

## HEALTH EQUITY PILOT PROJECT

## **United Kingdom**

## 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 the United Kingdom with gradients for the European Union as a whole.

To set this in context, life expectancy in the United Kingdom is slightly greater than that in the EU as a whole for men and slightly less for women –differences of 1.2 and 0.6 years of life, respectively. Healthy life expectancy is slightly less than in the EU as a whole for both males and females – around one year less in both cases. There are substantial income inequalities in the United Kingdom by level of educational attainment.

There are steep gradients in self perceived health by education and income for both men and women - differences are slightly greater than for the EU as a whole. Gradients in long term illness are also steeper than those for the EU as a whole by both education and income. Self-reported diabetes decreases with increased education among both men and women, with similar gradients to the EU as a whole.

Some of the differences in health and behaviours the lead to these differences are apparent from early in life. At ages 15 to 44, the principal reproductive ages, obesity is less common among women with tertiary education than other educational groups and pre-obesity is more common among those with lower levels of education than others. In every educational group, both obesity and pre-obesity are more common than in the EU as a whole. Rates of obesity in girls at ages four to seven decrease as their mother's level of educational attainment increases. Among boys at these ages, those whose mothers have post-secondary education have lower rates of obesity than other boys. At ages 15 to 16, the proportion of male and female students who reported have ever got drunk and those reporting getting drunk at ages 14 or less decreased with increasing level of mother's education, considerably more steeply than in the EU as a whole. Male students whose mothers had low levels of education were much more likely to have drunk alcohol in the last month than others and female students in this group were much more likely than others to have drunk alcohol at ages 12 or less.

Among adults, fruit and vegetable consumption increases with increased levels of educational attainment among both men and women - in all cases much more steeply than for the EU as a whole. For both men and women, physical activity outside work increases with education – with similar gradients to the EU as a whole – and in work physical activity is least common among those with tertiary education, as in the EU as a whole. Obesity decreases with increased level of educational attainment among men and women, with similar gradients to the EU as a whole. Pre-obesity also decreases among women, but less steeply than in the EU as a whole. Heavy drinking monthly increases with increased education among men; among women, those with lower levels of education are less likely to do so than other educational groups. Among women aged 18 to 64, drinking every day decreases with increased education - more sharply than for the EU as a whole. Binge drinking monthly also decreases with increased education, but less sharply than in the EU as a whole. Among men at these ages, both daily drinking and binge drinking are more common among those with lower levels of educational attainment than others.

## INTRODUCTION

This report summarises the data that are available to compare socio-economic inequalities relating to alcohol, nutrition and physical activity in the United Kingdom 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 the United Kingdom**.

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.

<sup>&</sup>lt;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>&</sup>lt;sup>2</sup> Mackenbach, J.P. (2016), <u>Health Inequalities in Europe</u>, Erasmus University Publishing, Rotterdam

## BACKGROUND INFORMATION

The average population of the United Kingdom during 2017 was 65.8 million, slightly less than 13 percent of the figure for the European Union (EU) as a whole. Half of the population was aged under 40 years – the comparable figure for the EU was 42.8 years. Net migration was 3.8 per 1,000 population (2.4 for the EU as a whole). In terms of age dependency, the number aged under 15 or 65 and over was 56 percent of the figure for age 15 to 64 - the comparable figure for the EU was 53.9 per cent.

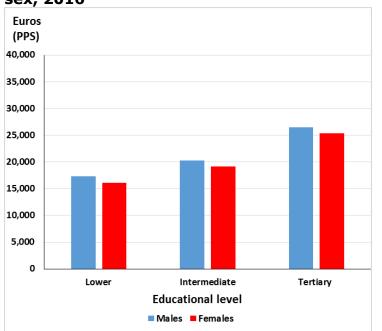
In 2016, life expectancy at birth was 79.4 years for males and 83 years for females – a gender gap of 3.6 years. Comparable figures for the EU were 78.2, 83.6 and 5.4 years. The comparable figures for healthy life years in the United Kingdom were 63.0, 63.1 and 0.1 years (i.e. women stayed healthier for very slightly longer than men in the United Kingdom) and 63.5, 64.2 and 0.7 years for the EU. These figures meant that men in the United Kingdom could expect to spend 16.4 years in ill-health and women 19.9 years – a difference of 3.5 years. The comparable figures for the EU were 14.7 and 19.4 years – a difference of 4.7 years.

## INCOME INEQUALITY

#### INEQUALITIES WITHIN COUNTRY

In terms of income inequality, the Gini coefficient was 31.5 for the United Kingdom compared to 30.8 for the EU. The fifth of the population with the highest incomes received 5.1 times the income of the lowest fifth – the ratio across the EU as a whole was 5.2.

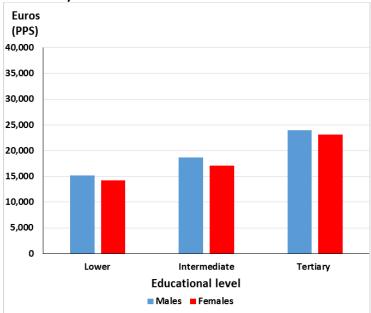
Both equivalised mean and median income per household increased with level of educational attainment in 2016. Average equivalised household income was around 9,200 Euros higher for men with tertiary education than for those with lower levels of educational attainment. For women of this age the difference was similarly around 9,200 Euros. The comparable differences in median income were 8,700 and 8,900 Euros, respectively.



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

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





Sources, numbers and definitions: See Annex

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

Sources, numbers and definitions: See Annex

## INEQUALITIES IN BEHAVIOURS AND OUTCOMES

## HEALTH AND LIFE EXPECTANCY

## LIFE EXPECTANCY

#### INEQUALITIES WITHIN COUNTRY

No EU harmonised data available by socio-economic status for the UK as a whole – available data are for England and Wales, Scotland and Northern Ireland separately.

#### 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.

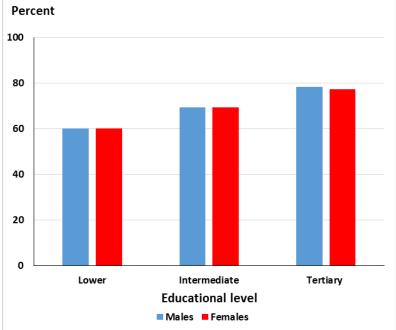
#### SELF PERCEIVED HEALTH

#### (a) By educational attainment

#### INEQUALITIES WITHIN COUNTRY

The data suggest there are clear social gradients in self-perception of good or very good health for both men and women in the United Kingdom by level of educational attainment. Self-reported health of the least educated men is 18 percentage points less than the most educated. For women, the gap is slightly less at 17 percentage points.





Sources, numbers and definitions: See Annex

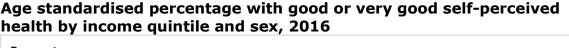
#### COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

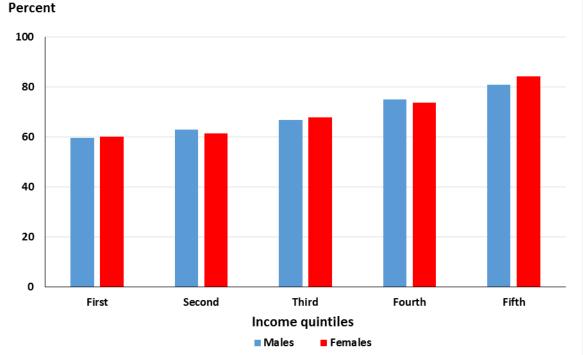
The data suggest there is a clear social gradient in self-perception of good or very good health in the EU as a whole. Self-reported health of the least educated men is 14 percentage points less than the most educated. For women, the gradient is slightly steeper with a gap of 16 percentage points.

## (b) By income

#### INEQUALITIES WITHIN COUNTRY

The data suggest there are clear social gradients in self-perception of good or very good health for both men and women in the United Kingdom by income quintile. Self-reported health of men in the lowest income quintile is 21 percentage points less than those in the top income quintile. For women, the gap is slightly greater at 24 percentage points.





Sources, numbers and definitions: See Annex

## 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.

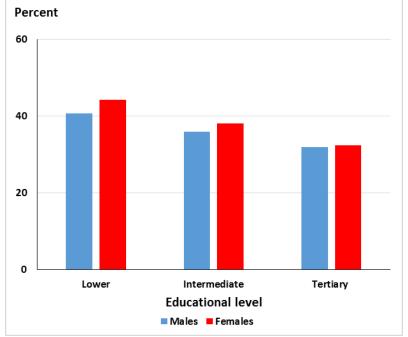
## LONGSTANDING ILLNESS OR HEALTH PROBLEMS

## (a) By educational attainment

#### INEQUALITIES WITHIN COUNTRY

The data suggest there are clear social gradients in reporting a long-standing illness or health problem for both men and women in the United Kingdom by level of educational attainment. Self-reported long-standing illness or health problems of the least educated men is nine percentage points greater than for the most educated. For women, the gap is slightly greater at 12 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

## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

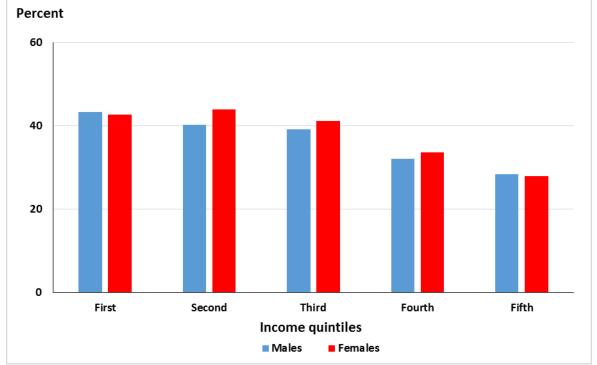
The data suggest that those with tertiary education are much less likely to report a long-standing illness or health problem than those with less educational attainment in the EU as a whole. Reporting of long-standing ill-health is four percentage points lower for the most educated men than for the least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

## (b) By income

#### INEQUALITIES WITHIN COUNTRY

The data suggest there is a clear social gradient in reporting a long-standing illness or health problem for men in the United Kingdom by income quintile. Self-reported long-standing illness or health problems by men in the lowest income quintile is 15 percentage points greater than for those in the top income quintile. For women, there is little difference in reporting between the three lowest income quintiles. However, thereafter self-reporting of long-standing illness or health problems decrease as income level increases. As a result, the gap between the lowest and highest income quintiles is 15 percentage points.

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



Sources, numbers and definitions: See Annex

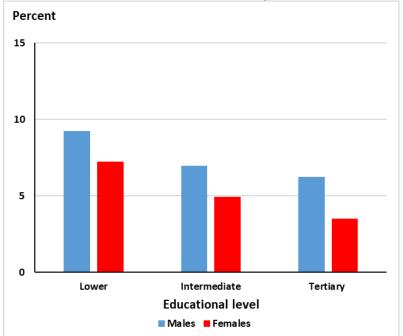
## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

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 higher 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 clear social gradient in self-reporting of diabetes in the United Kingdom by level of educational attainment. Self-reported diabetes among the least educated men is three percentage points greater than for the most educated. For women, the gradient is slightly steeper with a gap of four percentage points.



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

Sources, numbers and definitions: See Annex

#### 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

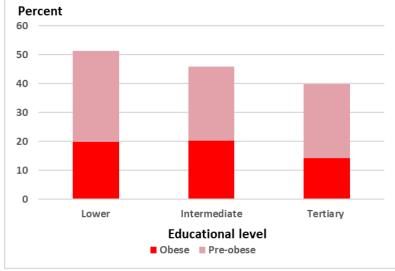
## (A) LIFECOURSE STAGE - A GOOD START IN LIFE

The events at which a good start in life needs to be established include preconception, 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 the United Kingdom, the data suggest that prevalence of obesity is less common among those with tertiary education while pre-obesity is more common among those with lower levels of educational attainment than others.



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

Sources, numbers and definitions: See Annex

## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

For the EU as a whole, there is a social gradient 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.

## INFANT MORTALITY

No EU harmonised data available by socio-economic status for the UK as a whole – available data are for England and Wales, Scotland and Northern Ireland separately.

#### 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.

ALCOHOL CONSUMPTION DURING PREGNANCY No EU harmonised data available by socio-economic status

FOETAL ALCOHOL SPECTRUM DISORDER No EU harmonised data available by socio-economic status

BREAST FEEDING AND COMPLIMENTARY FEEDING No EU harmonised data available by socio-economic status

SUGAR SWEETENED BEVERAGES IN EARLY CHILDHOOD No EU harmonised data available by socio-economic status

SALT CONSUMPTION IN EARLY CHILDHOOD No EU harmonised data available by socio-economic status

SATURATED FAT CONSUMPTION IN EARLY CHILDHOOD No EU harmonised data available by socio-economic status

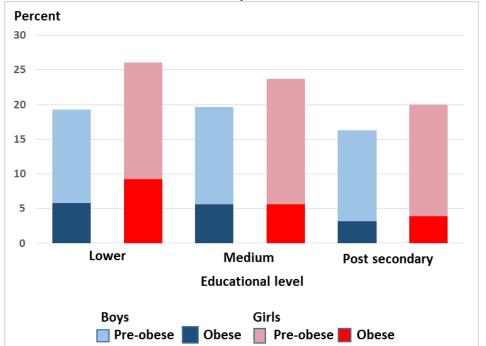
FRUIT CONSUMPTION IN EARLY CHILDHOOD No EU harmonised data available by socio-economic status

VEGETABLE CONSUMPTION IN EARLY CHILDHOOD No EU harmonised data available by socio-economic status

## OVERWEIGHT IN EARLY CHILDHOOD

#### INEQUALITIES WITHIN COUNTRY

Based on a study by Ruiz et al. that included 10 EU Member States, there is a social gradient at ages four to seven years in obesity (BMI value at this age equivalent to 30 or more at age 18) by maternal education for girls in the United Kingdom. Rates of obesity in girls at these ages decrease as their mother's level of educational attainment increases. Among boys, those whose mothers have tertiary education have lower rates of obesity than other boys. Among both boys and girls, there is no clear pattern to pre-obesity (BMI value at this age equivalent to at least 25 but less than 30 at age 18).



## Children overweight at ages four to seven by sex and mother's educational attainment level, born in 1983-2006

Sources, numbers and definitions: See Annex

INEQUALITIES IN THE EU AS A WHOLE

In the majority of the nine countries in the EU for which data are available, at ages four to seven, children whose mothers attained post-secondary education are less likely to be either obese or pre-obese than those whose mothers have lower levels of educational attainment.

## 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

There are no EU harmonised data available by socio-economic status for the UK as a whole – available data are for England, Scotland and Wales separately

#### 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.

### SALT CONSUMPTION AT AGES 11 TO 15

No EU harmonised data available by socio-economic status

#### SATURATED FAT CONSUMPTION AT AGES 11 TO 15

No EU harmonised data available by socio-economic status

#### FRUIT CONSUMPTION AT AGES 11 TO 15

There are no EU harmonised data available by socio-economic status for the UK as a whole – available data are for England, Scotland and Wales separately

#### 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

There are no EU harmonised data available by socio-economic status for the UK as a whole – available data are for England, Scotland and Wales separately.

#### 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

There are no EU harmonised data available by socio-economic status for the UK as a whole – available data are for England, Scotland and Wales separately

#### 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.

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

There are no EU harmonised data available by socio-economic status for the UK as a whole – available data are for England, Scotland and Wales separately

#### 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

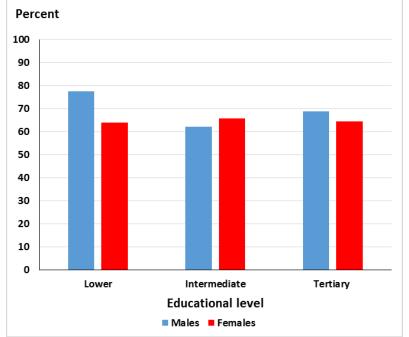
The main purpose of the European School Survey Project on Alcohol and Other Drugs (ESPAD) project is to collect comparable data on substance use among 15 to 16 year- old students in as many European countries as possible. The target group consists of students who turn 16 during the year of data collection, 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 the United Kingdom to the average for all survey participants in the EU.

## DRANK ALCOHOL IN THE LAST MONTH

#### INEQUALITIES WITHIN COUNTRY

The percentage of female students aged 15 to 16 years who drank alcohol in the preceding month differed little by level of maternal educational attainment in the United Kingdom. For male students those whose mothers had lower levels of educational attainment were most likely to have drunk alcohol in the previous month.



## 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

### 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

The percentage of male and female students aged 15 to 16 years who had ever been drunk in their lifetime decreased with increased level of maternal educational attainment in the United Kingdom. For males and females there were twelve and eight percentage point differences, respectively, between those whose mothers had lower levels of educational attainment and those whose mothers had tertiary education.

## Percent 100 90 80 70 60 50 40 30 20 10 0 Lower Intermediate Tertiary Educational Males Females

# 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* 

COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

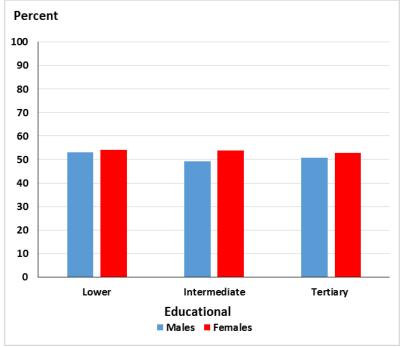
The percentage of participating EU students aged 15 to 16 years who had ever been drunk in their lifetime differed little by level of maternal educational attainment. For both males and females, it was slightly greater for those whose mothers had intermediate levels of educational attainment and slightly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

## HEAVY DRINKING IN THE LAST MONTH

#### INEQUALITIES WITHIN COUNTRY

The percentage of female students aged 15 to 16 years who had five or more drinks on one occasion in the previous month was similar for all levels of maternal educational attainment in the United Kingdom. For males there was slightly more variation, with the percentage who had five or more drinks on one occasion in the previous month greatest for those with mothers with lower levels of educational attainment.

#### 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

## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

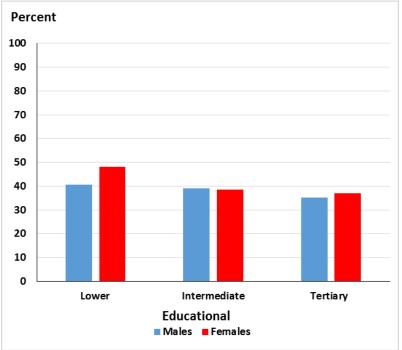
The percentage of participating EU students aged 15 to 16 years who had five or more drinks on one occasion in the previous month decreased with increased level of maternal educational attainment, with a six percentage point difference between lower levels of maternal educational attainment and tertiary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

## GOT DRUNK AT AGE 14 OR LESS

#### INEQUALITIES WITHIN COUNTRY

The percentage of students aged 15 to 16 years who got drunk at age 14 or less decreased with level of maternal educational attainment for both males and females in the United Kingdom. There were six and 11 percentage point differences among male and female students, respectively, between those whose mothers had lower levels of educational attainment and those whose mothers had tertiary education.

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

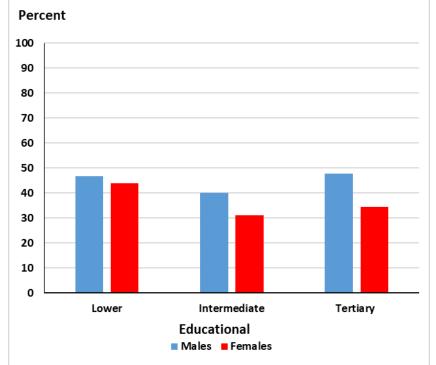
## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

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 male students aged 15 to 16 years who had first drunk alcohol at age 12 or less was less among those whose mothers had intermediate levels of educational attainment than others. Among female students at these ages, those whose mothers had lower levels of educational attainment were more likely than others to have first drunk alcohol at age 12 or less.



# 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

*Sources, numbers and definitions: See Annex* 

## 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

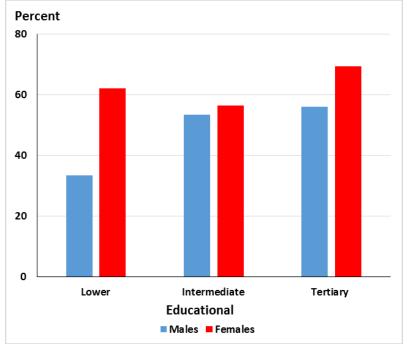
SATURATED FAT CONSUMPTION AT AGES 15 TO 24 No EU harmonised data available by socio-economic status

## FRUIT CONSUMPTION AT AGES 15 TO 24

### INEQUALITIES WITHIN COUNTRY

Data from EHIS suggest that, for men at ages 15 to 24 in the United Kingdom, there is a social gradient in fruit consumption at least daily by level of educational attainment. The proportion consuming fruit at least daily increases with level of educational attainment (although many in this age group will not have attained their final lifetime level of education). Among women at these ages, the proportion consuming fruit at least daily is lowest among those with intermediate levels of educational attainment.

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



Sources, numbers and definitions: See Annex

## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

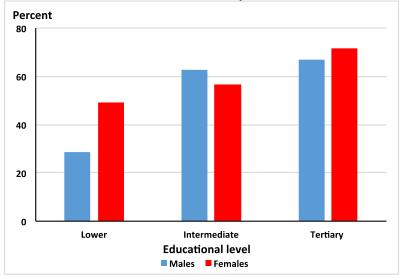
Data from EHIS for the EU as a whole suggest that there are consistent gradients in vegetable consumption among young men and women aged 15 to 24, with those who attained a tertiary level of education most likely to eat fruit at least daily. However, many in this age group will not have attained their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

## VEGETABLE CONSUMPTION AT AGES 15 TO 24

#### INEQUALITIES WITHIN COUNTRY

Data from EHIS suggest that there are clear social gradients, for both men and women at ages 15 to 24 in the United Kingdom, in vegetable consumption at least daily by level of educational attainment. The proportion consuming fruit at least daily increases with level of educational attainment (although many in this age group will not have attained their final lifetime level of education).

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



*Sources, numbers and definitions: See Annex* 

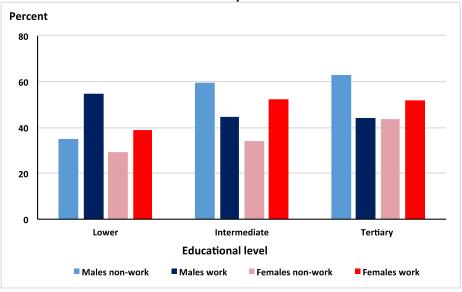
## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

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

EHIS data suggest that, among both men and women in the United Kingdom at ages 15 to 24, physical activity outside work increases with increased level of educational attainment (although many in this age group will not have attained their final lifetime level of education). Among men at these ages, in- work physical activity is more common among those with lower levels of educational attainment than others while, among women at these ages, it is less common among those with lower levels of educational attainment than others.



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

*Sources, numbers and definitions: See Annex* 

## 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.

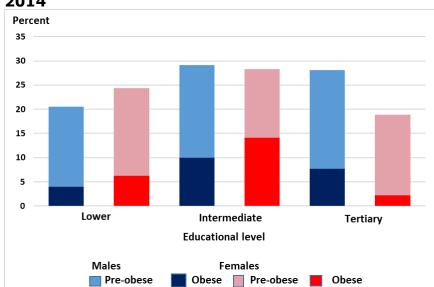
Physical activity outside work similarly shows no clear relationship with educational attainment level, at ages 15 to 24 across the EU as a whole. Those with intermediate levels of educational attainment are least likely to engage in significant physical activity outside work at these ages.

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

EHIS data show that, among men at ages 15 to 24 in the United Kingdom, the rate of pre-obesity (equivalent to BMI of at least 25 but less than 30 at age 19) increases as level of educational attainment increases (although many in this age group will not have attained their final lifetime level of education). Among women at these ages, pre-obesity is less common among those with intermediate levels of educational attainment than others. On the other hand, rates of obesity (equivalent to BMI of at least 30 at age 19) are highest for both sexes among those with intermediate levels of educational attainment.



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

Sources, numbers and definitions: See Annex

## 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

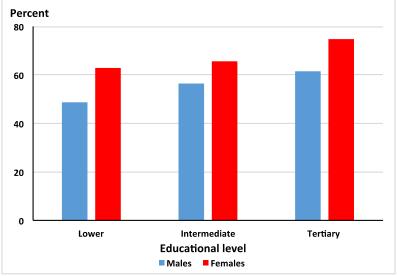
No EU harmonised data available by socio-economic status

## FRUIT CONSUMPTION AT AGES 18 AND OVER

INEQUALITIES WITHIN COUNTRY

EHIS data suggest there are clear social gradients among both men and women at ages 18 and over in the United Kingdom in daily fruit consumption. The proportion consuming fruit at least daily increases with increased level of educational attainment.

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



Sources, numbers and definitions: See Annex

## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

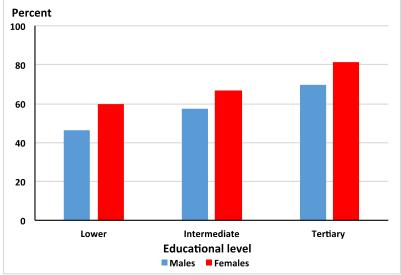
Data from EHIS for the EU as a whole suggest that those with intermediate levels of educational attainment were least likely to eat fruit at least daily at ages 18 and over, with those who attained a tertiary level of education generally most likely to eat fruit at least daily.

## VEGETABLE CONSUMPTION AT AGES 18 AND OVER

#### INEQUALITIES WITHIN COUNTRY

EHIS data suggest there are clear social gradients among both men and women at ages 18 and over in the United Kingdom in daily vegetable consumption. The proportion consuming vegetables at least daily increases with increased level of educational attainment.

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



Sources, numbers and definitions: See Annex

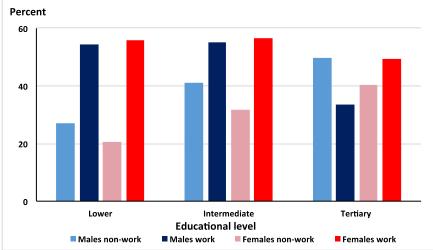
## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

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

EHIS data suggest that, for both men and women in the United Kingdom at ages 18 and over, there is a marked social gradient in physical activity outside work – rates increase with increased level of educational attainment. For both men and women at these ages, in-work physical activity is least common among those with tertiary education.



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

Sources, numbers and definitions: See Annex

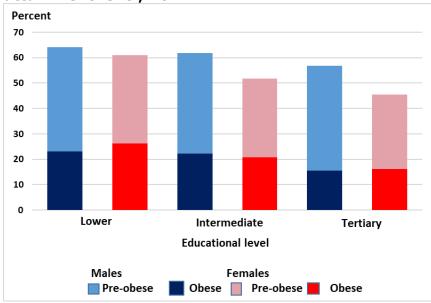
## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

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

In the United Kingdom, EHIS data suggest there are clear social gradients among women aged 18 and over in both obesity (BMI of at least 30) and preobesity (BMI of at least 25 but less than 30) by level of educational attainment. Both decrease with increased level of educational attainment. Among men at these ages, obesity is less common among those with tertiary education than others but there is no consistent relationship in pre-obesity



## Adults overweight at ages 18 and over by sex and educational attainment level, 2014

Sources, numbers and definitions: See Annex

## 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

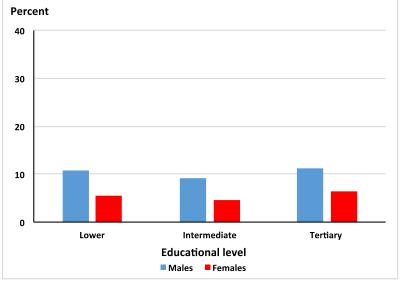
## CANCER DEATHS

No EU harmonised data available by socio-economic status

## DAILY ALCOHOL CONSUMPTION AT AGES 18 AND OVER

#### INEQUALITIES WITHIN COUNTRY

Based on EHIS data, there is no consistent association between daily alcohol consumption and level of educational attainment, for either men or women at ages 18 and over in the United Kingdom. For both sexes, daily consumption is slightly less common among those who had intermediate levels of educational attainment than others.



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

*Sources, numbers and definitions: See Annex* 

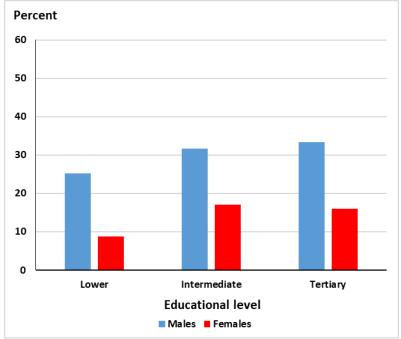
## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

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 the United Kingdom, EHIS data suggest that for men aged 18 and over, heavy episodic drinking at least monthly increases with increased level of educational attainment. For women at these ages, the rate is lower among those with lower levels of educational attainment than others.



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

Sources, numbers and definitions: See Annex

## 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.

## ALCOHOL RELATED CAUTIONS AND ARRESTS

No EU harmonised data available by socio-economic status

## ALCOHOL RELATED DEATHS

No EU harmonised data available by socio-economic status

## RARHA ALCOHOL DATA

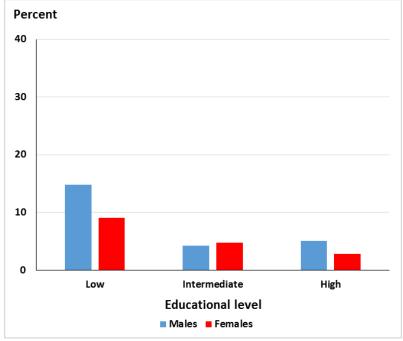
The EU Joint Action on Reducing Alcohol Related Harm Standardised European Alcohol Survey (RARHA SEAS) was a comprehensive survey of alcohol consumption and harm conducted in 17 EU countries and two non-EU countries. Survey data was gathered from representative samples of the general populations aged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

## DAILY ALCOHOL CONSUMPTION AT AGES 18 TO 64

#### INEQUALITIES WITHIN COUNTRY

RARHA survey data for United Kingdom suggest that there is a clear social gradient in the proportion of women aged between 18 and 64 who consume alcohol every day. Among men at these ages, those with low levels of educational attainment are markedly more likely to consume alcohol daily than others.

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



Sources, numbers and definitions: See Annex

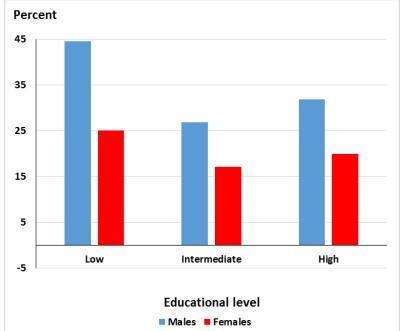
## COMPARISON WITH INEQUALITIES IN THE EU AS A WHOLE

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 United Kingdom suggest that, among both men and women at ages 15 to 64, those with intermediate education are least likely to drink heavily at least monthly and those with low levels of educational attainment are most likely to do so.



# 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

## 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 THE UNITED KINGDOM, 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-<br>mediate | Tertiary |   |  |
| Males   | 17,307                       | 20,257            | 26,531   | Mean equivalised household                          |  |
| Females   | 16,121                       | 19,180            | 25,363   | income (pps) for males and females aged 18 and over |  |
| Source: Eurostat, EU-SILC survey [ilc_di08]<br>http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di08⟨=en<br>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 |                   | ment level | Definition  |
|--|------------------------------|-------------------|------------|---|
|  | Lower                        | Inter-<br>mediate | Tertiary   |   |
| Males                                      | 15,196                       | 18,715            | 23,942     | Median equivalised household                        |
| Females                                    | 14,265                       | 17,051            | 23,143     | income (pps) for males and females aged 18 and over |
| Source: Eurostat EU SILC survey [ils di09] |                              |                   |            |   |

Source: Eurostat, EU-SILC survey [ilc\_di08] http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\_di08&lang=en Accessed 23 March 2018

## 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 three variables on health status and four variables on unmet needs for health care.

The variables on **health status** represent the so called Minimum European Health Module (MEHM), and measures three 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

|         | Educatio | onal attain | ment level | Definition   |
|---------|----------|-------------|------------|--|
|         | Lower    | Inter-      | Tertiary   |  |
|         |          | mediate     |            |  |
| Males   | 60.20    | 69.19       | 78.31      | Percent reporting good or very   |
| Females | 60.09    | 69.36       | 77.33      | good health, standardised for age<br>using the European Standard<br>Population |

Source: Eurostat [hlth\_silc\_02]

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 the United Kingdom 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  | Secon<br>d | Third      | Fourth | Fifth |   |
| Males   | 59.55  | 62.92      | 66.79      | 74.92  | 80.73 | Percent reporting good<br>or very good health,                    |
| Females | 60.14  | 61.26      | 67.86      | 73.60  | 84.19 | standardised for age<br>using the European<br>Standard Population |

Source: Eurostat [hlth\_silc\_10]

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 the United Kingdom 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-<br>mediate | Tertiary |  |
| Males   | 40.65                        | 35.97             | 31.94    | Percent reporting a long-  |
| Females | 44.28                        | 38.01             | 32.32    | standing illness or health<br>problem, standardised for age<br>using the European Standard<br>Population |

Source: Eurostat [hlth\_silc\_05]

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 the United Kingdom 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 | e quintile | Definition |        |       |  |
|---------|--------|------------|------------|--------|-------|--|
|         | First  | Second     | Third      | Fourth | Fifth |  |
| Males   | 43.35  | 40.18      | 39.11      | 32.10  | 28.31 | Percent reporting a  |
| Females | 42.65  | 43.88      | 41.05      | 33.56  | 27.84 | long-standing<br>illness or health<br>problem,<br>standardised for<br>age using the<br>European Standard<br>Population |

Source: Eurostat [hlth\_silc\_11] 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 the United Kingdom 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

|         | Educatio | onal attainme     | Definition |  |
|---------|----------|-------------------|------------|--|
|         | Lower    | Inter-<br>mediate | Tertiary   |  |
| Males   | 9.21     | 6.95              | 6.24       | Percent reporting that   |
| Females | 7.24     | 4.91              | 3.52       | they have diabetes,<br>standardised for age<br>using the European<br>Standard Population |

Source: Eurostat [hlth\_silc\_05]

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 the United Kingdom 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 lev    | Definition      |  |
|--------------|------------------|-------------------|-----------------|--|
|              | Lower            | Inter-<br>mediate | Tertiary        |  |
| Pre-obese    | 31.5             | 25.8              | 25.6            | Percent with a BMI of<br>at least 25 but less<br>than 30 |
| Obese        | 19.8             | 20.2              | 14.2            | Percent with a BMI of 30 or more                         |
| Source: Euro | stat, [hlth_ehis | _bm1e], Europe    | ean Health Inte | rview Survey   |

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

#### OVERWEIGHT IN EARLY CHILDHOOD

Ruiz et al. (2016) defined overweight cases using the age and gender-specific thresholds for BMI recommended by the International Obesity Task Force (IOTF) in each national cohort, which correspond to a BMI value of  $25 \text{ kg/m}^2$  at 18 years of age. Obese cases in each cohort were also defined by the IOTF as the age-and gender-specific BMI values that are comparable to an adult BMI value of 30 kg/m<sup>2</sup>.

Maternal education was ascertained at entry to each cohort study, either during pregnancy or near the time of birth. The country-specific coding scheme provided by ISCED-1997 was used to classify mothers into the following categories:

- post-secondary non-tertiary to second stage of tertiary education (ISCED 4–6),
- upper secondary education (ISCED 3), and
- pre-primary to lower secondary or second stage of basic education (ISCED 0–2).

# Children overweight at ages four to seven by level of maternal educational attainment and sex, born in 1983-2006

|                                  | Educatior   | nal attainn | nent level | Definitions                          |  |  |
|----------------------------------|---|-------------|------------|--------------------------------------|--|--|
|                                  | Lower   | Inter-      | Tertiary   |                                      |  |  |
|                                  |   | mediate     |            |                                      |  |  |
| Pre-obese                        |   |             |            |                                      |  |  |
| Boys                             | 13.5  | 14.0        | 13.1       | Percent with BMI that is equivalent  |  |  |
| Girls                            | 16.9  | 18.1        | 16.1       | to at least 25 but less than 30 at   |  |  |
|                                  |   |             |            | age 18                               |  |  |
| Obese                            |   |             |            |                                      |  |  |
| Boys                             | 5.8   | 5.6         | 3.2        | Percent with BMI that is equivalent  |  |  |
| Girls                            | 9.2   | 5.6         | 3.9        | to 30 or more at age 18              |  |  |
| Source: Ruiz                     | r et al (20   | 16) Impact  | t of Low M | aternal Education on Early Childhood |  |  |
| Overweight and Obesity in Europe |   |             |            |                                      |  |  |
|                                  | http://onlinelibrary.wiley.com/doi/10.1111/ppe.12285/full |             |            |                                      |  |  |
| Accessed 25                      | April 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

|   | Education | al attainment     | t level  | Definition  |  |  |  |
|---|-----------|-------------------|----------|---|--|--|--|
|   | Lower     | Inter-<br>mediate | Tertiary |   |  |  |  |
| Males   | 77.4      | 62.2              | 68.8     | Percent who had any                                     |  |  |  |
| Females   | 64.0      | 65.8              | 64.5     | alcohol beverage to<br>drink during the last 30<br>days |  |  |  |
| Source: ESPAD<br>http://www.espad.org/<br>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

|                 | Education | nal attainment    | t level  | Definition  |  |  |  |  |
|-----------------|-----------|-------------------|----------|---|--|--|--|--|
|                 | Lower     | Inter-<br>mediate | Tertiary |   |  |  |  |  |
| Males           | 62.5      | 53.0              | 50.5     | Percent who have been   |  |  |  |  |
| Females         | 63.3      | 57.2              | 54.9     | intoxicated from drinking<br>alcoholic beverages, for<br>example staggered when<br>walking, not being able to<br>speak properly, throwing<br>up or not remembering<br>what happened, in their<br>lifetime |  |  |  |  |
| Source: ESPAD   |           |                   |          |   |  |  |  |  |
| http://www.espa |           |                   |          |   |  |  |  |  |
| Extracted 13 Ap | ril 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

|               | Educatio | nal attainm       | nent level | Definition                                     |  |  |
|---------------|----------|-------------------|------------|--|--|--|
|               | Lower    | Inter-<br>mediate | Tertiary   |  |  |  |
| Males         | 53.1     | 49.2              | 50.8       | Percent who had five or more                   |  |  |
| Females       | 54.0     | 53.7              | 52.7       | drinks on one occasion during the last 30 days |  |  |
| Source: ESPAD |          |                   |            |  |  |  |

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

|   | Education | al attainment     | Definition |   |  |  |  |
|---|-----------|-------------------|------------|---|--|--|--|
|   | Lower     | Inter-<br>mediate | Tertiary   |   |  |  |  |
| Males   | 40.6      | 39.0              | 35.1       | Percent who had first got                             |  |  |  |
| Females   | 48.0      | 38.6              | 37.0       | drunk on alcohol when<br>aged 14 years of age or less |  |  |  |
| Source: ESPAD<br>http://www.espad.org/<br>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

|   | Education | al attainment     | Definition |   |  |  |  |
|---|-----------|-------------------|------------|---|--|--|--|
|   | Lower     | Inter-<br>mediate | Tertiary   |   |  |  |  |
| Males   | 46.9      | 40.0              | 47.7       | Percent who first drank at  |  |  |  |
| Females   | 44.0      | 31.1              | 34.6       | least one glass of alcoholic<br>beverage when aged 12<br>years of age or less |  |  |  |
| Source: ESPAD<br>http://www.espad.org/<br>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  | ower Inter- Tertiary |      |                                  |  |  |
|              |  | mediate              |      |                                  |  |  |
| Males        | 33.5   | 53.5                 | 56.1 | Percent consuming fruit at least |  |  |
| Females      | 62.2   | 56.4                 | 69.3 | daily                            |  |  |
| Source: Euro | Source: Eurostat [blth abis fula] European Health Interview Survey |                      |      |                                  |  |  |

Source: Eurostat [hlth\_ehis\_fv1e], European Health Interview Survey 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 15 to 24 by level of educational attainment and sex, 2014

| · · · · · · · · · · · · · · · · · · ·                                      |   |                 | /    |                                 |  |  |
|--|---|-----------------|------|---------------------------------|--|--|
|  | Educational attainment level  |                 |      | Definition                      |  |  |
|  | Lower   | Inter- Tertiary |      |                                 |  |  |
|  |   | mediate         |      |                                 |  |  |
| Males  | 28.8  | 62.6            | 66.9 | Percent consuming vegetables at |  |  |
| Females  | 49.4  | 56.6            | 71.5 | least daily                     |  |  |
| Source: Euro   | Source: Eurostat [hlth_ehis_fv1e], European Health Interview Survey |                 |      |                                 |  |  |
| http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_fv1e⟨=en |   |                 |      |                                 |  |  |
| Accessed 26  | 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-      | Tertiary |  |
|   |                              | mediate     |          |  |
| Non-work rel  | ated physic                  | al activity |          |  |
| Males   | 35.1                         | 59.3        | 63.0     | Percent engaging in health-  |
| Females   | 29.1                         | 34.1        | 43.7     | enhancing aerobic physical activity of 150 or more minutes per week outside work |
| work-related  | physical ac                  | tivity      |          |  |
| Males   | 54.9                         | 44.8        | 43.9     | Percent engaging in moderate or  |
| Females   | 38.7                         | 52.5        | 51.8     | heavy physical activity in work.   |
| Source: Eurostat, [hlth_ehis_pe1e, hlth_ehis_pe2e], European Health Interview<br>Survey |                              |             |          |  |

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\_ehis\_pe1e&lang=en http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\_ehis\_pe2e&lang=en Accessed 17 April 2017

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

|  | Educational attainment level |         |          | Definitions                         |  |  |
|--|------------------------------|---------|----------|-------------------------------------|--|--|
|  | Lower                        | Inter-  | Tertiary |                                     |  |  |
|  |                              | mediate | _        |                                     |  |  |
| Pre-obese  |                              |         |          |                                     |  |  |
| Males  | 16.5                         | 19.1    | 20.4     | Percent with BMI that is equivalent |  |  |
| Females  | 18.2                         | 14.2    | 16.7     | to at least 25 but less than 30 at  |  |  |
|  |                              |         |          | age 19                              |  |  |
| Obese  |                              |         |          |                                     |  |  |
| Males  | 4.0                          | 10.0    | 7.7      | Percent with BMI that is equivalent |  |  |
| Females  | 6.2                          | 14.1    | 2.2      | to 30 or more at age 19             |  |  |
| Source: Eurostat, [hlth_ehis_bm1e], European Health Interview Survey       |                              |         |          |                                     |  |  |
| http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_bm1e⟨=en |                              |         |          |                                     |  |  |
| Accessed 2   | 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, 2014

|   | Educational attainment level |                     |      | Definition                       |
|---|------------------------------|---------------------|------|----------------------------------|
|   | Lower                        | wer Inter- Tertiary |      |                                  |
|   |                              | mediate             | _    |                                  |
| Males   | 48.8                         | 56.5                | 61.3 | Percent consuming fruit at least |
| Females 62.7 65.4 74.7 daily  |                              |                     |      |                                  |
| Source: Eurostat [hlth_ehis_fv1e], European Health Interview Survey |                              |                     |      |                                  |

*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-  | Tertiary |                                 |
|   |                              | mediate |          |                                 |
| Males   | 46.5                         | 57.5    | 69.8     | Percent consuming vegetables at |
| Females   | 59.6                         | 66.9    | 81.1     | least daily                     |
| Source: Eurostat [hlth_ehis_fv1e], European Health Interview Survey |                              |         |          |                                 |

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-<br>mediate | Tertiary |  |  |
| Non-work rel  | ated physica                 | al activity       |          |  |  |
| Males   | 26.9                         | 41.1              | 49.7     | Percent engaging in health-  |  |
| Females   | 20.5                         | 31.9              | 40.2     | enhancing aerobic physical<br>activity of 150 or more minutes<br>per week outside work |  |
| Work-related  | physical ac                  | tivity            |          |  |  |
| Males   | 54.4                         | 55.1              | 33.4     | Percent engaging in moderate or  |  |
| Females   | 55.7                         | 56.7              | 49.4     | heavy physical activity in work.   |  |
| Source: Eurostat, [hlth_ehis_pe1e, hlth_ehis_pe2e], European Health Interview<br>Survey |                              |                   |          |  |  |

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\_ehis\_pe1e&lang=en http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\_ehis\_pe2e&lang=en Accessed 17 April 2017

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

|           | Educatio | nal attainme      | Definitions |                             |
|-----------|----------|-------------------|-------------|-----------------------------|
|           | Lower    | Inter-<br>mediate | Tertiary    |                             |
| Pre-obese |          |                   |             |                             |
| Males     | 41.1     | 39.5              | 41.2        | Percent with BMI at least   |
| Females   |          |                   |             | 25 but less than 30 at age  |
|           | 34.8     | 30.9              | 29.4        | 19                          |
| Obese     |          |                   |             |                             |
| Males     | 23.0     | 22.3              | 15.6        | Percent with a BMI of 30 or |
| Females   | 26.3     | 20.8              | 16.1        | more                        |
|           | · - —    |                   | •           | th Interview Survey         |

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\_ehis\_bm1e&lang=en 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-  | Tertiary |                              |  |
|   |                              | mediate |          |                              |  |
| Males   | 10.8                         | 9.1     | 11.2     | Percent consuming alcohol at |  |
| Females   | 5.5                          | 4.6     | 6.4      | least daily                  |  |
| Source: Eurostat [hlth_ehis_al1e], European Health Interview Survey<br>http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_al1e⟨=en<br>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-  | Tertiary |                                  |
|  |                              | mediate | _        |                                  |
| Males  | 25.2                         | 31.7    | 33.4     | Percent ingesting more than      |
| Females  | 8.8                          | 17.0    | 16.0     | 60gm of pure ethanol on a single |
|  |                              |         |          | occasion at least once a month   |
| Source: Eurostat [hlth_ehis_al3], European Health Interview Survey |                              |         |          |                                  |

Source: Eurostat [hlth\_ehis\_al3], European Health Interview Survey http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\_ehis\_al3e&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

|                    | Educatio                                     | onal attain | ment level | Definition                   |  |  |  |
|--------------------|--|-------------|------------|------------------------------|--|--|--|
|                    | Lower  | Inter-      | Tertiary   |                              |  |  |  |
|                    |  | mediate     | _          |                              |  |  |  |
| Males              | 14.8   | 4.2         | 5.1        | Percent consuming alcohol at |  |  |  |
| Females            | 9.1  | 4.7         | 2.8        | least daily                  |  |  |  |
| Source: RARHA SEAS |  |             |            |                              |  |  |  |
| http://www         | http://www.rarba.eu/About/Pages/default.aspx |             |            |                              |  |  |  |

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-<br>mediate | Tertiary |   |
| Males              | 44.4                         | 26.8              | 31.8     | Percent drinking 40 grams of  |
| Females            | 25.0                         | 17.1              | 19.8     | 100% alcohol or more per<br>woman and 60 grams or more<br>per man on a single occasion at<br>least once a month |
| Source: RARHA SEAS |                              |                   |          |   |

http://www.rarha.eu/About/Pages/default.aspx

Accessed 9 April 2018

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