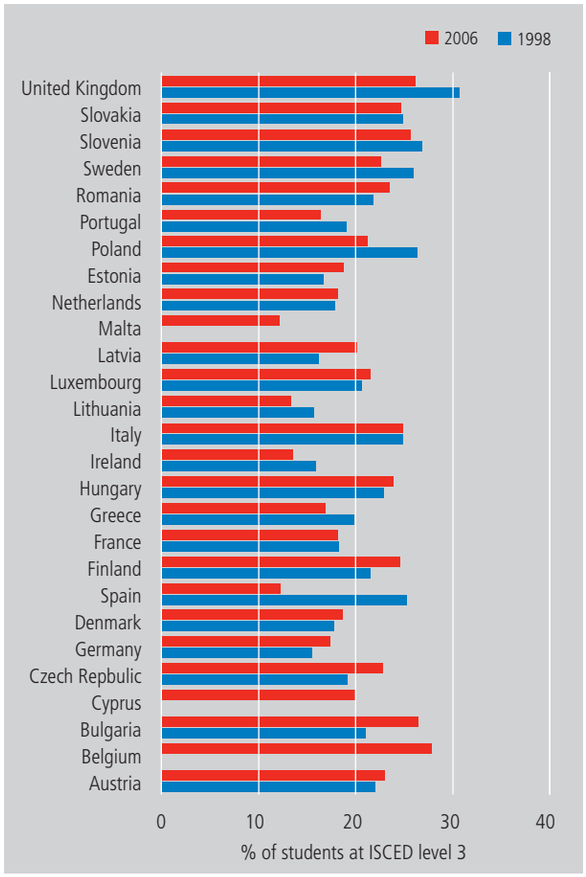


Fig. 2.2.2
PERCENTAGE OF STUDENTS AT ISCED LEVEL 4 1998–2006 *EUROSTAT*

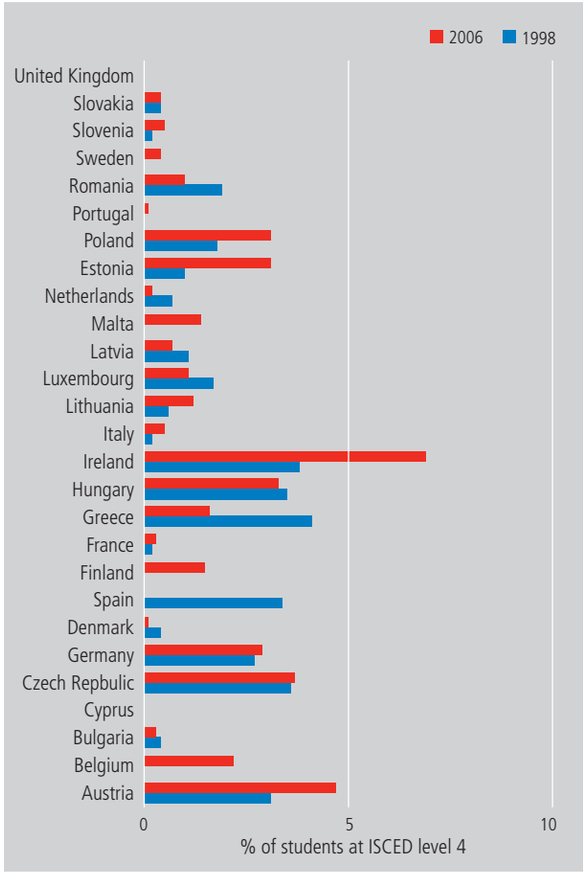


Fig. 2.2.3
PERCENTAGE OF STUDENTS AT ISCED LEVEL 5 1998–2006 *EUROSTAT*

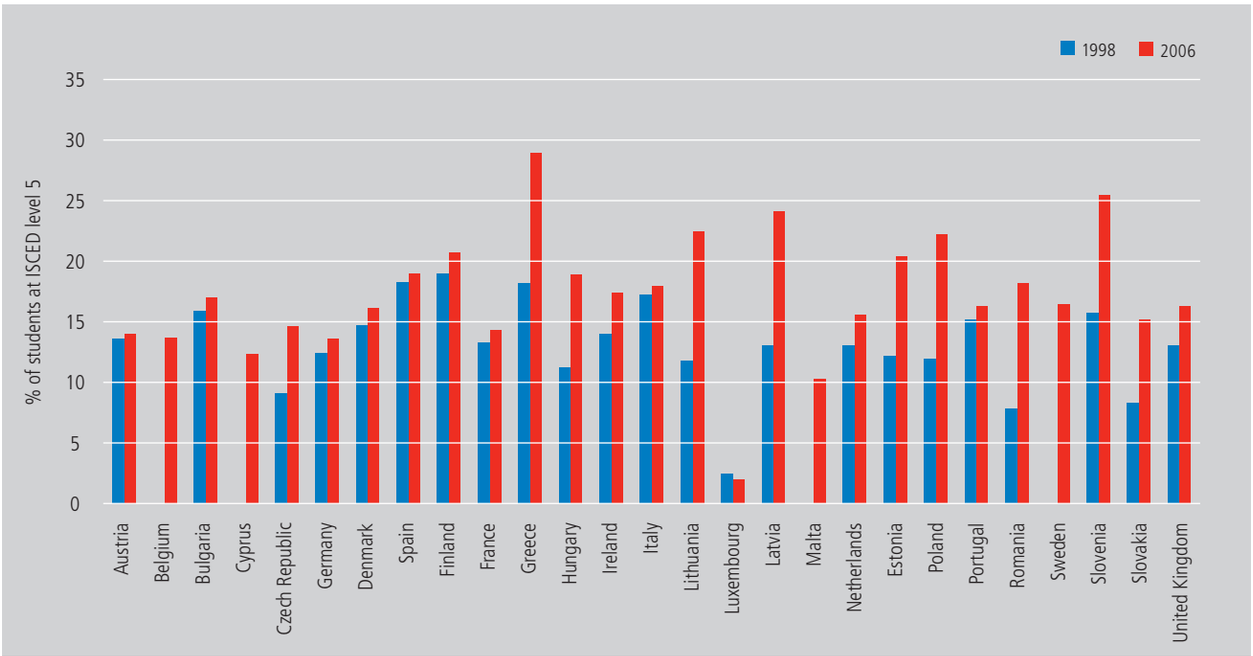


Fig. 2.2.4 shows female involvement in education between 1998 and 2006 in EU27 countries. A significant increase can be seen in Germany, the United Kingdom, Denmark, Poland, Slovakia, Slovenia and France, but significant declines in numbers of females in secondary education can be observed in Finland, Sweden, Austria, Hungary, Ireland and Spain.

Examination of the numbers of young people aged 15–24 in employment (Fig. 2.2.5) shows an overall balance between 1997 and 2007 in all countries of the EU27 *(2)*, although a more accurate picture requires analysis of specialized regional or national data from the labour market and education sector.

Perceived school performance

The PISA 2006 international survey offers reliable, comparable data to facilitate the evaluation of school performance.

One of the most important influencing factors on school performance is the student's home background. Key findings from the HBSC survey show that gender and family affluence are significant factors in assessment of very good school performance, with girls and those from high-affluence families more likely to report performing well at school *(1)*.

However, a disadvantageous home background does not automatically mean a poor school performance *(2)*. Students' self-efficacy is also an important factor in determining individual school performance. Students who have confidence in their abilities have a strong sense of self-efficacy and are willing to invest in learning to overcome difficulties *(2)*. Results of the PISA 2003 survey showed a significant positive association between students' self-efficacy in mathematics and their performance in mathematics assessments: on average, each unit increase on the index of self-efficacy in mathematics corresponded to a performance difference of 47 points.

One major finding of the 2006 PISA survey is that students need to believe in themselves from the outset of their education experience to enable investment in the education system to help them achieve higher levels of performance *(2)*. This is a significant point in relation to performance gaps, as academic performance is an important predictor of future life chances, including education and employment opportunities *(1)*.

Liking school

School satisfaction is considered an indicator of the emotional aspect of quality of life in the school setting. An overall positive experience of school can be a resource for health and for a better school performance, while the negative experience of "disliking school" constitutes a risk factor that may result in health-compromising behaviours such as sexual risk-taking, illegal substance use and smoking *(1)*.

When young people in the HBSC survey were asked how they feel about school at the present (possible answers were "I like it a lot" and "I don't like it at all"), very large cross-country differences were evident. The results show a consistent gender difference at age 11 which narrows, along with a general decline in liking school "a lot", between ages 11 and 15. Neither geographical region nor family affluence is a strong predictor of liking school "a lot" *(1)*.

Pressured by schoolwork

Students experience schoolwork-related stress, a phenomenon that is analogous to job strain in an occupational setting, as a component of school adjustment. Stress induced by schoolwork can not only be found in individual students; it is also characteristic of a wider context that includes the classroom or even the whole school.

Sources of school-related stress vary, but most commonly it is linked with perceived academic demands from parents and teachers. Like any other perceived stress, high levels of school-related stress have been associated with a wide range of health outcomes that have an influence on academic performance, such as lower self-rated health, low quality of life and less satisfaction with school *(1)*.

Fig. 2.2.4
COMPARISON OF FEMALES IN SECONDARY EDUCATION 1998–2006
EUROSTAT

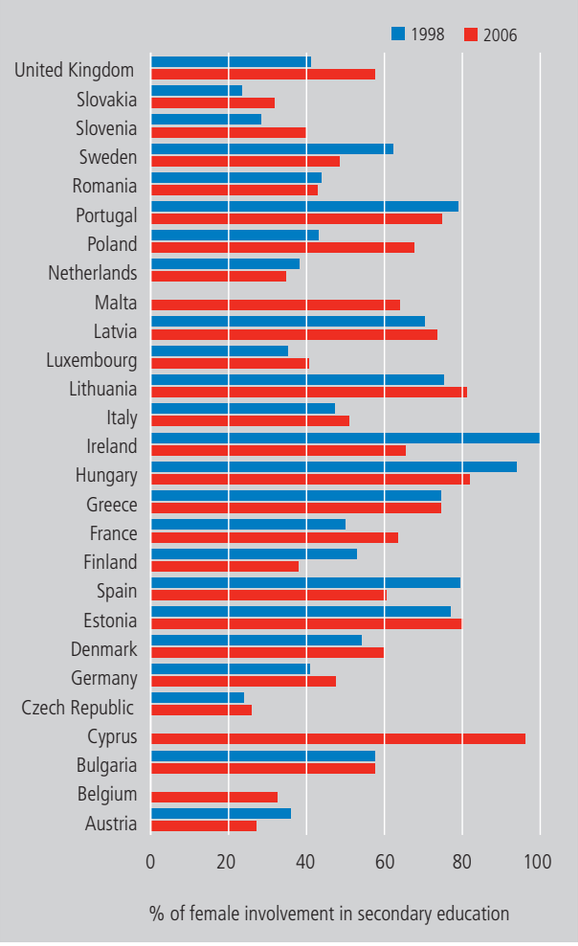
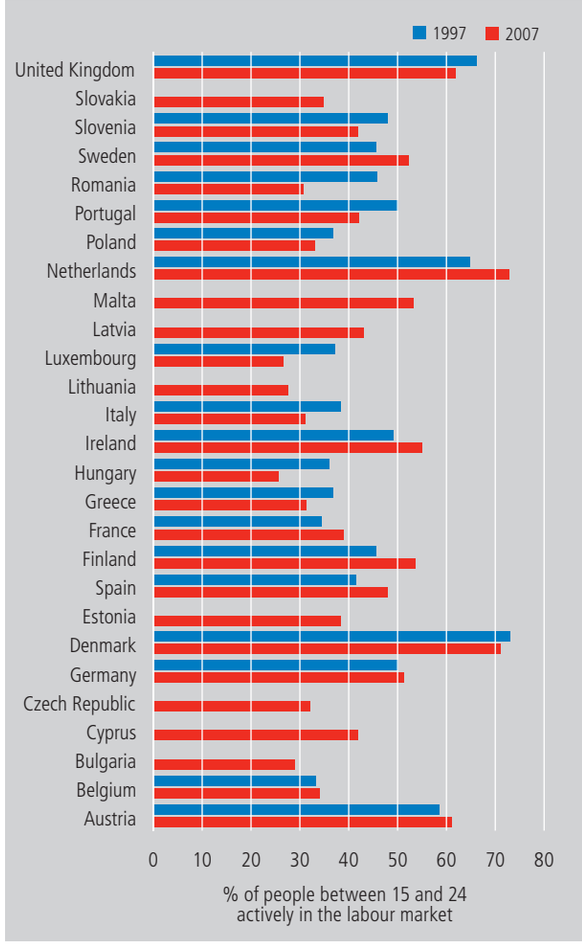


Fig. 2.2.5
COMPARISON OF 15–24-YEAR-OLDS ACTIVELY IN THE LABOUR MARKET IN 1997 AND 2007
EUROSTAT



Reports of feeling highly pressured by schoolwork vary between countries, from 9% among 11-year-old girls in the Netherlands to 73% among 15-year-old girls in Portugal. The numbers indicate that girls at the age of 15 feel the greatest pressure in most countries, although no specific geographical pattern emerges (Fig. 2.2.6, Fig. 2.2.7) *(1).* Receiving recognition of effort in school has a strong impact on students' health.

WHAT ARE THE CHALLENGES?

Findings from the HBSC survey show a high coherence between perceived school performance and the subjective health of students. This finding has important implications for the future development of education systems, not only in improving the overall school performance of students, but also in improving their perceptions of their own health.

Fig. 2.2.6
15-YEAR-OLD GIRLS WHO FEEL PRESSURED BY SCHOOLWORK

2005/2006
HBSC Survey

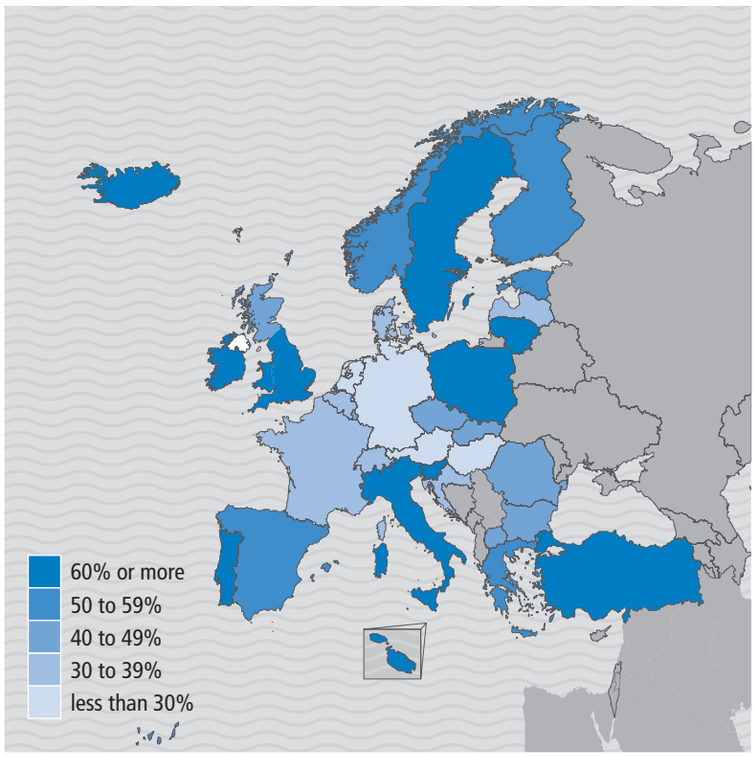
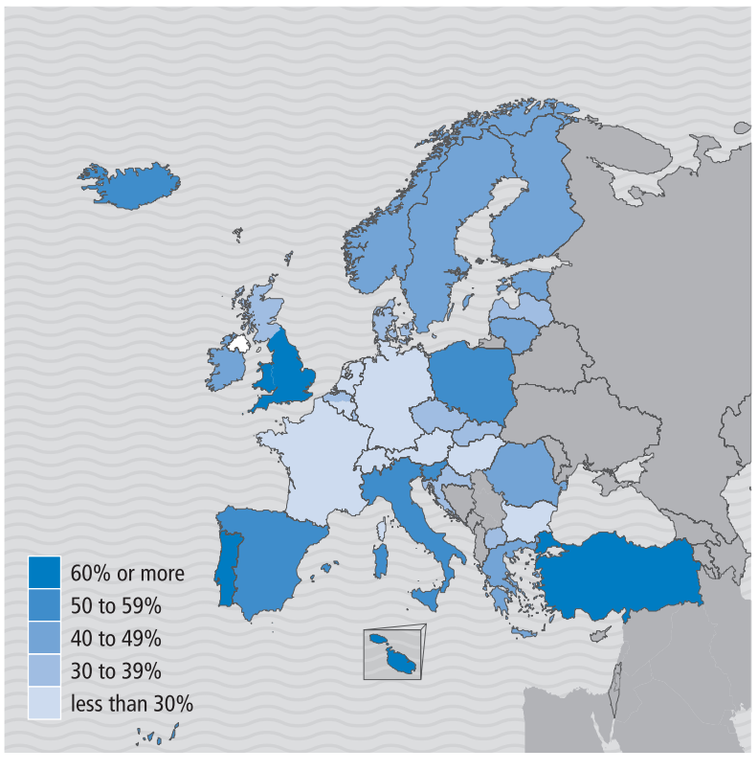


Fig. 2.2.7
15-YEAR-OLD BOYS WHO FEEL PRESSURED BY SCHOOLWORK

2005/2006
HBSC Survey



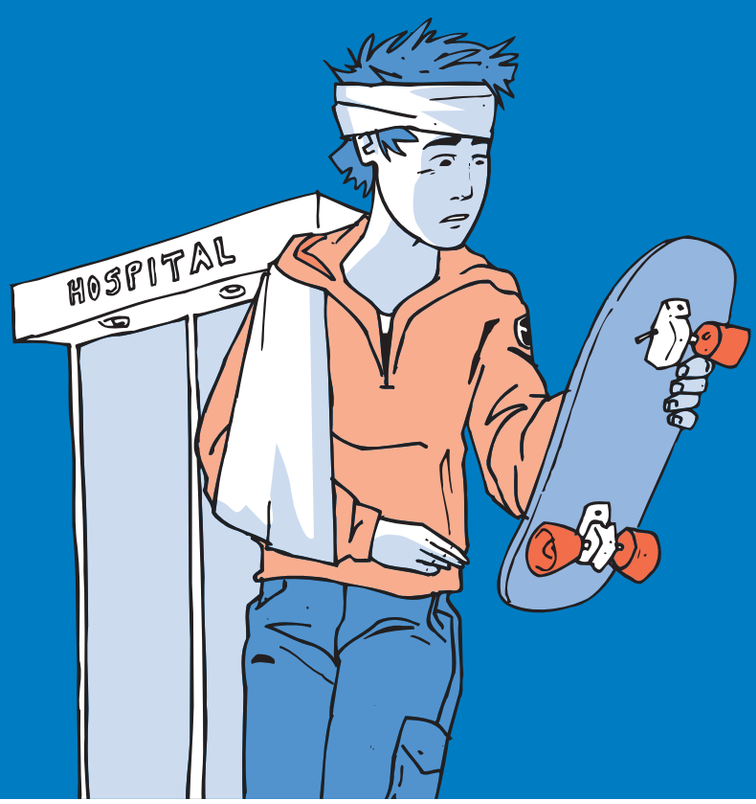
3 HEALTH OUTCOMES

INJURIES AND ACCIDENTS

3.1

SUMMARY

- Injuries are the leading cause of death in young people, affecting mainly males.
- Injuries prevalence increases with age (from 1 to 24 years).
- Injuries are more prevalent in middle-income countries and among lower socioeconomic groups within countries.
- Road traffic injuries are the leading cause of death and the leading cause of injuries in young people aged 10–24 years.
- The challenge around injury is collecting comparable data on non-fatal injuries and injury mechanisms to prevent injuries and promote safety among young people.



WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Injuries are the leading cause of death and disability among young people and constitute one of the leading causes of deaths across all age groups, with more than 5 million injury deaths globally every year.

In Europe, injuries kill 800 000 people every year, accounting for 8.3% of all deaths in Europe *(1,2).* There are 250 000 fatalities each year in the European Union. Injuries represent the fourth major cause of death in the EU27 countries, following cardiovascular diseases, cancer and diseases of the respiratory system *(3).*

For every injury-related death, it is estimated that injuries cause 30 people to be admitted to hospital and 300 others to attend emergency departments for outpatient treatment *(1,2).* Injuries that do not result in death may have short- or long-term effects on the health of the injured person, with associated burdens (including lost potential, disability, treatment costs and rehabilitation) being substantial *(4).*

The World Bank and WHO have developed a measure of the impact of disease – the disability-adjusted life-year (DALY) (Box 3.1.1) – to assess the total significance of disease to society beyond the immediate cost of treatment or the burden of disease.

Box 3.1.1 **THE DISABILITY-ADJUSTED LIFE-YEAR (DALY)**

DALY is a summary measure that combines the impact of illness, disability and mortality on population health. The DALY combines the amount of time lived with disability and the amount of time lost due to premature mortality, using actual data and estimates of illness and death in a population. One DALY equals one lost year of healthy life *(5).* In Europe, injuries account for 14% of overall DALYs *(1)* and 19% among 0–19-year-olds *(6).*

Injuries not only cause a significant decrease in quality of life, but are also very costly. Overall in Europe, the annual health care costs of treating patients who subsequently die from injuries sustained are estimated to be €1–6 billion, and those of non-fatal injuries €80–290 billion. Injuries in the home and from leisure activities (not including workplace injury, road traffic injury and sport injury) cost about €10 billion for the EU15 countries. This accounts for about 5.2% of total inpatient expenditure *(1)*, with the cost of road traffic injuries being about 2% of a country's GDP *(7)*. It is estimated that injuries consume approximately 10% of hospitals' resources *(3)*.

WHAT DO WE KNOW?

Overview: morbidity and mortality

PREVALENCE

Injuries are one of the leading causes of morbidity and mortality among children and young people over 12 months (Table 3.1.1). In the EU27 countries between 2003 and 2005, injury deaths accounted for:

- 3% of deaths among those aged 0–1 years
- 27% of deaths among those aged 1–4 years
- 37% of deaths among those aged 5–14 years
- 65% of deaths among those aged 15–24 years *(3)*.

The leading causes of fatal unintentional injuries among 0–19-year-olds in Europe were road traffic (39%), drowning (14%), poisoning (7%), fires (4%) and falls (4%). Other causes, including suffocation, choking, strangulation, hypo- and hyperthermia, animal encounters and natural disasters, account for 32% of all deaths *(1)*.

Injury mortality and morbidity are not equally distributed among countries and between genders and age groups. Injury mortality and morbidity in all age groups and from all causes are more prevalent among males. All injury types increase with age (from age 1 to age 24), and the increase is steeper among males *(3).*

Table 3.1.1 **LEADING TEN CAUSES OF DEATHS AMONG PEOPLE AGED 0–24 YEARS IN EUROPE** *WHO, 2006*

Rank	10–14 years	15–19 years	20–24 years
1	Road traffic injuries	Road traffic injuries	Road traffic injuries
2	Lower respiratory infection	Self-inflicted injuries	Self-inflicted injuries
3	Drowning	Violence	Violence
4	Self-inflicted injuries	Drowning	Poisoning
5	Leukaemia	Poisoning	War
6	Congenital anomalies	Lower respiratory infection	Drowning
7	Violence	Cerebrovascular disease	Tuberculosis
8	Cerebrovascular disease	Leukaemia	Cerebrovascular disease
9	Poisoning	War	Falls
10	Epilepsy	Falls	Drug-use disorders

Injury mortality varies greatly by country, but males are at much higher risk for injury-related death in most countries (Fig. 3.1.1). Injury rates also vary widely, with higher rates in middle-income countries than in high-income countries. Within countries, injury fatalities, irrespective of cause, are associated with poverty, single parenthood, low maternal education, low maternal age at birth, poor housing, large family size and parental alcohol or drug abuse. In that sense, injuries are the leading cause of inequality in childhood death *(1)*.

With the exception of drowning and burns, all types of injuries increase with age, and the increase is more substantial among males (Table 3.1.2) *(7)*.

Table 3.1.2 **INJURY-RELATED MORTALITY IN EUROPEAN REGION PER 100 000 POPULATION** *WHO, 2008*

	0–4 years		5–14 years		15–29 years	
	Males	Females	Males	Females	Males	Females
All	42.3	28.0	27.4	11.9	128.3	28.4
Road traffic injuries	3.8	4.0	4.8	3.4	29.4	7.4
Fire-related burns	3.8	4.0	0.6	0.5	1.0	1.1
Drowning	7.7	4.4	5.8	2.4	9.1	1.7
Falls	1.8	1.2	1.0	0.4	2.8	0.6
Poisoning	4.6	4.0	1.6	1.0	13.2	3.1

Road traffic injuries

PREVALENCE

Road traffic injury is the leading cause of death among young people aged 10–24 and, as such, requires further attention. While young people represent 11.4% of the population, they account for 20.4% of traffic fatalities (Fig. 3.1.2) *(8)*.

Road transport is one of the most complex and dangerous systems people have to deal with on a daily basis (3). For children, daily life includes travelling to school, home and play, which leaves them vulnerable to road traffic injuries.

Road traffic injuries are the leading cause of death among 5–24-year-olds in Europe, in spite of improvements in traffic safety in many countries. They are also the leading mechanism of traumatic brain and extremities injuries and subsequent long-term impairment *(1)*. Most road traffic fatalities are of car passengers, followed by pedestrians and riders of motorcycles and scooters *(3)*.

Fig.3.1.1
DEATHS (PER 100 000) DUE TO INJURY AND POISON AMONG 5–19-YEAR-OLDS

WHO Health for all database, 2004

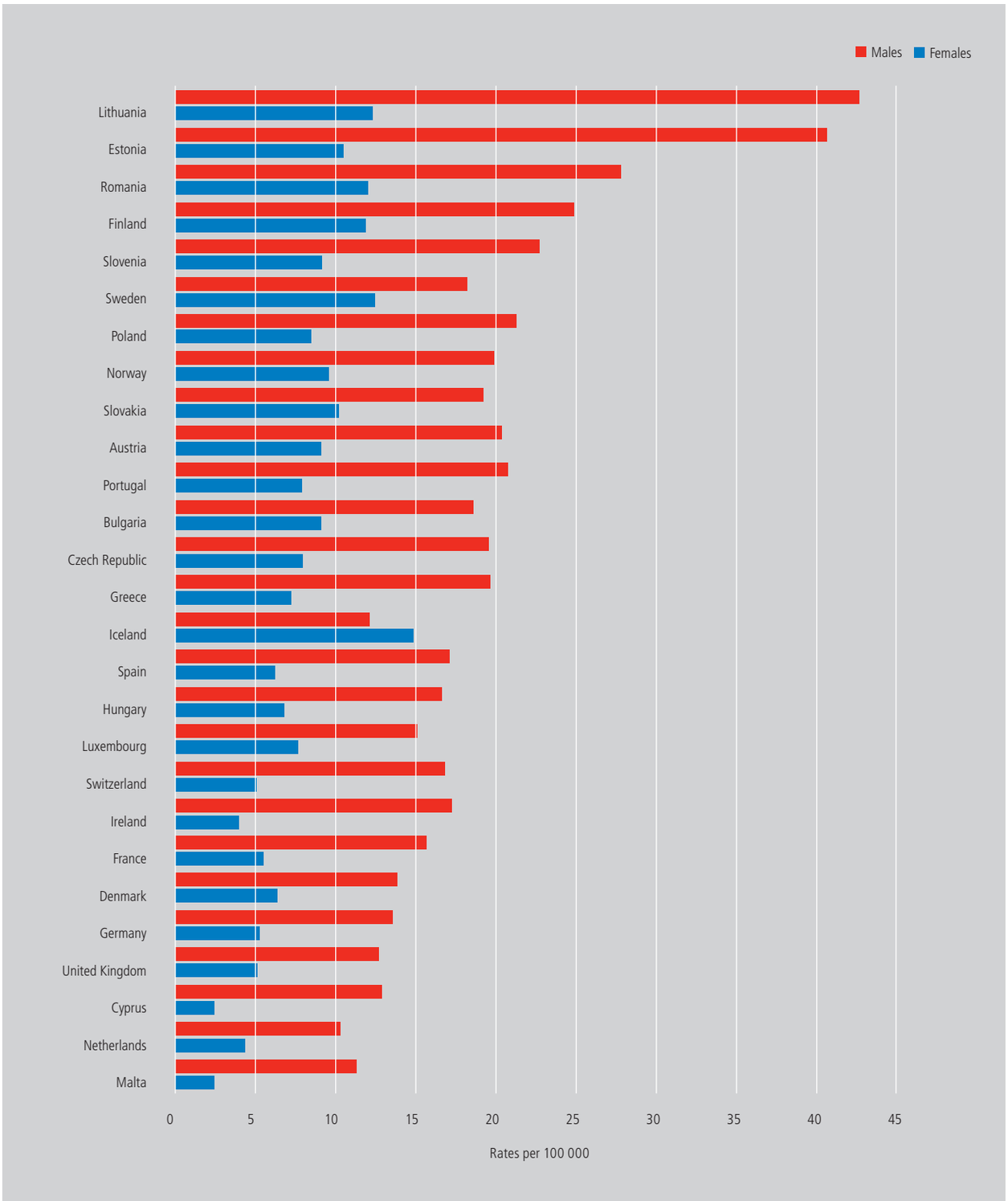
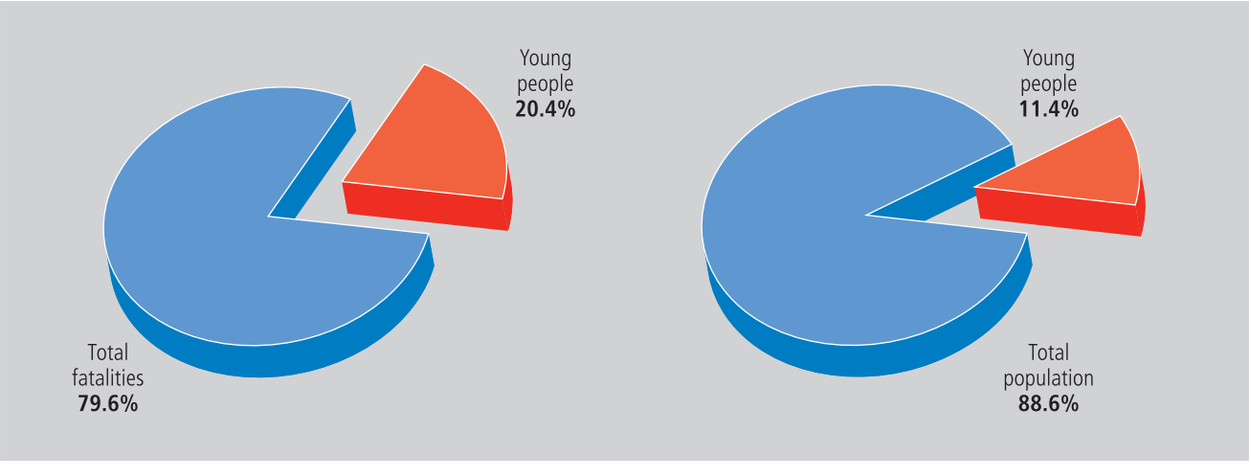


Fig.3.1.2
PROPORTION OF YOUNG PEOPLE IN POPULATION AND IN TRAFFIC FATALITIES

CARE Database / EC, EUROSTAT



INEQUALITIES

Children in middle-income countries have a 60% higher risk of dying from road traffic injuries than those in high-income countries.

Injuries in the community

PREVALENCE

As part of the HBSC survey, schoolchildren were asked how many times during the last 12 months they had been injured and had to be treated by a doctor or nurse. Overall, about 42% of 11-, 13- and 15-year-olds reported at least one such injury. As with fatal injuries, injury prevalence increased between 11- and 15-year-olds of both genders.

INEQUALITIES

Injury is more prevalent among boys in all countries and across all age groups. However, unlike fatal injury and severe injury, injuries in the community are more prevalent among children from more-affluent families. Country variations are also different for injuries in the community: injury rates are relatively higher in northern and western Europe, while rates in eastern Europe are relatively low (Table 3.1.3).

WHAT ARE THE CHALLENGES?

As children grow, they become more exposed to activities that may end in an injury. Children's injuries receive more attention than injury in young people, resulting in few international reports specific to the latter age group. Although it is known that injuries are the leading cause of deaths among 15–24-year-olds, data are mainly broken down for 19-year-olds and under. The age group of 19–24 years is rarely presented separately, limiting the ability to provide specific figures for young people. Additionally, whereas mortality data are fairly comprehensive, data on injury morbidity are inconsistent. Assessing the non-fatal burden is consequently challenging, given the variety of data systems in Europe.

Another aspect that needs to be addressed is the shortage of non-fatal injury data. Such data will allow the identification of priority areas for intervention and monitoring of their effectiveness.

It is important to recognize that injuries are preventable and that examples of efficient prevention programmes do exist. Lessons should be learnt from such programmes, allowing for the development of safety promoting health policies.

Table 3.1.3 *HBSC 2005/2006*

Associations between family affluence and indicators of health, by country/region and gender:
MEDICALLY ATTENDED INJURY IN THE LAST 12 MONTHS

NORTH	Boys	Girls
Denmark		+
England	+	+
Estonia	+	+
Finland	+	+
Iceland	+	
Ireland	+	+
Latvia	+	+
Lithuania	+	
Norway	+	+
Scotland	+	+
Sweden	+	+
Wales		

WEST	Boys	Girls
Austria	+	
Belgium (Flemish)		+
Belgium (French)		+
France	+	+
Germany	+	+
Luxembourg		+
Netherlands	+	+
Switzerland	+	+

SOUTH	Boys	Girls
Croatia	+	+
Greece	+	
Italy	+	+
Malta		+
Portugal	+	+
Slovenia	+	+
Spain	+	+
TFYR Macedonia†		
Turkey		

EAST	Boys	Girls
Bulgaria	+	
Czech Republic	+	+
Hungary		+
Poland	+	+
Romania	+	+
Slovakia	+	+

Where family affluence is statistically significant at $p < 0.05$, countries are identified with +/–

\+ indicates that higher levels of injury are significantly associated with higher family affluence

– indicates that higher levels of injury are significantly associated with lower family affluence

† The former Yugoslav Republic of Macedonia

MENTAL HEALTH AND WELL-BEING

3.2

SUMMARY

- The mental health of young people in Europe is generally good, but mental disorders are on the rise. Worldwide prevalence rates of mental disorders for those under the age of 18 years are currently in the region of 10% to 20%.
- Well-being is a fundamental part of mental health and deserves more attention in research.
- Special attention should be paid to migrant youth, as they are especially at risk.
- Low socioeconomic status (SES) is related to poor mental health. Gender and age differences should also be reflected in policy considerations and intervention and prevention programmes.
- There appears to be a fundamental lack of data on the mental health and well-being of young people aged 18–24.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Mental health in young people is a topic of increasing importance in Europe. The configuration of health and illness in young people has changed considerably over the last century. The main problems of the first half of the 20th century, such as acute infections and high infant mortality, have diminished in importance *(1)*, while the so-called "new morbidity" characterized by internalizing and externalizing problems and learning disabilities came to the fore in the middle part of the century. More recently, new phenomena such as self-harm and online game addiction have arisen.

Facing the magnitude of the burden of disease related to young people's mental disorders, WHO declared that young people's mental health was "a key area of concern" to which professionals and policy-makers must direct their attention *(2)*.

Although the mental health of the majority of European youth is good, psychological disorders of all kinds, such as anxiety and phobia, post-traumatic stress disorder, learning disorders, depression, eating disorders and addictions, are on the rise. Some of them currently have an alarming prevalence among young people in Europe. It is estimated that the overall prevalence of mental disorders in adolescence is in the region of 10% to 20% *(3)*, but this is anticipated to be even higher among adolescents belonging to underprivileged and poorly integrated population subgroups, such as migrants.

Compared to adults, young people are especially at risk of developing mental disorders as they face many new pressures and challenges in their daily lives. For example, leaving the parental home for the first time, exams and financial worries can cause high levels of stress, which can trigger mental ill health. Additionally, unfair denial of employment opportunities, discrimination and difficulties in access to services, health insurance and housing, leaving education early or underachieving, and peer and media pressure are all risk factors for, and consequences of, mental health problems.

Besides the absence of any mental disorder, good mental health is also characterized by high levels of well-being, including aspects of happiness, social involvement, self-esteem and sociability. WHO defined good mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" *(4)*.

Both mental health and well-being are essential for the health of young people. Happy and healthy young people are most likely to grow into happy and healthy adults, who in turn will contribute to the health and well-being of nations *(5)*. On an individual level, poor mental health and low levels of well-being can have deteriorating effects on young people's social, intellectual and emotional development, on their family, and on their future. Decisions taken in adolescence are often of significance for the rest of young people's lives.

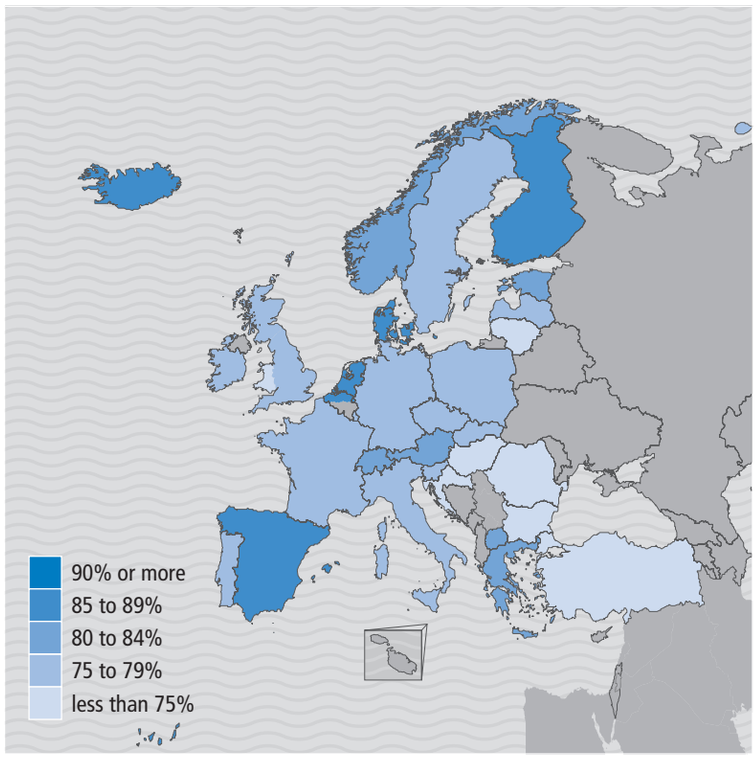
WHAT DO WE KNOW?

WHO states that the "development of a child and adolescent mental health policy requires an understanding of the prevalence of mental health problems among children and adolescents" *(6)*. Quantifying the burden of mental disorders in young people in Europe is, however, a difficult task. One of the reasons for this is that psychological and psychosocial problems in adolescence tend to be under-recognized and undertreated as they do not present as typical and discrete entities, as they tend to in adulthood. Estimates of psychological problems and disorders may therefore be higher than is reported by studies.

A second reason is that there is low comparability of national studies due to different definitions of mental health being employed (including "mental health problems", "psychosomatic complaints", "psychiatric disorders" and "life satisfaction") and different data collection methods being used.

Fig. 3.2.1
15-YEAR-OLD GIRLS WHO REPORT HIGH LIFE SATISFACTION

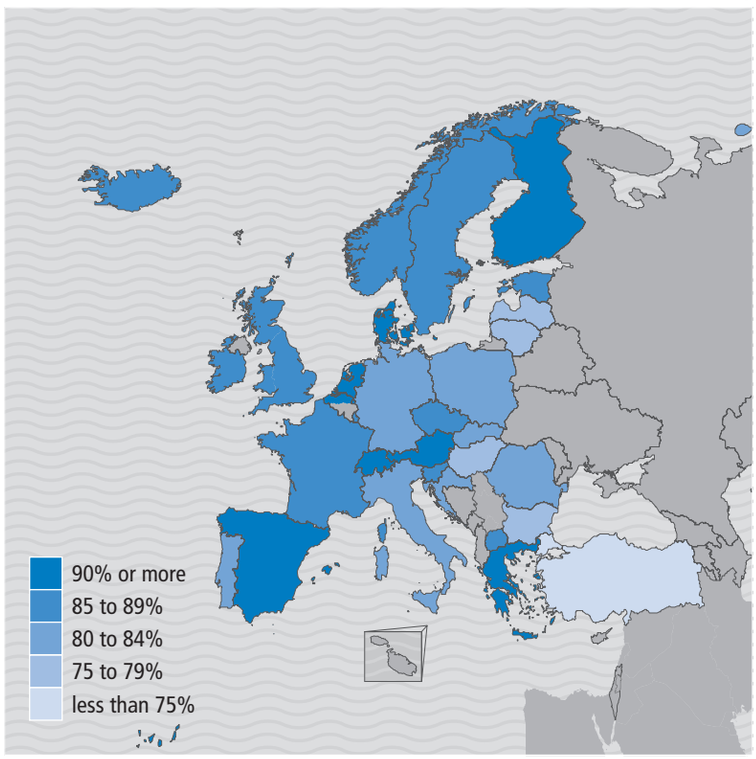
2005/2006 HBSC Survey



HBSC teams provided disaggregated data for Belgium and the United Kingdom: these data appear in the map above

Fig. 3.2.2
15-YEAR-OLD BOYS WHO REPORT HIGH LIFE SATISFACTION

2005/2006 HBSC Survey



HBSC teams provided disaggregated data for Belgium and the United Kingdom: these data appear in the map above

Overall prevalence estimates of mental disorders

Data on the age group 18–24 years are scarce; the focus here is therefore on younger age groups.

It is estimated that 10–20% of young people in Europe have a mental or behavioural problem.

Anxiety disorders (that is, generalized anxiety disorder, panic disorder, phobias, obsessive compulsive disorder, post-traumatic stress disorder and separation anxiety) are the most prevalent mental disorders among young people, with an average national prevalence rate of 10.4% (although cross-national variations exist). The second most prevalent mental disorders are conduct disorders (7.5%); while anxiety disorders are more prevalent among girls, conduct disorders are more prevalent among boys.

Depression and depressive disorders come third, with a prevalence ranging from 4% to 8% *(7)*. The lifetime prevalence of major depression is about 4% in the age group 12–17 and 9% at age 18 (twice as high in females as in males). The latest findings suggest an increase in the prevalence of adolescent depression.

Finally, hyperactivity/attention deficit disorders (ADHD) are estimated to have a prevalence rate of 4.4% among young people, affecting more boys than girls *(8)*. Psychotic disorders such as schizophrenia, schizoaffective disorder and affective and atypical psychoses are rare, but the incidence of schizophrenia increases typically after puberty and peaks in early adulthood. The prevalence of psychotic disorders is between 0.5% and 1% among young people *(9)*.

Well-being and happiness

Well-being is a fundamental part of mental health. The HBSC 2006 survey *(10)* therefore measured adolescent well-being in terms of life satisfaction. The survey showed that high life satisfaction is common among young people in European countries: 85% of the 13-year-olds and 82% of the 15-year-olds reported high life satisfaction (Fig. 3.2.1, Fig. 3.2.2).

Multiple health complaints

The HBSC survey measured mental health based on psychosomatic complaints experienced by young people aged 11–15 years. Psychosomatic complaints, or symptoms, are thought to be indicators of how people are responding to stressful situations. They include somatic symptoms like headaches or backaches and psychological symptoms such as nervousness or irritability, and can place an immense burden on the individual and on the health care system *(10)*.

On average, 33% of the 13-year-olds and 37% of the 15-year-olds reported multiple (two or more) health complaints more than once a week (Fig. 3.2.3, Fig. 3.2.4). There were large cross-national differences, with estimates ranging from 13% in 11- and 15-year-old Austrian boys to 76% in 13-year-old Turkish girls. There was a significant gender difference, with girls reporting multiple health complaints more frequently than boys. Also, young people with low socioeconomic status were more likely to report multiple health complaints compared to those with high socioeconomic status. With respect to geographical differences, young people in southern Europe were slightly more likely to report multiple health complaints compared to other European regions *(10)*.

Subclinical symptoms

The European Kidscreen study was carried out between 2001 and 2004. It measured non-clinical mental health problems in young people aged 12–18 years in 13 European countries (Austria, the Czech Republic, France, Germany, Greece, Hungary, Ireland, Poland, Spain, Sweden, Switzerland, the Netherlands and the United Kingdom).

The results therefore do not represent medical diagnoses, but indicate adolescents with emotional and behavioural problems that could have an impact on their individual well-being and daily functioning.

The percentage of adolescents who showed strong signs of mental disorders varied considerably across countries, ranging from 2.9% in Germany to 10.4% in the United Kingdom, with an average of 5.2%. An additional 9.9% (range: 6.2% in the Netherlands to 13.8% in Greece) showed somewhat less strong, but still significant, signs of mental disorder *(11)*.

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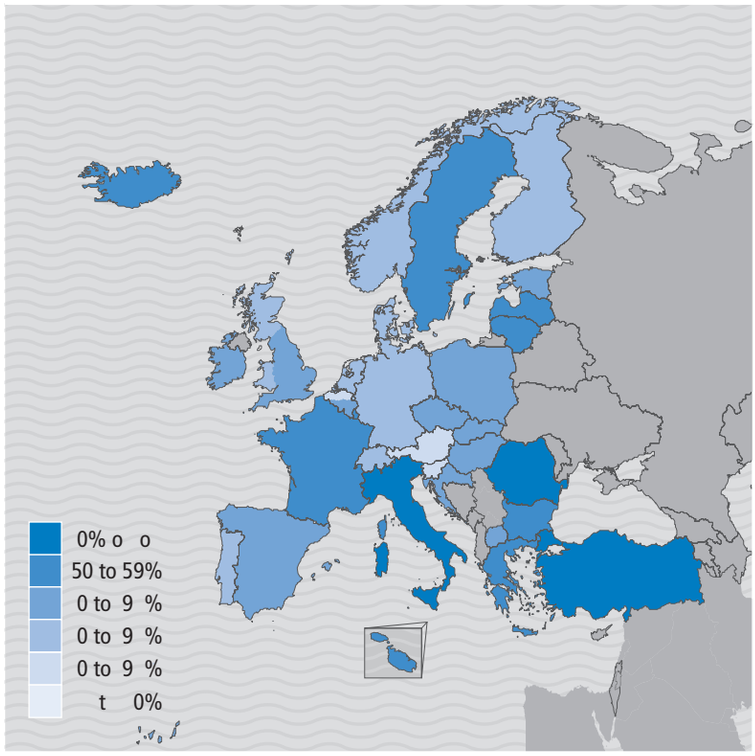
15-YEAR-OLD GIRLS WHO REPORT MULTIPLE HEALTH COMPLAINTS MORE THAN ONCE A WEEK

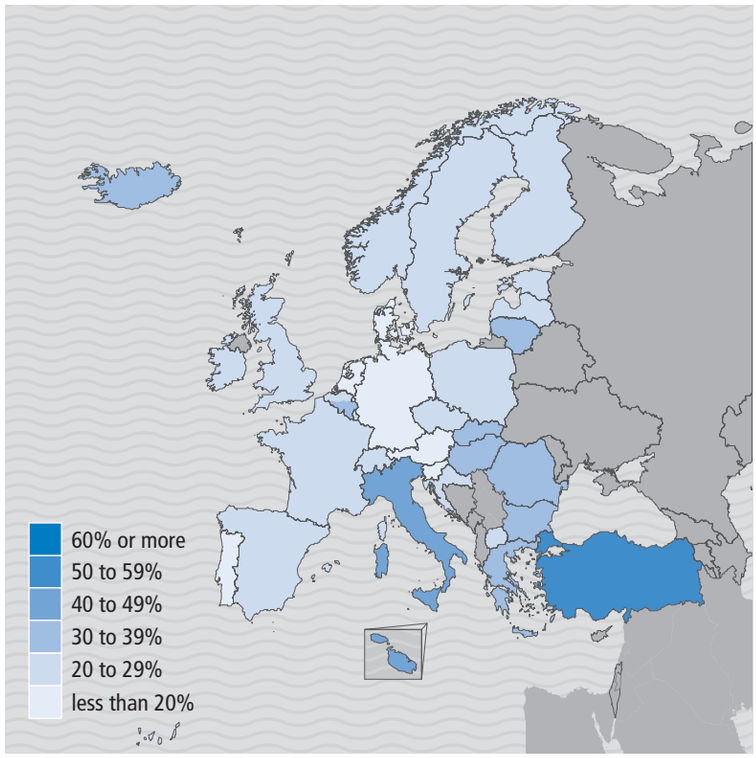
2005/2006 HBSC Survey



HBSC teams provided disaggregated data for Belgium and the United Kingdom: these data appear in the map above

Fig. 3.2.4
15-YEAR-OLD BOYS WHO REPORT MULTIPLE HEALTH COMPLAINTS MORE THAN ONCE A WEEK

2005/2006 HBSC Survey



HBSC teams provided disaggregated data for Belgium and the United Kingdom: these data appear in the map above

Suicide

Suicide is one of the three most common causes of death among young people and is a public health concern in many European countries. Suicide rates in EU27 countries in 2005 for people between 15 and 29 years were 8 per 100 000 people, with variations across countries ranking from fewer than 5 per 100 000 in some southern countries to around 25 per 100 000 in northern and eastern Europe *(12)*.

Data on suicide rates in EU countries are shown in Fig. 3.2.5.

Inequalities

AGE DIFFERENCES

Generally, an increase in mental disorders with age has been reported *(10,13)*, although not all studies have found this effect (see, for instance, Ihle & Esser *(8)*). A potential increase, which appears to continue to rise in young adulthood, may partly be explained by recurrent cases.

With respect to well-being, there is a significant decline in levels of life satisfaction between ages 11 and 15 among girls in almost all countries, but this applies to boys only in a minority of countries.

GENDER DIFFERENCES

In general, girls tend to suffer more from internalizing disorders, while boys have a tendency to experience more externalizing problems. This may be related to the fact that boys and girls tend to have different reactions to stress and trauma. Boys are more likely to respond to stress by means of aggression (either against others or against themselves), to use physical exertion or recreation strategies and to deny or ignore stress and problems. In contrast, adolescent girls more frequently become introverted and internalize the problems they encounter, yet are more likely to admit they cannot cope in difficult situations and more often turn to friends to discuss their problems.

In the HBSC survey, boys generally reported higher life satisfaction and fewer psychosomatic complaints *(10)*. These gender differences increased with age.

SOCIOECONOMIC DIFFERENCES

Research on socioeconomic inequalities in mental health has shown associations between lower socioeconomic status and impaired mental health. This has been found for mental disorders as well as for positive mental health *(10,11)*.

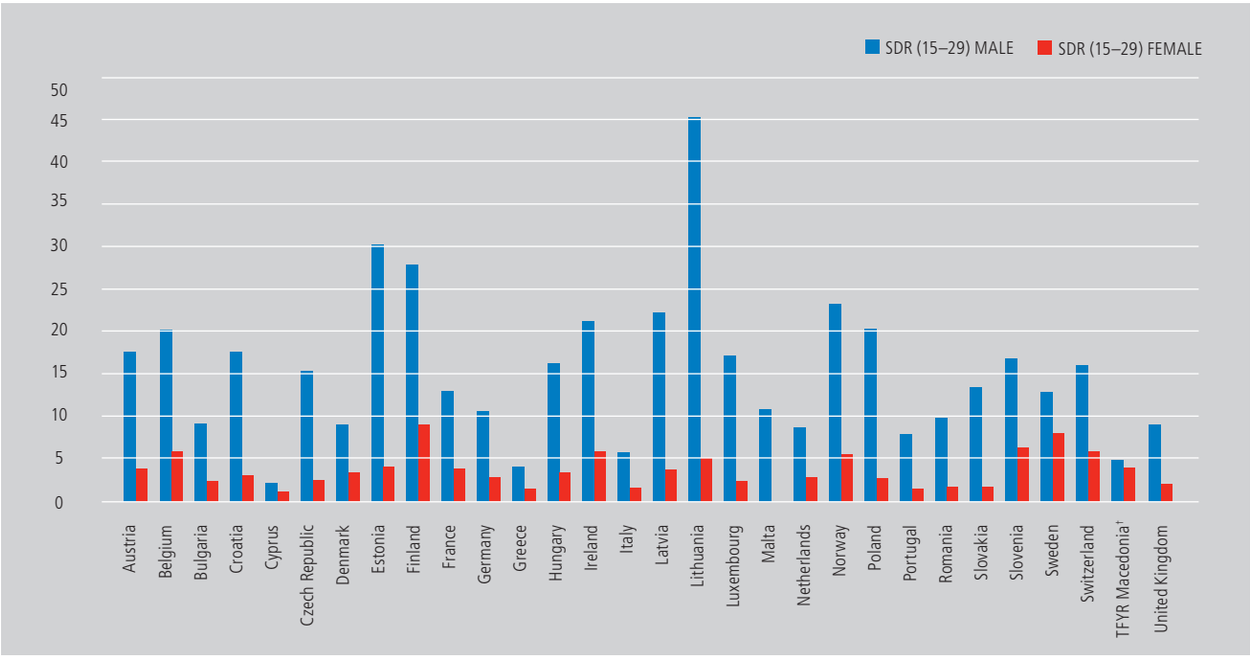
GEOGRAPHICAL DIFFERENCES

Based on the 2006 HBSC data, boys in northern and western Europe are more likely to report high life satisfaction, while those in eastern and southern Europe are significantly less likely to do so. With respect to the experience of multiple health complaints, boys and girls in eastern and southern Europe have relatively high levels of multiple health complaints, while those in northern and western Europe are less likely to report those complaints. Percentages ranged from 96% in 13-year-old boys in the Netherlands to 61% in Turkish 15-year-old girls.

Life satisfaction was found to decrease with age and was higher for boys. Young people with higher socioeconomic status tended to report greater life satisfaction.

Fig. 3.2.5
SUICIDE AND INTENTIONAL SELF HARM PER 100 000

WHO Health for all Database



† The former Yugoslav Republic of Macedonia

WHAT ARE THE CHALLENGES?

Trends in mental ill health: an increase over time?

Several studies provide evidence to support the assumption that rates of mental disorders in young people increase over time.

Rutter & Smith *(14)* conclude from their review that there has been a substantial rise in the prevalence of psychosocial disorders in many western nations over the past 50 years. Reviews by Fombonne *(15)* and Prosser & McArdle *(16)* arrive at the same conclusion, particularly in relation to suicide, delinquency/offending behaviour, substance misuse/addictive behaviours and depression. Collishaw et al. *(17)* provide comparable data, indicating a rise in conduct problems and emotional problems over time.

Caution is warranted in interpreting these findings, as data sources are limited. There is also the suggestion in some reports that increased media attention and heightened professional awareness are contributing to the rising number of referrals and diagnoses *(18,19)*. And there is now evidence to suggest that the trend may be reversing in some countries, such as the United Kingdom *(20,21)*.

Mental health of migrant adolescents

Membership of an ethnic minority, combined with low socioeconomic status, is a factor linked to mental disorders and the adoption of risky behaviours in adolescents. It is believed that this issue must be mainly addressed from the perspective of promoting and assuring school success as the only way to break the cycle of "poverty–>social exclusion–>school failure–>health-compromising behaviours–>school dropout–> under- or unemployment–>social exclusion–>poverty".

Migrant status and low socioeconomic status are associated: they often coexist with a higher level of adolescent risk behaviours. Adolescents in this situation reveal that they feel socially unsupported and unhappy. Other in-depth studies have suggested a co-occurrence of poor physical health, risk behaviours (substance use) and poor mental health, and stress the importance of social settings, school ethos and family–school links. They also suggest the need for a global community intervention within adolescent contexts (family, school, community) to promote personal and social skills adequate to their needs, the final aims being the promotion of well-being, competence, autonomy, personal sense of responsibility, sense of belonging and personal achievement, social participation and commitment.

Economically disadvantaged adolescents who live in deprived neighbourhoods with mainly ethnic minorities are in greater danger of social exclusion, discrimination and stigmatization and face more severe social problems, all of which are highly related to mental disorders.

Self-harm procedures

Self-harm procedures, without intention of suicide, are becoming more common among adolescents as a way of regulating anxiety, depression, boredom and feelings of emptiness or lack of self-worth *(22–24)*.

Young people who self-harm also more frequently report negative emotions, lack emotional self-regulation and experience depression and anxiety *(25)*.

Online games addiction

Online games abuse or addiction presents a serious threat to the mental health of young people in Europe. "Massive multiplayer online games" (MMOG) are computer games that can be played by thousand of players at the same time.

The arising concept of online games addiction is associated with the fact that the young people who are involved in playing the games withdraw from real life and its challenges and duties, such as attending school, sleeping and eating properly and engaging with family life and friends; this can occur when they become increasingly intense and frequent users of MMOG.

In the HBSC survey, the number of adolescents referring to spending several hours a day using a computer, specifically on weekends and in countries that more recently were integrated into the EU, increased dramatically between 2002 and 2006. In some countries, withdrawal from family and school life was associated with computer use *(10)*.

Gaps and problems with data

There is a need to collect detailed, comparable, reliable and valid data on mental health among young people in Europe to enable political decision-making to be based on a strong scientific rationale. The mental health status of 18–24-year-olds, in particular, is not systematically measured and deserves to be the focus of future research. Data on well-being are currently much more scarce than data on mental disorders.

OVERWEIGHT AND OBESITY

3.3

SUMMARY

- Excess body weight among people in Europe poses a serious public health threat to populations.
- Overweight is an impediment to the physical, mental and social well-being of individuals and contributes to considerable morbidity and mortality.
- Childhood obesity is strongly associated with risk factors for cardiovascular disease and diabetes, orthopaedic problems and impaired psychological well-being, including eating disorders, poor social relations and educational disadvantages.
- Important trends in overweight are noted in relation to sociodemographic variables. Overweight rates are higher in industrialized societies in individuals from lower socioeconomic situations, while the inverse is true for countries in transition. Overweight seems to be associated with male gender.
- The challenge lies in addressing the high prevalence of overweight and the increasing trend of overweight in all ages, particularly among children and young people, through a concerted effort involving governments, industry, communities and individuals.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Excess body weight poses a serious public health challenge in Europe. Overweight and obesity are omnipresent in affluent nations and in countries in transition.

The most commonly used simple measure for assessing overweight and obesity is the body mass index (BMI). It is defined as the weight in kilograms divided by the square of the height in metres (kg/m2).

Variable definitions have been used to define overweight in children based on BMI for age and using gender-specific reference charts for growth. Generally, children with values in the upper extremes of the growth reference chart (between the 85th and 95th centile) have been considered "overweight" and those in the uppermost extreme (over the 95th or 97th centile) have been considered "obese".

Results vary depending on the reference chart used. Care must therefore be taken to choose the growth reference chart that is most appropriate for the population. In 2000, the International Obesity Task Force (IOTF) published age- and gender-specific international cut-offs based on data from six different reference populations (the United Kingdom, Brazil, the Netherlands, Hong Kong, Singapore and the United States) *(1)*. It defined adult cut-offs of 25 kg/m2 for overweight and 30 kg/m2 for obesity. The IOTF cut-offs offer a single standard international reference that can be used to compare the burden of overweight across populations throughout the world *(2)*, although it is recognized that this reference data set may not adequately represent non-western populations.

Increasingly, obesity is approached from an ecological perspective – that is, one that attributes a correlation between rising levels of obesity with poor (high energy-density) diets and physical inactivity, rather than individual variables such as psychological characteristics. This is sometimes referred to as an "obesogenic" environment.

Overweight and obesity present Europe with an unprecedented health challenge that has been underestimated and is compounded by the complex multifaceted epidemiology (frequency and determinants) of overweight.

The complexity of epidemiology of overweight and obesity is not widely appreciated and tends to be under-recognized, particularly with respect to variation in overweight prevalence in relation to age, gender, geographic distribution and socioeconomic status across Europe.

Apart from the well-documented association of overweight with conditions comprising the metabolic syndrome (hypertension, dyslipidaemia, glucose intolerance) and increased risk of type 2 diabetes and cardiovascular disease, there is increasing evidence that obesity is linked to certain cancers and diseases that partly reflect mechanical stress on the body as a result of increased body weight and fatness (such as shortness of breath, sleep apnea, back pain and osteoarthritis). Overweight is also associated with social and psychological consequences such as social stigma, low self-esteem, depression and a poor quality of life.

Overweight and obesity in childhood carry serious health consequences that can last into adulthood. Childhood obesity is strongly associated with risk factors for cardiovascular disease and diabetes, orthopaedic problems and impaired psychological well-being, including eating disorders, poor social relations and educational disadvantages *(3–6)*. Overweight children are more likely to become overweight adults *(7,8)*. A high BMI in adolescence predicts elevated cardiovascular disease and adult mortality rates, even if the excess body weight is lost.

WHAT DO WE KNOW?

Various collaborative surveys conducted by WHO, the IOTF, the European Childhood Obesity Group and the European Association for the Study of Obesity (EASO) Childhood Obesity Task Force have produced important information on the distribution of overweight and obesity in relation to age, gender, geography and socioeconomic factors in Europe.

3.3

Distribution of overweight and obesity

PREVALENCE

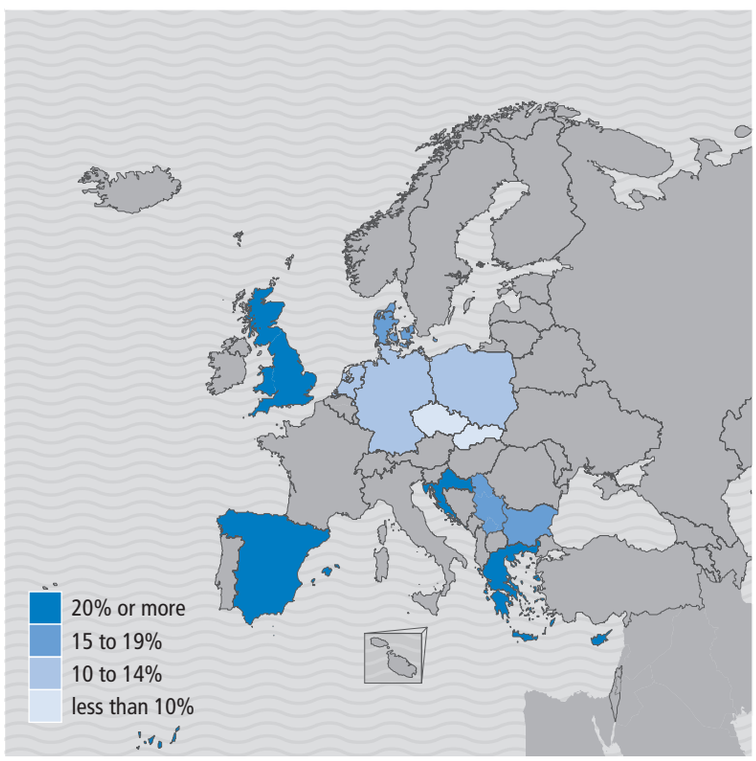
For children under 15 years, two kinds of information concerning overweight and obesity is available:

- information based on measured weight and height in surveys in several countries (IOTF/EASO) during 1990–2001; and
- information based on reported data on weight and height in two international studies: the HBSC survey in 2005/2006 *(9)*, and the pro-children study conducted in 2003 *(2,10)*.

These studies generally indicate a high prevalence of overweight among children under 15 years in Europe of between 10% and 20%.

Fig.3.3.1 presents geographically the prevalence of overweight in 14–17-year-old children using the IOTF cut-offs. A clear trend of lower prevalence of overweight among children in central and eastern European countries, whose economies suffered various degrees of recession during the period of economic and political transition in the 1990s, is noted *(11)*. A north–south gradient in overweight prevalence is reflected and a clear trend of higher rates of overweight among children in southern Europe is evident, with over 20% of 14–17-year-olds who are overweight being in southern European countries such as Spain, Italy, Greece and Malta.

Fig. 3.3.1
PREVALENCE OF OVERWEIGHT IN 14–17-YEAR-OLDS BY IOTF STANDARDS
Lobstein et al (2003)



There is a lack of specific data on late-teenage years (15–19 years), although surveys have generally included this age group in the category "adults".

Prevalence of overweight and obesity among adults in Europe is shown in Fig. 3.3.2 *(10)*.

INEQUALITIES

Although the prevalence of overweight based on reported data is generally underestimated due to overestimation of height and underestimation of weight, cross-country and regional comparisons can nevertheless be drawn.

In the HBSC survey, higher rates of overweight (>20%) were noted in southern European countries such as Spain, Malta, Italy and Greece, while lowest prevalence was seen in central Europe (Fig. 3.3.3, Fig. 3.3.4) *(9)*. No clear age patterns were observed in this survey *(12)*.

The HBSC survey supports a significant association between male gender and overweight prevalence in most European countries surveyed. In addition, children from low-affluence families who took part in the survey reported higher levels of overweight and obesity, particularly in western Europe. In contrast, a positive association between overweight prevalence and family affluence is noted in countries in transition, with high rates of overweight in affluent families *(12)*.

The higher rates of overweight in southern European countries and in children from disadvantaged families in affluent countries can be linked to several elements in the "obesogenic" environment, including factors such as:

- urbanization of populations;
- concomitant changes in diet (consumption of energy-dense foods and soft drinks in place of fruit and vegetables); and
- reduced physical activity levels (increased television viewing or the absence of safe streets, parks, or play areas) *(2)*.

Fig.3.3.2
PREVALENCE OF OVERWEIGHT AND OBESITY AMONG ADULTS

WHO, 2007

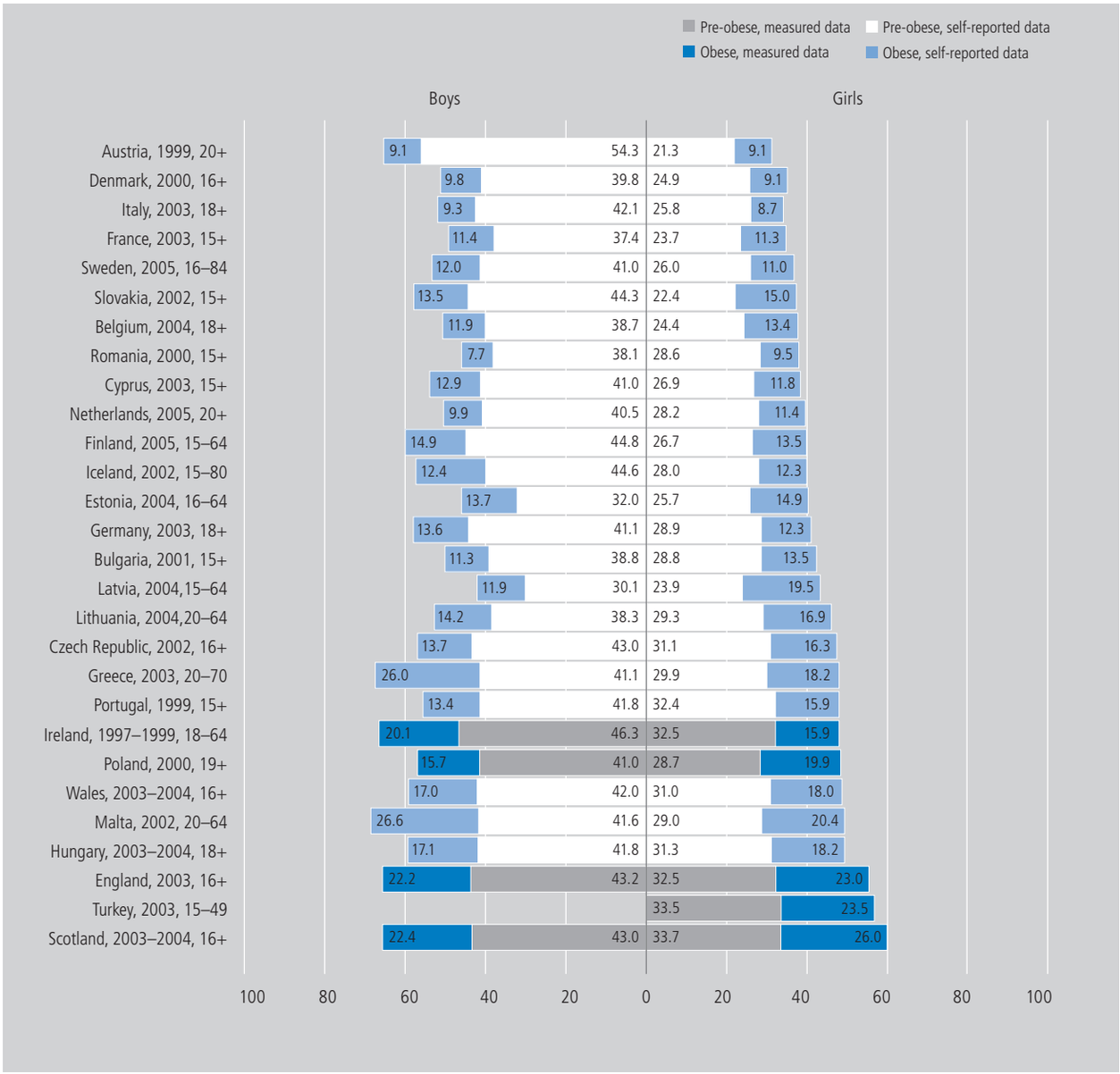


Fig.3.3.3
13-YEAR-OLDS WHO REPORT THAT THEY ARE OVERWEIGHT OR OBESE ACCORDING TO BMI

2005/2006 HBSC Survey

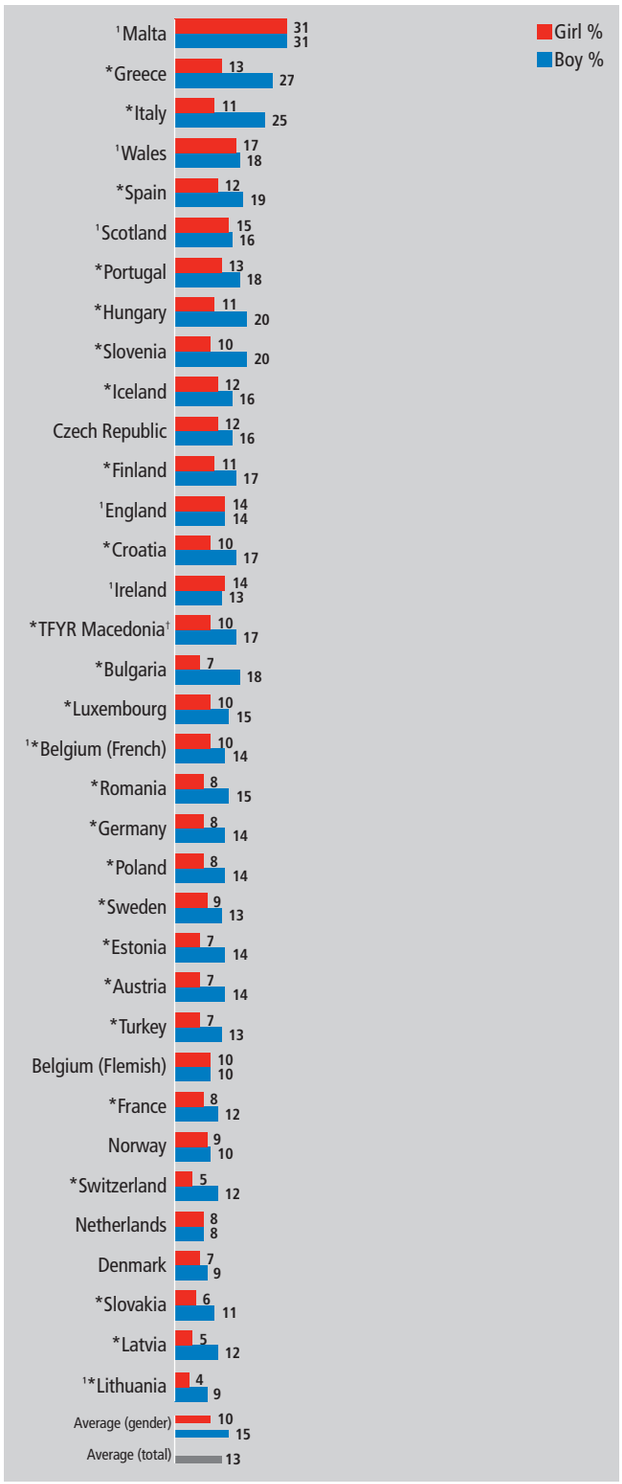
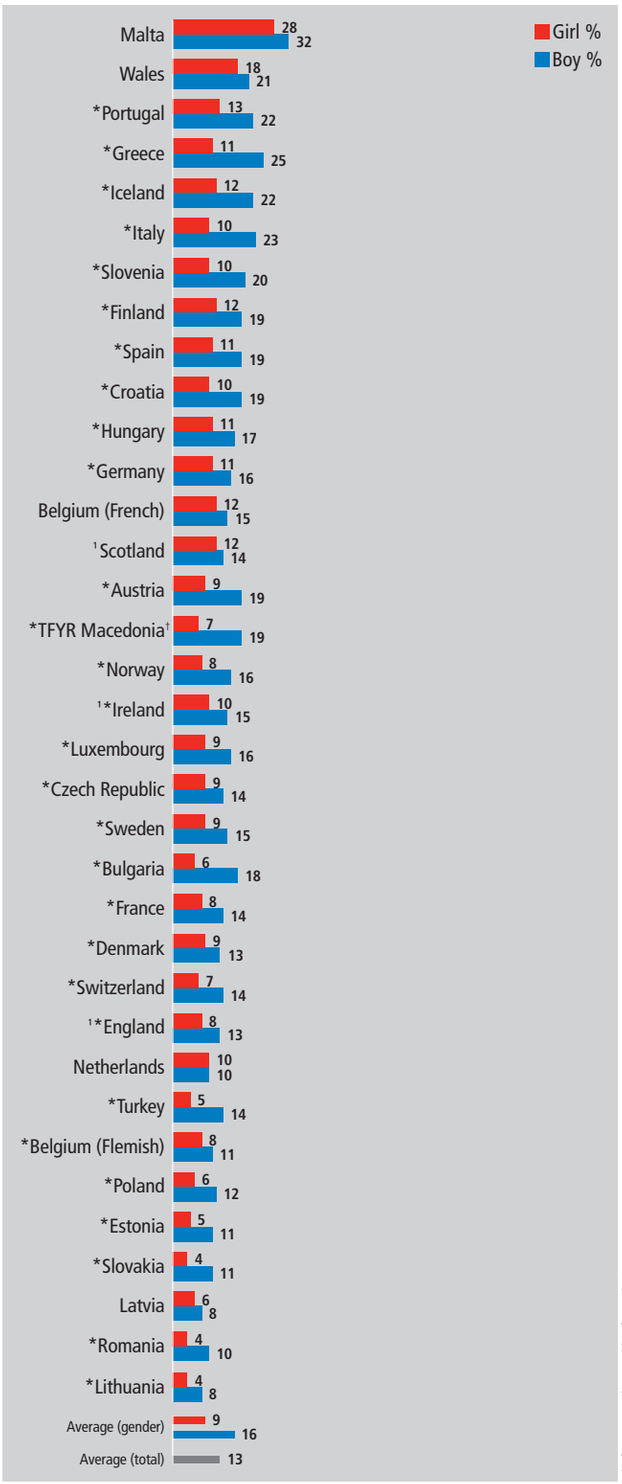


Fig.3.3.4
15-YEAR-OLDS WHO REPORT THAT THEY ARE OVERWEIGHT OR OBESE ACCORDING TO BMI

2005/2006 HBSC Survey



* indicates a significant gender difference (at p<0.05) ¹ indicates 30% or more missing data

Body image

Around 30% of young people who took part in the HBSC survey believed they were "a bit" or "much too" fat, with more girls (37.3%) holding this perception than boys (22.6%). This negative body image becomes more prevalent with age in girls. "Feeling too fat" varies a lot across countries but is more common among girls living in northern and western Europe (Fig. 3.3.5, Fig. 3.3.6).

There is strong correspondence between young people's perceived and declared body weight. In France, for example, 77% of overweight and 89% of obese adolescents feel they are "a bit" or "much too" fat *(13)*. However, there are also a significicant proportion of girls who have a negative body image by reporting themselves as too fat even though they are in normal BMI range.

WHAT ARE THE CHALLENGES?

The challenges in addressing the epidemic of overweight in youth and young adults are related not only to its high prevalence, but also to the fact that trends over time show a continued increase in overweight, particularly at younger ages. In addition, important gaps exist in the knowledge base concerning the precise estimates of overweight at specific ages; there is therefore a need for better monitoring to establish trends over time.

Increasing trend of overweight and obesity

Not only is the prevalence of overweight and obesity high in Europe, but it is also the case that annual rates of increase in overweight continue to rise, posing a further threat to health and emphasizing the need for public action.

The prevalence of obesity has risen three-fold or more since the 1980s, even in countries with traditionally low rates of overweight and obesity. The prevalence of overweight in Ireland and the United Kingdom (England and Scotland) has risen rapidly by more than 0.8% per year based on measured data among both women and men. Based on self-reported data, the highest annual increases in the prevalence of overweight in women and men have been seen in Denmark (1.2% and 0.9% respectively from 1987 to 2001), Ireland (1.1% for both genders from 1998 to 2002), France (0.8% from 1997 to 2003), Switzerland (0.8% and 0.6% respectively from 1992 to 2002) and Hungary (0.6% for both genders from 2000 to 2004). Self-reported adult obesity rates have been falling in Estonia and Lithuania.

If no action is taken and the prevalence of obesity continues to increase at the same rate as in the 1990s, an estimated 150 million adults will be overweight or obese by 2010 *(10)*.

Overweight and obesity are increasing in children across Europe over time, consequently "passing" the epidemic into adulthood and creating a growing health burden for the next generation (Fig. 3.3.7). The rise is particularly sharp in certain countries: in Poland, for instance, the prevalence of overweight was around 8% in the late 1980s, but it had more than doubled to 18% 10 years later *(6)*.

This trend is mirrored in the alarming rise in the annual rate of increase in overweight in children and adolescents. The annual increment in overweight in children is estimated to be about 5 to 10 times higher than it was in 1970. The IOTF predicts that about 38% of school-aged children in Europe will be overweight by 2010, and that more than a quarter of these children will be obese.

Key gaps and priority areas for further research

The evidence reviewed here on the prevalence of overweight and obesity among children, adolescents and adults from national and regional studies has been compiled from existing databases, published literature and information from health agencies. Discrepancies in sampling methods, techniques used to assess body weight and height ("measured" versus "self-reported"), sampling periods and pooling of ages (particularly late teens into adult years) in the information available, as well as the cross-sectional nature of most surveys, mean that caution is necessary in the interpretation of the findings.

There is a need for systematic longitudinal data to provide precise estimates of prevalence and trends for overweight and obesity, and a need for more-specific information on the age group of 15–25 years than is currently available. In addition, there is a need to better understand the relationship between self-declared and measured height and weight data. If large-scale, well-designed studies were to consider age, gender, weight status and socioeconomic factors in their design, correct weights that could be applied to future national surveys based on self-reported data could be produced, improving the validity of estimates on overweight prevalence.

Most surveys are based on BMI which, although practical, has limitations, particularly among certain groups such as children with growth problems and adolescents going through puberty. BMI status in relation to perceived self-image is another important area, particularly among children and adolescents, but little is known on this issue, with the HBSC survey the only known source of information.

It must be acknowledged that not only overweight, but also underweight, carries health risks, but little information on underweight in the age group of interest (11–25-year-olds) was found. Future surveys should aim to examine the prevalence of underweight in this age group.

The aetiology of overweight and obesity is complex and multifactorial. More work needs to be done to identify what is effective (taking into consideration age, gender, socioeconomic situations and cultural differences) in combating the increasing threat of overweight and obesity in children, adolescents and young adults.

Fig. 3.3.5
PERCEIVED BODY IMAGE OF BEING "TOO FAT" AMONG 15-YEAR-OLD GIRLS
2005/2006 HBSC Survey

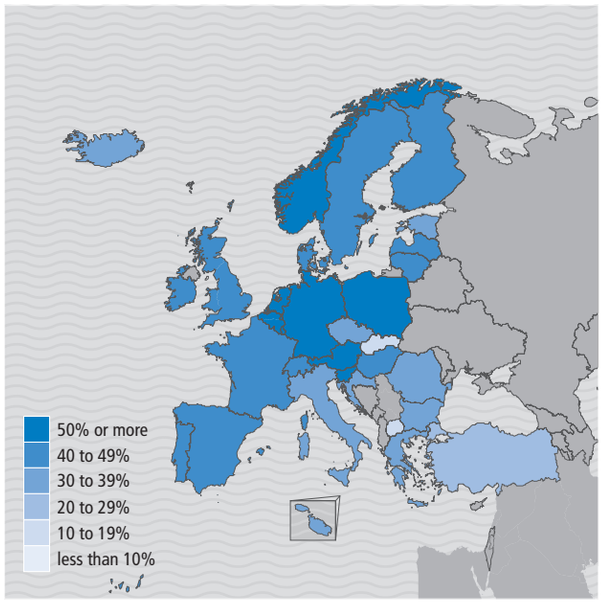
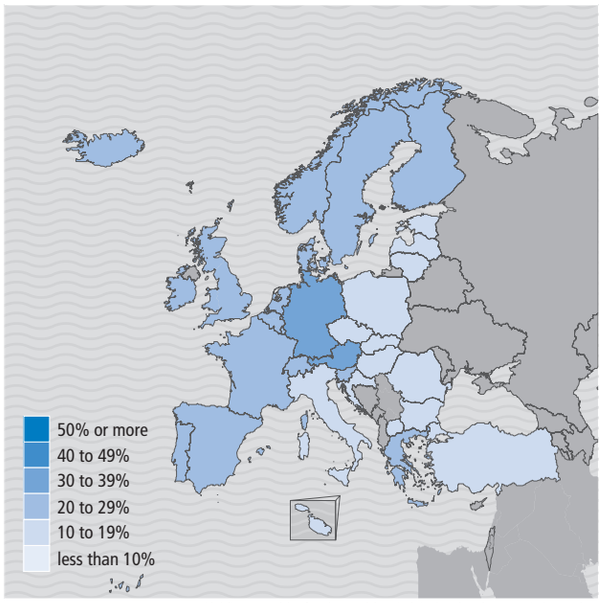
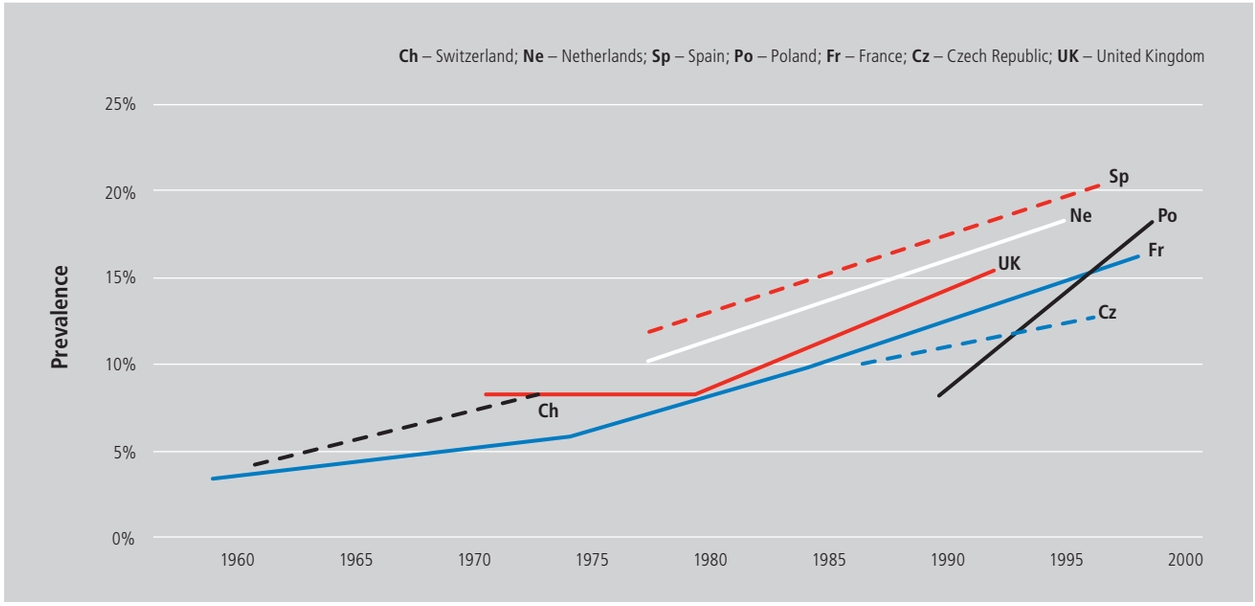


Fig. 3.3.6
PERCEIVED BODY IMAGE OF BEING "TOO FAT" AMONG 15-YEAR-OLD BOYS
2005/2006 HBSC Survey



HBSC teams provided disaggregated data for Belgium and the United Kingdom: these data appear in the map above

Fig.3.3.7
RISING TRENDS IN OVERWEIGHT CHILDREN
International Obesity Taskforce, 2002



4 HEALTH AND RISK BEHAVIOURS

EATING PATTERNS

4.1

SUMMARY

- Good nutrition is important for growth and development, health and well-being.
- The dietary habits of young people are not optimal in terms of maintaining health or preventing disease.
- Data on younger children illustrate that daily fruit and vegetable intakes are below recommended levels and daily soft drinks consumption is high, particularly in eastern European countries. Missing breakfast is common among adolescents.
- Data on the dietary patterns and factors that influence food choice among young people aged 17 and older are lacking.
- European-wide dietary strategies that are culturally appropriate and that are applicable to various age groups and socioeconomic backgrounds require further exploration.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Good nutrition is fundamental for healthy development and to maintain health and well-being. Food also has a role in both causing and preventing diseases. The prevalence of unhealthy diets in European countries is of particular concern for adults and children. Diet-related chronic diseases are a serious public health problem among adults, with a growing incidence of these diseases among younger age groups.

Diet-related diseases

Noncommunicable diseases, which include cardiovascular disease (CVD), cancer and diabetes, are responsible for 86% of deaths and 77% of the disease burden (measured in disability-adjusted life-years) in Europe *(1)*. CVD is the number one killer in Europe, causing more than half (52%) of all deaths.

Many of these conditions are linked by common risk factors. Seven leading risk factors account for almost 60% of the disease burden in Europe, including being overweight (7.8%) and low intake of fruit and vegetables (4.4%) *(1,2)*.

Diets high in salt and energy-dense foods also contribute to the burden of disease *(3,4)*. One third of CVD cases are related to poor diets *(5)*; good nutrition could prevent about one third of cancer cases *(6)* and modest changes in diet and physical activity could prevent up to 60% of diabetes cases.

Children are increasing their risk of early development of chronic diseases such as CVD, diabetes, the metabolic syndrome, osteoporosis and some cancers through lifestyle and dietary patterns. Childhood obesity is a current health crisis *(7)*, resulting in young children being diagnosed with altered glucose metabolism and the metabolic syndrome *(8–10)*. Nutrient deficiencies are also of concern, specifically of iron and iodine, both of which affect brain development in children *(11,12)*.

The cost of diet-related diseases is estimated to account for some 30% of national health service costs *(13)*. Overweight and obesity alone are responsible for up to 6% of health care expenditure in Europe. There are other social and economic costs beyond the health sector, with a significant proportion of the total cost of care falling on patients and their families. Indirect costs in terms of lost lives, diminished productivity and reduced income can nearly match or, in some cases, exceed the direct costs. It is estimated that indirect costs for overweight and obesity, for example, are two times higher than direct health care costs.

The emergence of an "obesogenic" environment has been associated with the increasing prevalence of obesity and diet-related chronic diseases throughout the world *(14)*, particularly in those countries undergoing socioeconomic transition *(15,16)*. Policy approaches to tackle these issues have moved towards multisectoral and environmental interventions, while also continuing to develop individual and population-based approaches.

As of 2006, one third of the European countries had developed policies on food and nutrition *(17)*, but no country is meeting WHO's recommended dietary goals *(3)*, and the burden of diet-related diseases continues to grow.

The second action plan on food and nutrition policy *(17)* is therefore timely. Proposed within it are a number of goals and action areas spanning various sectors, enabling countries to target consistent priorities across national food and nutrition policies, noncommunicable disease prevention strategies and public health policies. Implementing these policies and evaluating their impact are key.

Good nutrition during childhood

Good nutrition and the establishment of healthy eating habits in childhood and adolescence:

- promotes optimal childhood health, growth and intellectual development;
- prevents immediate health problems such as iron deficiency anaemia, obesity, eating disorders and dental caries; and
- may prevent long-term health problems such as CVD, cancer and osteoporosis *(18,19)*.

Because of both the immediate and long-term negative consequences of a poor diet, it is important to promote good nutrition as early in life as possible, thereby reducing the number of years through which damage can occur.

Dietary habits and food choices can track from childhood and adolescence to adulthood *(20,21)*. Consequently, much work has focused on modifying dietary habits, food choice and dieting practices, often employing a settings approach such as the family environment or school. While encouraging good nutrition as early as possible in life through, for example, exclusive breastfeeding, good weaning practices and pre-school nutrition *(17)*, much work can also be conducted during the middle childhood years and adolescent period before adverse health behaviours become firmly established.

The importance of good nutrition during childhood is recognized in the *WHO European strategy for child and adolescent health and development (22)*, with nutrition being one of the seven priority areas for action. Targets are proposed in each of the specific life stages: preconception and pregnancy, first year of life, early childhood, late childhood and adolescence.

The European Youth Forum has identified "nutrition and healthy lifestyles" as one of the key areas of importance and concern for youth health and well-being *(23)*. Factors the forum has identified as contributing to unhealthy diets include the greater availability of energy-dense foods and drinks, larger portion sizes and an increase in the use of restaurants and fast food outlets. Policy measures to encourage healthier food consumption and to support a healthy body image were recommended, taking into account the needs of those from lower socioeconomic circumstances who may be more vulnerable to poor diets. Specifically, improvements in food labelling, the production of healthier food products for children and responsible marketing were called for, in addition to the need for schools to provide healthy meals affordably or free of charge.

WHAT DO WE KNOW?

A number of different approaches can be taken to comparing food consumption and dietary patterns across Europe. These include:

- nationwide surveys of individuals;
- household budget survey data, as coordinated in the Data Food Networking (DAFNE) project, funded by the European Commission (EC) *(24)*; and
- food balance sheets of the Food and Agriculture Organization of the United Nations *(25)*.

There are recognized advantages and disadvantages to these methods. Some, such as national surveys which collect individual data by life stage or age group, are more appropriate in exploring young people's dietary habits at European level. Other sources, such as household food availability data, are not designed to focus on young people specifically, although statistical modelling has been used to provide data by age and gender *(26)*.

Importantly, none of the surveys/projects mentioned have addressed issues such as the food environment (homes and schools, for example) and food marketing and advertising *(27,28)*; these issues are particularly relevant to young people.

Many of the national dietary surveys among children and adolescents which have provided valuable information to support local nutrition policy and practice have been compiled in an attempt to explore food and nutrient intakes by European region *(29–33)*, but differences in sampling, methodology and measurement instruments have made comparisons difficult. In addition, the focus of these surveys has primarily been on energy and nutrients rather than patterns of food intake *(30–33)*.

National health and nutrition data have been compiled from 14 European countries, culminating in the European Nutrition and Health Report (ENHR) *(34)*. Data from an additional 11 countries are currently being added *(35)*. The report provides data on energy and nutrient intakes of children and adolescents, which are further expanded by data

obtained from the literature (a total of 79 surveys of 23 countries). The primary aim was to develop dietary guidelines for young people in Europe *(36)*.

The data, however, are not directly comparable for a number of reasons: various collection methods were used, age ranges varied and food composition databases differed between countries *(36,37)*. Importantly, insufficient data were available for any conclusion to be reached on young people's food patterns in terms of food consumed, rather than energy and nutrient intakes *(36)*.

Some surveys have investigated the food habits of subgroups of young people in Europe using standardized methodology, with a view to creating consistency and comparability across participating countries and across successive surveys, where applicable. These include the HBSC survey and the Healthy Lifestyle in Europe by Nutrition in Adolescence (HELENA) study, which looks at the age range 13–16 years. There appears to be a lack of published data on the food habits and dietary patterns of young people in Europe aged 18–25 years.

HBSC survey

The HBSC survey *(38)* examines self-reported food habits of 11-, 13- and 15-year-olds, focusing on the frequency of consumption of fruit and vegetables, sweets and soft drinks and breakfast consumption.

FRUIT CONSUMPTION

Daily fruit consumption varies between countries, but intakes decline with age and are lower among boys and those from low-affluence families in almost all countries (Fig. 4.1.1, Fig. 4.1.2).

VEGETABLE CONSUMPTION

Daily vegetable consumption showed similar patterns to fruit consumption, with reported intakes highest among younger children (33%) compared to older children (28%). Once again, boys were less likely to consume vegetables on a daily basis across all age groups and in all countries (11-year-olds: 38% among girls versus 31% among boys; 15-year-olds: 34% among girls versus 26% among boys).

SOFT DRINKS CONSUMPTION

There is considerable variation between countries in terms of non-diet soft drinks consumption, with boys and girls in northern European countries reporting the lowest levels. Intakes generally increased with age, being significantly higher among boys than girls at 15 years in almost all countries. Girls from low-affluence families are more likely to consume soft drinks; this is especially evident in western and northern European countries (Fig. 4.1.3, Fig. 4.1.4).

Based on analysis from the HBSC survey, daily fruit, vegetable or soft drink consumption were not associated with self-reports of overweight. In an investigation of television viewing among European young people, positive associations were found for sweets and soft drinks and negative associations for fruit and vegetables, although the latter observation was not so apparent among central and eastern European countries *(39)*.

BREAKFAST CONSUMPTION

The proportion of young people eating breakfast every school day varies considerably between countries, with an approximate range of 35% to 85%, and an average of 60%.

Breakfast consumption declines with age, especially among girls. Girls aged 13 years (56%) and 15 years (51%) are less likely to eat breakfast than boys (13 years: 66%; 15 years: 61%). This is the case in almost all countries. In most cases, eating breakfast is associated with higher family affluence, especially in western and northern Europe.

Daily breakfast consumption was found in most countries to be positively associated with healthy lifestyle behaviours, such as daily fruit and vegetable consumption, and negatively with unhealthy lifestyle behaviours, such as smoking, drunkenness and daily soft drinks consumption. In the HBSC survey, irregular breakfast habits occurred more often among children of single-parent families compared to two-parent family structures.

Fig.4.1.1
13-YEAR-OLDS WHO EAT FRUIT DAILY

2005/2006 HBSC Survey

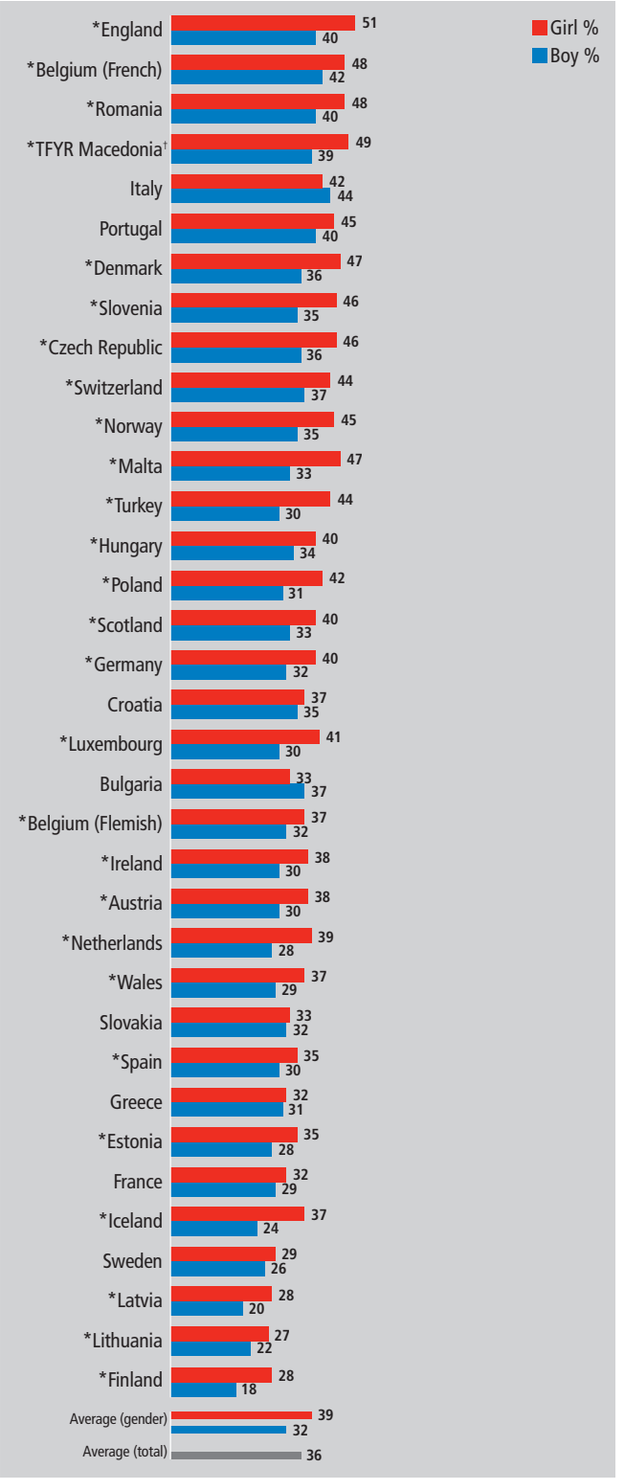
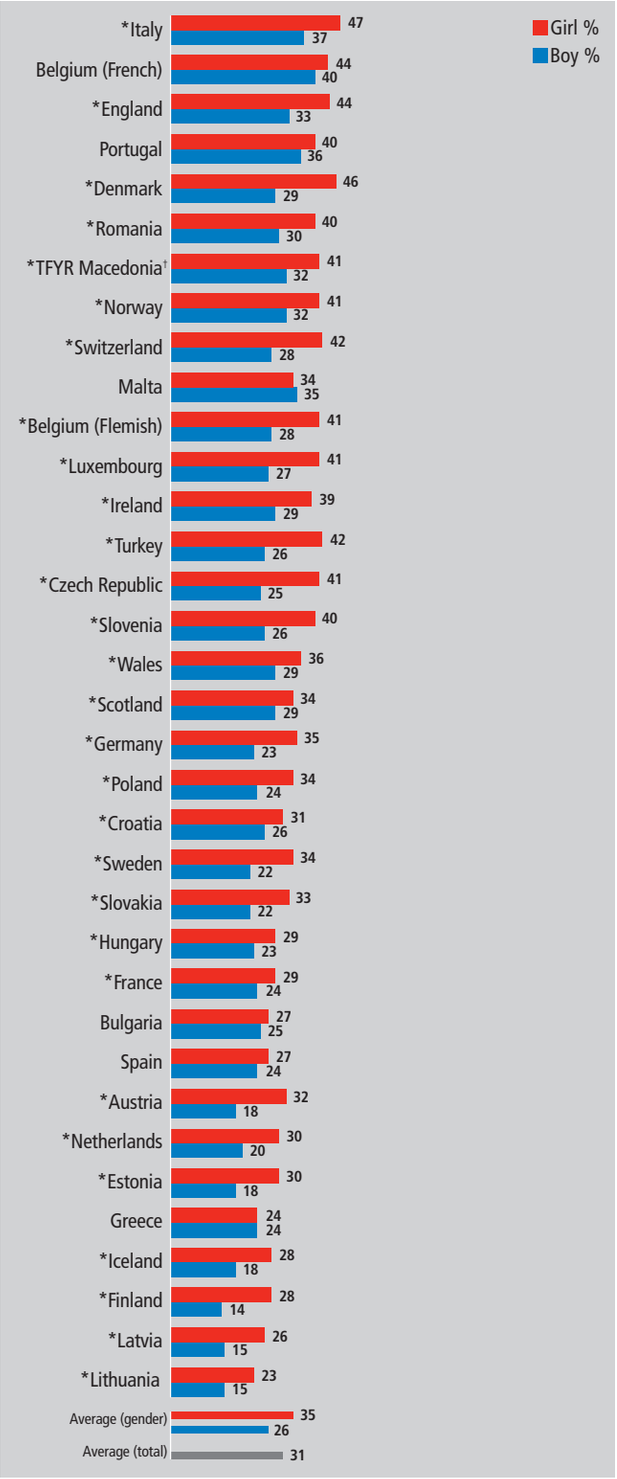


Fig.4.1.2
15-YEAR-OLDS WHO EAT FRUIT DAILY

2005/2006 HBSC Survey



† The former Yugoslav Republic of Macedonia

* indicates a significant gender difference (at p<0.05)

An analysis of 31 HBSC countries showed that daily breakfast consumption was consistently negatively associated with overweight, with the association being stronger for boys than girls (noted in 26 and 18 of 31 countries, respectively) across all regions.

The HELENA study

A fundamental objective of the HELENA project is to obtain data from a random sample of European adolescents aged 13–16 years on dietary intake, food choices and preferences, anthropometry, physical activity and fitness and on a range of blood nutritional, immunological, lipid and genetic markers. While literature on the rationale, overall objectives, study design and tools to be used have been published *(37,40–42)*, results on dietary patterns are currently unavailable. Results are timely, as the need for more emphasis on adolescent nutrition was highlighted recently *(43)*.

WHAT ARE THE CHALLENGES?

Although policies on nutrition exist in almost all European countries, the burden of diet-related diseases continues to grow, particularly as a result of the obesity epidemic *(17)*. There is therefore a critical need to support healthy eating and physical activity in young people. Poor eating habits, including inadequate intake of vegetables and fruit and an excess of energy-dense snacks, play a role in immediate and long-term health, with behaviours established during this time being likely to track into adulthood.

The difficulties of assessing food habits among children and adolescents are many *(44)*. The challenge becomes even greater when attempting to assess dietary patterns of young people across countries because of wide country variations in the consumption of many food items, in food culture and portion sizes, and in food composition databases *(45)*.

Nevertheless, comparable data on food habits across young people in Europe should be collected. While data on a relatively small number of food items for younger age groups are available, particularly through the HBSC survey, a more comprehensive investigation of dietary patterns is needed.

In addition to the frequency of food items consumed, information on their portion sizes is also required. These data are essential for surveillance purposes and as a basis for developing advice and evaluating policies and interventions.

It appears that there is a lack of data on young people's eating patterns between 15 and 25 years. Many dietary surveys consider young people over the age of 17 years as "adults", limiting the potential for intervention work and for diet and nutritional status surveillance among this age group. Young adults' food consumption patterns, eating styles, influences and attitudes around food are likely to differ from older adults and, indeed, from their younger peers, and more work is warranted among this age group.

While data on food patterns need to be collected, the factors affecting food choices made by young people in Europe, who live in very different societies and cultures, also needs further exploration. How to effect change at a European level by investigating how environmental factors affect dietary choice across countries is also worthy of further work.

Food supply, price and availability across Europe could be explored in terms of how they affect food choice, with potential for intervention in the food market thereafter. Food marketing and advertising practices to young people across Europe need continuous monitoring *(25)*. Much work has already been accomplished in terms of establishing an international code on marketing of foods and non-alcoholic beverages to children *(27)*.

It is recognized that relying solely on an individualistic approach to dietary change is not appropriate. Everyone in society has a role to play. European-wide dietary strategies that are culturally appropriate and that are applicable to various age groups and socioeconomic backgrounds require further exploration.

Fig.4.1.3
13-YEAR-OLDS WHO DRINK SOFT DRINKS DAILY
2005/2006 HBSC Survey

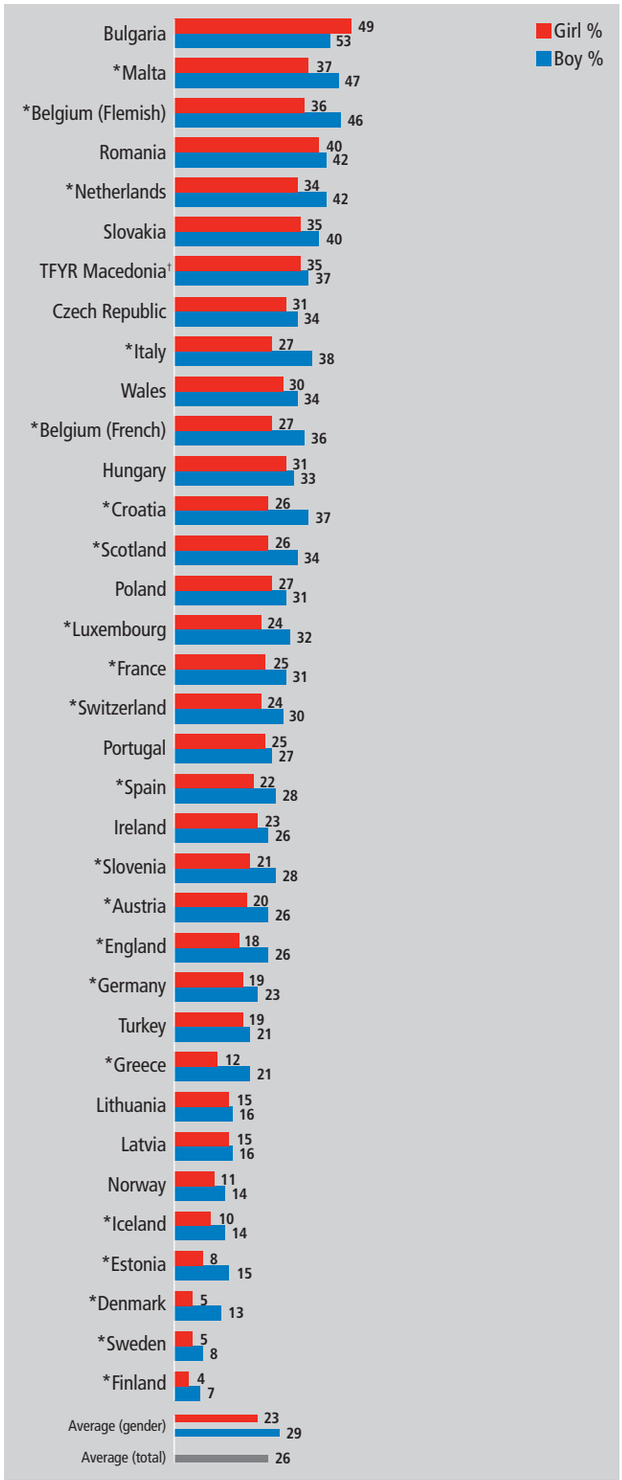
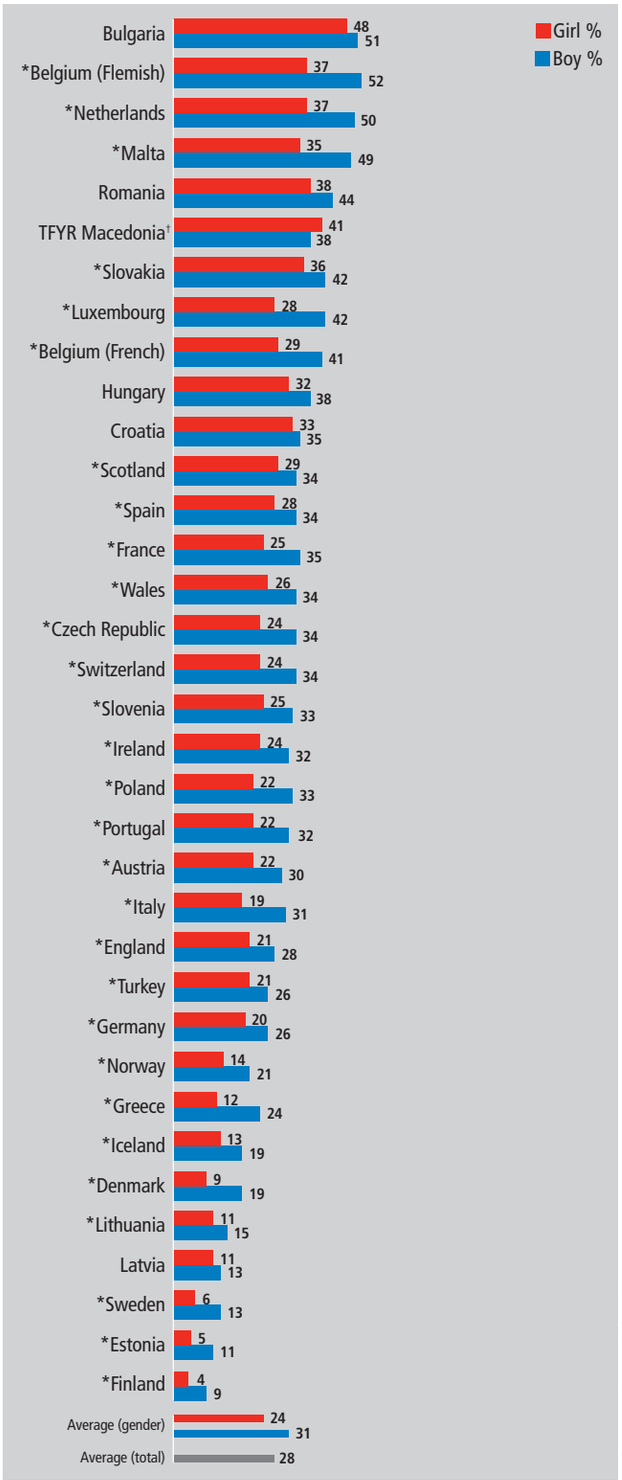


Fig.4.1.4
15-YEAR-OLDS WHO DRINK SOFT DRINKS DAILY
2005/2006 HBSC Survey



* indicates a significant gender difference (at p<0.05)

PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

4.2

SUMMARY

- Physical activity levels decrease during adolescence. This decrease is more marked among girls and parallels an increase in overweight and obesity.
- Adolescents' moderate-to-vigorous physical activity has decreased over time.
- No conclusion can be drawn concerning trends in television watching; however, it clearly constitutes the major sedentary behaviour among male and female adolescents.
- Computer use has shown an increasing trend which is concomitant with decreased use of traditional media.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Coronary heart disease, cerebrovascular diseases and chronic obstructive pulmonary disease are among the leading causes of death throughout the world. Obesity is a risk factor for many of these chronic conditions. There is an increasing prevalence in obesity and type 2 diabetes in children and adults, with resulting morbidity and mortality *(1,2)*.

The primary mechanism for overweight and obesity is an imbalance of energy intake versus energy expenditure; lack of physical activity and excess sedentary behaviour account for one side of this equation.

Extensive reviews of the literature on children and adolescents (ages 6 through 18) indicate that moderate-to-vigorous activity (MVPA)* is related to decreased adiposity, improvement in metabolic syndrome (abdominal obesity, elevated blood pressure, elevated fasting glucose and reduced high-density lipoprotein), decreased triglyceride level, increased high-density lipoprotein level, improved endothelial function, bone density, muscular strength and endurance and aerobic fitness, and improved mental health (anxiety, depression, self-concept) *(3–6)*.

National surveys confirm the negative relationship between physical activity and obesity *(7,8)*. Physical activity appears to improve both short- and long-term physical and mental health status: general health, bone health, health-related quality of life and positive mood states have all been associated with higher levels of daily physical activity *(4,9,10)*. In addition, there is ample evidence that increased physical activity improves cognitive performance *(6,11,12)*.

Physical activity also brings psychosocial benefits. In HBSC surveys, adolescents' physical activity had positive associations with self-image, quality of life, self-reported health status and quality of family and peer communications, and negative associations with health complaints and, for some countries, tobacco use *(13,14)*.

Based on their extensive review of the literature, Strong et al. *(6)* developed the recommendation that children should participate in at least 60 minutes of MVPA daily for any health benefit. This recommendation is consistent with those of governmental and professional organizations *(15–17)*. Others suggest that longer duration of daily MVPA is necessary to mitigate cardiovascular risk factors *(18)*. However, many children do not meet the 60 minutes of daily physical activity recommendations *(19)*.

As children move into adolesence they become less likely to participate in physical activity, and there is a corresponding increase in obesity *(20–23)*, although HBSC data suggest that physical activity has not decreased in adolescence from 1985 to 2002 *(24)*.

Although HBSC surveys examining relations between sedentary behaviour and physical activity have shown a weak or no relationship *(25,26)*, sedentary behaviour is a cardiovascular risk factor independent of physical activity levels. Daily sedentary behaviour is associated with risk for overweight in adolescents ages 11 through 15 *(27,28)* and subsequent obesity in young women *(29)*.

The relationship between sedentary behaviour and obesity may depend on the specific activity (watching television, playing computer/video games or using computers for homework and e-mail), gender and age *(30)*. There is evidence for a dose–response relationship between sedentary behaviour and prevalence of overweight *(19,31,32)* and a causal relationship between sedentary behaviour and obesity is suggested by interventions demonstrating that reduction in sedentary behaviour leads to improvements in weight status *(33)*. In addition, there is evidence that the cumulative effect of sedentary behaviour builds up over the course of childhood *(34)*.

Adolescent sedentary behaviour has been related to other health problems, including neck, shoulder and lower back pain, psychological and somatic symptoms, physical and verbal aggression, hostility, cigarette smoking, alcohol use and illicit drug use *(22,35–41)*. Adolescent sedentary behaviour has also been shown to be negatively related to a number of known health promoting and protective factors: physical health status, nutrition, quality of life, body image, self-image, school performance and quality of family communication *(22,36,42)*.

* Defined as any activity that increases your heart rate and gets you out of breath some of the time.

WHAT DO WE KNOW?

Physical activity

4.2

PREVALENCE

It is important that children are encouraged to participate in physical activity, in order to establish health behaviours which will carry them through adolescense and support them into adulthood *(4,43,44).*

Findings concerning the amount and intensity of physical activity are remarkably consistent across studies and European countries *(45–48).* These findings indicate that two thirds of young Europeans do not take part in sufficient appropriate physical activity and that physical activity levels clearly decline with age.

The European Opinion Research Group analysed physical activity levels of EU countries *(49)*. Fig. 4.2.1 refers to young people's participation in physical activity of different intensity, frequency and duration.

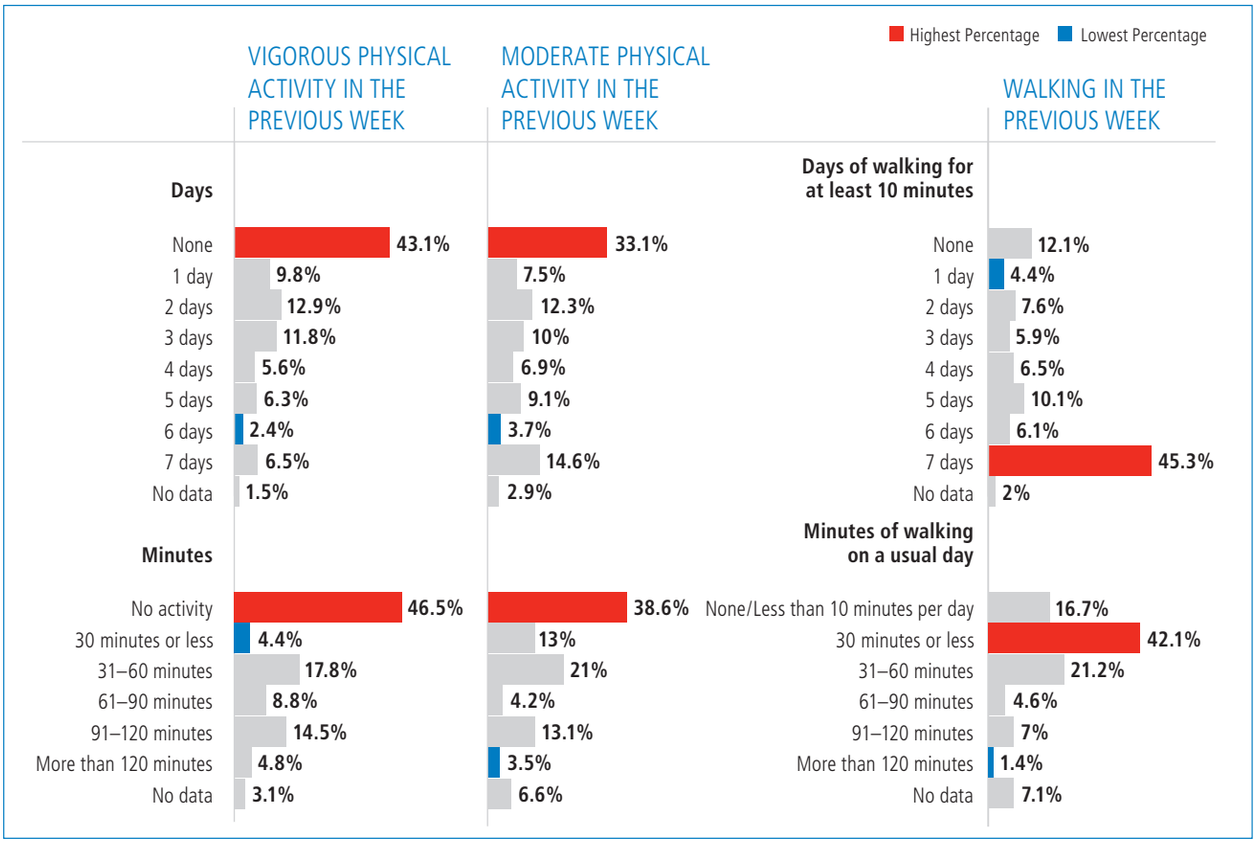
Inactivity is a problem, with 43% of the sample participating in no vigorous physical activity in the previous week and only 17.5% reporting having participated in five or more days. Only 6.5% of the sample had participated in vigorous physical activity on every day of the week.

Considering moderate physical activity, one third (33.1%) of the respondents reported not doing any in the past week. Only 27.4% reported having participated in five or more days, of which 14.6% reported moderate physical activity on every day of the past week.

Over the previous seven days, 45.3% of young people reported walking each day for at least 10 minutes, with 13% reporting they walked for more than 60 minutes on a usual day.

Fig. 4.2.1 **YOUNG PEOPLE'S PARTICIPATION IN PHYSICAL ACTIVITY OF DIFFERENT INTENSITY, FREQUENCY AND DURATION**

European Opinion Research Group



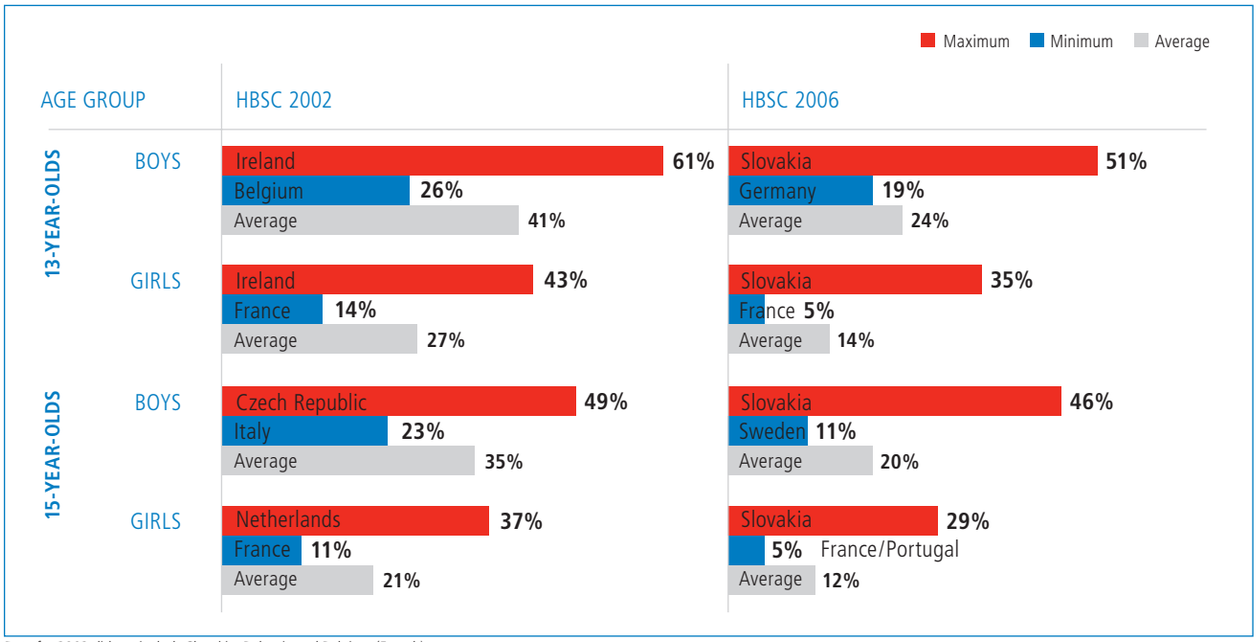
INEQUALITIES

Over the last few decades data indicate a decline in physical activity levels, particularly in 13–15-year-old girls *(45,46)*. In addition, the trend shows that boys are more active than girls across all age groups. This makes girls paticularly vunrable to sedentary related illness *(50)*.

Data from the 2002 HBSC survey *(45)* show a decrease of physical activity from age 13 to age 15. Considerable variability across countries was observed. Results indicate a consistent drop in the proportion of respondents who reported at least 60 minutes of MVPA a day on five or more days of the past week (Fig. 4.2.2). Only 34% of all adolescents reported engaging in such levels of physical activity, with boys significantly more active than girls and levels of participation decreasing across age groups for both genders. Considerable variations were observed across countries, with proportions of children meeting the guidelines ranging from 23% of 15-year-old boys in Italy to 61% of 15-year-old boys in Ireland, and from 11% of 15-year-old girls in France to 43% of 15-year-old girls in Ireland.

Fig. 4.2.2
YOUNG PEOPLE WHO REPORT AT LEAST ONE HOUR OF MVPA DAILY

2005/2006 HBSC Survey



Data for 2002 did not include Slovakia, Bulgaria and Belgium (French).

Consistent with previous findings, data from the 2006 HBSC survey *(46)* indicate that the percentage of 13-year-olds who reported participating in more than 60 minutes of MVPA (20%), was higher than for 15-year-olds (16%). This pattern was identified in both males and females, but girls were found to be less active than boys across all age groups.

Despite the fact that there has been no broader geographical pattern to the extent of MVPA, there are wide discrepancies between countries. While Slovakia, Ireland and Bulgaria ranked consistently among the most active countries in all age groups, Portugal, France and Norway are among the countries in which lower levels of physical activity were reported.

The percentage of 13-year-olds who reported participating in at least 60 minutes of MVPA ranged from 5% (girls) in France and 19% (boys) in Germany to 35% (girls) and 51% (boys) in Slovakia. In the 15-year-old group, the range varied from 5% (girls) in France and Portugal and 11% (boys) in Sweden to 29% (girls) and 46% (boys) in Slovakia. In more than half of the countries, young peole who reported higher family affluence also reported being more physically active, indicating that socioeconomic status is an important determinant of adolescents' physical activity levels.

In a recent report from the Commission of the European Communities *(51)*, physical activity levels and free time tended to decrease with age. Nevertheless, 45% of the respondents aged 15–30 did some sort of physical activity during their free time (such as going for a walk, riding a bicycle or practising sport).

4.2 Sedentary behaviour

Watching television

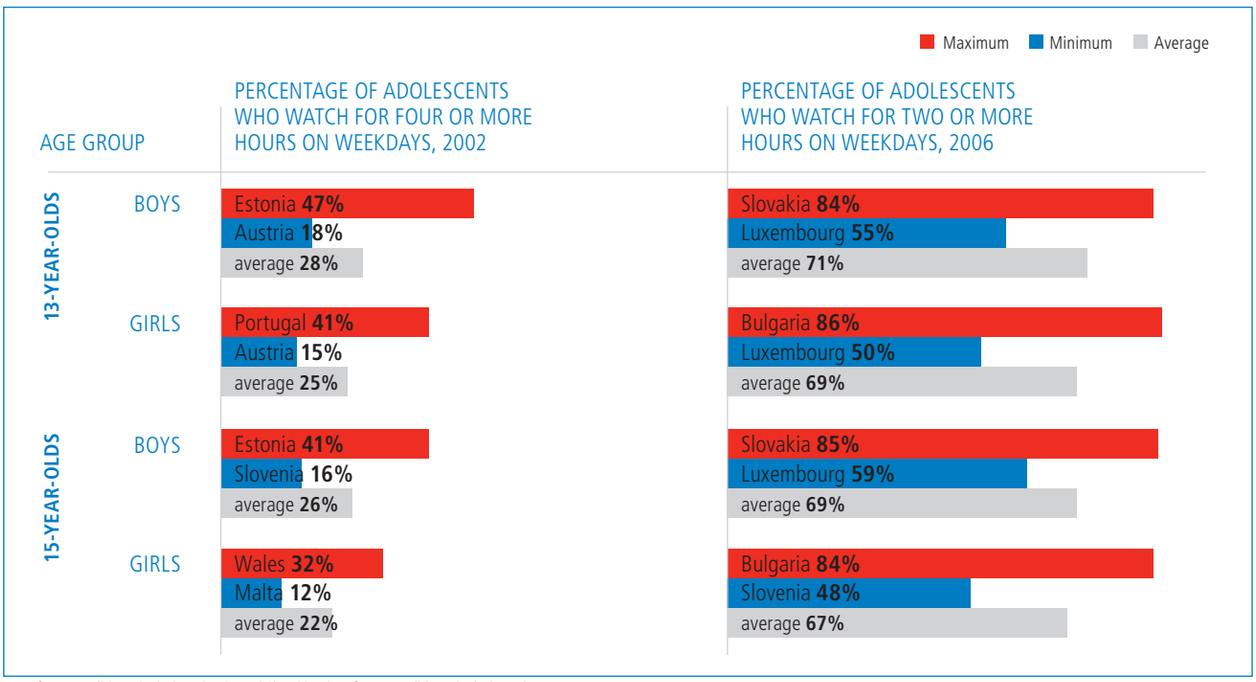
PREVALENCE

In contrast to physical activity levels which decrease during adolescence, leisure time sedentary behaviours increase from childhood through to adolescence. These trends are complemented by a corresponding increase in childhood obesity *(20,22,23,52)*.

No conclusions can be drawn with respect to trends in television use in recent years *(45–47)*. The proportion of adolescent "permanent viewers" – viewers who spend more than four hours per weekday watching television – is approximately 24% in EU countries. On weekend days, this proportion increases to 43.3%. This means that on an ordinary Saturday or Sunday, nearly half of European adolescents spend a significant portion of their time watching television. In the 2006 HBSC survey *(46)*, about two thirds of young people engaged in television viewing two or more hours a day during weekdays.

Fig. 4.2.3 **PERCENTAGE OF ADOLESCENTS WHO WATCH TELEVISION**

2005/2006 HBSC Survey



Data for 2002 did not include Bulgaria and Slovakia, data for 2006 did not include Malta

INEQUALITIES

Time spent by adolescents watching television tends to increase as they grow older. Also boys are more likely to view TV than girls *(45–47)*. According to the HBSC 2006 survey *(46)*, at age 13, 69% of girls and 70% of boys watched two or more hours of television daily. For the age 15 and older group, the percentage was 69% for boys and 67% for girls. For 13-year-olds, the countries with the highest percentage of television viewing time were Bulgaria (86% for girls) and Slovakia (84% for boys). For 15-year-olds, Slovakia (85% for boys) and Bulgaria (84% for girls) rank highest for time spent watching television (Fig. 4.2.3).

Thirteen-year-olds in Luxembourg reported the lowest percentage (55% and 50% for boys and girls, respectively). In 15-year-olds, Luxembourg (59% for boys) and Slovenia (48% for girls) were the countries with the least time spent watching television.

There is a higher prevalence of television viewing by boys, but gender differences may be related to regional and socioeconomic differences. For example, western European boys reported lower percentages of television viewing compared with eastern Europeans boys. This pattern can also be observed for girls, but the differences appear less noticeable. High socioeconomic status was associated with television viewing in Bulgaria for both genders and in Croatia and Romania for boys only. In contrast, lower socioeconomic status was more strongly associated with television viewing time for girls in several countries.

Computer use

PREVALENCE

In contrast to time trend analyses of television use, the use of computers unambiguously increases in most parts of Europe at the expense of the use of other media such as radio, CD and newspapers *(45,47)*. In 2006 on average 35% of 13-year-olds and 31% of 15-year-olds spent more than two hours on weekdays playing games on their computer or games console. In comparison 35% of 13-year-olds and 42% of 15-year-olds use computers for emails, internet and homework.

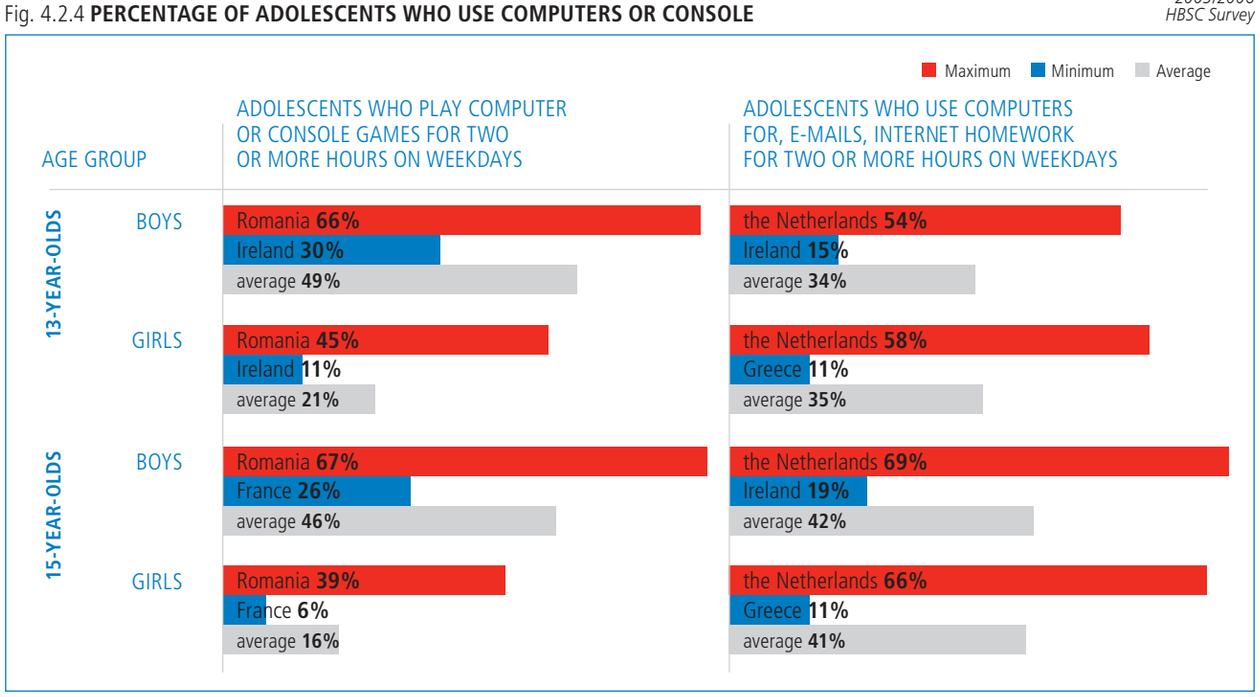
INEQUALITIES

As young people become older the use of computers/consoles to play computer games declines. In contrast, Internet use and computer use for creative work increases with age. Children from lower social groups use the computer less.

With regard to overall time spent using computers, a greater percentage of boys reported spending two or more hours a day during weekdays (49% versus 21% for the younger group and 46% versus 16% for the older group, for boys and girls respectively). For use of computers and Internet for homework, the gender differences disappear (34% versus 35% for the younger group and 42% versus 41% for the older group, for boys and girls respectively). Fig. 4.2.4 shows the variation between the countries.

Fig. 4.2.4 **PERCENTAGE OF ADOLESCENTS WHO USE COMPUTERS OR CONSOLE**

2005/2006 HBSC Survey



WHAT ARE THE CHALLENGES?

4.2

As with other areas comparable data across European countries on levels of physical activity and sedentary behaviours is limited for the older age group referred to in this report. However data for 13 to 15 year olds tells us that in general terms participation in physical activity is decreasing and sedentary behaviour plays a substantive part in young people's daily activities. Specifically, physical activity decreases with age and girls tend to be less active than boys at all age levels. Decreases in physical activity start at earlier ages in girls compared to boys. Sedentary behaviours appear to be high, with more than half of European young people spending two or more hours a day on weekdays watching television. In addition, there is a trend toward increased use of computers for leisure and homework, which increases the risk of sedentary behaviour.

Apart from the obvious need to fill the gaps in data collection for older age groups, there is a real need for further research which helps us understand the broader determinants of young people's ability to participate in physical activity and to promote appropriate levels of the new and old technologies which encourage sedentary behaviour. This is particularly important given that we already know health-related information or beliefs about lifestyles is by itself insufficient to promote change

Current research tells us that for long-term change to occur, children and adolescents need to learn behaviour-change skills (such as self monitoring, goal-setting, stimulus control, self-reinforcement, self-instruction and problem-solving) to become effective self-regulators. For children and adults to establish life skills for maintaining physical activity in changing life circumstances, they need to learn how to monitor and change their own behaviour *(53,54)*. Policy related research that provides us with greater details about how such factors need to be addressed in programmes relevant for across different ages and gender is going to be most useful.

There is already some evidence to suggest that:

Physical education curricula focus on health-related activities that have the potential to be transferred to other periods of life across the lifespan. Educators should emphasise lifespan activities and lifestyle changes in addition to fitness *(53,55)*. Effective school programmes include physical education, activity breaks, environmental changes that facilitate physical activity and integrated family strategies for increasing physical activity *(56)*.

Policies regarding neighbourhood and school environments are important for facilitating adolescent physical activity *(57,58)*. Sallis et al. *(59)* and Biddle et al. *(3)* provide useful reviews of work in this area, suggesting that the key determinants of physical activity include social factors (such as encouragement from parents, siblings and peers) and the physical environment (including the availability of facilities and programmes).

Policies that promote family involvement in physical activity have cascading benefits for the parents, their children of all ages and future generations. Community programmes and facilities that provide opportunities for physical activity have been shown to be related to increased physical activity. "Walkable" communities with safe streets and reasons to walk (shops, parks, restaurants, recreational venues) provide environments that are conducive to physical activity being built into daily life.

ALCOHOL, DRUGS AND TOBACCO

4.3

SUMMARY

- Substance use is associated with a large number of interacting factors.
- There are wide variations across countries in relation to tobacco, alcohol and drug use.
- Substance use increases substantially with age, and alcohol and cannabis use are more common among boys.
- Cannabis use increased markedly in almost all EU countries during the 1990s but is currently stabilizing in many countries.
- The number of reported drug law offences in EU countries increased by an average of 36% between 2001 and 2006.
- A special focus on emerging trends (online shops, new psychoactive substances, combined use of substances) is required.
- Investigations point to the importance of programmes being tailored for different problem behaviours, being school-based and using a whole-school approach, and being focused on building competences and alternative lifestyles.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Tobacco is still the leading cause of preventable death in the world.

Adolescence is a period of major vulnerability to substance use and substance use disorders. Some adolescents start engaging in substance use early, a behaviour that is associated with a higher risk of adult dependence.

To understand substance use, it is necessary to consider a large number of interacting factors. Five levels of influence are proposed to explain individual behaviour that endorses substance use:

- intrapersonal level (individual characteristics such as knowledge, attitudes, beliefs and personality traits);
- interpersonal level (interactions between family, peers and friends);
- institutional level (rules and regulations within institutions such as schools and workplaces)
- community level (influences from social networks and norms within the community); and
- public policy level (regulations and laws at national or regional level) *(1–3).*

Perceived peer group norms are crucial in explaining young people's substance use *(4).* Adolescence is a time in which peer pressure can incline young people to engage in substance use *(5)*, encouraging the development of particular substance use cultures which can be interpreted as "rites of passage" for some young people.

Low parental supervision or families with a coercive social interaction style seem to be a risk factor for substance use in children and adolescents *(6)*.

It is essential to understand the "potentialities" and perceived benefits of substance use from a young person's viewpoint. These include relaxation, tension and stress reduction, heightened sexual contact, enhanced social relationships and an antidepressant effect *(7).*

The literature notes that substance use is frequently associated with multiple health risks and with violence and injury (such as road accidents and suicide attempts) *(8).* A study examining the relationship between the early initiation of cannabis use and other high-risk behaviours with psychosocial and health-related correlates in 15-year-old adolescents in six European countries showed that the early initiation (≤13 years of age) of tobacco (and alcohol) use was associated with the early use of cannabis and with frequent use of tobacco, alcohol and cannabis at age 15 *(9).*

As substance use among young people in Europe has increased substantially since the 1990s, and because of the many short- and long-term consequences of substance use, there is an urgent need to recognize and understand such trends.

WHAT DO WE KNOW?

Tobacco

PREVALENCE RATES

Data from the HBSC survey show that smoking rates in European countries average 5% at age 13, with the average increasing to 19% at age 15 (Fig. 4.3.1, Fig. 4.3.2). The most striking feature is the increase of weekly smoking between ages 13 and 15 and the emerging variations in rates across countries *(10)*. Estonia has the largest proportion of smokers who started smoking at age 13 or younger (65% for boys and 43% for girls), while the lowest proportion was found in the former Yugoslav Republic of Macedonia (15% and 11% respectively) (Fig. 4.3.3).

Data from the 2007 European School Survey Project on Alcohol and other Drugs (ESPAD) survey* show that on average, 58% of students aged 16 had tried cigarettes at least once and 29% had used cigarettes during the last

* Data includes countries outside the EU27

Fig.4.3.1
13-YEAR-OLDS WHO SMOKE AT LEAST ONCE A WEEK
2005/2006 HBSC Survey

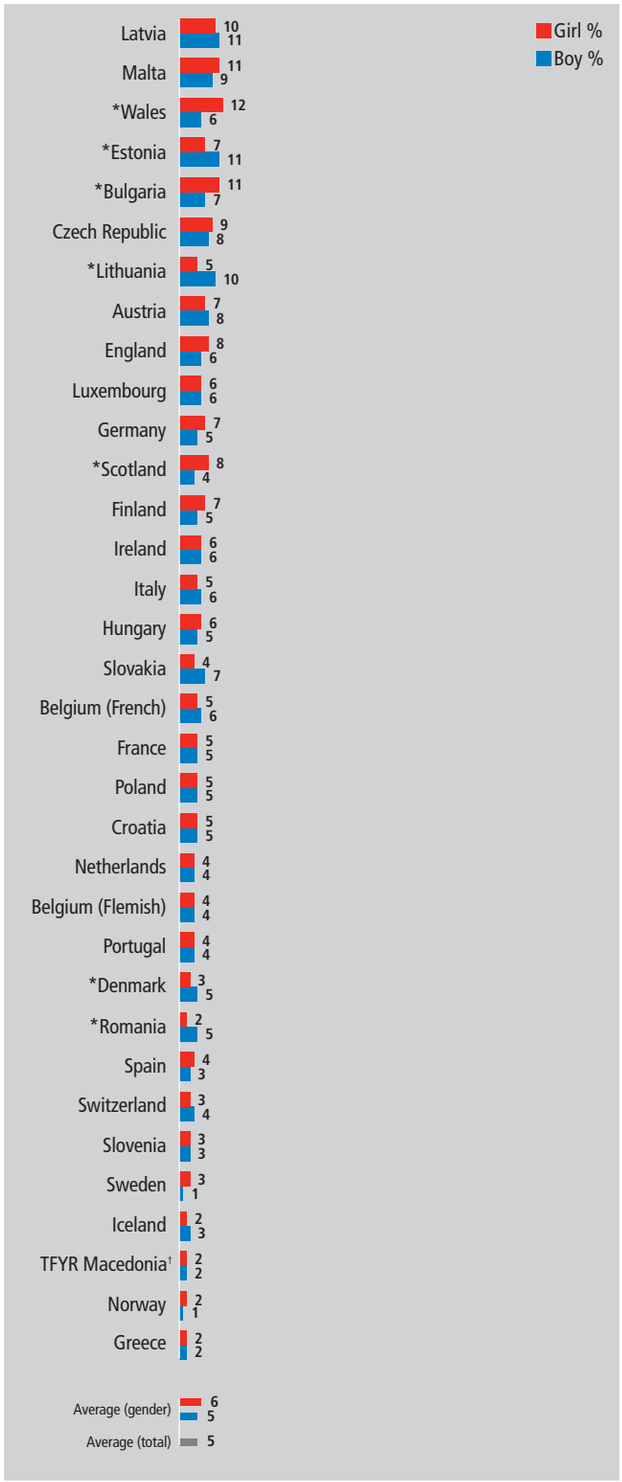
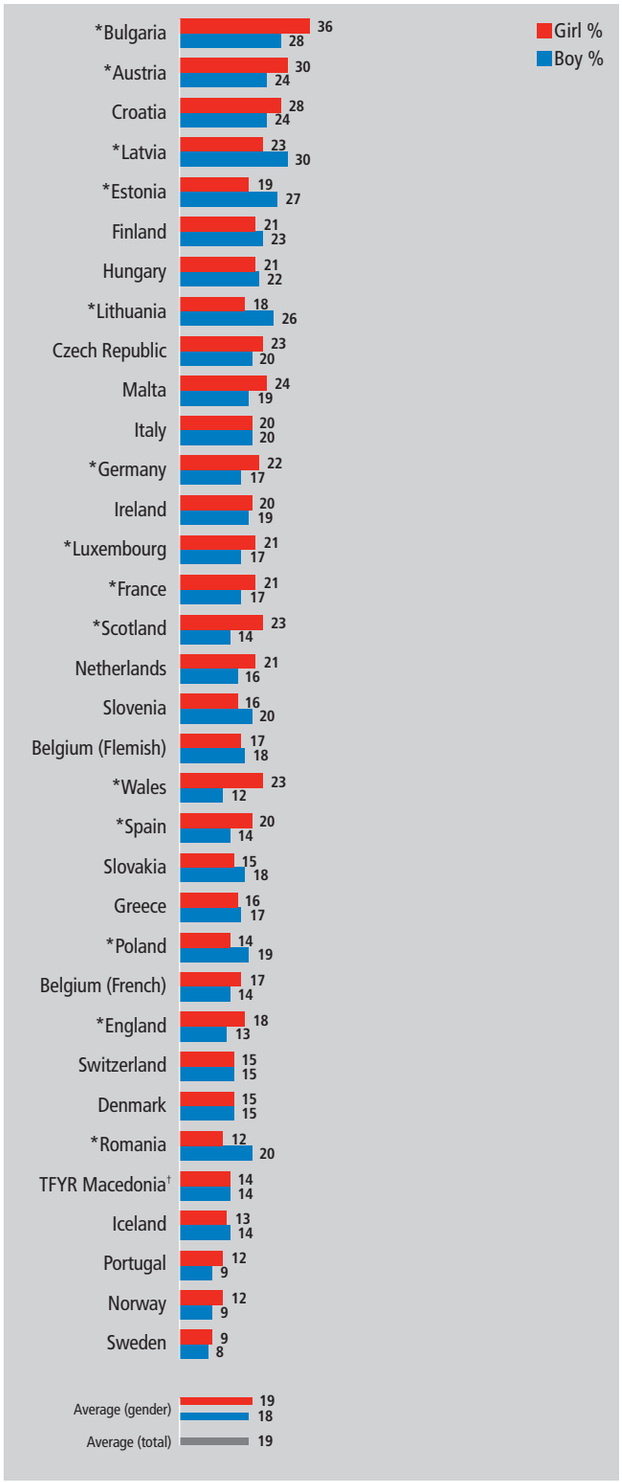


Fig.4.3.2
15-YEAR-OLDS WHO SMOKE AT LEAST ONCE A WEEK
2005/2006 HBSC Survey



† The former Yugoslav Republic of Macedonia

* indicates a significant gender difference (at p<0.05).

30 days *(11)*. An early smoking debut (age 13 or younger) is correlated (at country level) with high levels of use in the past month. On average, 7% of the 15–16-year-old students in the survey said that they started smoking daily at age 13 or before.

For the 15–34 age group, Sweden and Slovakia are the countries with the lowest daily smoking prevalence. In both countries, less than 20% of the population aged between 15 and 34 are daily smokers. In contrast, Bulgaria has the highest percentage of daily smokers (31% for the population aged 15–24 and half of the population aged 25–34), followed by Estonia, where two thirds of men aged 25–34 are regular smokers. Ireland is the only country where the share of smokers decreases with age *(12)*.

INEQUALITIES

No clear pattern of gender differences can be found among 15-year-olds in most countries *(10)*. In Poland, Latvia, Lithuania, Romania and Estonia, significantly more boys than girls are weekly smokers, while in the United Kingdom, Spain, France, Luxembourg, Germany, Austria and Bulgaria, the opposite prevails.

A study by Hublet et al. *(12)* looked at smoking trends between 1990 and 2002. Three different trends were observed among boys and girls, each showing the same geographical pattern. Among boys, Nordic countries showed a declining or stabilizing smoking trend; in western countries, an initial increase was followed by a decrease in daily smoking; and in eastern European countries, an increase was followed by stabilization in smoking prevalence between 1998 and 2002. Similar daily smoking trends could be found among girls, with only a few exceptions. No country showed a continuous decline in daily smoking prevalence among girls; indeed, Austria and Hungary showed an increasing smoking trend in girls, at the same time as boys' rates were stabilizing.

For the older age groups (those 15 years and older), males are more likely to be smokers. Only in Sweden and the United Kingdom is the percentage of female smokers aged 15–24 found to be higher than that of males *(12)*.

Family affluence is not strongly associated with early smoking initiation, but is significantly related to weekly smoking in girls in half of the EU countries *(10).* Girls with low family affluence are more likely to be weekly smokers; in boys, this relationship was less pronounced.

HBSC data about tobacco initiation and weekly smoking in 13–15-year-old adolescents are presented in Fig. 4.3.1 and Fig. 4.3.2.

Alcohol

PREVALENCE

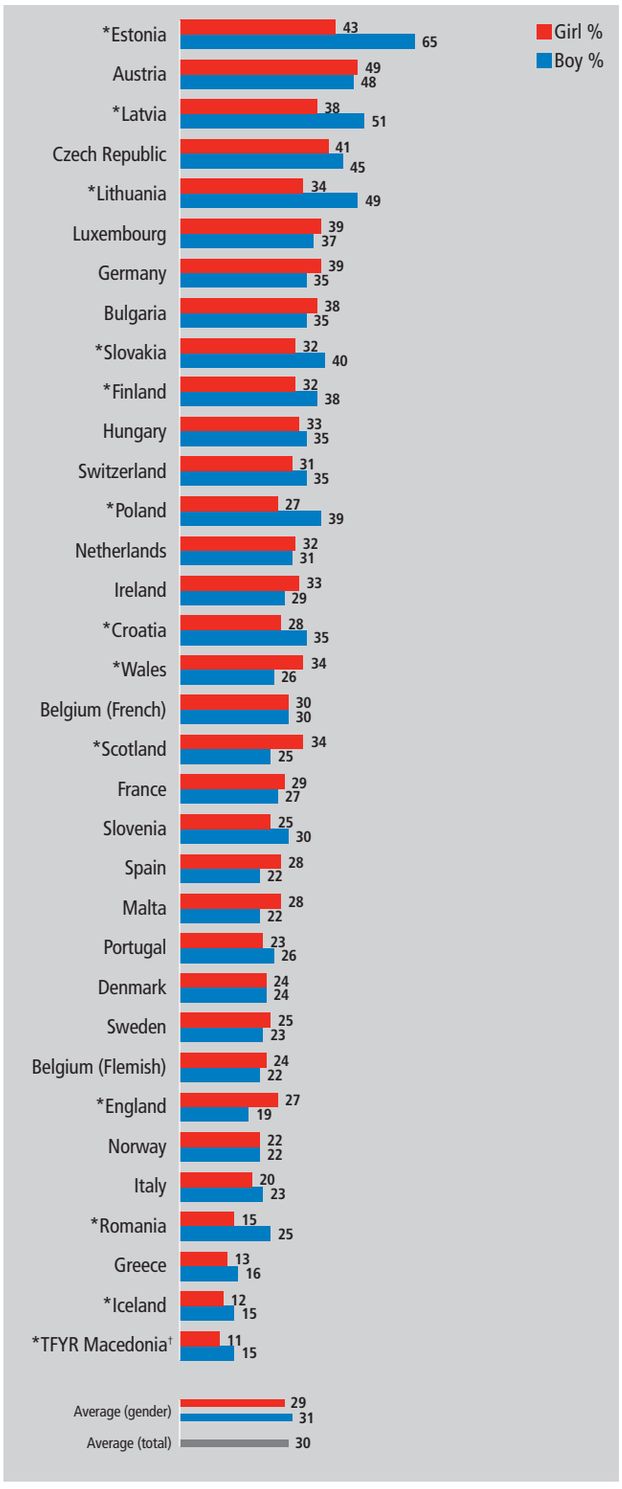
Overall, alcohol is the most consumed psychoactive substance by young people in the EU. At least two thirds of the 16-year-olds students in the ESPAD survey had tried alcohol at least once during their life. Eighty-two per cent drank alcohol in the last 12 months and 61% in the past 30 days. On average, 40% of the alcohol consumed on the latest drinking day was beer. The next most important beverage type was spirits, contributing 30% of total alcohol consumption. Wine and "alcopops" contributed 13% and 11% respectively *(11)*.

"Early drunkenness" is defined in the HBSC study as having been drunk by the age of 13 or younger (as reported by young people when 15). There are considerable variations between countries in the prevalence of early drunkenness, from 3% of girls in Italy to 35% of boys in Estonia (Fig. 4.3.4). There are also very large differences between countries in the prevalence of 15-year-olds having been drunk on two or more occasions (Fig. 4.3.5).

In one third of the countries participating in the ESPAD study, at least half of the 15–16-year-old olds had consumed at least one glass of alcohol at the age of 13 or younger, and 14% had been drunk at that same age Only 14% of students stated that at present, they never drink alcohol. In countries where students reported a relatively high level of alcohol use in the past 30 days, they also, by contrast, reported lower volumes of consumption on their latest

Fig.4.3.3
15-YEAR-OLDS WHO REPORT FIRST SMOKING AT AGE 13 OR YOUNGER

2005/2006 HBSC Survey



[1] The former Yugoslav Republic of Macedonia

* indicates a significant gender difference (at p<0.05).

drinking day. In some countries (such as Greece), students drank more often, but in smaller quantities, while in others (including the Nordic countries), alcohol was consumed less often but in larger quantities *(11)*.

In most European countries, more than 80% of young people aged 17–18 years have consumed alcohol over the past 12 months, with Denmark and the Czech Republic registering the highest prevalence (95%). The lowest prevalence of young people having consumed alcohol over the past 12 months was found in Portugal (74%), with Sweden on 77% *(12)*.

In around half of the countries for which data are available, more than 50% of young Europeans aged 17–18 have been drunk at least once in the past 12 months. Denmark accounted for the highest rates of drunkenness among young people (82%), while only 25% of young people in Cyprus and 29% in France admitted to having been drunk in the past 12 months *(12)*.

INEQUALITIES

There are large cross-national differences in the prevalence of weekly alcohol consumption among 13–15-year-olds as measured in the HBSC survey. In all countries (but one), rates increased between 13 and 15 for both boys and girls. There is a general tendency for weekly drinking and drunkenness to be more common among boys. Young people in northern Europe have relatively high rates of drunkenness and those in southern Europe relatively low rates. These geographic patterns are stronger for girls than boys.

Wide variations were found between countries in reports of early drunkenness (at 13 years or younger) among 15-year-olds. Young people in southern Europe have relatively low prevalence of early drunkeness. The opposite is true for northern Europe, where girls are generally as likely as boys to report this behaviour *(10)*.

Recent trend research suggests that alcohol prevalence among 15-year-olds increased over time in some countries and decreased in others between 1998 and 2006, but that the increase was more prevalent among girls.

Family affluence does not appear to be an important predictor for any alcohol variables.

Cannabis

PREVALENCE

Cannabis is the most popular drug among young people aged 15–34. The highest levels of use are generally being reported among 15–24-year-olds. Estimates suggest that around 23 million European adults have used cannabis in the last year *(14)*.

Data from the 2006 HBSC survey show large variations in lifetime and last 30 days prevalence of cannabis use by 15-year-olds across Europe (Fig. 4.3.7) *(10).* Recent use (30-day use) is virtually unreported in some countries, while others report up to 15% of cannabis use at the high end of the range.

INEQUALITIES

Among the 15-year-olds, boys usually report a higher prevalence of cannabis use, with a significant gender difference in around half of countries. The differences can be very high between countries, from 15% of both boys and girls in Spain, to 1% of boys (and <0.5% of girls) in Romania *(10)*. The difference in reported prevalence between genders is small or even absent in some of the countries with the highest prevalence estimates. Family affluence does not appear to be linked to cannabis use.

National survey data reported to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) *(14)* show that cannabis use increased markedly during the 1990s in almost all countries, particularly among young people and school students. Around the year 2000, lifetime prevalence of cannabis use among the 15–34 age group increased to levels in excess of 30% in nine countries and around 40% in two cases, while last-year prevalence

Fig.4.3.4
15-YEAR-OLDS WHO REPORT EARLY DRUNKENNESS

2005/2006 HBSC Survey

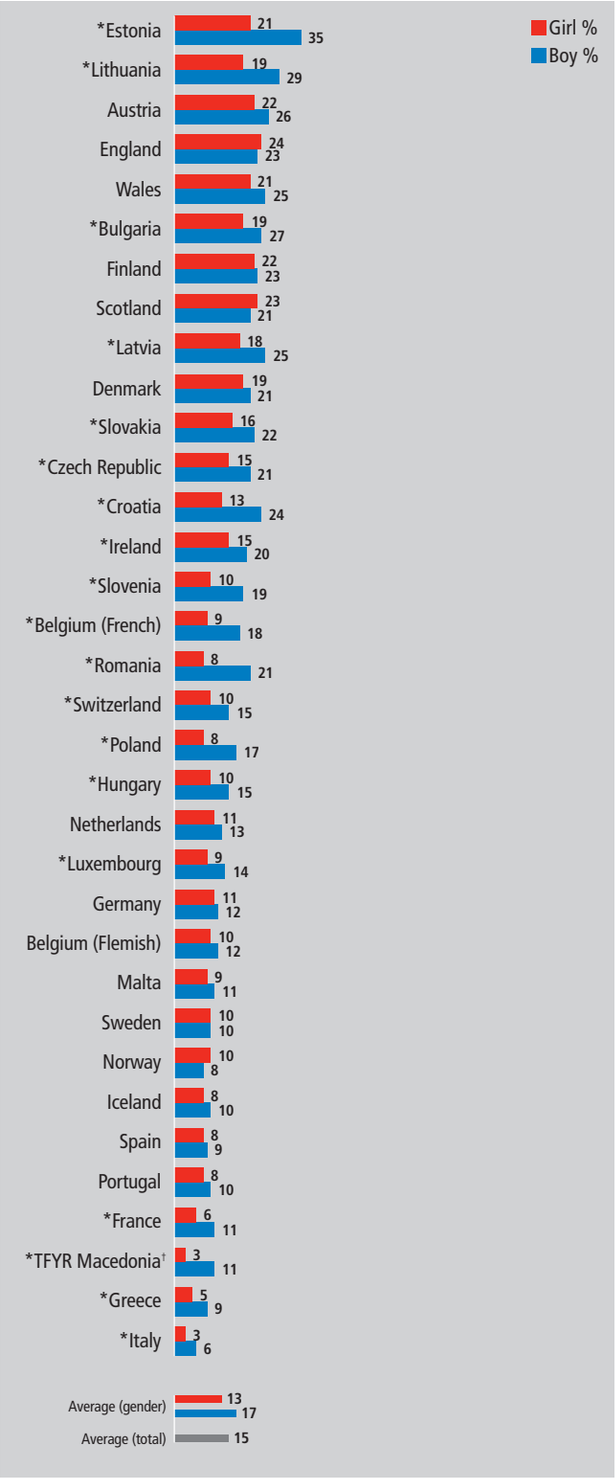
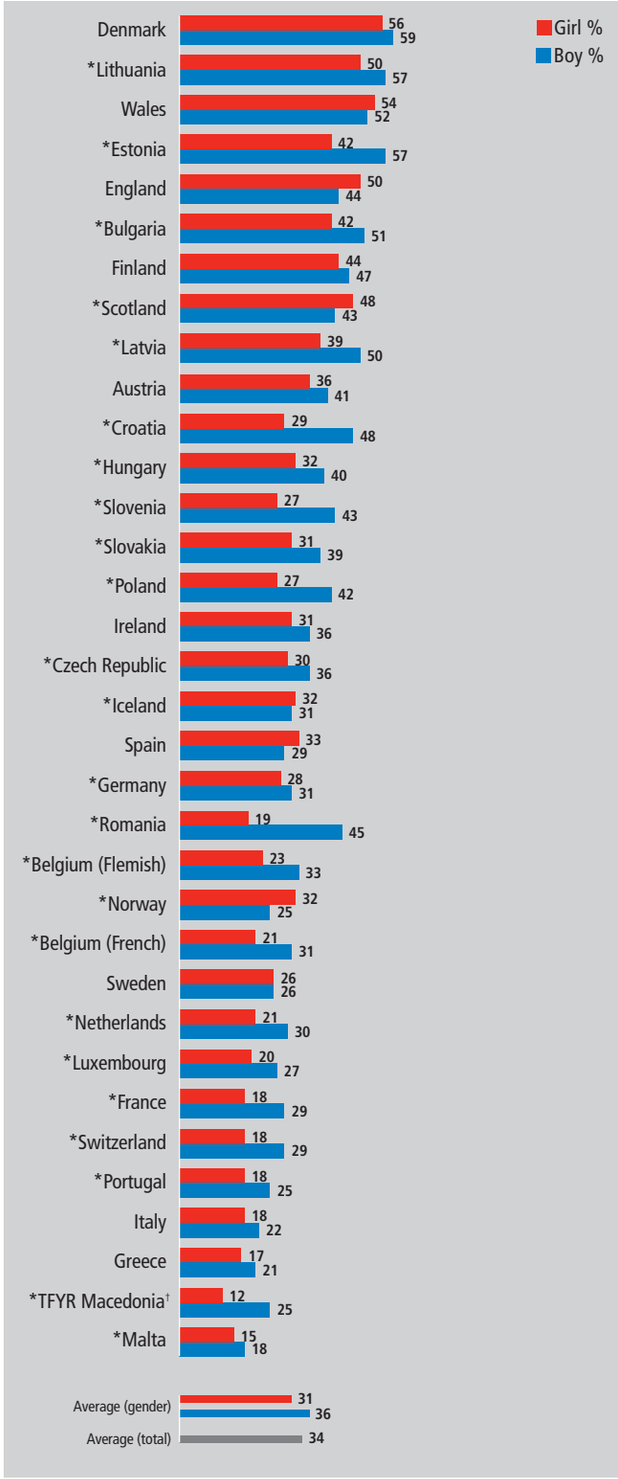


Fig.4.3.5
15-YEAR-OLDS WHO HAVE BEEN DRUNK AT LEAST TWICE

2005/2006 HBSC Survey



† The former Yugoslav Republic of Macedonia

* indicates a significant gender difference (at p<0.05).

reached 15–20% in seven countries and last-month prevalence 8–15% in six. Information from recent national surveys suggests that cannabis use is stabilizing in many countries.

A comparison of HBSC data between 2002 and 2006 *(15)* shows a stable or decreasing trend in both lifetime and more-frequent cannabis use among 15-year-old students in most countries.

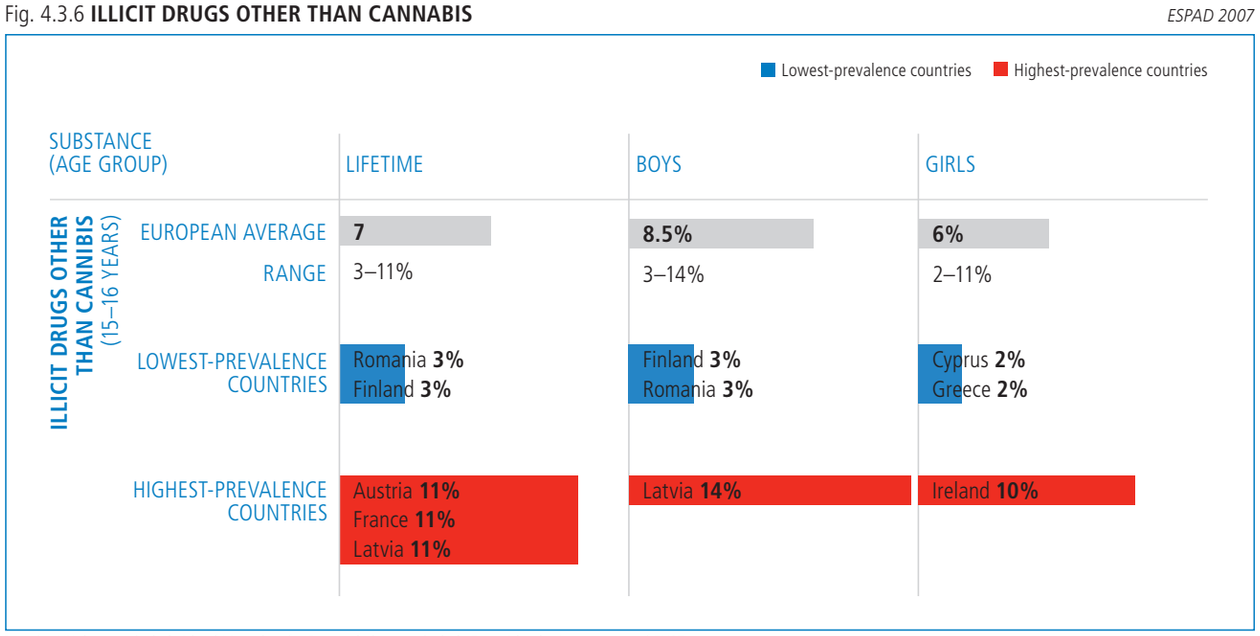
Other drugs

PREVALENCE

The ESPAD study examines *(11)*, illicit drug use other than cannabis, including: ecstasy, amphetamines, LSD or other hallucinogens, cocaine and heroin. On average, 7% of the 15–16-year-olds report the use of illicit drugs other than cannabis. Fig. 4.3.6 shows the variation between the countries.

The most widely used illicit drugs for 15–16-year-olds are amphetamines, ecstasy and cocaine (3% on average). A summary of substance use among young people in Europe is shown in Fig. 4.3.8.

Fig. 4.3.6 **ILLICIT DRUGS OTHER THAN CANNABIS** *ESPAD 2007*



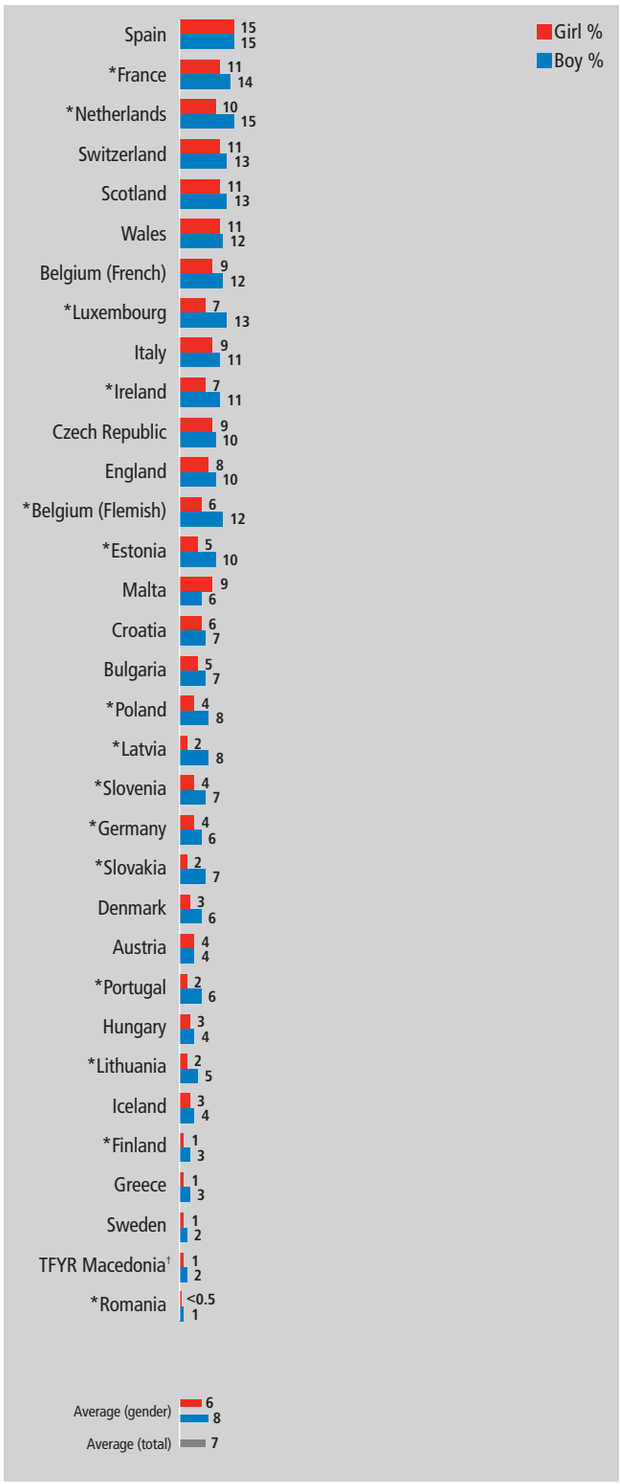
Data for UK does not include Isle of Man, data for Denmark does not include Faroe Islands. Averages are of EU27

In the general population, cocaine remains the second most-used substance after cannabis, with national prevalence rates between 0.4% and 7.7%. The EMCDDA report states that cocaine use is mainly concentrated among young adults (15–24 years): last-year prevalence of cocaine use is estimated at 2.6%. It is estimated that between 0.4% and 11.2% of young adults have used it at least once. On average, 1.2% have used cocaine in the past month, but there is much variation between the countries.

Among young adults (15–34 years), lifetime prevalence of amphetamine use varies considerably between countries, from 0.2% to 16.5% (the European average is around 5%) *(14)*. Last-year use of amphetamines in this age group ranges from 0.1% to 2.9%, with the majority of countries reporting prevalence estimates of between 0.7% and 1.9%. Bulgaria and the Mediterranean countries such as Greece, Cyprus and Malta accounted for the lowest levels of drug consumption in Europe *(14)*. It is estimated that on average, 1.3% of young Europeans have used amphetamines in the last year.

Fig.4.3.7
15-YEAR-OLDS WHO HAVE USED CANNABIS IN THE LAST 30 DAYS

2005/2006 HBSC Survey



† The former Yugoslav Republic of Macedonia

* indicates a significant gender difference (at p<0.05)

Ecstasy consumption is also more prevalent among young adults (15–34 years) compared to older age groups *(14)*. Lifetime prevalence estimates for 15–34-year-olds ranged at national level from 0.5% to 14.6%, with between 0.4% and 7.7% of this age group reporting using the drug in the last year. Consumption remained high in the Czech Republic and the United Kingdom.

Lifetime prevalence estimates of LSD use among this same age group are a little higher than is found in older age groups. In the few countries providing comparable data, the use of LSD is often exceeded by that of hallucinogenic mushrooms, where lifetime prevalence estimates for young adults range from 1% to 9% and last-year prevalence estimates are between 0.3% and 3% *(14)*.

INEQUALITIES

Use of cocaine is particularly high among young males (15–34 years). The female to male prevalence ratio for last-year use ranged between 1.1 and 1.13 for adolescents and young adults in different countries. Weighted averages for the EU as a whole suggest that, among cocaine users aged 15–34, the male to female ratio was nearly 4 to 1 (3.8 males for each female) *(14)*.

Trends analysis reveals stabilization or even a decrease in amphetamine and ecstasy consumption in Europe following a general increase in the 1990s, although not in all countries *(14)*.

Substance use and criminality

Although data on drug-related crime are rare or patchy, it is clear from research that there is a positive relationship between substance use and criminal activity *(16)*. The available data from the EMCDDA 2008 report (which includes subjects from 15- to 64-years-old) show that overall, the number of reported drug law offences in EU countries increased by an average of 36% between 2001 and 2006. Most European countries reported that the majority of the offences were related to drug use or possession for use. In 2006, cannabis continued to be the illicit drug most often involved in reported drug law offences in most European countries. Drug law offences related to heroin dropped by an average of 14% in the EU over the period 2001–2006.

In adolescents younger than 16 years, delinquency problems (such as physical fighting, robbery or theft and getting into trouble with the police) are related to alcohol use *(11)*. Physical fighting associated with alcohol use was reported by 13% (on average) of the 15–16-year-olds. The country scoring highest in this group of problems is the United Kingdom (12%), with Greece and Portugal lowest at around 3%. There were substantial gender differences, with twice as many boys as girls (11% versus 5%) involved in physical fighting.

WHAT ARE THE CHALLENGES?

Areas for further research

Cannabis use increased markedly during the 1990s in almost all EU countries, particularly among young people and school students. Information from recent national surveys, however, suggests that cannabis use is stabilizing in many countries. Such trends need to be confirmed and monitored.

Special attention is needed to monitor emerging trends concerning psychoactive products and behaviours related to them. Young people can access over 200 psychoactive products and controlled substances such as LSD, ecstasy, cannabis and opioids through online shops on the Internet. Besides these substances, new psychoactive substances were notified for the first time through the early-warning system to the EMCDDA and Europol (a total of 15 during 2007). New patterns in the use of combinations of substances require more detailed study; the simultaneous use of Viagra™ and ecstasy when going out seems to be a new trend that has been noted among young people (Blay, unpublished observations, March 2009).

The EMCDDA 2008 report presents data on this topic on individuals from 15 to 64 years. Specification by age groups and gender would be helpful in clarifying the involvement of adolescents in these risk behaviours.

Fig. 4.3.8
ILLICT DRUG USE OTHER THAN CANNABIS

EMCDDA, 2008

Lowest-prevalence countries Highest-prevalence countries

SUBSTANCE (AGE GROUP)		LIFETIME	LAST YEAR
AMPHETAMINES (15–34 YEARS)	ESTIMATED NUMBER OF USERS	**7 MILLION**	**2 MILLION**
	EUROPEAN AVERAGE	**5.1%**	**1.3%**
	RANGE	0.2–16.5%	0.1–2.9%
	LOWEST-PREVALENCE COUNTRIES	Greece **0.2%** Romania **0.5%** Malta **0.7%** Cyprus **0.8%**	Greece **0.1%** France **0.2%** Cyprus **0.3%** Portugal **0.4%**
	HIGHEST-PREVALENCE COUNTRIES	United Kingdom **16.5%** Denmark **12.7%** Spain **5.3%** Latvia **5.3%**	Estonia **2.9%** United Kingdom **2.7%** Latvia **2.4%** Denmark **2.2%**
ECSTACY (15–34 YEARS)	ESTIMATED NUMBER OF USERS	**7.5 MILLION**	**2.5 MILLION**
	EUROPEAN AVERAGE	**5.6%**	**1.8%**
	RANGE	0.5–14.6%	0.4–. %
	LOWEST-PREVALENCE COUNTRIES	Romania **0.5%** Greece **0.6%** Malta **1.4%** Lithuania **2.1%** Poland **2.1%**	Greece **0.4%** Italy **0.7%** Poland **0.7%** Denmark **0.9%** Lithuania **0.9%** Portugal **0.9%**
	HIGHEST-PREVALENCE COUNTRIES	Czech Republic **14.6%** United Kingdom **13.0%** Ireland **9.0%** Slovakia **8.4%**	Czech Republic **7.7%** United Kingdom **3.9%** Estonia **3.7%** the Netherlands **2.7%** Slovakia **2.7%**
COCAINE (15–24 YEARS)	ESTIMATED NUMBER OF USERS	**3 MILLION**	**2 MILLION**
	EUROPEAN AVERAGE	**4.5%**	**2.6%**
	RANGE	0.4–11.2%	0.2–6.1%
	LOWEST-PREVALENCE COUNTRIES	Romania **0.4%** Greece **0.6%** Lithuania **0.7%** Malta **1.1%** Poland **1.1%**	Greece **0.2%** Poland **0.3%** Czech Republic **0.4%** Latvia **0.6%**
	HIGHEST-PREVALENCE COUNTRIES	United Kingdom **11.2%** Spain **8.7%** Denmark **8.0%** Ireland **7.0%**	United Kingdom **6.1%** Spain **5.8%** Ireland **3.8%** Denmark **3.3%** Italy **3.3%**
COCAINE (15–34 YEARS)	ESTIMATED NUMBER OF USERS	**7.5 MILLION**	**3.5 MILLION**
	EUROPEAN AVERAGE	**5.4%**	**2.3%**
	RANGE	0. – 12. %	0.2–5.4%

Policy and tailored preventive interventions

The implementation of clusters of programmes tailored to address different problem behaviours is an important aspect of prevention. School-based interventions should follow a systematic approach to ensure they address the many challenges within the school setting. A focus on the positive aspects of life is encouraged, as is reinforcement of the autonomy, responsibility and social participation of young people.

Recent studies point to the need for selective and more intense interventions on small identified risk groups, taking "surgical" care of selective risk factors and situations. These focus on times and events in which substances may be available to young people *(17)*. Some currently recommended tobacco control policies (especially price and tax increases) may help decrease smoking prevalence in 15-year-old adolescents, but have a greater influence on boys than girls *(18)*. Similarly, research into alcohol use shows a greater increase in alcohol consumption among girls, suggesting more research is needed to examine national effects of alcohol marketing practices and preventive measures with a particular focus on the possibility that changes in the social roles of adolescent girls may make them more susceptible to drinking *(19)*.

SEXUAL HEALTH

4.4

SUMMARY

- The gender gap between age at first sexual intercourse is narrowing in the EU, mostly among the youngest and those in western and northern Europe.
- Condoms are widely used, more by males than females, and more than before. Among 15-year-olds, the contraceptive pill is used more commonly in western Europe.
- There are dramatic differences in abortion rates between the different regions of Europe, with very high rates in eastern Europe.
- Overall in Europe, young people are not the main population affected by human immunodeficiency virus (HIV), with 11% of cases occurring among 15–24-year-olds in EU countries.
- The challenges around sexual health are in collecting comparable data that can be broken down by age at country level and in developing common indicators to meet the challenge of improving sexual and reproductive health in Europe.

WHY IS THIS ISSUE IMPORTANT TO YOUNG PEOPLE?

Sexual and reproductive health is an integral part of holistic health. It consists of the promotion of safe and healthy sexual behaviour, including reproductive choice. Sexual and reproductive health has a substantial contribution to make towards meeting the United Nations Millennium Development Goals, as it is fundamental to human well-being *(1)*.

Sexual health is rooted in lifelong sexual development, spanning from early childhood throughout adulthood. It is a process, not a destination.

Sexual health is a central component of health for all sections of the population, but the challenges in maximizing the sexual health of young people are substantial. Addressing the sexual health of young people by raising their commitment to safer sex has become a major issue in many countries *(1–3)*.

There are, however, substantial disparities between EU countries on factors linked to sexual and reproductive heath: different cultural and religious backgrounds, different policies on issues such as family planning and accessibility and affordability of contraception and abortion, different policies relating to youth-friendly services, and different education systems dealing differently with issues like gender, health education and sexual education. Such differences, among others, explain the large discrepancies found in, for instance, levels of condom and contraceptive pill use, rates of abortion and teenage pregnancies and numbers of sexually transmitted infections (STIs).

Overall, reproductive health outcomes contribute to the general health and social well-being of a population. Even if in many countries the average age of first sexual intercourse had been decreasing *(4)*, no universal trend towards earlier sexual intercourse is seen. Rather, there seems to be a shift towards later marriage leading to higher rates of premarital sex *(5)*. While the risk profile may be changing, early and poorly protected sexual intercourse remain of central relevance to public health *(6–9)*.

Early sexual activity, particularly when associated with inconsistent or non-use of contraception, has serious short- and long-term health-compromising consequences. Early sex has implications for self-perception, well-being, social status and future health behaviour *(10)*, including sexual behaviour *(11)*. Early sexual initiation can be seen as part of broader risk-behaviour clusters that include substance use and unprotected sex *(12–15)*. Unprotected or poorly protected intercourse bring the risk of unintended pregnancy, abortion and early motherhood. Teenage pregnancy and early parenthood can lead to poor educational achievement, poor physical and mental health, poverty and social isolation for the young mothers and their children *(16–18)*.

For those not employing barrier methods of protection, the risk of STIs, including HIV transmission, is also present. Reported condom use at last high-risk sexual contact (penetrative sex with a nonmarital, noncohabitating partner) has been identified by UNAIDS (the Joint United Nations Programme on HIV/AIDS) and REPROSTAT (part of the Health Monitoring Program of the European Commission) as 1 of 13 core reproductive health indicators for HIV prevalence among young people *(19)*.

WHAT DO WE KNOW?

Sexual experience

PREVALENCE

Experience of sexual intercourse as reported by 15-year-olds in the 2006 HBSC survey varies considerably across countries, from 12% in Slovakia to 38% in Bulgaria and Denmark.

In 2004, the average age at first sexual intercourse was 16.5 years, ranging from 15.7 in Iceland to 18.0 in Slovakia *(2)* (Table 4.4.1).

Table 4.4.1
AVERAGE AGE OF FIRST INTERCOURSE IN 16–20-YEAR-OLDS *Avery et al, 2007*

COUNTRY	AGE AT FIRST INTERCOURSE
Iceland	15.7
Germany	16.2
Austria	16.3
Netherlands	16.4
Sweden	16.4
Denmark	16.5
Finland	16.5
Norway	16.5
United Kingdom	16.7
Bulgaria	17.1
France	17.1
Belgium	17.2
TFYR Macedonia†	17.2
Slovenia	17.2
Hungary	17.3
Switzerland	17.3
Czech Republic	17.5
Ireland	17.5
Croatia	17.6
Italy	17.6
Spain	17.7
Greece	17.8
Poland	17.9
Slovakia	18.0

† The former Yugoslav Republic of Macedonia

INEQUALITIES

The HBSC survey emphasises that although in general boys are more likely to report sexual intercourse, this pattern is reversed in a few countries. This could mean that gender stereotypes in which boys are considered to be more sexually active and to commence sexual activity earlier are eroding in the majority of EU countries.

There is some evidence of geographical patterns, particularly among girls. The highest rates of sexual intercourse for girls are in northern Europe, while girls in southern and western Europe have relatively low rates of reported sexual intercourse.

Family affluence is generally not a strong predictive factor, except for boys in eastern Europe, where more boys from high-affluence families report having had sexual intercourse.

International comparisons of age of initiation of sexual activity show that in industrialized countries, the observed decline in age of first having sex *(2,4)* is slowing down, but that the gender gap is narrowing, with girls initiating earlier than before *(20).* This leads to a profile observed in Nordic countries, where girls initiate slightly earlier than boys *(21,22).*

Bozom & Kontula *(4)*, drawing on data from an integrated European comparative study, found that only in a few countries (Denmark, Germany and Norway) did more females than males in the younger cohorts report first intercourse prior to 18 years. This pattern was not observed among the older cohorts (except in Denmark). In his analysis of trends in sexual initiation between 1960 and 1995, Teitler *(20)* found that patterns of youth sexual behaviours are converging across industrialized countries. The variation within and between countries in the age of sexual debut is narrowing, while the influence of social class is becoming less predominant.

Condom use

PREVALENCE

From HBSC data, condoms are the most commonly used form of contraception among 15-year-olds at their last sexual intercourse, with wide variations between countries (from 65% in Sweden to 89% in Spain) *(23,24)*.

In many countries and in many studies, the data on contraception use does not specify what type of contraception was used. A typical statement is that "condoms are the most commonly used type of contraception worldwide" *(2)*, particularly among adolescents *(7)*, yet no comparative data on the consistency with which condoms are used are offered *(5)*.

INEQUALITIES

Among 15-year-olds, as found in the HBSC survey, boys are more likely to report condom use at last intercourse. There are no clear geographical patterns and family affluence is not a major factor in condom use at last intercourse in this population.

Overall, the proportion of 15–24-year-old sexually active young people reporting condom use is higher among males than among females. Rates of condom use are usually higher in industrialized countries, especially among females. Condom use has increased in recent years in most countries *(5,7)*.

Contraceptive pill use

PREVALENCE

Reports of contraceptive pill use at last sexual intercourse among 15-year-old respondents to the HBSC survey show great variations, ranging from 4% in Spain to 52% in the Netherlands.

Oral contraceptives are the most popular method of pregnancy prevention in industrialized countries. The data on contraception use in many countries and in many studies do not specify what type of contraception was used, so they will inevitably encompass traditional and nontraditional methods and those that are efficient and less (or not) efficient *(2)*.

INEQUALITIES

According to the HBSC data, girls are more likely to report contraceptive pill use at last sexual intercourse. There are strong geographical patterns, with those from western Europe being most likely to report such use and those from eastern and southern Europe being least likely *(23,24)*. No associations with family affluence could be detected, as the numbers were too small to detect meaningful differences.

Overall, there has been an increase in the use of contraception by young people at first intercourse in European countries. Until the late 1980s, this rise was due to the use of contraceptive pills, but there has been a dramatic increase in the use of condoms in Europe since the 1990s (although this is less substantial in the United Kingdom) *(20)*.

A summary of contraceptive use as presented in the HBSC survey is shown in Fig. 4.4.1.

Unintended pregnancy

PREVALENCE

Fertility trends over recent decades in Europe show a sharp decline in the total fertility rate, far below the replacement level of 2.1 children per woman. There has also been an increase during the period 1995–2005 in the mean age of mothers at first births; the mean age overall in the EU is now around 27 years *(25)*.

Evidence suggests the rates of adolescent pregnancy have been decreasing in the last 20 years *(2)*.

More than 40% of pregnancies of that occur in industrialized countries are unintended and 28% end in induced abortion *(26)*.

Data on unintended pregnancies among young women are scarce, but the assumption is that at least in industrialized countries, most teenage pregnancies are unintended *(18)*.

INEQUALITIES

There are large differences within Europe on levels of pregnancies among young women, from approximately 12 pregnancies per 1000 women aged 15–19 in Italy to approximately 59/1000 in Bulgaria. Lower levels are found in western and central Europe (with the exception of the United Kingdom), while moderate rates (40–60 per 1000) are found in eastern Europe (Fig. 4.4.2).

Fig. 4.4.1
CONTRACEPTIVE USE AT LAST INTERCOURSE

2005/2006 HBSC Survey

Country	Pill only	Condom only	Dual use	All protected
Netherlands	6.7 20.9	50.3 33.5	35.0 40.1	**92.0%** **94.5%**
Switzerland	3.2 15.6	62.2 54.7	26.3 21.1	**91.7%** **91.4%**
Denmark	20.8 28.7	47.4 43.6	21.2 18.2	**91.9%** **90.4%**
Germany	6.0 20.1	49.8 38.5	35.3 34.7	**88.7%** **93.4%**
Spain	0.7 1.1	79.9 91.3	3.2 3.6	**83.8%** **96.0%**
France	2.2 9.2	73.3 62.5	14.5 17.1	**90.0%** **88.8%**
Belgium (Flemish)	1.7 15.8	44.0 34.1	34.9 33.0	**88.0%** **90.8%**
Portugal	1.3 7.0	76.5 63.7	9.4 20.4	**87.2%** **91.1%**
England	2.7 6.8	68.5 64.5	15.8 16.4	**87.0%** **87.7%**
Austria	3.5 11.9	71.3 58.4	14.4 17.8	**89.1%** **88.1%**
Estonia	0.5 3.4	74.0 70.2	13.7 10.7	**88.2%** **84.3%**
Finland	8.2 20.7	64.5 53.8	15.3 10.4	**88.0%** **84.9%**
Wales	5.9 11.0	58.4 50.4	23.8 21.0	**88.1%** **82.4%**
Scotland	2.3 9.5	69.5 58.2	12.7 15.9	**84.4%** **83.6%**
Greece	1.5 0.8	84.4 61.5	3.4 4.6	**89.7%** **66.9%**
Latvia	0.8 3.2	80.2 69.4	5.8 8.1	**86.8%** **80.6%**
Croatia	0.0 0.7	74.2 76.6	7.5 7.1	**81.7%** **84.4%**
Bulgaria	0.6 0.4	77.8 69.2	8.0 6.6	**86.3%** **76.2%**
Sweden	14.1 18.9	57.6 52.3	9.8 8.2	**81.5%** **79.4%**
Lithuania	0.9 0.9	78.7 64.9	4.4 9.9	**84.0%** **75.7%**
Slovenia	5.0 5.4	56.0 64.6	14.2 19.2	**75.2%** **89.2%**
Hungary	2.5 3.9	70.2 66.9	8.3 8.7	**81.0%** **79.5%**
TFYR Macedonia†	1.0	77.6 58.7	3.2 6.5	**81.7%** **65.2%**
Romania	1.2 1.7	79.3 53.3	1.6 7.5	**82.0%** **62.5%**
Slovakia	1.3 1.4	56.6 65.2	7.9 1.4	**65.8%** **68.1%**

†The former Yugoslav Republic of Macedonia

Abortion

PREVALENCE

In 2007, Sedgh et al. *(25)* published a worldwide study on abortion rates from 1995 to 2003. On average, they found that there were 31 abortions for every 1000 live births worldwide in 2003. The rate was lowest in western Europe (12 per 1000). Rates in northern (17 per 1000) and southern Europe (18 per1000) were also quite low. The rate was highest in eastern Europe (44 per 1000).

INEQUALITIES

Overall, abortion rates have been decreasing over time in the EU. The induced abortion rate in Europe in 2003 was 28 per 1000 women aged 15–44 years, down from 48 per 1000 in 1995 *(25)*. Based on recent data *(27)*, it can be concluded that this decrease has continued in most countries until today.

Yet it needs to be stressed that even though rates in eastern European countries have fallen substantially since 1995, abortion rates in eastern Europe have remained higher than in any other region of Europe. This might be due to limited availability and high cost of appropriate contraceptives and to lack of counselling services in central and eastern Europe *(25)*.

Abortion rates in young women (under age 20) are higher in northern Europe. In 2005, the highest rate was found among Swedish girls (Fig. 4.4.3). It is worth emphasizing that abortion data are not readily available for those under 15 years in many countries, meaning caution should be exercised when interpreting such data *(2)*.

Sexually transmitted infections (STIs) (including HIV)

PREVALENCE

Worldwide, it is believed that the largest proportion of STIs occurs in people younger than 25 years *(7)*. The main studied and monitored STIs in the EU are syphilis, gonorrhoea and chlamydia infection. It should be noted that due to the fact that underreporting is common for such diseases, especially in the adolescent population (because of accessibility issues), the figures given are minimum estimates *(2)*.

Chlamydia is the most common sexually transmitted bacterial infection in many EU countries. Syphilis rates are considered a good indicator of the trends in all sexually transmitted diseases.

HIV/AIDS is still considered a serious health concern across the EU. In 2006, 26 220 newly diagnosed cases of HIV infection were reported, a rate of 67.2 per million. The highest rates of HIV in Europe are found in Estonia and Portugal. Rates of more than 100 newly diagnosed cases of HIV infection were observed in the United Kingdom (149), Latvia (130) and Luxembourg (119) in 2006. Of these, 11% were reported in young people (15–24-years-old) and 34% were female *(28)*.

INEQUALITIES

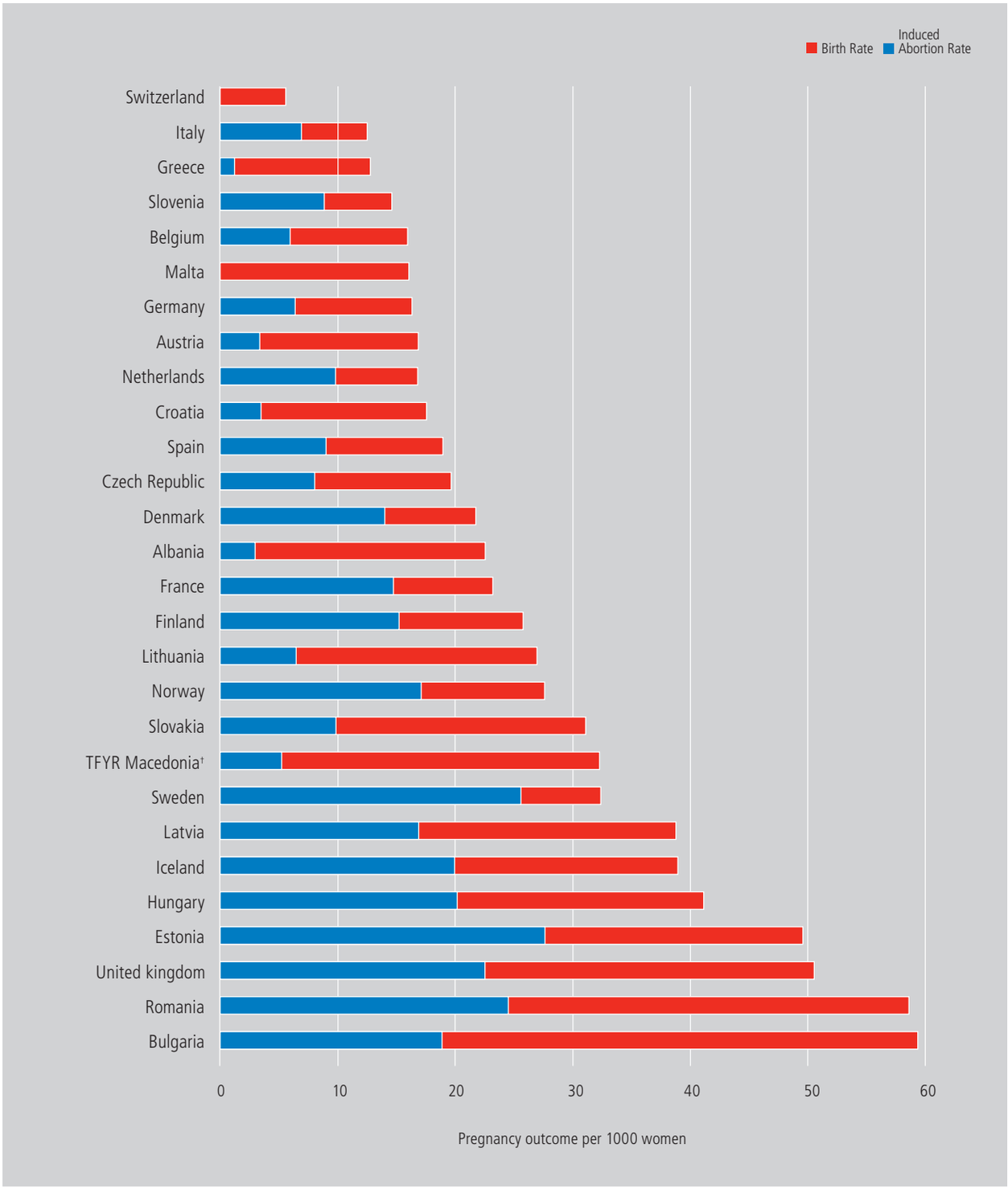
The eastern part of Europe suffered an epidemic-like increase in the incidence of syphilis in the 1990s, but now the rates are declining in all western and central European countries.

HIV epidemics in Spain, Italy, France and the United Kingdom continue to be the largest in Europe. The annual number of newly diagnosed HIV infections has more than doubled in the United Kingdom, from 4152 in 2001 to 8925 in 2006. In eastern Europe, the number of newly diagnosed HIV infections in 2006 surpassed 100 in only three countries: Poland (750), Turkey (290) and Romania (180). Elsewhere, the epidemics are comparatively small. Injecting drug use is the most-reported mode of HIV transmission in the three Baltic states (Estonia, Latvia and Lithuania), where the epidemics appear to have stabilized *(28,29)*.

The characteristics of newly diagnosed cases of HIV reported in Europe are summarized in Table 4.4.2 and Table 4.4.3.

Fig. 4.4.2
ADOLESCENT PREGNANCY OUTCOMES, PER 1000 WOMEN AGED 15-19

Avery et al, 2007



†The former Yugoslav Republic of Macedonia

Table 4.4.2 **CHARACTERISTICS OF NEWLY DIAGNOSED CASES OF HIV INFECTION REPORTED IN WESTERN EUROPE, 2006** *Euro HIV, 2007*

Number of HIV cases	25 241
Rate per million population	82.5
Percentage of cases:	
aged 15–24 years	10%
female	35%
Prodominant transmission mode	Heterosexual

Table 4.4.3 **CHARACTERISTICS OF NEWLY DIAGNOSED CASES OF HIV INFECTION REPORTED IN EASTERN EUROPE, 2006** *Euro HIV, 2007*

Number of HIV cases	1 805
Rate per million population	9.4
Percentage of cases:	
aged 15–24 years	17%
female	26%
Prodominant transmission mode	Heterosexual

*Missing data: Italy, Monaco, Spain

Human papilloma virus (HPV) vaccination

HPV vaccination is relatively new. There is wide variation in how countries choose to integrate vaccination into their national health programmes. Many are attempting to establish the vaccine's impact against cost–effectiveness.

Preliminary data suggest that vaccine uptake is highest when delivered through a school-based programme, such as in United Kingdom (Scotland) (92% for first dose, 88% for second) and participating Spanish regions (>90%). Uptake is less than 50% in Spanish regions where the on-demand vaccination is not supported by a campaign to increase participation. Similarly, only 9% of the Greek population has accepted the option of receiving the vaccine *(30)*.

WHAT ARE THE CHALLENGES?

The overall trend seems to be towards fewer gender differences in sexual behaviour in the EU, starting among the youngest (as shown in the HBSC survey) and in western and northern Europe.

Contraception use (mainly condoms) is more frequent among young people: partially linked to this, abortion rates are declining.

Substantial differences are found between regions of the EU, however, emphasizing the need to improve access for all young people in Europe to adequate reproductive and sexual health resources.

Reproductive health indicators currently used in the EU differ, making it difficult or impossible to compare between countries (even more so since the age cut-offs also vary). This has been underlined by the REPROSTAT programme and ought to be addressed to improve understandings of changes around the issue of sexual and reproductive health in the EU. These understandings are crucial to the design and evaluation of interventions to improve the sexual health of young people and, as a consequence, their overall health and well-being.

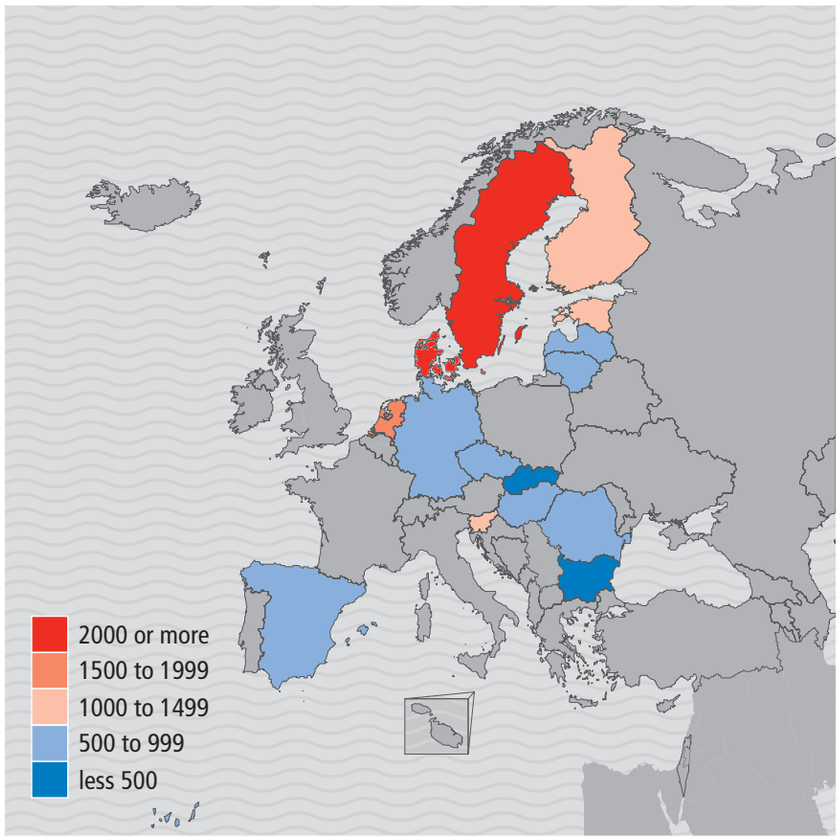
The specificity of data collected around sexual health needs to be recognized. For understandable social reasons, questions on sexual behaviour are more susceptible to misreporting, with underreporting on issues such as STIs to be expected. Some data are difficult to gather at country level. Overall, the common age range studied in the field of sexual and reproductive health is 15–44 years, making it difficult to work on more specific age categories or on specific problems (such as abortion rates for under 15s).

Finally, it needs to be underlined that most of the indicators collected around sexual and reproductive health are linked to negative outcomes of unsafe sex rather than sexual behaviour in general.

On the whole, little is known about patterns of sexual behaviour in the EU, with only some countries, such as France, conducting recent population surveys *(31)*. In addition, available data are usually not comparable.

Fig. 4.4.3
ABORTION RATES PER 1000 LIVE BIRTHS AMONG WOMEN UNDER AGE 20

WHO Health for all database



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A SNAPSHOT OF THE HEALTH OF YOUNG PEOPLE IN EUROPE

This report has been prepared by the WHO Regional Office for Europe for the European Commission conference, *Youth health initiative: be healthy, be yourself*, held in Brussels, Belgium on 9 and 10 July 2009.

The conference reflects the high priority given to youth health by the European Commission. This is a vital commitment, because securing the health and well-being of young people today is an essential investment in securing the health, well-being and prosperity of the Europe of tomorrow.

The report provides a "snapshot" of the health of young people in Europe rather than a more comprehensive account.

An editorial board was formed to oversee production of the report, and expert writers were commissioned to make specific contributions. Their expertise and knowledge of the underpinning issues makes for an authoritative yet succinct overview of the health issues that are important to Europe's young people now and for the future, including:

- mental health
- overweight and obesity
- physical activity and sedentary behaviour
- substance misuse
- sexual health.

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