



# HEALTH EQUITY PILOT PROJECT

## Bulgaria

### Profile of socio-economic inequalities in alcohol, nutrition and physical activity





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## SUMMARY

This report compares socio-economic inequalities relating to alcohol, nutrition and physical activity in Bulgaria with gradients for the European Union as a whole.

To set this in context, life expectancy in Bulgaria is less than that in the EU as a whole for both men and women – differences of seven and five years of life, respectively. Healthy life expectancy is slightly greater than that for the EU as a whole – less than one year greater for men and three years for women. There are substantial income inequalities in Bulgaria, by level of educational attainment, and life expectancy is related to educational attainment – an eight year difference among males and a five year difference among females.

There are steep gradients in self perceived health by education and income for both men and women – similar to the EU as a whole. Gradients in long term illness by education are steeper than those for the EU as a whole while gradients by income are less steep than the EU as a whole. There is a gradient in self-reported diabetes among women by education that is less than that for the EU as a whole. There is no clear gradient for men.

Some of the differences in health and behaviours that lead to these differences are apparent from early in life. There are gradients in obesity and pre-obesity among women at ages 15 to 44, the principal reproductive ages, slightly steeper than for the EU as a whole for pre-obesity but less steep than the EU as a whole for obesity. At ages 11 to 15, both boys and girls from high family affluence groups are more likely to consume fruit daily than those in low ones. Girls in these groups are more likely to report daily physical exercise and less likely to be overweight. However, weekly use of alcohol is more common among both boys and girls from high family affluence groups.

At ages 15 to 16, drinking alcohol in the last month, drunk in lifetime, drunk at age 12 or less all increased with increased level of mother's educational attainment for both male and female students. Getting drunk at age 14 or less also increased with mother's education for female students. In each case, differences in the EU as a whole were either smaller or in the opposite direction.

At ages 18 and over, there are steep gradients in daily fruit and vegetable consumption among both men and women that are much greater than for the EU as a whole. Physical activity outside work increases with level of educational attainment, but the gap is smaller than that for the EU as a whole. In work physical activity is markedly less common among those with tertiary education – with a gap that is similar to that for the EU as a whole for men and much larger than that for the EU as a whole for women. Both pre-obesity and obesity decrease with level of education for women but with slightly smaller differences than for the EU as a whole. Daily alcohol consumption decreases with education for men, with a difference that is similar to that for the EU as a whole. Conversely, for women it increased with education, in contrast to that for the EU as a whole.

At ages 18 to 64, daily alcohol consumption decreases with educational level for men, slightly less steeply than for the EU as a whole. Among women, binge drinking once a month increases with level of education, as it does in the EU as a whole.

## INTRODUCTION

This report summarises the data that are available to compare socio-economic inequalities relating to alcohol, nutrition and physical activity in the Bulgaria with gradients for the European Union as a whole. It is based solely **on data sources harmonised across Member States, available on or before April 2018**, from data bases such as Eurostat and WHO European Health Information Gateway. All graphs and tables presented in this report relate **solely to data for Bulgaria**.

Inequalities in life chances, behaviours and their health outcomes begin at the earliest stages in life, through intergenerational transmission, and accumulate across the life-course<sup>1</sup>. This observation provides two guiding principles for the structure of this report. First, the presentation of results is ordered according to the stages of the life course – from conditions in the womb through to adult behaviours. Second, both to reflect differentials that are established early in life and to achieve the greatest level of comparability, level of educational attainment is used as the principle measure of socio-economic variation in this report<sup>2</sup>. Other indicators, such as family affluence or income are used where this significantly extends the range of analyses possible.

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<sup>1</sup> World Health Organization (2013) Review of Social Determinants of Health and the Health Divide in the WHO European Region: final report of a consortium chaired by Michael Marmot. WHO Regional Office for Europe, Copenhagen.

<sup>2</sup> Mackenbach, J.P. (2016), [Health Inequalities in Europe](#), Erasmus University Publishing, Rotterdam

## BACKGROUND INFORMATION

The average population of Bulgaria during 2017 was 7.1 million, over one percent of the figure for the European Union (EU) as a whole. Half of the population was aged under 43.9 years – the comparable figure for the EU was 42.8 years. Net migration was -1.3 per 1,000 population i.e. a net outflow of migrants (compared to a net inflow of 2.4 for the EU as a whole). In terms of age dependency, the number aged under 15 or 65 and over was 53.4 percent of the figure for age 15 to 64 - the comparable figure for the EU was 53.9 per cent.

In 2016, life expectancy at birth was 71.3 years for males and 78.5 years for females – a gender gap of 7.2 years. Comparable figures for the EU were 78.2, 83.6 and 5.4 years. The comparable figures for healthy life years in Bulgaria were 64.0, 67.5 and 3.5 years (i.e. women stayed healthier for longer than men in Bulgaria) and 63.5, 64.2 and 0.7 years for the EU. These figures meant that men in Bulgaria could expect to spend 7.3 years in ill-health and women 11.0 years – a difference of 3.7 years. The comparable figures for the EU were 14.7 and 19.4 years – a difference of 4.7 years.

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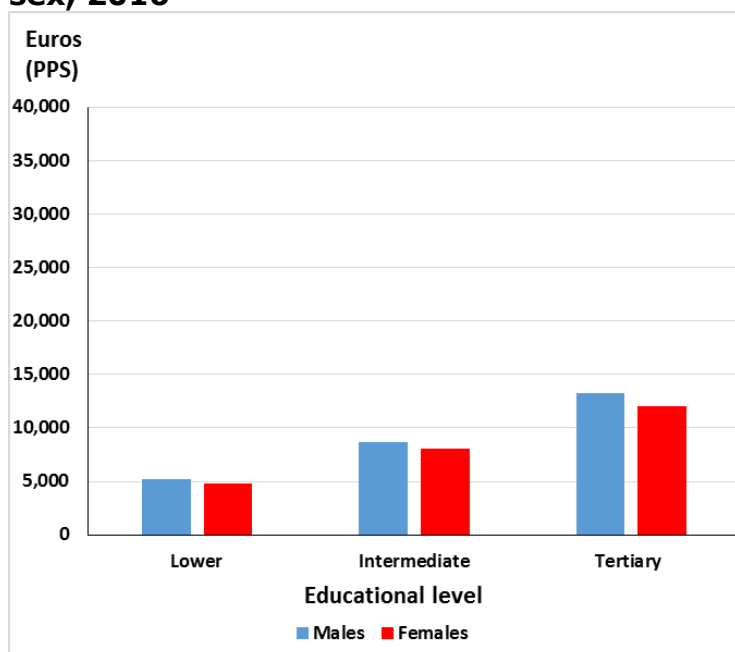
## INCOME INEQUALITY

### INEQUALITIES WITHIN COUNTRY

In terms of income inequality, the Gini coefficient was 38.3 for Bulgaria compared to 30.8 for the EU. The fifth of the population with the highest incomes received 7.9 times the income of the lowest fifth – the ratio across the EU was 5.2.

Both equivalised mean and median income per household increased with level of educational attainment in 2016. Average equivalised household income was around 8,100 Euros higher for men with tertiary education than for those with lower levels of educational attainment. For women of this age the difference was around 7,300 Euros. The comparable differences in median income were 6,600 and 5,900 Euros, respectively.

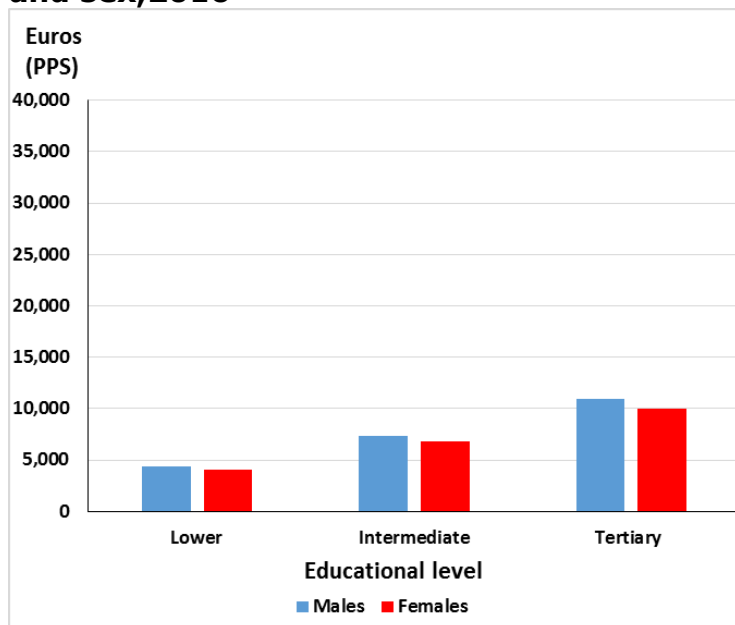
### Equivalised mean income (pps) by level of educational attainment and sex, 2016



Sources, numbers and definitions: See Annex 1

COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE  
 No figures are available for the EU as a whole.

### Equivalised median income (pps) by level of educational attainment and sex, 2016



Sources, numbers and definitions: See Annex 1

COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE  
 No figures are available for the EU as a whole.



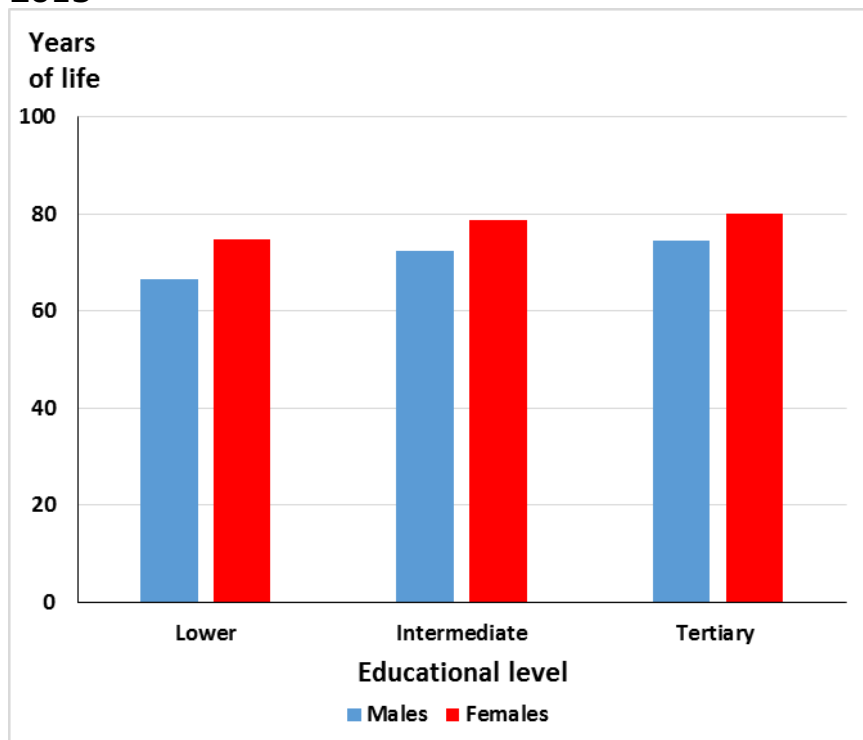
HEALTH AND LIFE EXPECTANCY

LIFE EXPECTANCY

INEQUALITIES WITHIN COUNTRY

The data for life expectancy at birth in Bulgaria suggest a consistent social gradient. Those with a higher educational attainment level have a higher life expectancy. There is a 7.9 year age gap between the least and most educated Bulgarian men and a 5.3 year gap for women. Both men and women with intermediate or tertiary levels of education have the lowest life expectancy at birth when compared to 15 other EU countries.

**Life expectancy at birth by level of educational attainment and sex, 2015**



Sources, numbers and definitions: See Annex 1

COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

No figures are available for the EU as a whole. Only 16 Member States report these data to Eurostat, of which three are for earlier years than 2015. In all these 16 Member States there are social gradients in life expectancy by educational attainment.

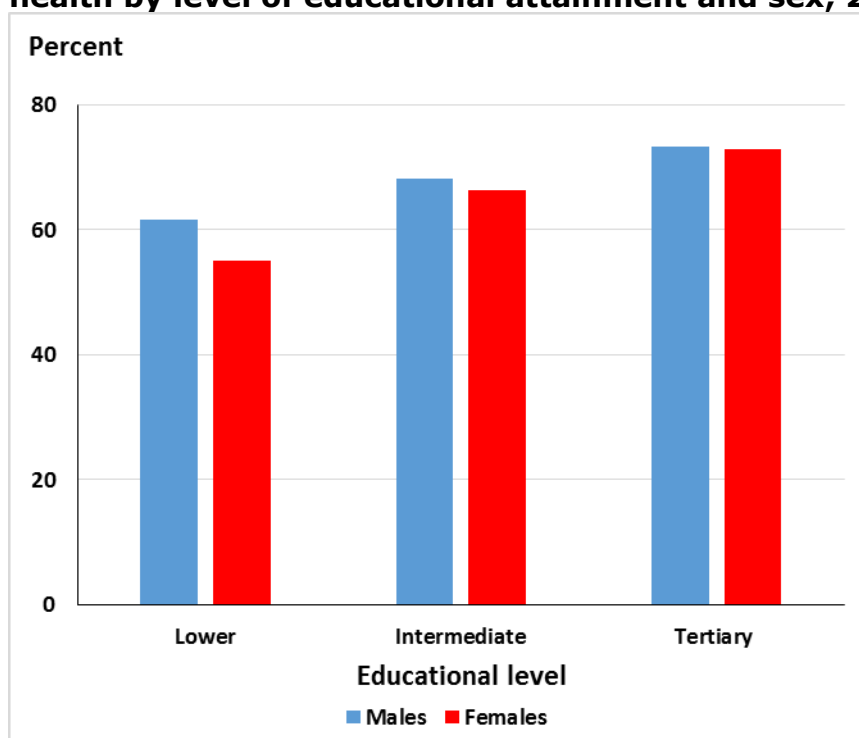
## SELF PERCEIVED HEALTH

### (a) By educational attainment

#### INEQUALITIES WITHIN COUNTRY

The data suggest there is a clear social gradient in self-perception of good or very good health in Bulgaria by level of educational attainment. Self-reported health of the least educated Bulgarian men is 12 percentage points less than the most educated. For Bulgarian women, the gradient is steeper with a gap of 18 percentage points.

### Age standardised percentage with good or very good self-perceived health by level of educational attainment and sex, 2016



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

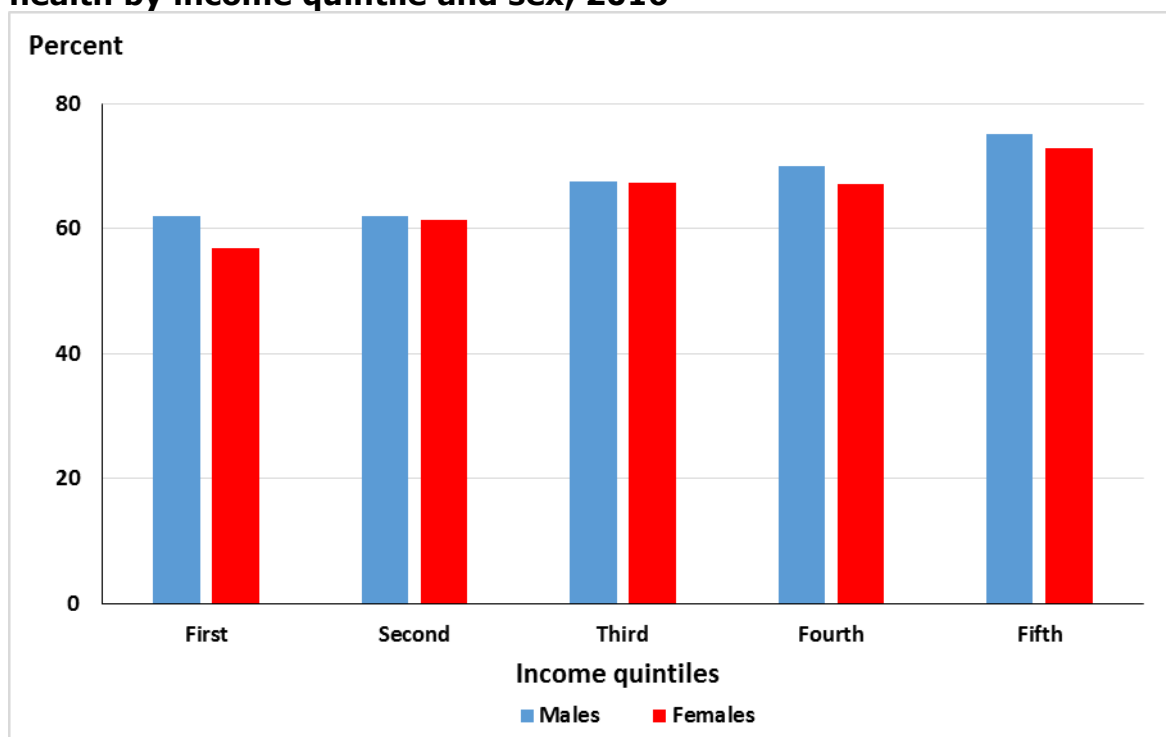
The data suggest there is a clear social gradient in self-perception of good or very good health in the EU as a whole. Self-reported health of the least educated men is 14 percentage points less than the most educated. For women, the gradient is slightly steeper with a gap of 16 percentage points.

### (b) By income

#### INEQUALITIES WITHIN COUNTRY

The data suggest there is a clear social gradient in self-perception of good or very good health in Bulgaria by income quintile. Self-reported health of men in the lowest income quintile is 13 percentage points less than those in the top income quintile. For Bulgarian women, the gradient is steeper with a gap of 16 percentage points.

### Age standardised percentage with good or very good self-perceived health by income quintile and sex, 2016



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

The data suggest there is a clear social gradient in self-perception of good or very good health in the EU as a whole. Self-reported health of men in the lowest income quintile is 18 percentage points less than for those in the highest income quintile. For women, the gradient is similar with a gap of 19 percentage points.

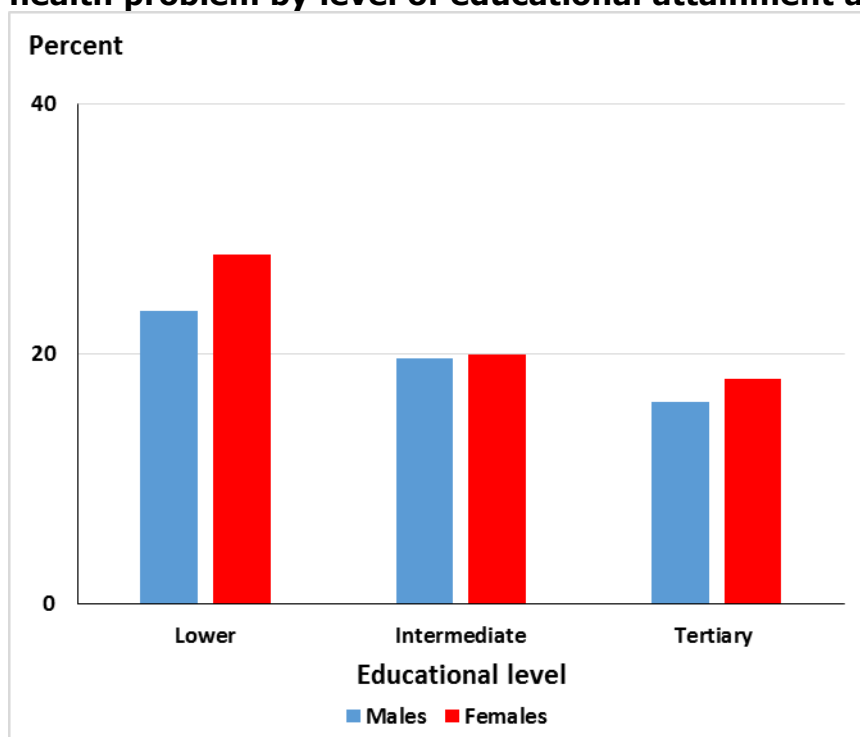
#### LONGSTANDING ILLNESS OR HEALTH PROBLEMS

##### (a) By educational attainment

##### INEQUALITIES WITHIN COUNTRY

The data suggest there is a clear social gradient in reporting a long-standing illness or health problem in Bulgaria by level of educational attainment. Self-reported long-standing ill-health of the least educated Bulgarian men is seven percentage points greater than for the most educated. For Bulgarian women, the gradient is slightly steeper with a gap of 10 percentage points.

### Age standardised percentage reporting a long-standing illness or health problem by level of educational attainment and sex, 2016



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

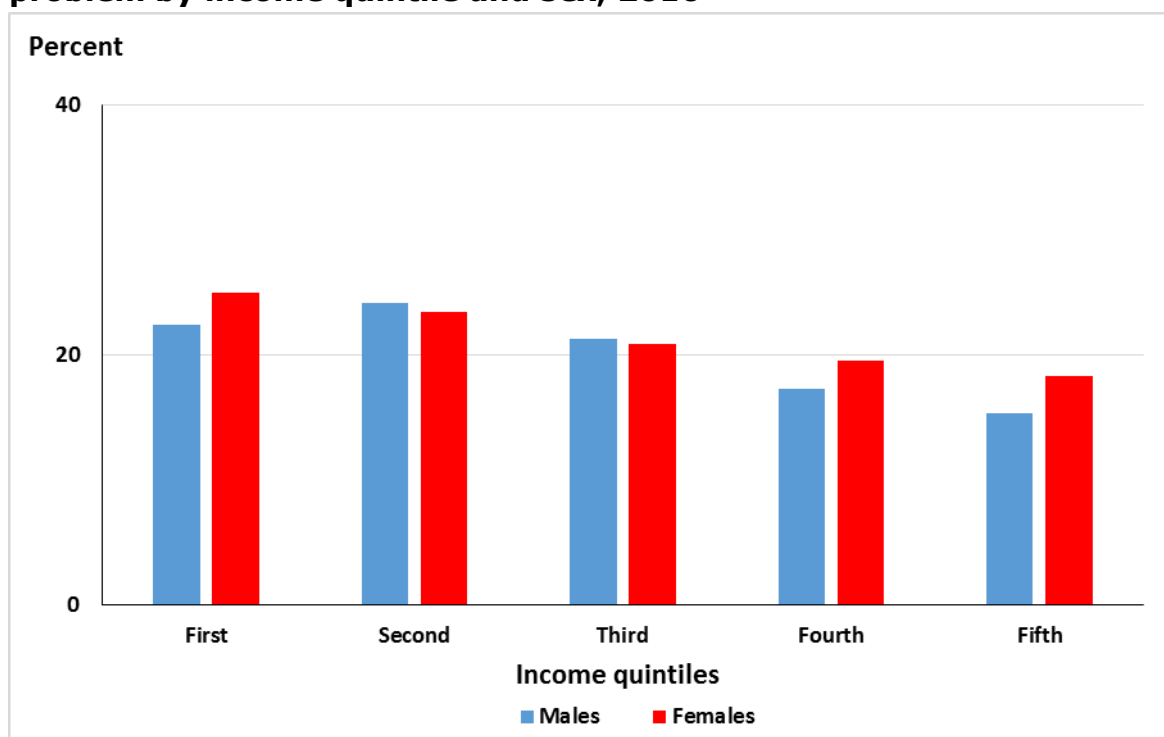
The data suggest that those with tertiary education are much less likely to report a long-standing illness or health problem than those with less educational attainment in the EU as a whole. Reporting of long-standing ill-health is four percentage points lower for the most educated men than for the least educated. For women, the gap is 5 percentage points.

#### (b) By income

##### INEQUALITIES WITHIN COUNTRY

The data suggest there is a social gradient in reporting a long-standing illness or health problem in Bulgaria by income quintile, although, for men, it is those in the second lowest income quintile that have the highest level of long-standing ill health - almost two percentage points higher than the lowest income quintile. Self-reported long-standing ill-health for Bulgarian men in the lowest income quintile is seven percentage points greater than for those in the top income quintile. For Bulgarian women, there is a clear gradient with a gap of seven percentage points between the highest and lowest income quintiles.

## Age standardised percentage reporting a long-standing illness or health problem by income quintile and sex, 2016



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

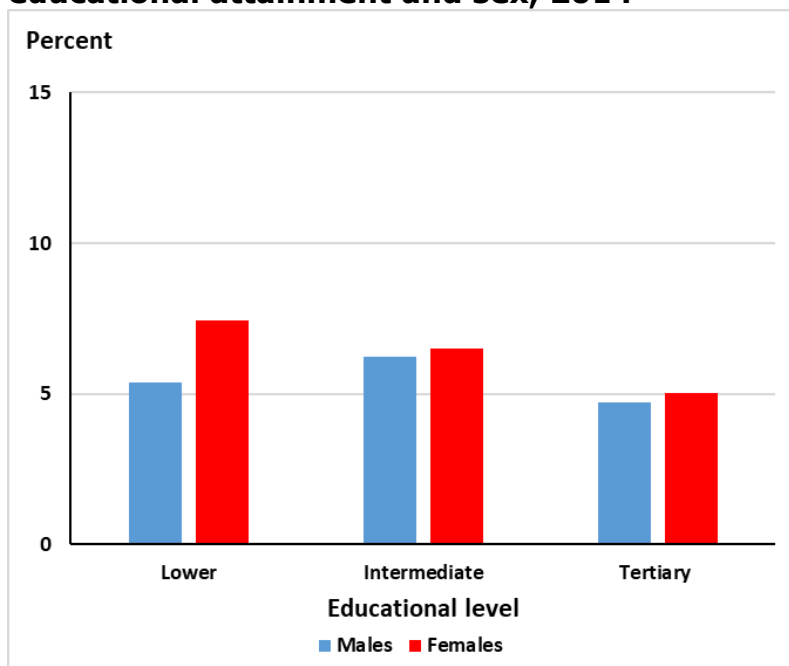
The data suggest there is a clear social gradient in reporting a long-standing illness or health problem in the EU as a whole. Self-reported long-standing ill-health in the lowest income quintile is 11 percentage points less than for those in the highest income quintile, for both men and women.

### SELF REPORTING OF DIABETES

#### INEQUALITIES WITHIN COUNTRY

The data suggest there is a social gradient in self-reporting of diabetes in Bulgaria by level of educational attainment among women. Self-reported diabetes among the least educated women is two percentage points greater than for the most educated. Among men, rates are highest for those with intermediate levels of educational attainment.

### Age standardised percentage reporting diabetes by level of educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

The data suggest that those with tertiary education are less likely to report having diabetes than those with less educational attainment in the EU as a whole. Reporting of diabetes is three percentage points lower for the most educated men than for the least educated. For women, the gap is four percentage points.

## LIFECOURSE

### A) LIFECOURSE STAGE - A GOOD START IN LIFE

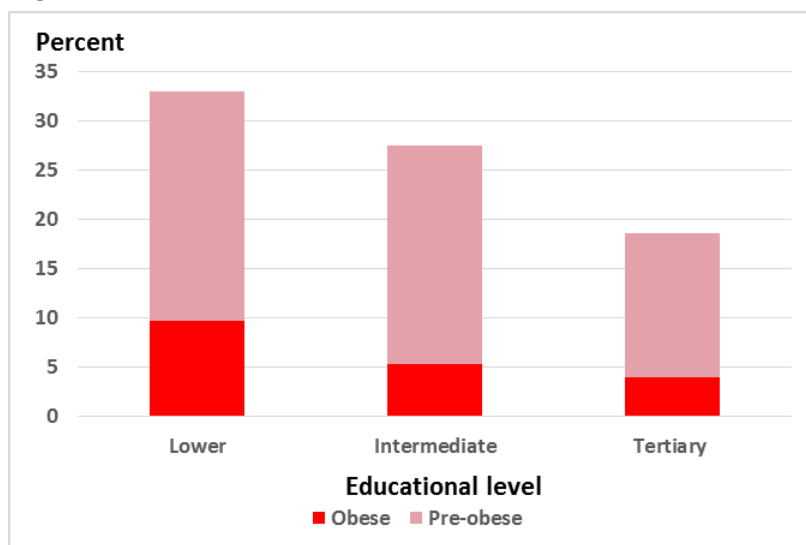
The events at which a good start in life needs to be established include pre-conception, conception, pregnancy and birth, the first thousand days, pre-school and primary education.

#### WOMEN OVERWEIGHT AT FERTILE AGES 18 TO 44

##### INEQUALITIES WITHIN COUNTRY

Among overweight adults (BMI of 25 or more), the European Health Interview Survey (EHIS) separately identifies the proportions obese (BMI of 30 or more) from those who are not (i.e. pre-obese with BMI of at least 25 but less than 30). Among women at ages 18 to 44 in Bulgaria, there are clear social gradients in both pre-obesity and obesity – for both the proportions are greatest for women with lower levels of educational attainment, and least for those with tertiary education.

#### Women overweight at ages 18-44 by level of educational attainment, 2014



Sources, numbers and definitions: See Annex 1

##### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

For the EU as a whole, there are social gradients in both pre-obesity and obesity among women aged 18 to 44. Among those with lower levels of educational attainment, 24.1 percent are pre-obese. This figure falls to 17.6 per cent among those with tertiary education. The comparable figures for obesity are 14.3 and 7.7 per cent.

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## INFANT MORTALITY

### INEQUALITIES WITHIN COUNTRY

No EU harmonised data available by socio-economic status for Bulgaria.

### INEQUALITIES IN THE EU AS A WHOLE

There are social gradients across all but one of the nine countries in the EU for which data are available.

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## ALCOHOL CONSUMPTION DURING PREGNANCY

No EU harmonised data available by socio-economic status.

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## FOETAL ALCOHOL SPECTRUM DISORDER

No EU harmonised data available by socio-economic status.

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## BREAST FEEDING AND COMPLIMENTARY FEEDING

No EU harmonised data available by socio-economic status.

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## SUGAR SWEETENED BEVERAGES IN EARLY CHILDHOOD

No EU harmonised data available by socio-economic status.

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## SALT CONSUMPTION IN EARLY CHILDHOOD

No EU harmonised data available by socio-economic status.

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## SATURATED FAT CONSUMPTION IN EARLY CHILDHOOD

No EU harmonised data available by socio-economic status.

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## FRUIT CONSUMPTION IN EARLY CHILDHOOD

No EU harmonised data available by socio-economic status.

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## VEGETABLE CONSUMPTION IN EARLY CHILDHOOD

No EU harmonised data available by socio-economic status.

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## OVERWEIGHT IN EARLY CHILDHOOD

No EU harmonised data available by socio-economic status for Bulgaria.



## B) LIFECOURSE STAGE - AGES 11 TO 15

The Health Behaviour of School Age Children (HBSC) survey 2013/2014 is the principal source of information at ages 11 to 15. To derive their Family Affluence Scale (FAS) the survey used a six-item assessment of common material assets or activities. Responses were scored and summed to form a summary score.

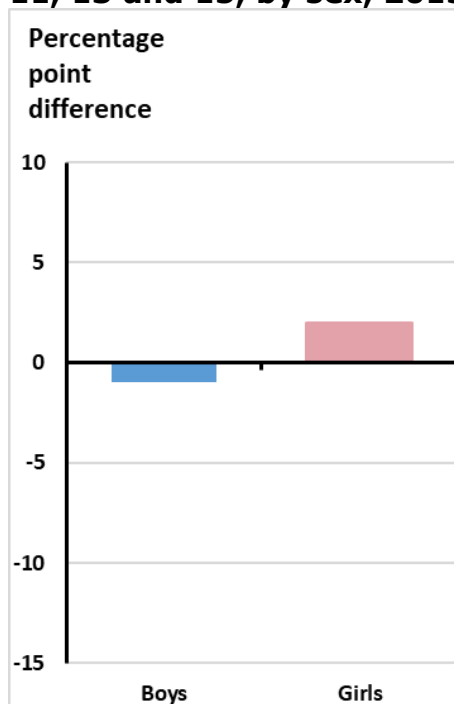
Additional information is available from ESPAD on alcohol consumption and is presented in the next section.

### SUGAR SWEETENED BEVERAGES AT AGES 11 TO 15

#### INEQUALITIES WITHIN COUNTRY

In the HBSC survey, the differences in sugar-sweetened beverage consumption between high and low affluence groups in Bulgaria are not statistically significant.

#### **Percentage point difference in prevalence of drinking soft-drinks at least once a day between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

The HBSC survey does not provide estimates for the EU as a whole. However, soft drink consumption is significantly related to low family affluence for girls in nearly half of EU countries for which these data are available. For boys, the pattern differs between EU countries with few countries showing significant differences.

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### SALT CONSUMPTION AT AGES 11 TO 15

No EU harmonised data available by socio-economic status.

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### SATURATED FAT CONSUMPTION AT AGES 11 TO 15

No EU harmonised data available by socio-economic status.

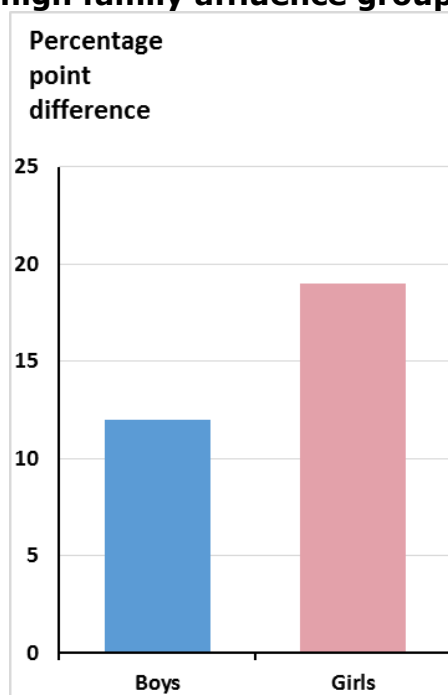
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### FRUIT CONSUMPTION AT AGES 11 TO 15

#### INEQUALITIES WITHIN COUNTRY

The HBSC survey data suggest a positive association between family affluence and daily fruit consumption in Bulgaria among those aged 11 to 15. Prevalence of fruit consumption is greater for those from more affluent households than it is for those in low affluence homes. The difference is greater for girls than boys, with 19 and 12 percentage point differences, respectively.

#### **Percentage point difference in daily fruit consumption between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**



*Sources, numbers and definitions: See Annex 1*

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

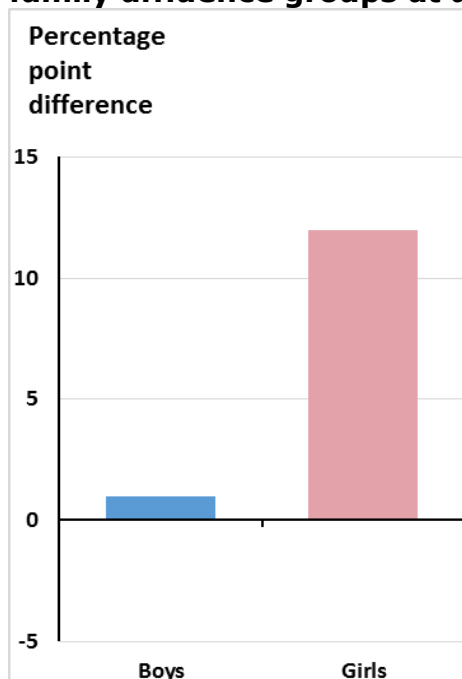
The HBSC survey does not provide estimates for the EU as a whole. However, fruit consumption is significantly related to family affluence across most EU countries for which these data are available.

## PHYSICAL ACTIVITY AT AGES 11 TO 15

### INEQUALITIES WITHIN COUNTRY

The HBSC survey data show that, at ages 11 to 15 in Bulgaria, moderate or vigorous physical activity is 12 percentage points higher among girls from high affluence groups than from low affluence groups. The difference among boys is not statistically significant.

### **Percentage point difference in prevalence of reporting at least one hour of moderate or vigorous physical activity daily, between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**



*Sources, numbers and definitions: See Annex 1*

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

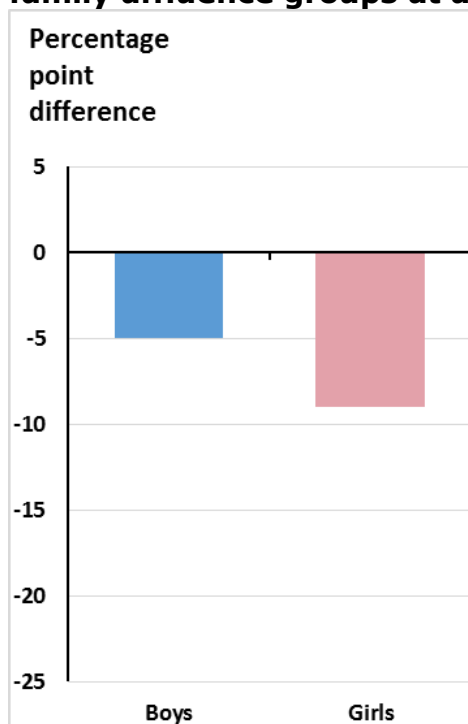
The HBSC survey does not provide estimates for the EU as a whole. However, physical activity is significantly related to family affluence in around half of EU countries for which these data are available. In these countries it is more common among both boys and girls in high family affluence groups than in low ones.

## OVERWEIGHT AT AGES 11 TO 15

### INEQUALITIES WITHIN COUNTRY

Among girls aged 11 to 15 in Bulgaria the HBSC data suggest a negative association between family affluence and being overweight. The prevalence of girls who are overweight is nine percentage points less for those in high affluence groups than in low affluence groups. The difference for boys (five percentage points) is not statistically significant.

### Percentage point difference in those overweight between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

The HBSC survey does not provide estimates for the EU as a whole. However, being overweight is significantly related to family affluence across most EU countries for which these data are available.

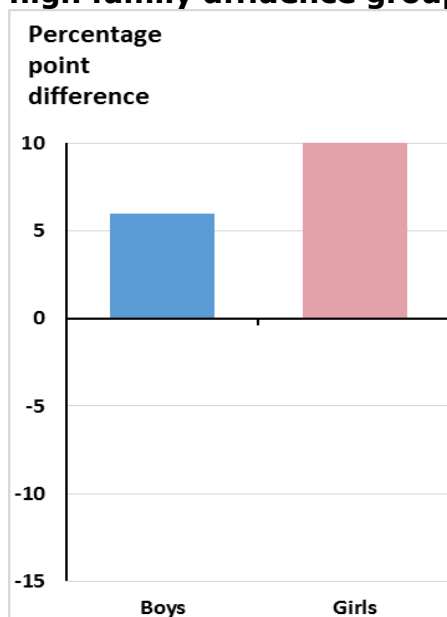
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#### WEEKLY ALCOHOL CONSUMPTION AT AGES 11 TO 15

##### INEQUALITIES WITHIN COUNTRY

The HBSC data suggest that underage drinking at ages 11 to 15 is more common among both boys and girls from high family affluence groups in Bulgaria than it is among low affluence groups. There is a six and 11 percentage point difference for boys and girls, respectively.

### Percentage point difference in weekly use of alcohol between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

The HBSC survey does not provide estimates for the EU as a whole. Weekly alcohol consumption is not significantly related to family affluence in the majority of EU countries for which these data are available.

## C) LIFECOURSE STAGE - AGES 15 TO 24

### ALCOHOL CONSUMPTION REPORTED AT AGES 15 AND 16

The main purpose of the European School Survey Project on Alcohol and Other Drugs (ESPAD) project is to collect comparable data on substance use among 15 to 16 year- old students in as many European countries as possible. The target group consists of students who turn 16 during the year of data collection, which in 2011 meant students born in 1995. The surveys are conducted in schools in the participating country, during the same period of time and using a common methodology.

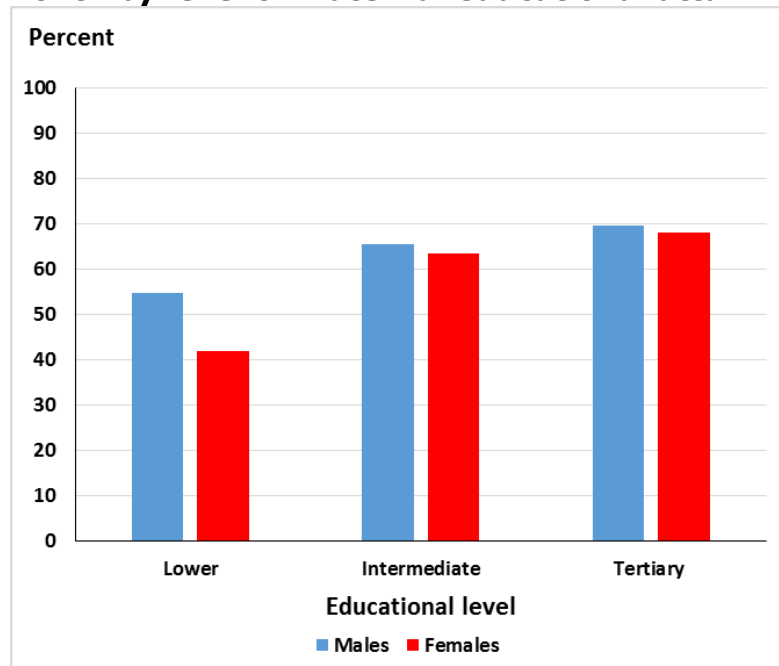
The ESPAD survey was not conducted in all EU member States in 2011 – no ESPAD data are available for Austria, Germany, Luxembourg and Spain for 2011. However, it did cover 23 Member States as well as Flanders (in Belgium). It is therefore possible to compare figures for Bulgaria to the average for all survey participants in the EU.

### DRANK ALCOHOL IN THE LAST MONTH

#### INEQUALITIES WITHIN COUNTRY

The percentage of male and female students aged 15 to 16 years who drank alcohol in the preceding month was least among those whose mothers had a lower level of educational attainment in Bulgaria.

#### **Percentage of 15 and 16 year old students who drank alcohol in the last month by level of maternal educational attainment and sex, 2011**



Sources, numbers and definitions: See Annex 1

## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

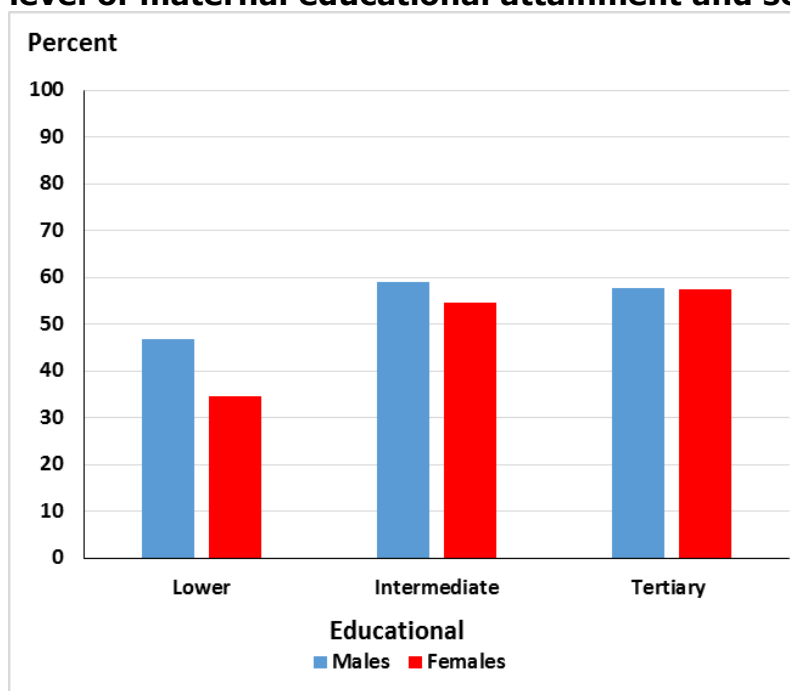
For both males and females, the percentage of participating EU students aged 15 to 16 years who drank alcohol in the preceding month was least among those whose mothers had a lower level of educational attainment.

### DRUNK IN LIFETIME

#### INEQUALITIES WITHIN COUNTRY

Among female students aged 15 and 16 in Bulgaria, the proportion who had ever been drunk increased with level of maternal educational attainment. Among male students, the proportion was also lowest among those with lower levels of maternal educational attainment but differed little at higher levels.

#### **Percentage of 15 and 16 year old students who had ever been drunk by level of maternal educational attainment and sex, 2011**



Sources, numbers and definitions: See Annex 1

## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

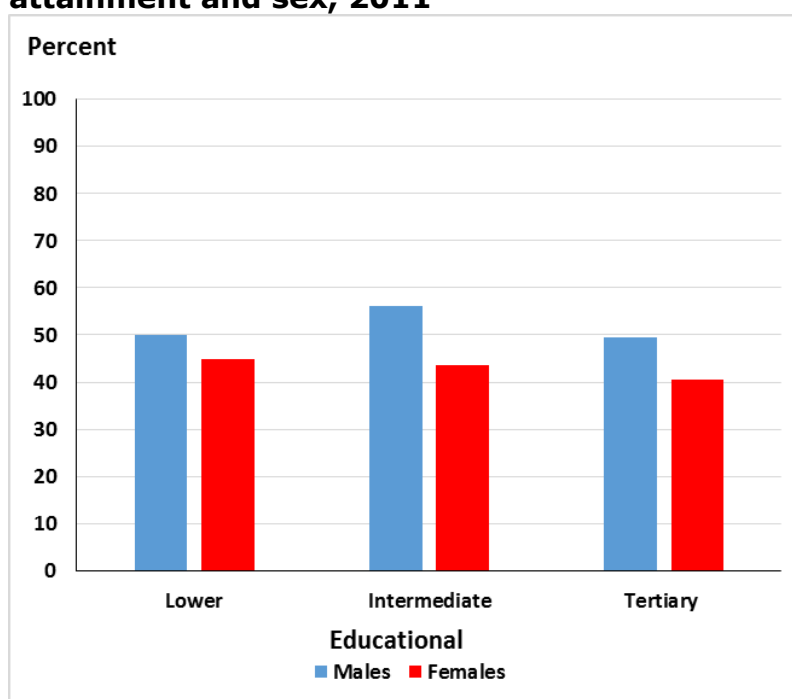
The percentage of participating EU students aged 15 to 16 years who had ever been drunk in their lifetime differed little by level of maternal educational attainment. For both males and females, it was slightly greater for those whose mothers had intermediate levels of educational attainment and slightly lower for those whose mothers had a tertiary education.

## HEAVY DRINKING IN THE LAST MONTH

### INEQUALITIES WITHIN COUNTRY

The percentage of students aged 15 to 16 years who had five or more drinks on one occasion in the previous month decreased with increased level of maternal educational attainment for females in Bulgaria - four percentage point difference between lower levels of maternal educational attainment and tertiary education. This level of drinking was greatest among male students whose mothers had attained intermediate levels education.

### **Percentage of 15 and 16 year old students who drank heavily on at least one occasion in the last month by level of maternal educational attainment and sex, 2011**



*Sources, numbers and definitions: See Annex 1*

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

The percentage of participating EU students aged 15 to 16 years who had five or more drinks on one occasion in the previous month decreased with increased level of maternal educational attainment, with a six percentage point difference between lower levels of maternal educational attainment and tertiary education for both males and females.

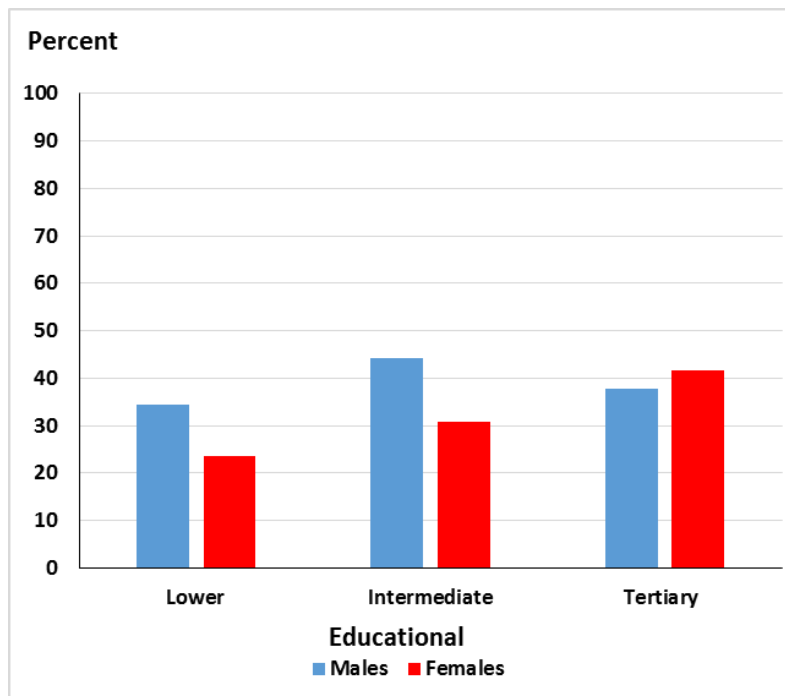


## GOT DRUNK AT AGE 14 OR LESS

### INEQUALITIES WITHIN COUNTRY

Among female students aged 15 to 16 years in Bulgaria, the percentage who got drunk at age 14 or less increased with level of maternal educational attainment, with an 18 percentage point difference between lower levels of educational attainment and tertiary education. Among males differences by level of maternal educational attainment were smaller than for females and the percentage getting drunk at age 14 or less was greatest for those whose mothers had intermediate levels of educational attainment.

### Percentage of 15 and 16 year old students who had ever been drunk at age 14 or less by level of maternal educational attainment and sex, 2011



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

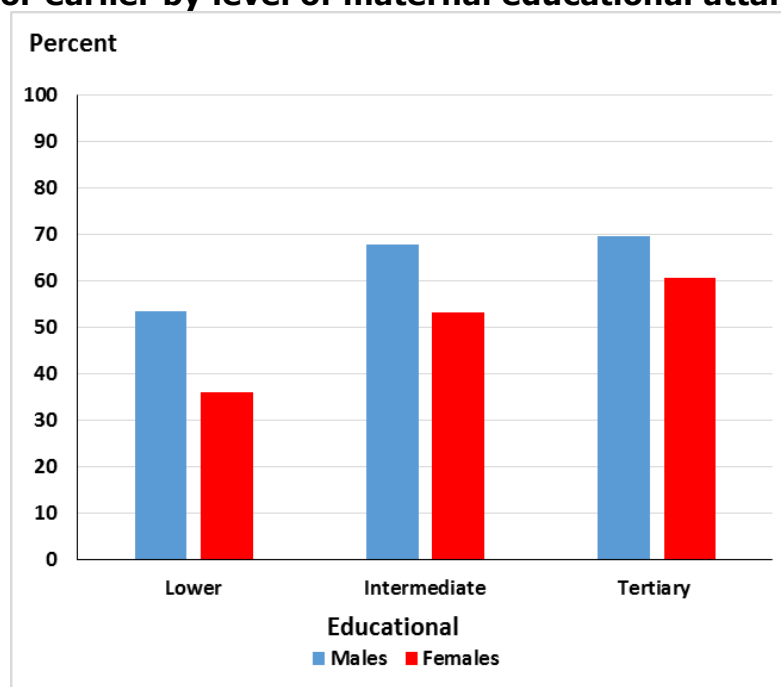
The percentage of participating EU students aged 15 to 16 years who got drunk at age 14 or less differed little by level of maternal educational attainment for both males and females. For both males and females, it was slightly greater for those whose mothers had intermediate levels of educational attainment and slightly lower for those whose mothers had a tertiary education.

## FIRST DRANK ALCOHOL AT AGE 12 OR EARLIER

### INEQUALITIES WITHIN COUNTRY

The percentage of students aged 15 to 16 years who had first drunk alcohol at age 12 or less increased with maternal level of educational attainment for both males and females - 16 and 24 percentage points higher, respectively, among those whose mothers had tertiary education compared to those whose mothers had lower levels of educational attainment.

### Percentage of 15 and 16 year old students who drank alcohol at age 12 or earlier by level of maternal educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

The percentage of participating EU students aged 15 to 16 years who had first drunk alcohol at age 12 or less decreased with increased level of maternal educational attainment. Among males and females it was five and six percentage points, respectively, lower among those whose mothers had a tertiary education than among those whose mothers had lower levels of educational attainment.

## DIET AND EXERCISE AT AGES 15 TO 24

The European Health Interview Survey (EHIS) is the principal source of information at ages 15 and over. The survey consists of four modules on health status, health care use, health determinants and socio-economic background variables. EHIS targets the population aged at least 15 and living in private households.

#### SUGAR CONSUMPTION AT AGES 15 TO 24

No EU harmonised data available by socio-economic status.

#### SALT CONSUMPTION AT AGES 15 TO 24

No EU harmonised data available by socio-economic status.

#### SATURATED FAT CONSUMPTION AT AGES 15 TO 24

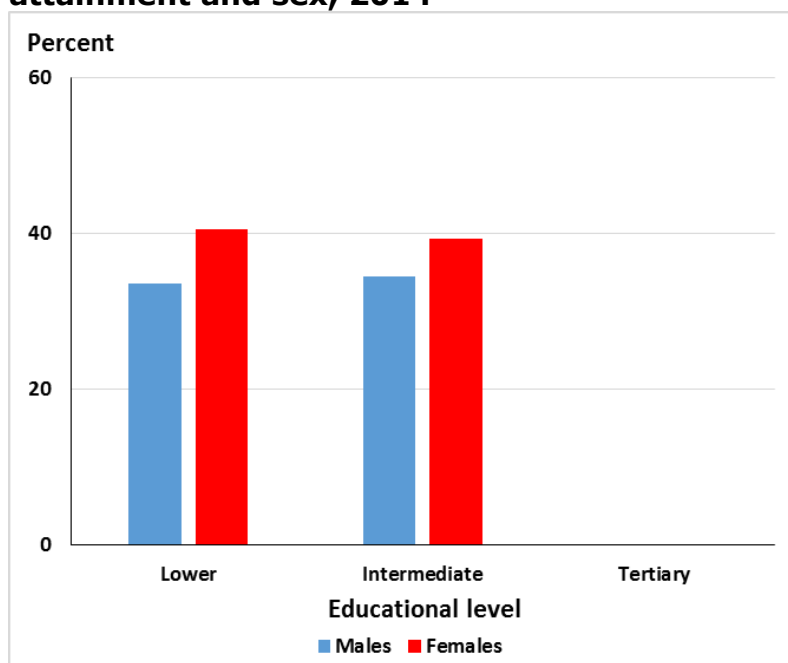
No EU harmonised data available by socio-economic status.

#### FRUIT CONSUMPTION AT AGES 15 TO 24

##### INEQUALITIES WITHIN COUNTRY

No EHIS data on fruit consumption at ages 15 to 24 are available for those with tertiary education in Bulgaria. There is little or no difference in consumption between the other educational attainment categories.

#### **Fruit consumption at least daily at ages 15 to 24 by level of educational attainment and sex, 2014**



*Sources, numbers and definitions: See Annex 1*

##### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

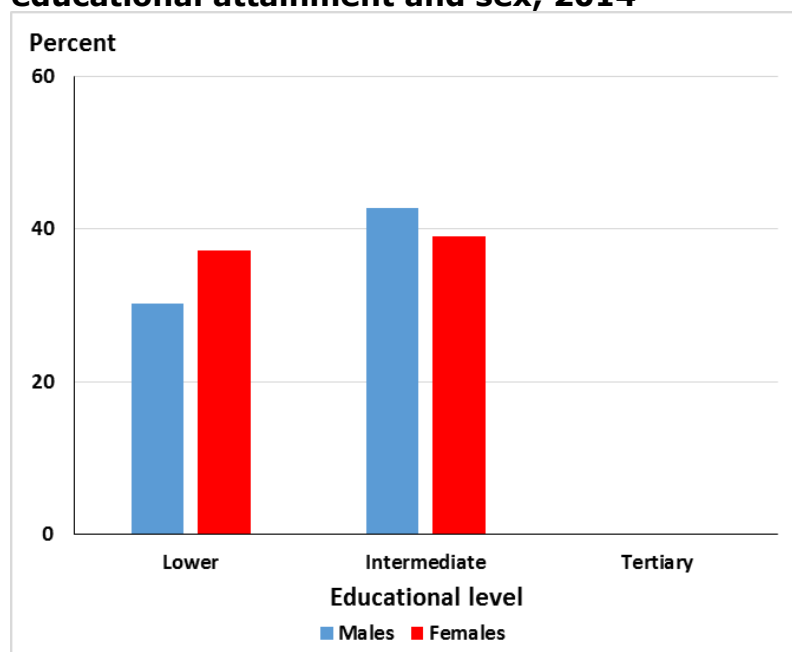
Data from EHIS for the EU as a whole suggest that there is a consistent gradient in fruit consumption among young women aged 15 to 24, with those who attained a tertiary level of education most likely to eat fruit at least daily. Among young men, those with intermediate levels of educational attainment were least likely to eat fruit at least daily. However, many in this age group will not have attained their final lifetime level of educational attainment.

## VEGETABLE CONSUMPTION AT AGES 15 TO 24

### INEQUALITIES WITHIN COUNTRY

No EHIS data on vegetable consumption at ages 15 to 24 are available for those with tertiary education in Bulgaria. Among both men and women vegetable consumption is more common among those with intermediate levels of educational attainment than among those with lower levels of educational attainment.

### **Vegetable consumption at least daily at ages 15 to 24 by level of educational attainment and sex, 2014**



*Sources, numbers and definitions: See Annex 1*

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

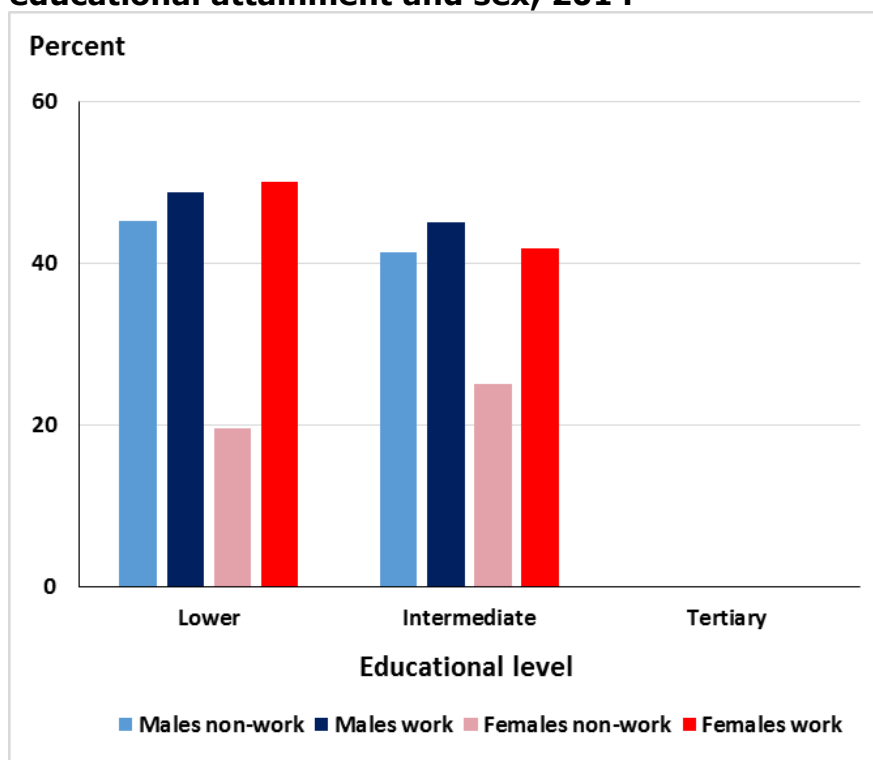
Data from EHIS for the EU as a whole suggest that there are consistent gradients in vegetable consumption among young men and women aged 15 to 24, with those who attained a tertiary level of education most likely to eat fruit at least daily. However, many in this age group will not have attained their final lifetime level of educational attainment.

## PHYSICAL ACTIVITY AT AGES 15 TO 24

### INEQUALITIES WITHIN COUNTRY

No EHIS data on physical activity at ages 15 to 24 are available for those with tertiary education in Bulgaria. For both men and women aged 15 to 24 in Bulgaria physical activity in-work is more common among those with a lower level of educational attainment compared to those who had reached an intermediate level of educational attainment. The same relationship can be seen for physical activity outside work amongst men. For women, the data show the opposite - physical activity outside work is more common among those with intermediate levels of educational attainment.

## Work and non-work related physical activity at ages 15 to 24 level of educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

Physical activity recorded in EHIS shows no clear relationship between in-work physical activity and educational attainment level, at ages 15 to 24 across the EU as a whole. Those with intermediate levels of educational attainment are most likely to engage in moderate or heavy physical activity in-work and those with lower levels of attainment least likely to do so. Physical activity outside work is more common among young men with lower levels of educational attainment than among those with intermediate levels. For young women, the highest levels are among those who had attained a tertiary level of education at this age.

Physical activity outside work similarly shows no clear relationship with educational attainment level, at ages 15 to 24 across the EU as a whole. Those with intermediate levels of educational attainment are least likely to engage in significant physical activity outside work at these ages.

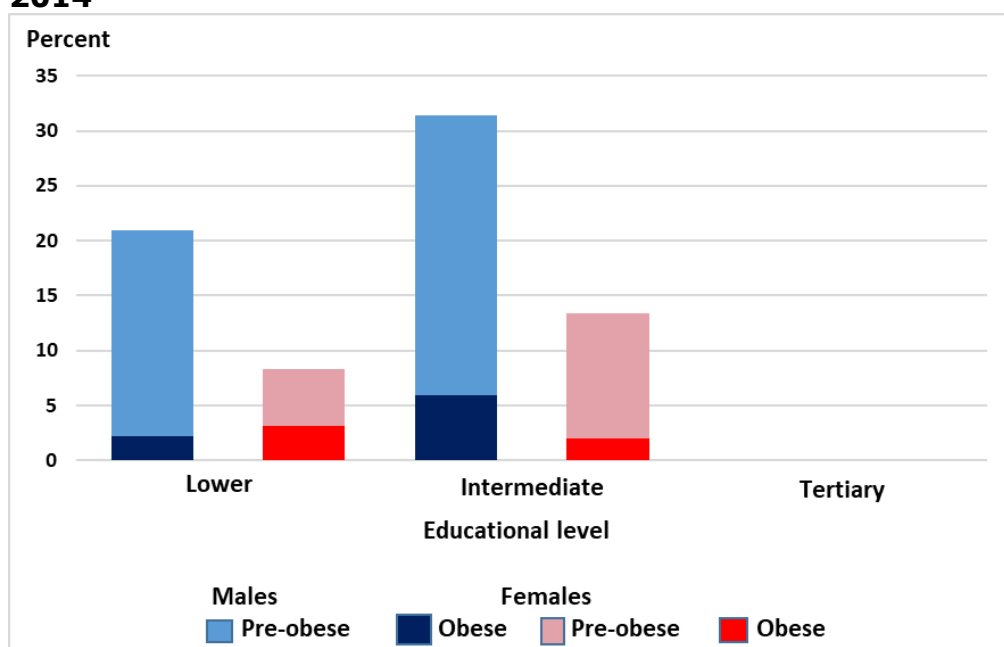
Many in this age group will not have attained their final lifetime level of educational attainment.

## OVERWEIGHT AT AGES 15 TO 24

### INEQUALITIES WITHIN COUNTRY

No EHIS data on physical activity at ages 15 to 24 are available for those with tertiary education in Bulgaria. For males at this age, both obesity (equivalent to BMI of 30 or more at age 19) and pre-obesity (equivalent to BMI of at least 25 but less than 30 at age 19) are more common among those with intermediate levels of educational attainment than among those with lower levels of educational attainment. The data show a similar pattern for pre-obesity among women. However, obesity is slightly less common among women at this age with intermediate levels of educational attainment than among those with lower levels of educational attainment.

### Overweight at ages 15 to 24 by level of educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

In the EU as a whole, at ages 15 to 24, EHIS data suggest that both pre-obesity (equivalent to BMI of at least 25 but less than 30 at age 19) and obesity equivalent to (BMI of 30 or more at age 19) are generally more common among young men and women with intermediate levels of educational attainment than at other levels of attainment. Many in this age group will not have attained their final lifetime level of education.

## D) LIFECOURSE STAGE - ADULT BEHAVIOUR

### SUGAR CONSUMPTION IN ADULTS

No EU harmonised data available by socio-economic status.

### SALT CONSUMPTION IN ADULTS

No EU harmonised data available by socio-economic status.

### SATURATED FAT CONSUMPTION IN ADULTS

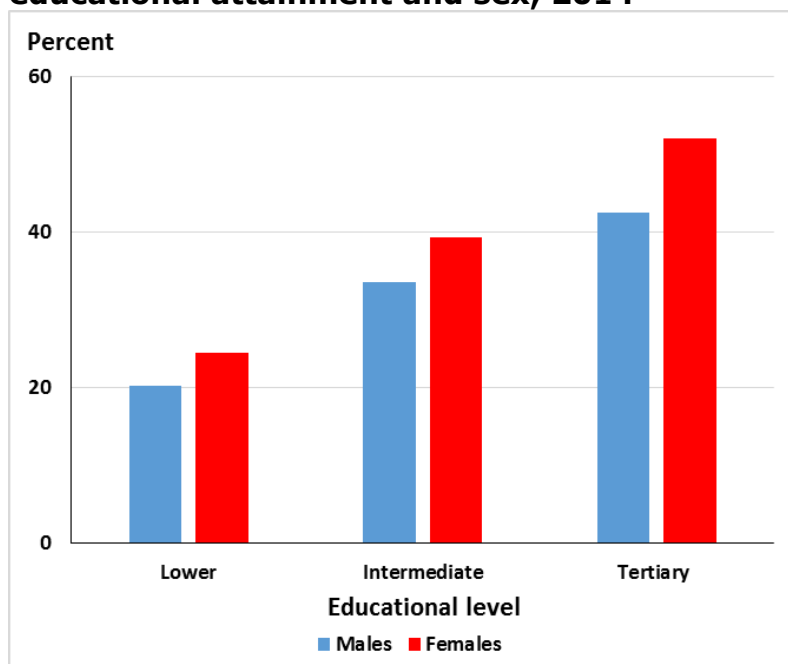
No EU harmonised data available by socio-economic status.

### FRUIT CONSUMPTION AT AGES 18 AND OVER

#### INEQUALITIES WITHIN COUNTRY

The EHIS data show a clear social gradient for fruit consumption among men and women aged 18 or over in Bulgaria. The proportion consuming fruit daily rises as level of educational attainment increases.

#### **Fruit consumption at least daily at ages 18 and over by level of educational attainment and sex, 2014**



Sources, numbers and definitions: See Annex 1

#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

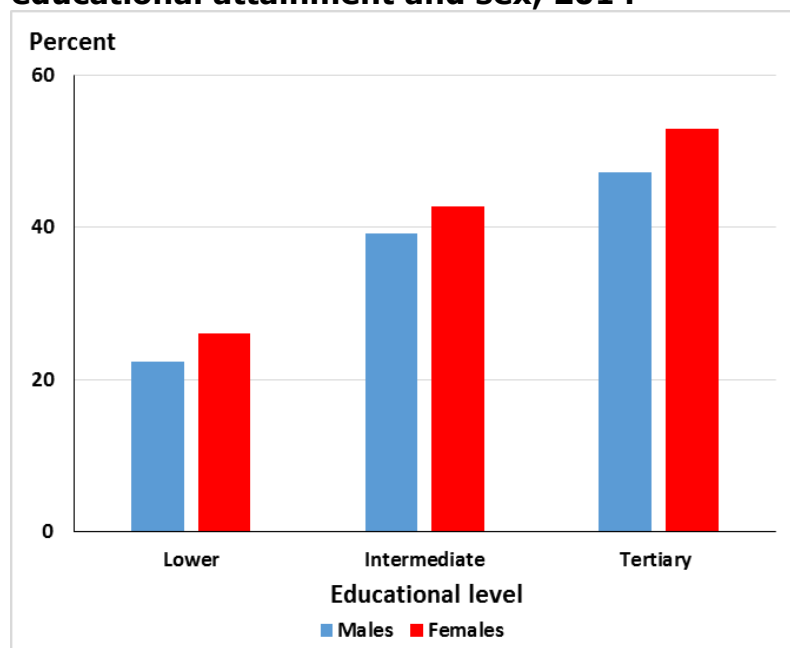
Data from EHIS for the EU as a whole suggest that those with intermediate levels of educational attainment were least likely to eat fruit at least daily at ages 18 and over, with those who attained a tertiary level of education generally most likely to eat fruit at least daily.

## VEGETABLE CONSUMPTION AT AGES 18 AND OVER

### INEQUALITIES WITHIN COUNTRY

The EHIS data show a clear social gradient for vegetable consumption among men and women aged 18 or over in Bulgaria. The proportion consuming vegetables daily rises as educational attainment level increases.

### **Vegetable consumption at least daily at ages 18 and over by level of educational attainment and sex, 2014**



*Sources, numbers and definitions: See Annex 1*

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

Data from EHIS for the EU as a whole suggest that those with intermediate levels of educational attainment were least likely to eat vegetables at least daily at ages 18 and over, with those who attained a tertiary level of education generally most likely to eat vegetables at least daily.

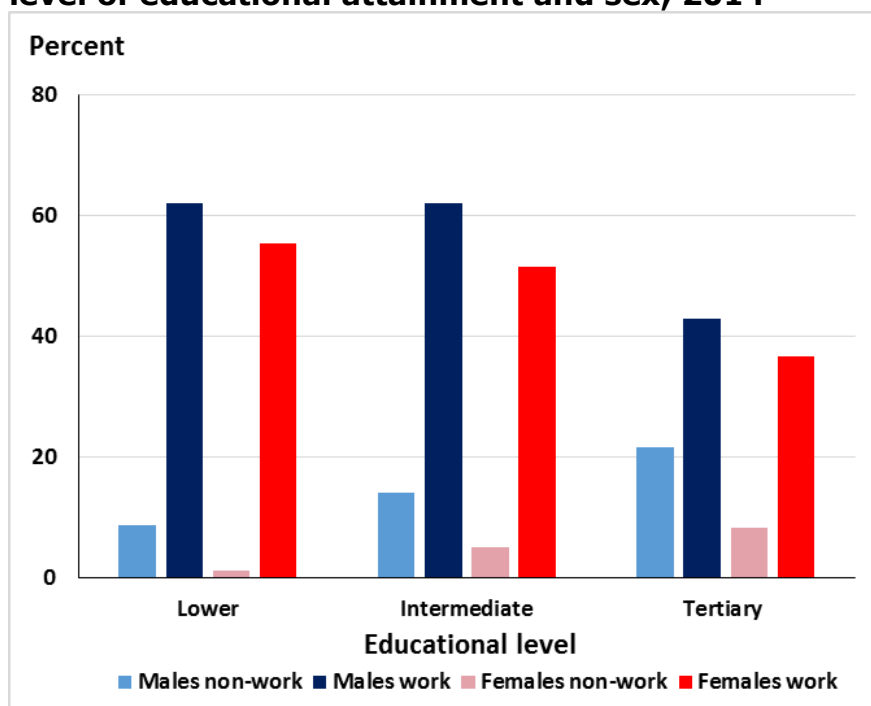
## PHYSICAL ACTIVITY AT AGES 18 AND OVER

### INEQUALITIES WITHIN COUNTRY

The EHIS data suggest that there is a social gradient in physical activity outside of work in Bulgaria for both men and women aged 18 and over. The level of physical activity outside work increases as the level of educational attainment increases. Conversely, in-work physical activity decreases with increased level of educational attainment.



## Work and non-work related physical activity at ages 18 and over by level of educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

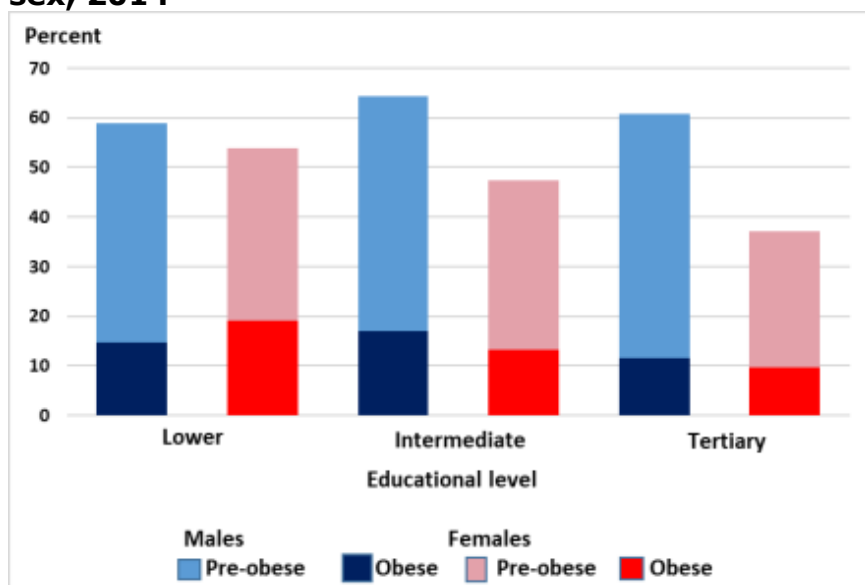
In the EU as a whole, EHIS data suggest that for both men and women there is a marked social gradient in physical activity outside work – the proportion engaging in physical exercise outside work increases with increased levels of educational attainment. Physical activity at work among men and women, aged 18 and over, is most common among those with intermediate levels of educational attainment and least common among those with tertiary education.

## OVERWEIGHT AT AGES 18 AND OVER

### INEQUALITIES WITHIN COUNTRY

For women aged 18 and over in Bulgaria, there is a social gradient in both obesity (BMI of 30 or more) and pre-obesity (BMI of at least 25 but less than 30) - the proportion of women in both categories decreases with increasing levels of educational attainment. Among men, pre-obesity increases with level of educational attainment while obesity is most common among those with intermediate levels of educational attainment.

## Overweight at ages 18 and over by level of educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

For the EU as a whole, there is a social gradient for both men and women in both the proportion who are pre-obese (BMI of at least 25 but less than 30) and obese (BMI of 30 or more) based on EHIS data. That is to say, both decrease as level of educational attainment increases. Among men at this age, however, these differences in levels of pre-obesity by level of educational attainment are small.

### CORONARY HEART DISEASE INCIDENCE

No EU harmonised data available by socio-economic status.

### CORONARY HEART DISEASE DEATHS

No EU harmonised data available by socio-economic status.

### CANCER INCIDENCE

No EU harmonised data available by socio-economic status.

### CANCER DEATHS

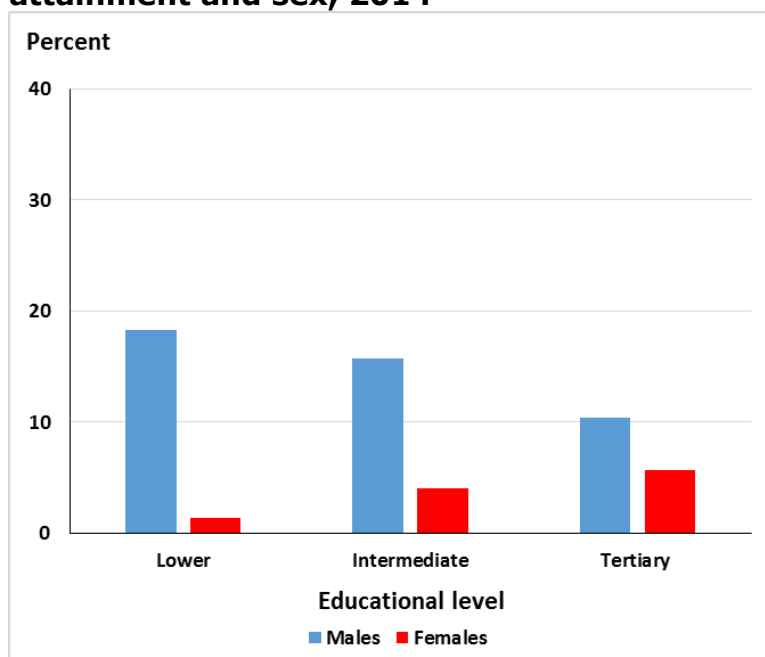
No EU harmonised data available by socio-economic status.

### DAILY ALCOHOL CONSUMPTION AT AGES 18 AND OVER

#### INEQUALITIES WITHIN COUNTRY

EHIS data suggest a social gradient in daily alcohol consumption among men in Bulgaria aged 18 and over. Those with a lower level of educational attainment consume more alcohol daily and those with tertiary education least. For women, the data suggest the reverse pattern of consumption.

## Daily alcohol consumption at ages 18 and over by level of educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

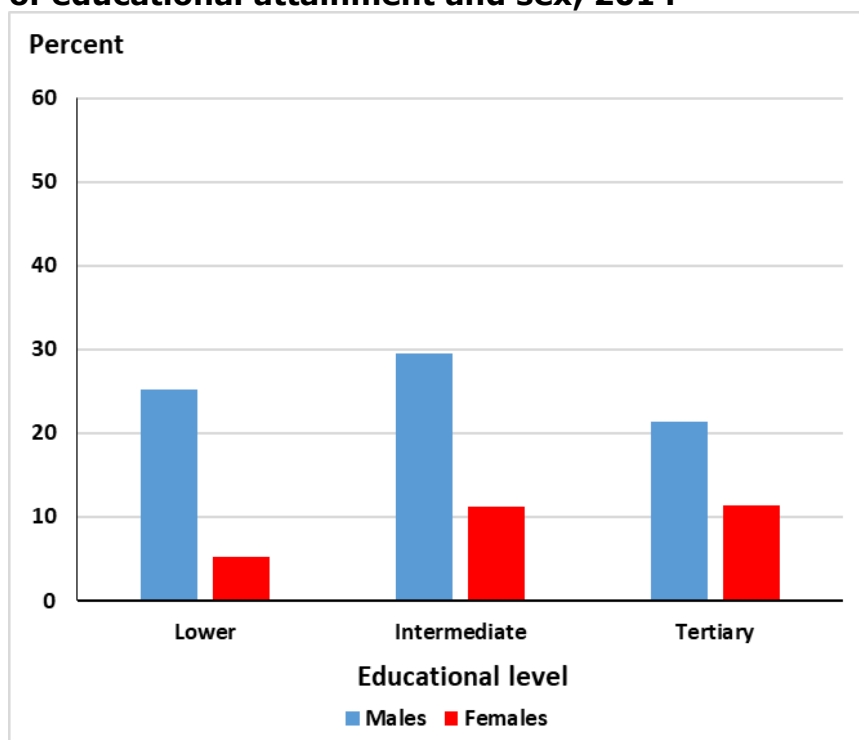
Based on EHIS data, among women aged 18 and over in the EU as a whole, there is a social gradient in the proportion drinking alcohol daily – the figure decreases with the level of education attained. Among men, while the proportion is highest among those with lower levels of educational attainment it is least among those with intermediate levels of educational attainment. The proportion of women drinking every day is around a third of the figure for men.

### HEAVY EPISODIC DRINKING AT AGES 18 AND OVER

#### INEQUALITIES WITHIN COUNTRY

In Bulgaria, EHIS data suggest that at ages 18 and over women with lower levels of educational attainment are less likely to engage in heavy episodic drinking at least monthly than their more highly educated counterparts. Among men those with intermediate levels of educational attainment are the most likely to do so.

## Heavy episodic drinking at least monthly at ages 18 and over by level of educational attainment and sex, 2014



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

Based on EHIS data in the EU as a whole there are no clear social gradients in the proportion drinking heavily at least monthly for both sexes at ages 18 and over. While those with lower levels of educational attainment are markedly less likely than others to drink heavily at least monthly, proportions for those with intermediate levels of educational attainment are slightly higher than for those with tertiary education. The proportion of women drinking heavily at least monthly is less than half the proportion among men.

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### ALCOHOL RELATED CAUTIONS AND ARRESTS

No data by socio-economic status

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### ALCOHOL RELATED DEATHS

No data by socio-economic status

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### RARHA ALCOHOL DATA

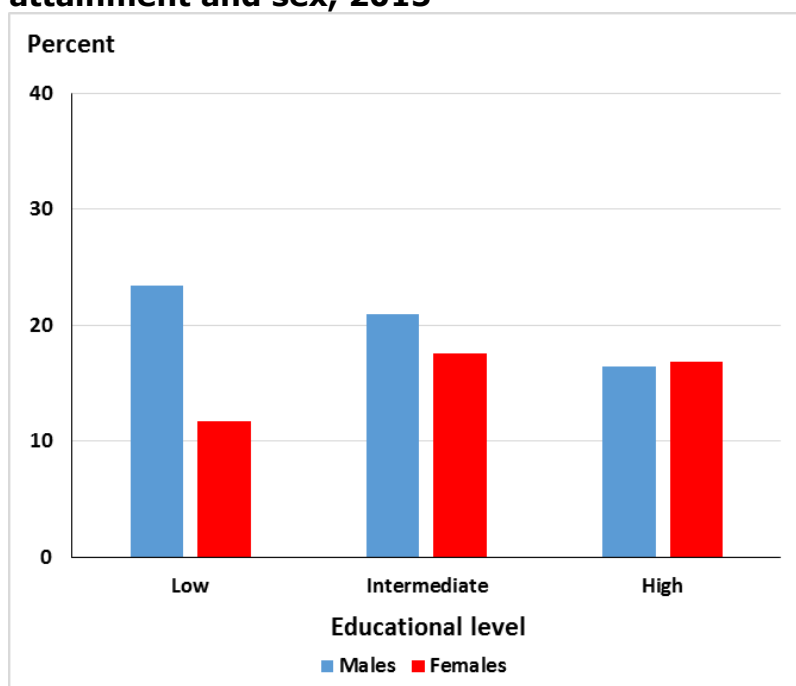
The EU Joint Action on Reducing Alcohol Related Harm Standardised European Alcohol Survey (RARHA SEAS) was a comprehensive survey of alcohol consumption and harm conducted in 17 EU countries and two non-EU countries. Survey data was gathered from representative samples of the general populations aged 18-64.

## DAILY ALCOHOL CONSUMPTION AT AGES 18 TO 64

### INEQUALITIES WITHIN COUNTRY

RARHA survey data for Bulgaria suggest that there is a clear social gradient in the proportion of men aged between 18 and 64 who consume alcohol every day. Conversely, there is a clear reverse social gradient in the proportion of women who do so. As a result, those with low levels of education the proportion of women who consume alcohol daily is around half that of their male counterparts while among those with tertiary education women are marginally more likely to do so.

### Daily alcohol consumption at ages 18 to 64 by level of educational attainment and sex, 2015



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

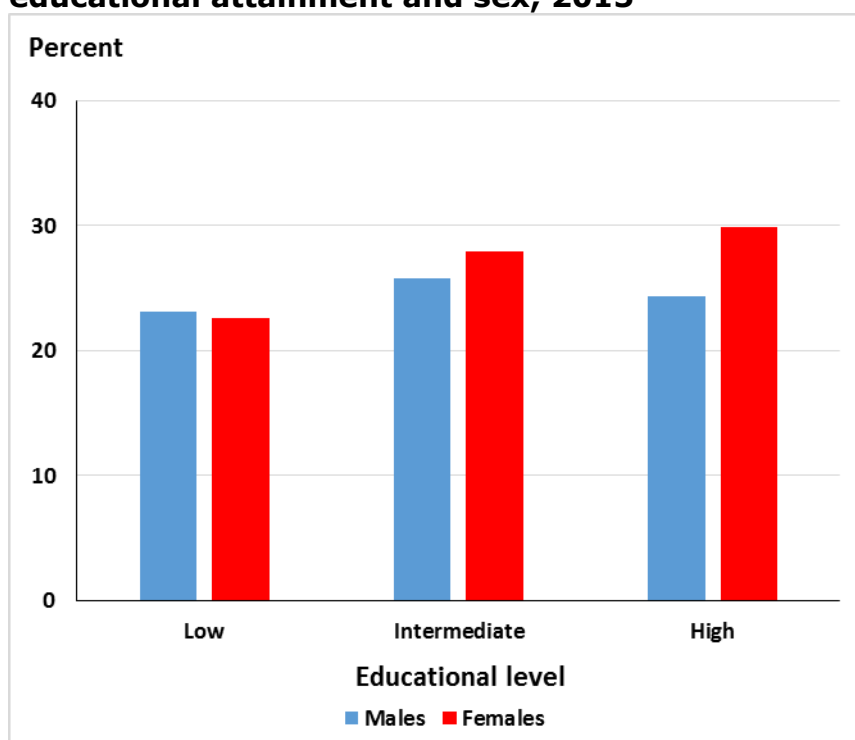
RARHA survey data for the 17 participant EU Member States suggest that there are clear social gradients by educational attainment in the proportions of both men and women aged between 18 and 64 who consume alcohol every day. The gradient is steeper for men than for women and, in each educational attainment category, the proportion of women who drink alcohol daily is less than that for men. Among women with lower levels of educational attainment the proportion drinking every day is less than a third of the figure for their male counterparts.

## HEAVY EPISODIC DRINKING AT LEAST MONTHLY AT AGES 18 TO 64

### INEQUALITIES WITHIN COUNTRY

RARHA survey data for Bulgaria suggest that there is a clear reverse social gradient in the proportion of women aged between 18 and 64 who drink heavily at least monthly. The proportion is least among women with lower levels of educational attainment and greatest among those with tertiary education. Among men the proportion is slightly greater among those with intermediate levels of educational attainment than among other men. Women with intermediate and tertiary levels of educational attainment are more likely to drink heavily at least monthly than men with these levels of educational attainment.

### Heavy episodic drinking at least monthly at ages 18 to 64 by level of educational attainment and sex, 2015



Sources, numbers and definitions: See Annex 1

### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

RARHA survey data for the 17 participant EU Member States suggest that there is a clear reverse social gradient in the proportion of women aged between 18 and 64 who drink heavily at least monthly. The proportion is least among women with lower levels of educational attainment and greatest among those with tertiary education. Among men the proportion is greatest among those with intermediate levels of educational attainment.

## ANNEX

### DATA FOR BULGARIA, SOURCES AND DEFINITIONS

#### INCOME INEQUALITY

**Income** is computed in EU SILC on the basis of the total equivalised disposable income attributed to each member of the household. The data (for each person) are ordered according to the value of the total equivalised disposable income.

#### Equivalised mean income in Euros (PPS) at ages 18 and over by level of educational attainment and sex, 2016

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	5,182	8,675	13,241	Mean equivalised household income (pps) for males and females aged 18 and over
Females	4,779	8,073	12,084	

Source: Eurostat, EU-SILC survey [ilc\_di08]

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_di08&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di08&lang=en)

Accessed 23 March 2018

#### Equivalised median income in Euros (PPS) at ages 18 and over by level of educational attainment and sex, 2016

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	4,377	7,362	10,974	Median equivalised household income (pps) for males and females aged 18 and over
Females	4,086	6,817	9,958	

Source: Eurostat, EU-SILC survey [ilc\_di08]

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_di08&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di08&lang=en)

Accessed 23 March 2018

#### HEALTH AND LIFE EXPECTANCY

##### Life expectancy at birth by level of educational attainment

**Life expectancy** represents the mean number of years still to be lived by a person, if subjected throughout the rest of his or her life to the current mortality conditions (age-specific probabilities of dying).

**Level of educational attainment** is defined according to the [International standard classification of education \(ISCED\)](#). The educational attainment level of an individual is the highest ISCED level successfully completed.

Educational attainment levels are presented for three main categories:

- Lower: Less than primary, primary and lower secondary education (ISCED 2011 levels 0-2)
- Intermediate: Upper secondary and post-secondary non-tertiary education (ISCED 2011 levels 3 and 4)
- Tertiary: Tertiary education (ISCED 2011 levels 5-8)

### Life expectancy at birth by level of educational attainment and sex, 2015

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	66.6	72.3	74.5	Mean number of years still to be lived from birth
Females	74.8	78.7	80.1	

Source: Eurostat [demo\_mlexpecedu]  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_mlexpecedu&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_mlexpecedu&lang=en)  
 Accessed 20 April 2017

### Self reported health by level of educational attainment and income

The European Statistics of Income and Living Condition (EU-SILC) survey contains a small module on health, composed of 3 variables on health status and 4 variables on unmet needs for health care.

The variables on **health status** represent the so called Minimum European Health Module (MEHM), and measures 3 different concepts of health:

- Self-perceived health
- Chronic morbidity (people having a long-standing illness or health problem)
- Activity limitation – disability (self-perceived long-standing limitations in usual activities due to health problems)

In this report the first two health status concepts are used since these are the ones most likely to result from behaviours, rather than inherited disorders, accidents and the relationship between health status and the availability of aids to daily living that mitigate health conditions.

**Educational attainment level:** the level of education attainment of individuals is classified in EU SILC according to the International Standard Classification of Education (ISCED) version of 1997 and are grouped as follows:

- Pre-primary, primary and lower secondary education
- Upper secondary and post-secondary non-tertiary education
- First and second stage of tertiary education



**Income quintile group:** is computed in EU SILC on the basis of the total equivalised disposable income attributed to each member of the household. The data (of each person) are ordered according to the value of the total equivalised disposable income. Four cut-point values (the so-called quintile cut-off points) of income, dividing the survey population into five groups equally represented by 20 % of individuals each, are found:

- First quintile group of equivalised income
- Second quintile group of equivalised income
- Third quintile group of equivalised income
- Fourth quintile group of equivalised income
- Fifth quintile group of equivalised income.

The first quintile group represents 20 % of population with lowest income and the fifth quintile group 20 % of population with highest income.

### Age standardised percentage with good or very good self-perceived health by level of educational attainment and sex, 2016

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	61.62	68.18	73.26	Percent reporting good or very good health, standardised for age using the European Standard Population
Females	54.94	66.25	72.83	

Source: Eurostat [hlth\_silc\_02]

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_silc\\_02&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_silc_02&lang=en)

Accessed 18 March 2018

Note. Age standardisation for males and females in Bulgaria is based on ages 16 to 24, then ten-year age groups up to age 74 and then 75 and over.

### Age standardised percentage with good or very good self-perceived health by income quintile and sex, 2016

	Income Quintile					Definition
	First	Second	Third	Fourth	Fifth	
Males	62.11	62.00	67.54	70.11	75.19	Percent reporting good or very good health, standardised for age using the European Standard Population
Females	56.88	61.36	67.25	67.19	72.94	

Source: Eurostat [hlth\_silc\_10]

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_silc\\_10&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_silc_10&lang=en)

Accessed 18 March 2018

Note: Age standardisation for males and females in Bulgaria is based on ages 16 to 24, then ten-year age groups up to age 74 and then 75 and over.

### Age standardised percentage reporting a long-standing illness or health problem by level of educational attainment and sex, 2016

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	23.40	19.60	16.15	Percent reporting a long-standing illness or health problem, standardised for age using the European Standard Population
Females	27.92	19.97	17.99	

Source: Eurostat [hlth\_silc\_05]

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_silc\\_05&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_silc_05&lang=en)

Accessed 18 March 2018

Note: Age standardisation for males and females in Bulgaria is based on ages 16 to 24, then ten-year age groups up to age 74 and then 75 and over.

### Age standardised percentage reporting a long-standing illness or health problem by income quintile and sex, 2016

	Income quintile					Definition
	First	Second	Third	Fourth	Fifth	
Males	22.37	24.10	21.25	17.24	15.29	Percent reporting a long-standing illness or health problem, standardised for age using the European Standard Population
Females	24.95	23.43	20.84	19.56	18.27	

Source: Eurostat [hlth\_silc\_11]

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_silc\\_11&lang=eneing](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_silc_11&lang=eneing)

Accessed 18 March 2018

Note: Age standardisation for males and females in Bulgaria is based on ages 16 to 24, then ten-year age groups up to age 74 and then 75 and over.

### Age standardised percentage reporting that they have diabetes by level of educational attainment and sex, 2014

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	5.37	6.24	4.71	Percent reporting that they have diabetes, standardised for age using the European Standard Population
Females	7.45	6.49	5.04	

Source: Eurostat [hlth\_silc\_05]

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_ehis\\_cd1e&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_cd1e&lang=en)

Accessed 11 October 2018

Note: Age standardisation for males and females in Bulgaria are based on age groups 15 to 44, 45 to 54, 55 to 64, 65 to 74 and 75 and over.

## LIFECOURSE

### (A) LIFECOURSE STAGE - A GOOD START IN LIFE

**Educational attainment level:** the education attainment levels of individuals are based on data collected in the European Health Interview Survey (EHIS) classified according to the International Standard Classification of Education (ISCED) 2011 and are grouped as above.

#### Women overweight at ages 18-44 by level of educational attainment, 2014

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Pre-obese	23.2	22.2	14.6	Percent with a BMI of at least 25 but less than 30
Obese	9.7	5.3	4.0	Percent with a BMI of 30 or more

Source: Eurostat, [hlth\_ehis\_bm1e], European Health Interview Survey  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_ehis\\_bm1e&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_bm1e&lang=en)  
Accessed 25 April 2017

### B) LIFECOURSE STAGE - AGES 11 TO 15

The Health Behaviour of School Age Children (HBSC) survey 2013/2014 is the principal source of information at ages 11 to 15. To derive their Family Affluence Scale (FAS) the survey used a six-item assessment of common material assets or activities as follows:

(1) summing the score on responses to the following six items:

- Does your family own a car, van or truck? (Responses: no, one, two or more);
- Do you have your own bedroom for yourself? (No, yes);
- How many times did you and your family travel out of [insert country/region name] for a holiday/vacation last year? (Not at all, once, twice, more than twice);
- How many computers do your family own? (None, one, two, more than two);
- Does your family have a dishwasher at home? (No, yes); and
- How many bathrooms (rooms with a bath/shower or both) are in your home? (None, one, two, more than two).

(2) comparing the individual's summary score from the FAS to all other scores in the respective country/region. This relative affluence score is then used to identify groups of young people in the lowest 20% (low affluence), middle 60% (medium affluence) and highest 20% (high affluence) in each country and region.

**Percentage point difference in prevalence of drinking soft-drinks at least once a day between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**

	Percentage point difference	Definition
Boys	-1	Difference in prevalence between those in the low and high affluence groups based on the Family Affluence Scale (FAS)
Girls	2	
<p>Source: HBSC 2016  <a href="https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_6-difference-in-drinking-soft-drinks-by-fas/">https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_6-difference-in-drinking-soft-drinks-by-fas/</a>            Accessed 14 March 2017</p>		

**Percentage point difference in daily fruit consumption between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**

	Percentage point difference	Definition
Boys	12	Difference in prevalence between those in the low and high affluence groups based on the Family Affluence Scale (FAS)
Girls	19	
<p>Source: HBSC 2016  <a href="https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_4-difference-in-eating-fruit-by-fas/">https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_4-difference-in-eating-fruit-by-fas/</a>            Accessed 14 March 2017</p>		

**Percentage point difference in prevalence of reporting at least one hour of moderate or vigorous physical activity daily, between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**

	Percentage point difference	Definition
Boys	1	Difference in prevalence between those in the low and high affluence groups based on the Family Affluence Scale (FAS)
Girls	12	
<p>Source: HBSC 2016  <a href="https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_12-difference-in-moderate-to-vigorous-physical-activity-by-fas/">https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_12-difference-in-moderate-to-vigorous-physical-activity-by-fas/</a>            Accessed 14 March 2017</p>		

**Percentage point difference in those overweight between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**

	Percentage point difference	Definition
Boys	-5	Difference in prevalence between those in the low and high affluence groups based on the Family Affluence Scale (FAS)
Girls	-9	
<p>Source: HBSC 2016  <a href="https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_83-differences-in-bmi-by-fas/">https://gateway.euro.who.int/en/indicators/hbsc-indicators/hbsc_83-differences-in-bmi-by-fas/</a>            Accessed 14 March 2017</p>		

**Percentage point difference in weekly use of alcohol between low and high family affluence groups at ages 11, 13 and 15, by sex, 2013/14**

	Percentage point difference	Definition
Boys	6	Difference in prevalence between those in the low and high affluence groups based on the Family Affluence Scale (FAS)
Girls	11	
<i>Source: HBSC 2016</i> <a href="https://gateway.euro.who.int/en/indicators/hbsc_88-differences-in-alcohol-consumption-by-fas/">https://gateway.euro.who.int/en/indicators/hbsc_88-differences-in-alcohol-consumption-by-fas/</a> Accessed 14 March 2017		

**C) LIFECOURSE STAGE - AGES 15 TO 24**

**ALCOHOL CONSUMPTION REPORTED AT AGES 15 AND 16**

The main purpose of the European School Survey Project on Alcohol and Other Drugs (ESPAD) project is to collect comparable data on substance use among 15 to 16 year- old students in as many European countries as possible. The target group consists of students who turn 16 during the year of data collection, which in 2011 meant students born in 1995. The surveys are conducted in schools in the participating country, during the same period of time and using a common methodology.

**Educational attainment level:** the level of education attainment of mothers is used here, grouped using the classification in ESPAD as follows:

*Lower*

Completed primary school or less  
 Some secondary school

*Intermediate*

Completed secondary school

*Tertiary*

Some college or university  
 Completed college or university

**Percentage of 15 and 16 year old students who drank alcohol in the last month by level of maternal educational attainment and sex, 2011**

	Educational attainment level			Definition
	Lower	Inter- mediate	Tertiary	
Males	54.7	65.4	69.6	Percent who had any alcohol beverage to drink during the last 30 days
Females	41.8	63.4	68.1	

*Source: ESPAD*  
<http://www.espad.org/>  
 Extracted 13 April 2018

**Percentage of 15 and 16 year old students who had ever been drunk by level of maternal educational attainment and sex, 2011**

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	46.8	59	57.7	Percent who have been intoxicated from drinking alcoholic beverages, for example staggered when walking, not being able to speak properly, throwing up or not remembering what happened, in their lifetime
Females	34.6	54.6	57.3	

Source: ESPAD  
<http://www.espad.org/>  
 Extracted 13 April 2018

**Percentage of 15 and 16 year old students who drank heavily on at least one occasion in the last month by level of maternal educational attainment and sex, 2011**

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	50	56.2	49.5	Percent who had five or more drinks on one occasion during the last 30 days
Females	44.9	43.7	40.6	

Source: ESPAD  
<http://www.espad.org/>  
 Extracted 13 April 2018

**Percentage of 15 and 16 year old students who had ever been drunk at age 14 or less by level of maternal educational attainment and sex, 2011**

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	34.5	44.3	37.7	Percent who had first got drunk on alcohol when aged 14 years of age or less
Females	23.5	30.9	41.6	

Source: ESPAD  
<http://www.espad.org/>  
 Extracted 13 April 2018

**Percentage of 15 and 16 year old students who drank alcohol at age 12 or earlier by level of maternal educational attainment and sex, 2011**

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	53.4	67.7	69.5	Percent who first drank at least one glass of alcoholic beverage when aged 12 years of age or less
Females	36.0	53.2	60.5	
<i>Source: ESPAD</i> <a href="http://www.espad.org/">http://www.espad.org/</a> Extracted 13 April 2018				

**DIET AND EXERCISE AT AGES 15 TO 24**

The European Health Interview Survey (EHIS) is the principal source of information at ages 15 and over. The survey consists of four modules on health status, health care use, health determinants and socio-economic background variables. EHIS targets the population aged at least 15 and living in private households.

**Educational attainment level:** the education attainment levels of individuals in EHIS are classified according to the International Standard Classification of Education (ISCED) 2011 and are grouped as follows:

- Lower: less than primary, primary and lower secondary education
- Intermediate: upper secondary and post-secondary non-tertiary
- Tertiary: Tertiary education

**Fruit consumption at least daily at ages 15 to 24 by level of educational attainment and sex, 2014**

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	33.6	34.5	:	Percent consuming fruit at least daily
Females	40.5	39.3	:	
<i>Source: Eurostat [hlth_ehis_fv1e], European Health Interview Survey</i> <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_fv1e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_fv1e&amp;lang=en</a> Accessed 26 April 2017				

### Vegetable consumption at least daily at ages 15 to 24 by level of educational attainment and sex, 2014

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	30.3	42.7	:	Percent consuming vegetables at least daily
Females	37.2	39.1	:	
Source: Eurostat [hlth_ehis_fv1e], European Health Interview Survey <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_fv1e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_fv1e&amp;lang=en</a> Accessed 26 April 2017				

### Work and non-work related physical activity at ages 15 to 24 by level of educational attainment and sex, 2014

	Educational attainment level			Definitions
	Lower	Inter-mediate	Tertiary	
<i>Non-work related physical activity</i>				
Males	45.2	41.4		Percent engaging in health-enhancing aerobic physical activity of 150 or more minutes per week outside work
Females	19.5	25.0		
<i>work-related physical activity</i>				
Males	48.7	45.0		Percent engaging in moderate or heavy physical activity in work.
Females	50.0	41.8		
Source: Eurostat, [hlth_ehis_pe1e, hlth_ehis_pe2e], European Health Interview Survey <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_pe1e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_pe1e&amp;lang=en</a> <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_pe2e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_pe2e&amp;lang=en</a> Accessed 17 April 2017				

### Overweight at ages 15 to 24 by level of educational attainment and sex, 2014

	Educational attainment level			Definitions
	Lower	Inter-mediate	Tertiary	
<i>Pre-obese</i>				
Males	18.7	25.5	:	Percent with BMI that is equivalent to at least 25 but less than 30 at age 19
Females	5.2	11.4	:	
<i>Obese</i>				
Males	2.2	5.9	:	Percent with BMI that is equivalent to 30 or more at age 19
Females	3.1	2.0	:	
Source: Eurostat, [hlth_ehis_bm1e], European Health Interview Survey <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_bm1e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_bm1e&amp;lang=en</a> Accessed 20 April 2017				



## (D) LIFECOURSE STAGE - ADULT BEHAVIOUR

The European Health Interview Survey (EHIS) is the principal source of information at ages 15 and over. The survey consists of four modules on health status, health care use, health determinants and socio-economic background variables. EHIS targets the population aged at least 15 and living in private households.

**Educational attainment level:** the education attainment levels of individuals in EHIS are classified according to the International Standard Classification of Education (ISCED) 2011 and are grouped as follows:

- Lower: less than primary, primary and lower secondary education
- Intermediate: upper secondary and post-secondary non-tertiary
- Tertiary: Tertiary education

### Fruit consumption at least daily at ages 18 and over by level of educational attainment and sex I, 2014

	Educational attainment level			Definition
	Lower	Inter- mediate	Tertiary	
Males	20.2	33.6	42.5	Percent consuming fruit at least daily
Females	24.5	39.4	52.1	

Source: Eurostat [hlth\_ehis\_fv1e], European Health Interview Survey  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_ehis\\_fv1e&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_fv1e&lang=en)  
Accessed 26 April 2017

### Vegetable consumption at least daily at ages 18 and over by level of educational attainment and sex, 2014

	Educational attainment level			Definition
	Lower	Inter- mediate	Tertiary	
Males	22.3	39.2	47.3	Percent consuming vegetables at least daily
Females	26.0	42.7	53.0	

Source: Eurostat [hlth\_ehis\_fv1e], European Health Interview Survey  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_ehis\\_fv1e&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_fv1e&lang=en)  
Accessed 26 April 2017

### Work and non-work related physical activity at ages 18 and over by level of educational attainment and sex, 2014

	Educational attainment level			Definitions
	Lower	Inter-mediate	Tertiary	
<i>Non-work related physical activity</i>				
Males	8.6	14.0	21.5	Percent engaging in health-enhancing aerobic physical activity of 150 or more minutes per week outside work
Females	1.2	5.1	8.2	
<i>Work-related physical activity</i>				
Males	62.0	62.0	42.9	Percent engaging in moderate or heavy physical activity in work.
Females	55.4	51.6	36.6	
Source: Eurostat, [hlth_egis_pe1e, hlth_egis_pe2e], European Health Interview Survey <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_pe1e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_pe1e&amp;lang=en</a> <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_pe2e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_pe2e&amp;lang=en</a> Accessed 17 April 2017				

### Overweight at ages 18 by level of educational attainment and sex, 2014

	Educational attainment level			Definitions
	Lower	Inter-mediate	Tertiary	
<i>Pre-obese</i>				
Males	44.2	47.2	49.1	Percent with BMI at least 25 but less than 30 at age 19
Females	34.6	34.0	27.6	
<i>Obese</i>				
Males	14.7	17.1	11.6	Percent with a BMI of 30 or more
Females	19.2	13.3	9.6	
Source: Eurostat, [hlth_egis_bm1e], European Health Interview Survey <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_bm1e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_bm1e&amp;lang=en</a> Accessed 21 February 2017				

### Daily alcohol consumption at ages 18 and over by level of educational attainment and sex, 2014

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	18.3	15.7	10.4	Percent consuming alcohol at least daily
Females	1.4	4.1	5.7	
Source: Eurostat [hlth_egis_al1e], European Health Interview Survey <a href="http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_al1e&amp;lang=en">http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_egis_al1e&amp;lang=en</a> Accessed 27 April 2017				

### Heavy episodic drinking at least monthly at ages 18 and over by level of educational attainment and sex, 2014

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	25.2	29.6	21.4	Percent ingesting more than 60gm of pure ethanol on a single occasion at least once a month
Females	5.2	11.2	11.4	

Source: Eurostat [hlth\_ehis\_a13], European Health Interview Survey  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_ehis\\_a13e&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_a13e&lang=en)  
 Accessed 26 July 2017

### EU Joint Action on Reducing Alcohol Related Harm Standardised European Alcohol Survey (RARHA SEAS)

RARHA SEAS was a comprehensive survey of alcohol consumption and harm conducted in 17 EU countries and two non-EU countries. Survey data was gathered from representative samples of the general populations aged 18-64. On average 1,500 interviews per country were carried out, most surveys being completed in 2015.

Questions asked included frequency and usual quantity of drinking alcohol and risky single occasion drinking (RSOD) i.e. heavy episodic or binge drinking. It was assumed that drinking 40 grams of 100% alcohol or more per woman and 60 grams or more per man constitutes a threshold of RSOD or heavy episodic drinking.

The survey included a number of social and demographic questions, including "What is the highest school grade you have completed?" Answers to this question have been grouped as follows:

- 1) Less than primary, primary education and lower secondary education (lower)
- 2) Upper secondary (general and vocation), post-secondary non-tertiary education (intermediate)
- 3) Short-cycle tertiary, Bachelors, Masters, Doctoral (tertiary)

### Daily alcohol consumption at ages 18 to 64 by level of educational attainment and sex, 2015

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	23.4	20.9	16.4	Percent consuming alcohol at least daily
Females	11.7	17.6	16.8	

Source: RARHA SEAS  
<http://www.rarha.eu/About/Pages/default.aspx>  
 Accessed 9 April 2018

**Heavy episodic drinking at least monthly at ages 18 to 64 by level of educational attainment and sex, 2015**

	Educational attainment level			Definition
	Lower	Inter-mediate	Tertiary	
Males	23.1	25.8	24.4	Percent drinking 40 grams of 100% alcohol or more per woman and 60 grams or more per man on a single occasion at least once a month
Females	22.6	27.9	29.8	
<p><i>Source: RARHA SEAS</i>  <a href="http://www.rarha.eu/About/Pages/default.aspx">http://www.rarha.eu/About/Pages/default.aspx</a>            Accessed 9 April 2018</p>				

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