



# (Un)healthy lifestyles

## Education as a dividing line

The Netherlands Institute for Social Research  
The Hague, 22 October 2018

# Colophon

André, S., G. Kraaykamp and R. Meuleman (2018).  
(Un)healthy lifestyles: Education as a dividing line  
The Netherlands Institute for Social Research (SCP)  
The Hague, 22 October 2018  
ISBN 978 90 377 08 57 8

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[The translation of this cardstack was made possible by the ESS-SUSTAIN program](#)

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# Inhoud

Introduction.....	5
Health-related behaviour in the Netherlands.....	6
Education as a dividing line.....	14
Health-related behaviour and the education gap.....	19
The Netherlands in Europe.....	23
Family and lifestyle habits .....	31
Partner and health-related behaviour.....	42
The neighbourhood and health-related behaviour .....	46
Accumulation of risk factors .....	51
Sex and the discrepancy in health-related behaviour .....	55
Health-related behaviour by age.....	61
Alternative medicine .....	65
The education gap and policy relevance .....	69
Acknowledgements and sources .....	72

# Introduction

(Un)healthy lifestyles. Education as a dividing line is a digital report ('card stack') that consists of several standalone chapters. It studies educational differences in six health related behaviors in Europe (smoking, drinking alcohol regularly, being overweight, consuming vegetables, consuming fruit, engaging in sufficient physical activity) with an emphasis on the Netherlands. Differences in individual behavior, the accumulation of multiple (un)healthy behaviors, the role of social context (e.g. the neighborhood where people live, the educational level of parents and partners) and the national context (in a comparison of educational differences in European countries) are discussed. The card stack is based on information from the 7th round of the European Social Survey (ESS) which was conducted in 2014/2015. This publication, written by Stéfanie André, Gerbert Kraaykamp and Roza Meuleman (all affiliated to the Radboud University Nijmegen), describes both health risk factors and health promoting behavior. Educational differences in both of these aspects are discussed under the heading (un)healthy lifestyles.

# Health-related behaviour in the Netherlands

Authors: [Gerbert Kraaykamp](#), [Stéfanie André](#) and [Roza Meuleman](#)

## Why study health-related behaviour?

There are clear differences in the health status of different groups in the Dutch population. Epidemiological research shows that differences in lifestyle are important in explaining these health differences [[For example differences in eating and drinking habits and physical activity.](#)] (Mackenbach 2010; Williams 1995). There is, accordingly, great interest in the Netherlands in promoting a healthy lifestyle. Studying different lifestyles can help explain differences in perceived (or subjective) health. However, lifestyle differences are also closely related to objective health aspects, such as the risk of disease and mortality.

There is a clear, extensive and growing interest in these lifestyle behaviours; see also [Acknowledgements and sources](#). Health inequalities can attract a great deal of moral criticism (McCartney et al. 2013). Additionally, governments see tackling health-related behaviours as a clear opportunity for combating inequality. After all, other causes of health inequality across population groups, such as genetic disposition and family background, are much less open to influence through government policy. These policies therefore focus mainly on addressing the behavioural and cultural causes of health inequalities, through public information campaigns, prevention activities, support and various forms of training.

All these measures are essentially aimed at promoting healthy behaviour, increasing knowledge about risky behaviour and nudging cultural preferences towards healthy behaviour. This publication therefore fits into a broader policy context, which prioritises the importance of prevention over cure. An example is the National Prevention Agreement (*Nationaal Preventieakkoord*) to which a number of civil-society organisations recently agreed on. This Agreement explicitly emphasises behaviour and health, in contrast to the earlier focus on care and disease (see e.g. Council for Public Health and Health Care (RVZ 2010). Other examples are various reports from the Health Council of the Netherlands (*Gezondheidsraad*)).

## Better insight into differences in health-related behaviour between educational groups

A lot is already known about health-related behaviours from numerous national and international studies; see also [Acknowledgements and sources](#). This study seeks to go further by offering more detailed information based on unique comparative data. More specifically, our aim is to provide information for a broad, interested readership. First, we look at inequality in health-related behaviour based on different educational groups; see also [Education as a dividing line](#). This gives us insight into existing differences in the self-reported health of the population.

Second, we study health-related behaviour in a broader perspective, investigating whether there is an accumulation of (un)healthy habits in the same groups in society, and whether the education gap exacerbates this; see also [Accumulation of risk factors](#).

Third, we examine differences in the health-related behaviour of different educational groups in their social and national context. These differences are related not only to family aspects, such as the individual's household and the origin of their partner, but also to education gaps in health-related behaviour in other European countries; see [Family and lifestyle habits](#) and [Partner and health-related behaviour](#). This enables us to say something about the national context and how national policy can influence differences. This international comparison also provides an insight into how cultural and structural country characteristics might explain differences in the education gap between countries; see also [The Netherlands in Europe](#).

Fourth, we look in some detail at the use of [Alternative medicine](#). This is the first time such information has been available in a representative study in a comparative European perspective.

Finally, in describing health-related behaviour we draw on the highly respected data from the European Social Survey (<http://www.europeansocialsurvey.org>), which are representative for the Dutch population. This guarantees a valid description of differences in health-related behaviour.

## Healthy and unhealthy health-related behaviours

What do we mean by health-related behaviour? First and foremost, it is important to acknowledge that health-related behaviour is not about occasional excess, but about habits which form an integral part of someone's personal lifestyle. These habits have often developed over many years and become a normal part of a person's daily life. As a consequence, they can have a substantial impact on an individual's health over the longer term (Williams 1995). That impact may be harmful to health, or may promote health (Huijts et al. 2017).

### *Lifestyle expressions*

In the following cards we study six relevant lifestyle expressions which are presumed to be related to health. The behaviours studied are as follows:

- smoking;
- drinking alcohol regularly (several times per week);
- being overweight;
- consuming vegetables;
- consuming fruit;
- engaging in sufficient physical activity.

Drawing on information from the Health Council of the Netherlands ([www.gezondheidsraad.nl](http://www.gezondheidsraad.nl)), we developed a benchmarking system to determine what can be regarded as healthy and unhealthy. It is important to note that we were constrained in the design of this benchmarking system by the framing of the questions on (un)healthy habits in Round 7 of the European Social Survey (2014/'15); see also [Acknowledgements and sources](#).



## What is healthy and unhealthy?

### What is healthy?

We studied three healthy behaviours: eating vegetables, eating fruit and engaging in sufficient physical activity. No standardised health benchmarks are available for eating fruit and vegetables. However, the Health Council of the Netherlands (2015) states that eating fruit and vegetables lowers the risk of coronary heart disease, stroke, diabetes and certain forms of cancer. The Council accordingly recommends the consumption of at least 200 grams of vegetables and 200 grams of fruit per day. With regard to consumption of vegetables, we therefore distinguish between people who eat vegetables at least once per day and people who do not. We then look at the regular consumption of fruit, taking as a starting point that eating fruit daily is healthy.

The third healthy behaviour is engaging in sufficient physical activity. The Dutch physical activity guidelines (*Nederlandse Norm Gezond Bewegen – NNGB*) assume that a minimal amount of physical activity is necessary in order to maintain health. The guidelines suggest at least 2.5 hours of moderately intensive activity per week, spread over several days. Here we define sufficient activity as engaging in intensive physical activity for more than 30 minutes on at least one day per week. For more information on the questions and the response categories, see [Acknowledgements and sources](#).

### What is unhealthy?

We look at three types of unhealthy behaviour: smoking, drinking alcohol and being overweight. Smoking has a major impact on illness and health; smokers in the Netherlands die an average of 4.1 years earlier and spend 4.6 years fewer in good health than non-smokers. Here we draw a distinction between non-smokers and people who smoke on a daily or regular basis.

We also regard regular consumption of alcohol as an unhealthy behaviour. The Health Council of the Netherlands (2015) gives the following advice: ‘Do not drink alcohol, and in any event no more than one glass per day.’ Regular alcohol consumption not only has consequences for health, but also has secondary consequences such as reduced labour productivity, domestic violence and road traffic accidents. Our definition of drinking alcohol regularly is consuming alcohol several times per week.

Finally, we look at having an unhealthy body weight (Body Mass Index – BMI). We draw a distinction here between people with a BMI above 30 (obesity), persons with a BMI higher than 25 (overweight) and persons with a BMI below this threshold. Although the health risks of (moderate) overweight are less clear, the Health Council of the Netherlands (2003) states that the health risks of obesity are reasonably well documented. The morbidity associated with obesity leads for example to more medical treatments, more incapacity for work and higher costs for the healthcare system.

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## How common is (un)healthy behaviour in the Netherlands and Europe?

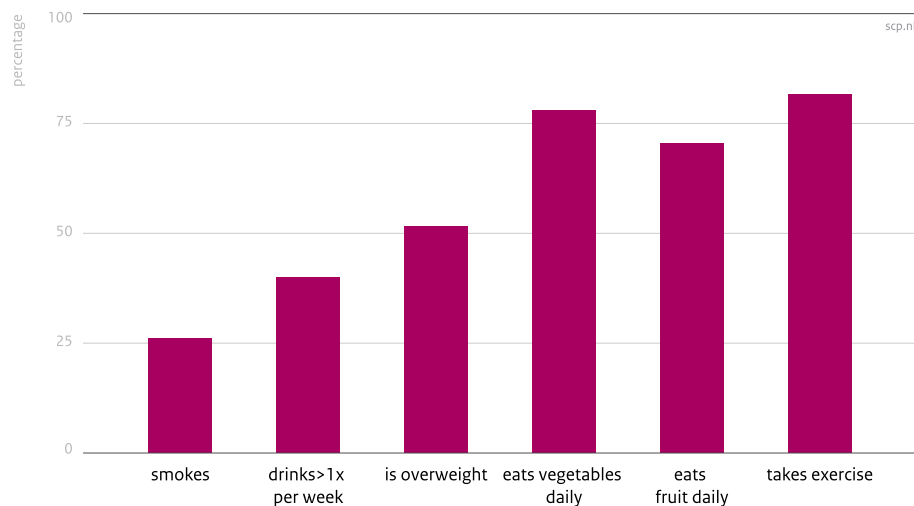
Figure 1.1 shows the prevalence of the six health-related behaviours in the Dutch population in 2014.

- It shows that 26% of all persons aged between 25 and 70 years are regular or intensive smokers. Smoking is thus a bad habit which affects roughly a quarter of the Dutch population.
- Regular alcohol consumption is much more common: 40% of the Dutch public report that they consume alcohol several times a week.
- More than half the population (51.6%) are overweight.
- Eating fruit and vegetables every day (70.4% and 77.9%, respectively) is a common aspect of a healthy lifestyle in the Netherlands.
- The majority of Dutch citizens (81.6%) report that they engage in intensive physical activity for more than 30 minutes at least once per week. This need not mean sport, but can also involve activities such as brisk walking or gardening.

Figure 1.1

Prevalence of six health-related behaviours

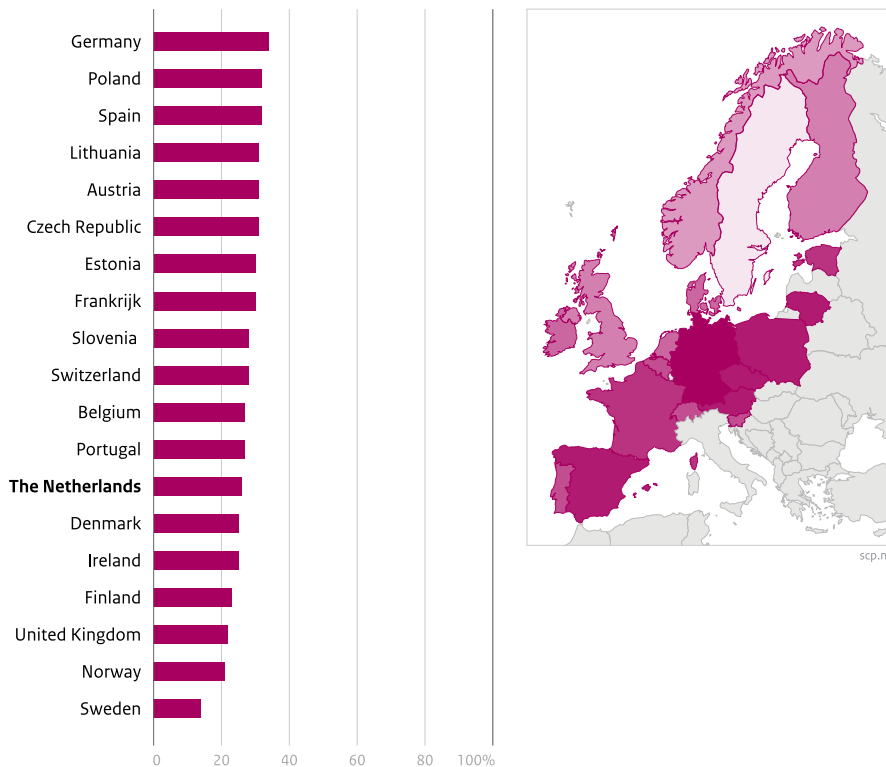
[Prevalence of six health-related behaviours, Dutch population aged 25-70 years, 2014 (in percentages).]



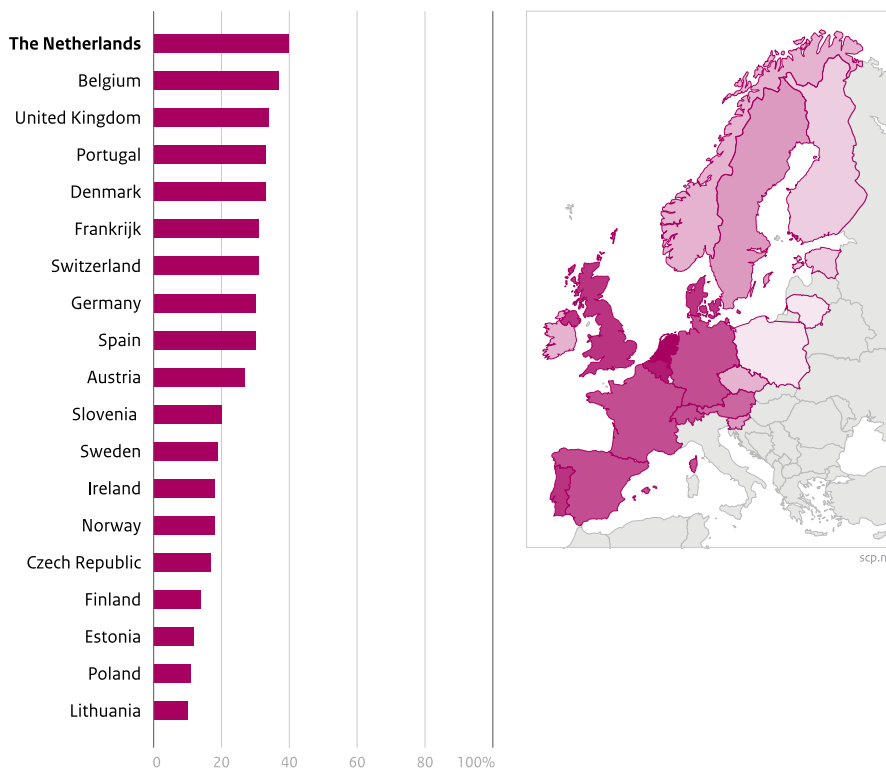
Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

**Figure 1.2**  
**Prevalence of six health-related behaviours in Europe**  
 [Prevalence of six health-related behaviours, EU population aged 25-70 years, 2014-2015  
 (in percentages).]

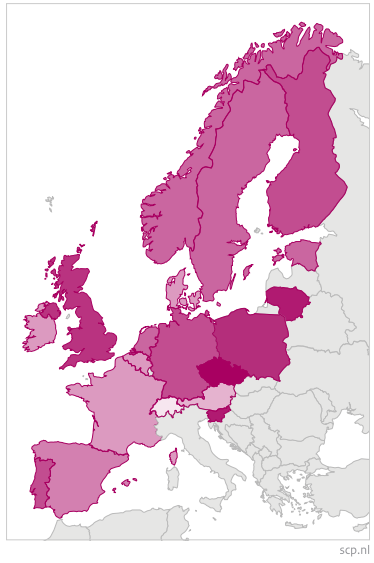
**Smokes**



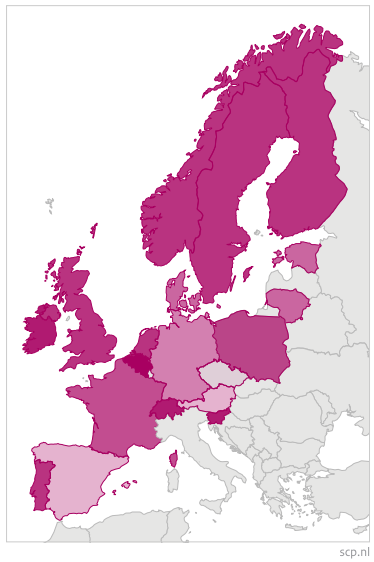
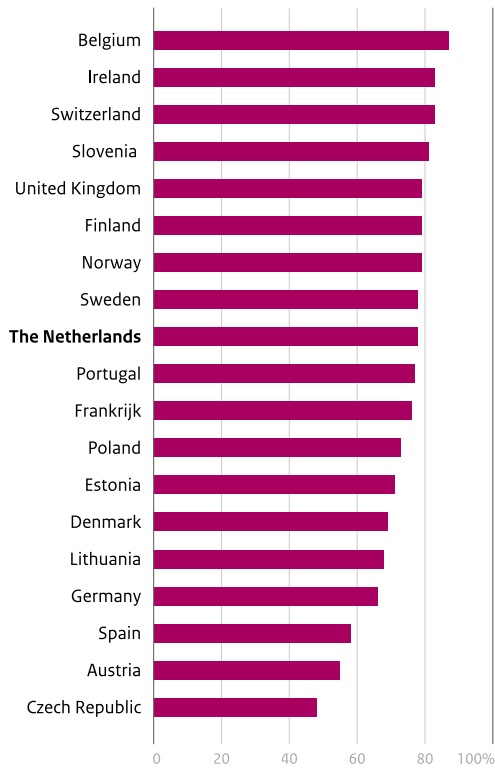
**Drinks >1x per week**



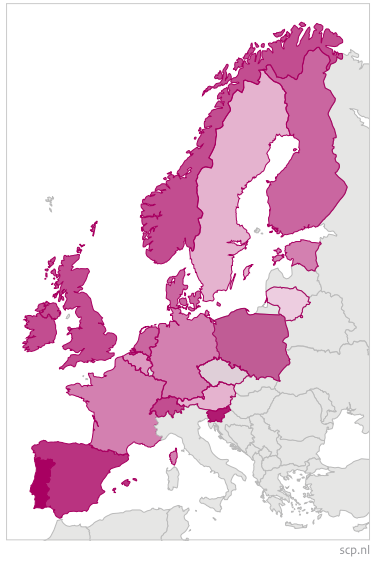
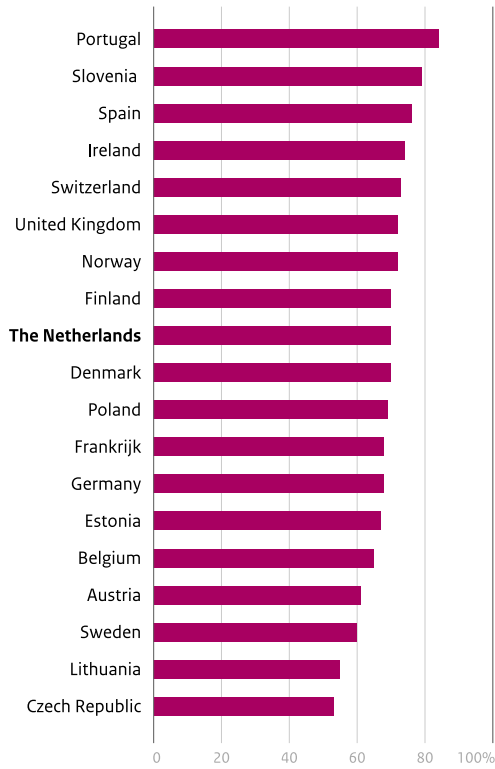
Is overweight



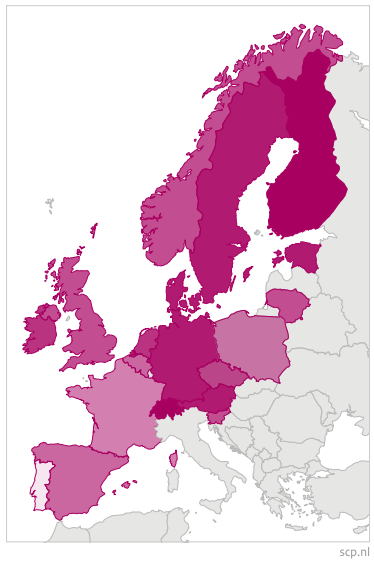
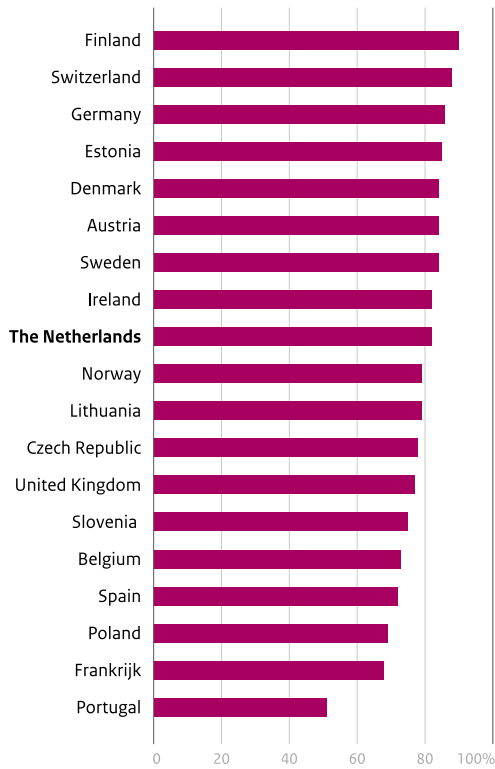
Eats vegetables daily



Eats fruit daily



Takes exercise



Source: European Social Survey Netherlands, Round 7, 2014-2015 (n=25,538)

On average, smoking is just as prevalent in the Netherlands as in the rest of Europe (26% in the Netherlands, 27% in Europe). However, the Netherlands is in the top group when it comes to regular alcohol consumption (40% versus 24% in Europe). Regular alcohol consumption is evidently more widespread and more broadly accepted in the Netherlands than in other European countries.

Although the above figure provides information on the incidence and prevalence of health-related behaviour in the population as a whole, we need to investigate which social groups most commonly engage in risky behaviours and health-promoting activities. This will provide specific information on the possible causes of existing health inequality between population groups. Cards 2 to 10 therefore focus on the importance of educational differences in the above six health-related behaviours; see also [Education as a dividing line](#). In the section on [Alternative medicine](#) we investigate the popularity of alternative medicine as a special form of health-related behaviour.

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## Cite this card

Kraaykamp, G., André, S., and Meuleman, R. (2018). Health-related behaviour in the Netherlands. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/health-related-behaviour-in-the-netherlands>.

## Publication date

22 October 2018

# Education as a dividing line

Authors: [Gerbert Kraaykamp](#), [Stéfanie André](#) and [Roza Meuleman](#)

## Educational differences: a prominent dividing line

The difference between people with a high and low educational level is often regarded as a prominent social dividing line running through the Dutch population. A number of scientific studies have recently been published which centre around this education gap in the Netherlands (Bovens et al. 2014; De Lange et al. 2015; Van de Werfhorst 2015). According to these studies, educational differences are reflected in a wide spectrum of behaviours and preferences in relation to work, participation in culture (elite versus popular cultural activities), opinions and attitudes, social networks (support and friendship), political trust and demographic transitions (getting married, having children, separating/divorcing).

A more general observation based on these studies is that the differences between people with a high and low educational level are substantial and often lasting. We therefore also investigate the differentiation between people with a high and low educational level specifically with regard to health-related behaviour. Where we report educational differences, these are statistically significant; see also [Acknowledgements and sources](#).

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### The research questions

The following are among the research questions addressed in our study:

- How significant is the education gap in lifestyle aspects such as smoking, drinking alcohol, being overweight, a healthy diet and physical activity?
- To what extent is the accumulation of risk factors related to education?
- To what extent does the education gap in health-related behaviours differ between younger and older persons, men and women and persons who have moved up or down the social ladder?
- Do the educational differences in health-related behaviour remain the same under different circumstances; or, put differently, to what extent do people with a high and low educational level differ from each other in various contexts (in Europe, in the Netherlands and in different neighbourhoods)?

These questions are answered in the various cards.

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### Why do we look at the highest attained educational level?

Scientific studies on social inequality in health or health-related behaviour often use the highest educational level attained as a determinant for someone's social position (in addition to income and occupational status). Several good reasons can be put forward for this (Huijts et al. 2017).

1. The highest educational level attained is a relatively stable *stratification characteristic* in a person's life course. It changes little after the age of 25, making it a robust and relevant predictor of all kinds of preferences, opportunities and outcomes in a person's life.
2. The highest educational level attained is *closely linked to personal qualities and characteristics* which explain why people from lower social classes more often exhibit risky health-related behaviour than persons from the higher social classes (see 'Mechanisms' below) (Mackenbach 2010). The main mechanisms concern more limited access to financial, cultural and social resources (Gesthuizen et al. 2012; Lahelma et al. 2004; Ross & Wu 1995).
3. Establishing individual educational levels by means of a simultaneous country-comparative survey (as in the European Social Survey) is relatively *reliable and valid*. Alternative indicators for a person's social position, such as income and occupational status, vary much more over time, and are often also dependent on specific regimes or structures in a country.

### Mechanisms: why is education linked to health-related behaviour?

Earlier research has shown that less educated people generally report poorer health and are overrepresented among those with a less healthy lifestyle (Eikemo et al. 2017; Mackenbach 2010; Ross & Wu 1995). There is a multitude of mechanisms underlying these educational differences, which (may) explain why less and highly educated people differ from each other in terms of health-related behaviour. While theoretically these mechanisms can be readily distinguished from each other, it is also highly likely that they are mutually reinforcing. In other words, they often occur simultaneously in the same individuals (Gesthuizen et al. 2012; Mackenbach 2010; Williams 1995), leading to cumulative and more pronounced negative health effects. Nonetheless, it is important to note that the mechanisms highlighted below do not always operate to the same degree for the six habits singled out here.

#### *Knowledge and competence gap*

The first – frequently cited – explanation is the knowledge and competence gap between highly and less educated people in relation to health. Not only do highly educated people have more information and skills in relation to healthy behaviour and therefore the ability to act accordingly, but information about health is also often complex and difficult to find that it is less accessible to less educated people (Rademakers 2014).

#### *Financial capacity*

Second, the often greater financial capacity of people with a higher educational level makes it easier for them to engage in healthier behaviour: healthy choices are generally more expensive than unhealthy alternatives. Being physically active, for example, requires financial investments in club memberships and sports equipment, and healthy (organic) food is also often more expensive. The more limited financial budgets of less educated people also restrict their access to and use of healthcare facilities.

#### *Type of employment*

Third, the educational level attained often affects the type of work that people perform. People with a higher educational level often work in less physically demanding jobs and generally also enjoy better working conditions in terms of aspects such as autonomy, ambient noise, humidity and hazardous substances, which are also linked to health outcomes.



### *Social networks*

Fourth, people's social networks also play a role. Members of an individual's immediate social network can offer psychological and physical support, share information and identify problems. Highly educated people generally have larger social networks, whose members more often have greater knowledge, resources and opportunities.

### *Cultural lifestyle differences*

Fifth, are the cultural lifestyle differences associated with educational differences. Cultural tastes and preferences are closely associated with social groups, which are in turn often based on the different educational categories. Displaying group-specific cultural lifestyle behaviours can provide people with a sense of identity and strengthen their feeling of belonging to a group. Health-related behaviours (and knowledge) can also be seen as cultural expressions of specific social groups, often based on education, giving rise to the association between these behaviours and education.

### *Residential context*

Finally, the contexts in which people live are also associated with education. Since highly educated people resemble each other in a number of ways (financially, culturally and in terms of preferences), they also often cluster in certain residential neighbourhoods with relatively good living conditions. This too can have an impact on dividing lines in terms of risky and health-related behaviours. Table 2.1 shows the distribution of the highest educational levels attained in the Netherlands in 2014.

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## Measuring educational level

Education is measured in several ways in empirical research. The European Social Survey establishes the educational level of persons aged between 25 and 70 years using a single question on the highest completed education. Dutch respondents were presented with a card showing 48 possible types of education within the present (and former) Dutch educational landscape.

To ensure sufficient population of each of the educational categories, we opt for a differentiation into four levels in this study (see table 2.1). 'Less educated' comprises the categories primary education, junior secondary vocational education (*lbo*), lower secondary education (*mulo*), junior general secondary education (*mavo*) and short senior secondary vocational courses (*kmbo*) (31,0%). Higher secondary education is the largest category (35.9%) and comprises senior secondary vocational education (*mbo*), secondary school for girls (*mms*), senior general secondary education (*havo*), pre-university education (*vwo*), secondary modern school (*hbs*), short higher professional education (*kort hbo*) and enhanced senior secondary vocational education ('*mbo-plus*'). In the tertiary education sector we differentiate between persons with a higher professional (*hbo*) degree (23,5%) and those with a research university degree (*wo*) (9,6%). This reflects the distinction between academic and vocational higher educational graduates in Dutch society. Respondents who are still at school or college/university are left out of our study, because they have not yet completed their education.

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table 2.1

Level of education in the Netherlands [Highest educational level attained, Dutch population aged 25-70 years, 2014-2015 (in percentages).]

		%	(n)
low level of education	lo, bao, lbo, mulo, mavo, vmbo, kmbo, mbo 1	31.0	(438)
higher secondary education	mbo 2-4, mms, havo, vwo, hbs, kort hbo, mbo+, propedeuse wo	35.9	(508)
university of applied sciences (HBO) degree	HBO Bachelor's and Master's	23.5	(333)
research university (WO) degree	research university (WO) Bachelor's and Master's, <i>kandidaats</i> and <i>doctoraal</i>	9.6	(136)
<b>total</b>		<b>100</b>	<b>(1415)</b>

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

lo	primary education
bao	new-style primary education
lbo	lower secondary vocational education
mulo	lower secondary education
mavo	junior general secondary education
vmbo	preparatory secondary vocational education
kmbo	short senior secondary vocational courses
mbo 1	senior secondary vocational education, level 1
mbo 2-4	senior general secondary education, levels 2-4
mms	secondary school for girls
havo	senior general secondary education
vwo	pre-university education
hbs	modern grammar school
kort hbo	short higher professional education
mbo+	enhanced senior secondary vocational education ('mbo-plus')
propedeuse wo	university foundation course
kandidaats	degree awarded after first cycle of university education
doctoraal	degree awarded on completion of second cycle of university education

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## Cite this card

Kraaykamp, G., André, S., and Meuleman, R. (2018). Education as a dividing line. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/education-as-a-dividing-line>.

## Publication date

22 October 2018

# Health-related behaviour and the education gap

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

Here we explore educational differences in health-related behaviour in the Netherlands. We investigate educational dividing lines in relation to smoking, regular alcohol consumption, overweight, consumption of fruit and vegetables and physical activity in the Dutch population in 2014. Educational differences in health-related behaviour could stem from the fact that people with low and high educational levels differ in terms of their health knowledge, financial capacity, working conditions, social networks, cultural lifestyle differences and context; see also [Education as a dividing line](#).

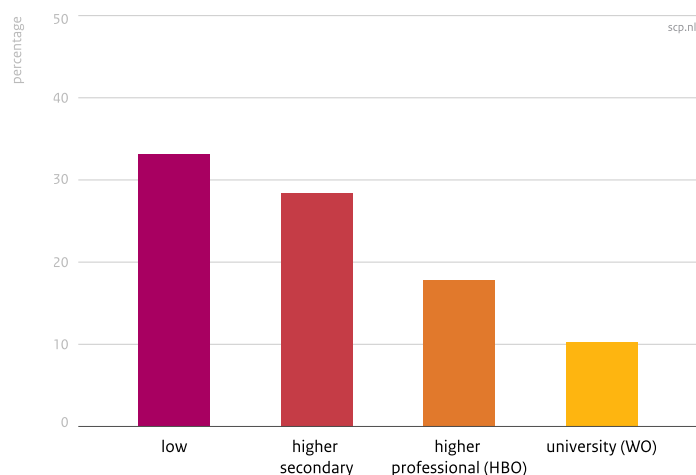
## Large educational differences in relation to smoking

Knowledge about the harmful effects of smoking is widespread. Moreover, age restrictions and measures to limit advertising have been in place for a long time in the Netherlands, and smoking is banned at the workplace and in public buildings and spaces. Despite this, there were still a large number of people who reported that they smoked daily in 2014. These (regular) smokers are mainly found among those with a lower and higher secondary education (33.1% and 28.4%, respectively); there are far fewer (regular) smokers among those with a high education. This may be explained by the idea that less educated people might be less aware of the serious health effects of smoking, or that smoking might be considered more acceptable within their social networks (and therefore carries less stigma) than is the case for people with a high educational level. Although smoking is a very expensive habit (nowadays), financial considerations appear to not play an important role in relation to smoking.

Figure 3.1

Smoking behaviour by educational level

[Respondent smokes,<sup>a</sup> Dutch population aged 25-70 years, by educational level, 2014-2015 (in percentages).]



a Smoking here includes smoking every day as well as smoking less regularly than every day. For more information on the variables, see [Acknowledgements and sources](#).

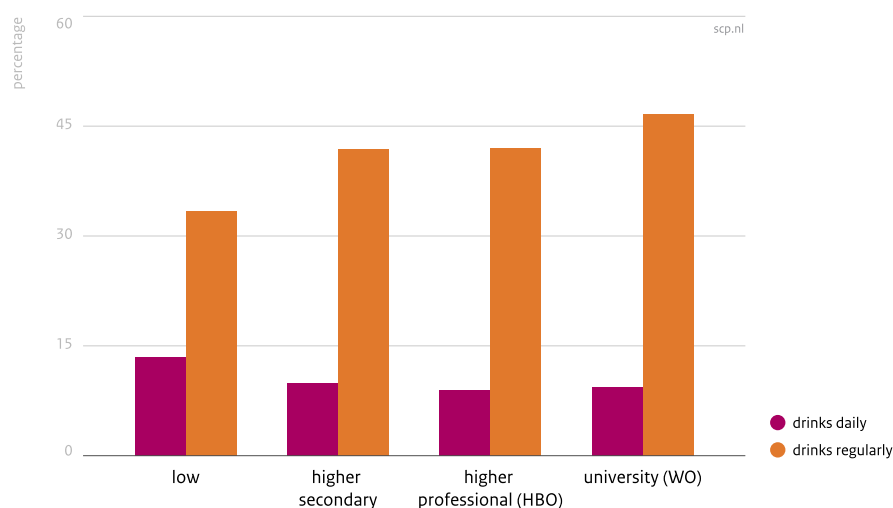
Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Drinking more prevalent among highly educated

Figure 3.2 illustrates that persons who drink alcohol regularly [Several times per week.] are most often found among those with a university education (46.7% compared with 33.4% among less educated people). This is a striking finding, given the advice by the Health Council of the Netherlands to avoid excessive alcohol consumption. It would seem that regular alcohol consumption among university graduates is so socially and culturally accepted that it is part of their lifestyle; see also [Education as a dividing line](#); this could be a reason for ignoring potentially harmful health effects.

More generally, we find that frequent alcohol consumption is more common among people with a higher education; regular use of alcohol is least common among the less educated (33.4%) and rises steadily with educational level. It may be assumed that this association can also be partly explained by the generally higher income of people with a higher educational level. Unlike regular alcohol consumption, the differences between educational groups in daily consumption are negligible.

**Figure 3.2**  
Alcohol consumption by educational level  
[Respondent drinks alcohol regularly<sup>a</sup> or daily, Dutch population aged 25-70 years, by educational level, 2014 (in percentages).]



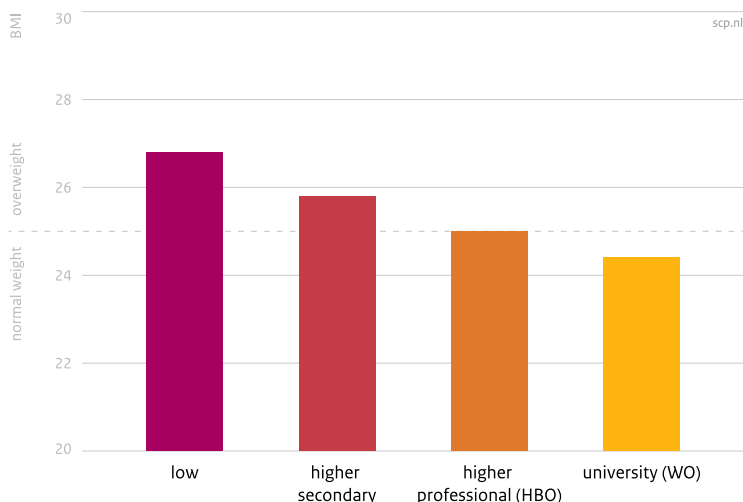
a More than once per week.

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Body weight and vegetable consumption also highly differentiated

Figure 3.3 presents the educational differences by (relative) bodyweight expressed as BMI. The average BMI among those with a low and higher secondary education is above 25, indicating overweight. Among higher professional (HBO) graduates, the average BMI is precisely on the threshold of overweight, while among university graduates it is below the overweight threshold, at 24.4. Here again knowledge and financial capacity may play a role in explaining the education gap presented here; see also [Education as a dividing line](#).

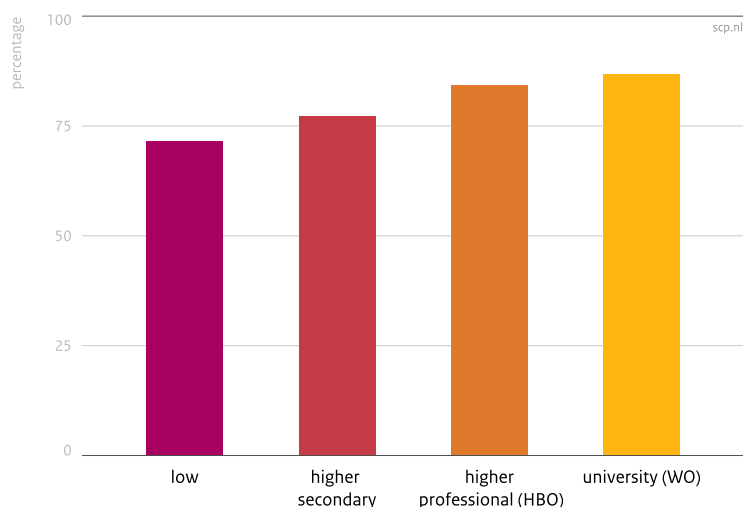
**Figure 3.3**  
**BMI by educational level**  
[BMI, Dutch population aged 25-70 years, by educational level, 2014<sup>a</sup>.]



a The dotted line represents the threshold for being overweight (BMI > 25).  
Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

Educational differences are less prominent for healthy eating than for the other health-related behaviours. We do however find a clear association with education and daily consumption of fruit and vegetables: the higher a person’s educational level, the healthier their diet. Although university graduates report that they eat fruit daily more often than less educated respondents, the difference (5.6 percentage points) is negligible. This contrasts with the differences in daily consumption of vegetables, where we do find meaningful differences between these groups (15.4 percentage points). The educational differences are thus larger for daily consumption of vegetables than of fruit.

**Figure 3.4**  
**Consumption of vegetables by educational level**  
[Eats vegetables at least once per day, Dutch population aged 25-70 years, by educational level, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Physical activity most popular among university graduates

Figure 3.5 shows people with a low educational level least often engage in physical activity (72.6%). It may be that this group lack the financial resources to enable them to participate in organised sport or purchase sports equipment; see also [Education as a dividing line](#). Physical activity in leisure time is most common among university graduates: 92.5% of them engage in sufficient physical activity. Possible explanations for this finding are that they have the most knowledge regarding the health-promoting effects of physical activity, as well as greater financial capacity to fund participation in sport.

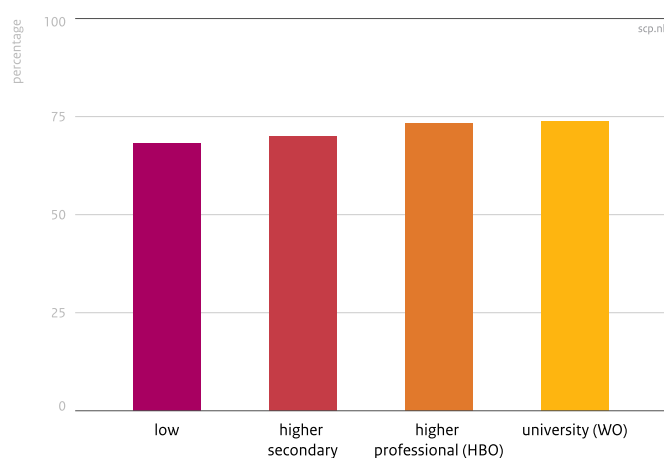
### Sufficient healthy physical activity

To establish whether people engage in sufficient healthy physical activity, respondents were asked how many days in the past week they had taken a brisk walk, played sport or spent at least 30 minutes on some other physical activity. Physical activity can thus involve cycling to work, for example, but also intensive sport. Here we define sufficient physical activity as engaging in intensive activity for more than 30 minutes at least once per week; see [Acknowledgements and sources](#).

Figure 3.5

Physical activity by educational level

[Intense physical activity for more than 30 minutes on at least one day per week, Dutch population aged 25-70 years, by educational level, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

In [Accumulation of risk factors](#) we investigate to what extent the accumulation of (un)healthy behaviours is related to education.

### Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2017). . In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/>.

### Publication date

22 October 2018



# The Netherlands in Europe

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

How does the Netherlands score compared with other countries in terms of the education gap in health-related behaviour? The European Social Survey (2014-2015) looked at 19 European countries to determine how people aged between 25 and 70 years with a low and high educational level differ in their health-related behaviour. For convenience of comparison, people with a tertiary education (higher professional (hbo) and university (wo)) are considered together and the measurement of the education gap is based on the difference between those with the highest and lowest educational level. We once again explore dividing lines in relation to smoking, regular alcohol consumption, overweight, consumption of fruit and vegetables and physical activity.

## Educational differences in health-related behaviour in Europe

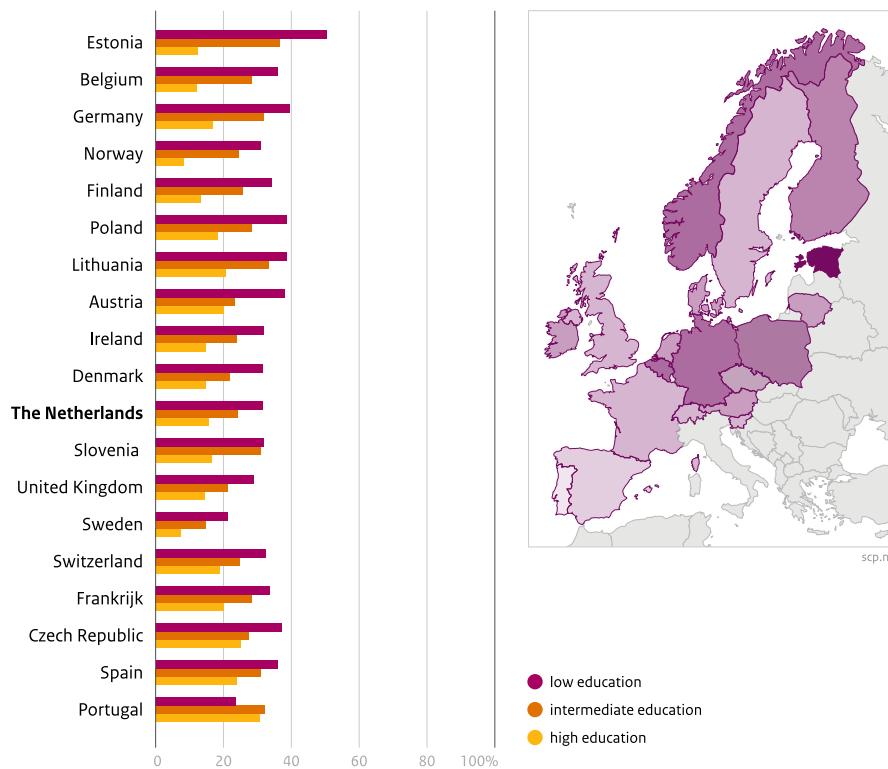
Figure 4.1 shows the educational differences in these six health-related behaviours in Europe. You can select the various indicators by clicking on the map.

Figure 4.1

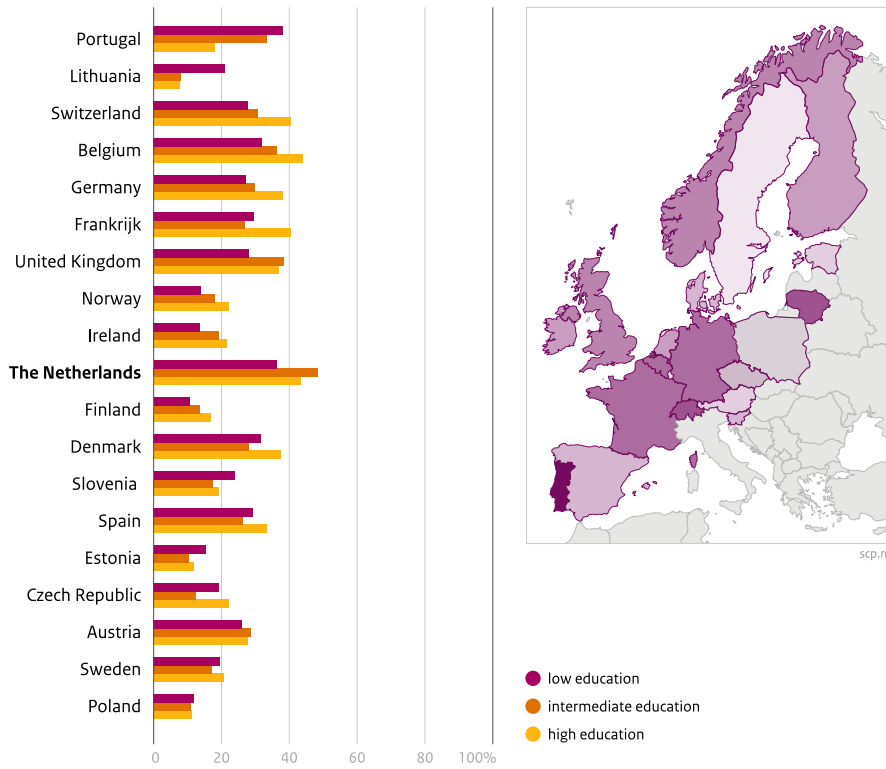
The education gap in health-related behaviour in Europe

[The education gap in health-related behaviour, EU population aged 25-70 years, 2014-2015 (in percentages).]

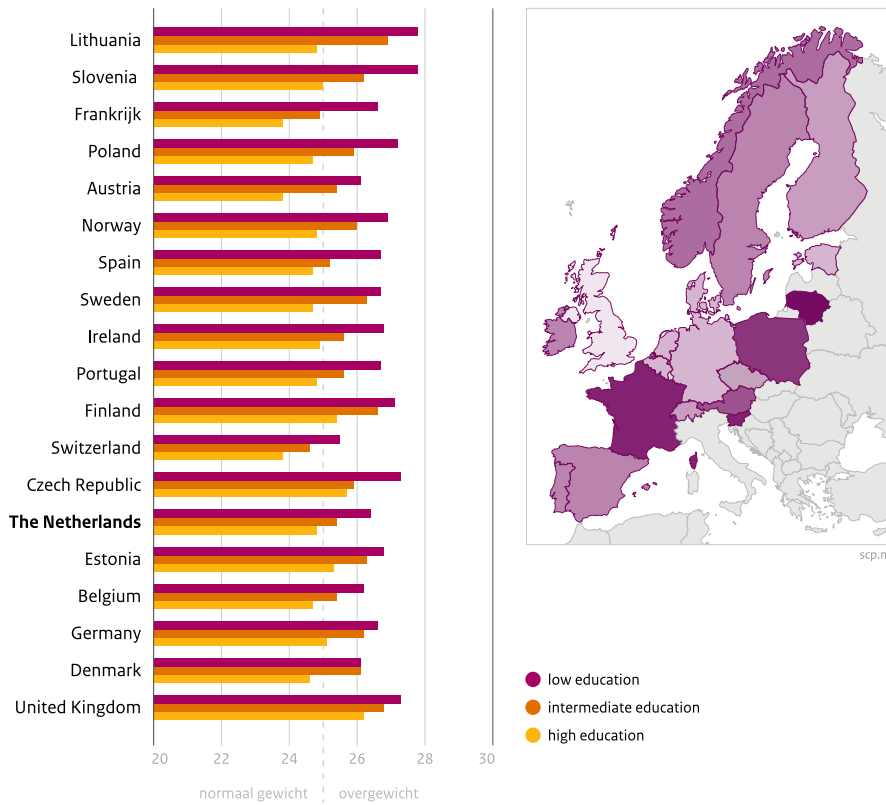
Smokes



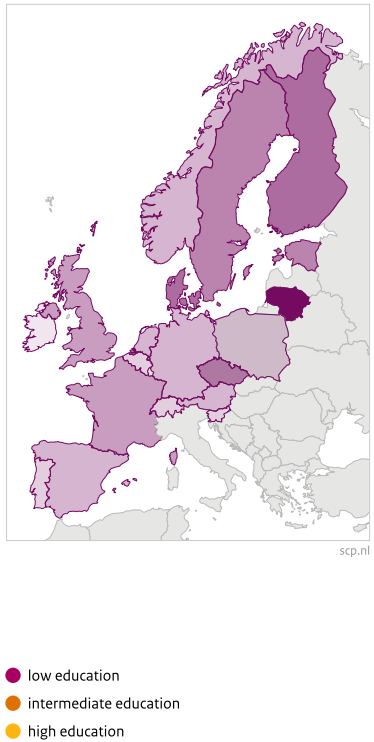
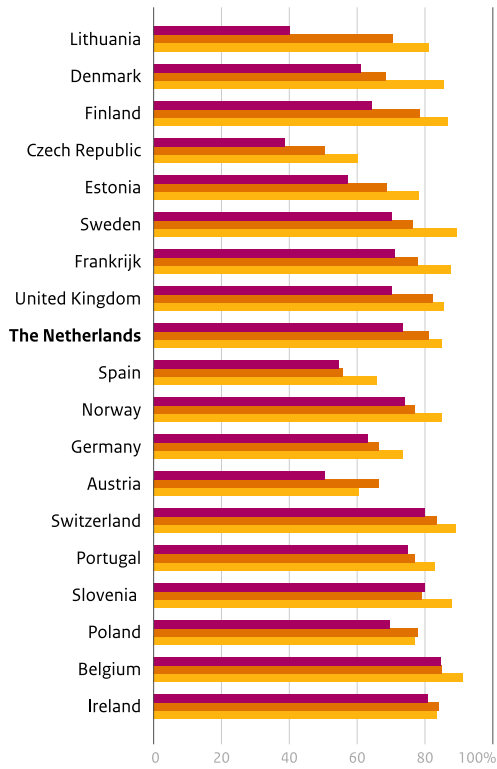
Drinks >1x per week



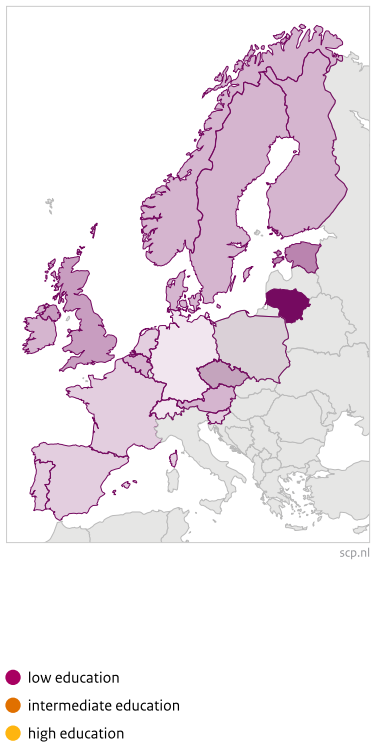
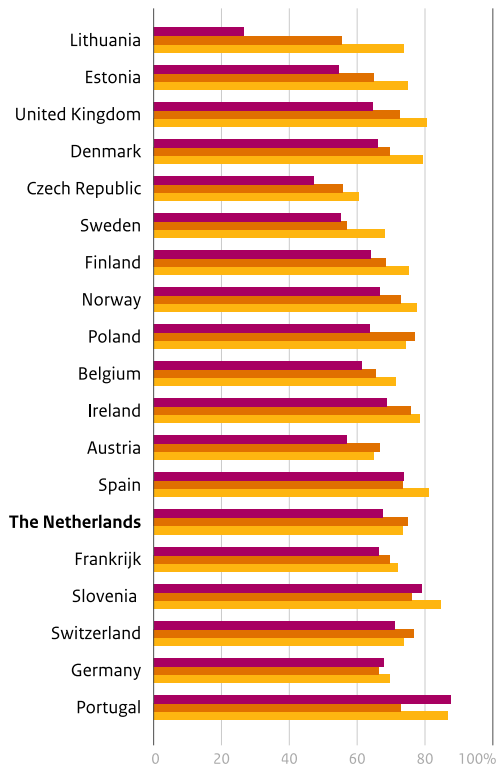
Average BMI



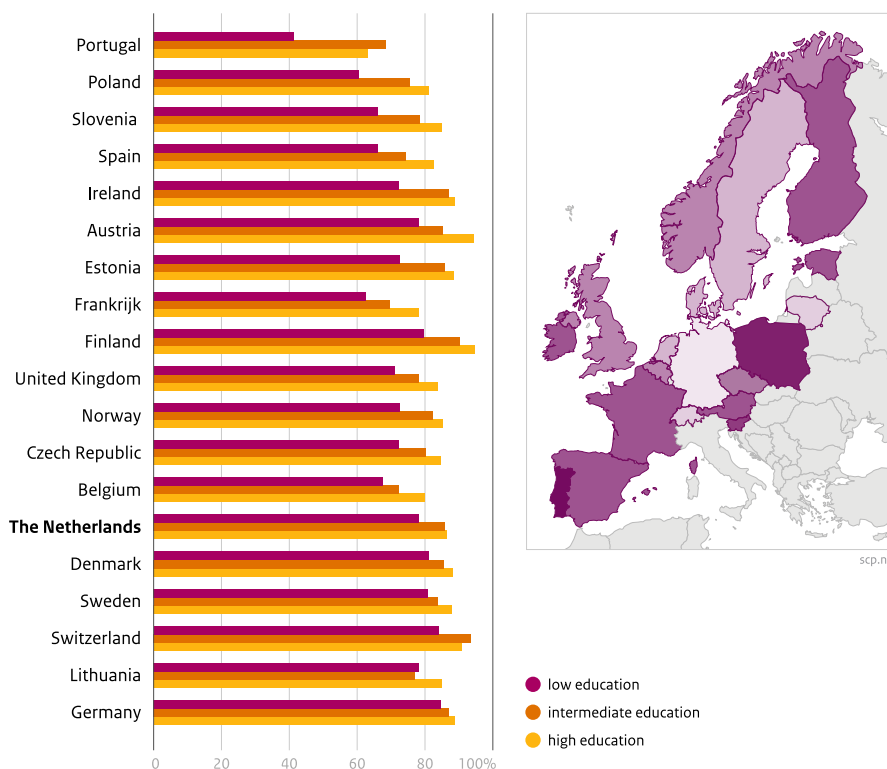
Eats vegetables daily



Eats fruit daily



## Takes exercise



Source: European Social Survey Netherlands, Round 7, 2014-2015 (n=25,538)

*Smoking*

Portugal proves to be the only country where people with a high educational level smoke more than people with a low educational level; in all other countries this unhealthy habit is more popular among those with the lowest educational level. The Netherlands occupies a midway position in terms of the gap between people with a low and high educational level, with a disparity of 15.8 percentage points. The relatively wide educational differences in smoking in Belgium and Estonia are striking, with the gap reaching as much as 23 percentage points or more. We find an education gap for smoking in virtually all countries in Europe, with smoking being an unhealthy lifestyle expression that is concentrated mainly among people with a low educational level across Europe.

*Alcohol consumption*

When it comes to alcohol consumption in Europe,<sup>1</sup> the Netherlands occupies a middle position in terms of inequality between those with high and low educational level in drinking alcohol regularly [[More than once per week.](#)]. In most countries, those with higher educational levels drink most often, but there are six countries (especially Portugal and Lithuania) where alcohol consumption is more frequent among the lower-educated.

The gap is particularly wide in Central European countries such as Belgium, Germany, France and Switzerland; alcohol consumption in these countries is relatively high among those with the highest educational level, and the education gap rises to over 10 percentage points. Strikingly, regular alcohol consumption by those with a high educational level is the highest of all European countries in the Netherlands and Belgium.

### *Overweight*

A comparison of educational differences in relative body weight (BMI) shows that the lowest-educated in the Netherlands have a BMI which is 1.6 points higher on average than those with a higher educational level. A similar substantial difference is found in virtually all European countries, ranging from 1.1 to 3.0 BMI points. The BMI differences by education are greatest in Central and Eastern European countries (Slovenia, France and Lithuania).

### *Eating fruit and vegetables*

There is wide international variation in the educational differences in consumption of fruit and vegetables. In Lithuania, for example, daily consumption of fruit is extremely unequally distributed across educational groups, while in Germany and Portugal there is virtually no difference between those with high and low educational levels. In the Netherlands, too, the differences between educational groups are negligible: 68% of the lowest-educated eat fruit daily, compared with 74% of those with a high educational level.

The picture is more uniform for daily consumption of vegetables: everywhere in Europe, daily consumption of vegetables is greater among the more highly educated. Once again, the educational differences are greatest in Lithuania. The Netherlands occupies a middle position in Europe as regards to educational differences; interestingly, however, the difference in vegetable consumption between those with a high and low educational level in the Netherlands is substantially larger (11.4 percentage points) than for fruit consumption (5.8 percentage points); see also [Health-related behaviour and the education gap](#). The overarching picture is that, across the whole of Europe, eating healthily on a daily basis is more common among higher than lower-educated people. However, the differences between individual countries are considerable. To what extent price, availability or cultural and knowledge disparities play a role here requires further research.

### *Physical activity*

Engaging in sufficient physical activity is relatively evenly divided across educational groups, especially in Northern European countries. The Netherlands is no exception, with a small though not negligible difference of 8.1 percentage points in physical activity between people with a high and low educational level. The differences are substantially greater in Eastern European countries in particular (with the exception of Lithuania), mainly because of a lack of physical activity by those with the lowest educational level in those countries. Europeans with a higher educational level in all countries engage in physical activity to roughly the same degree (between 80% and 90%). Portugal forms an exception here, with reported physical activity being generally relatively low.

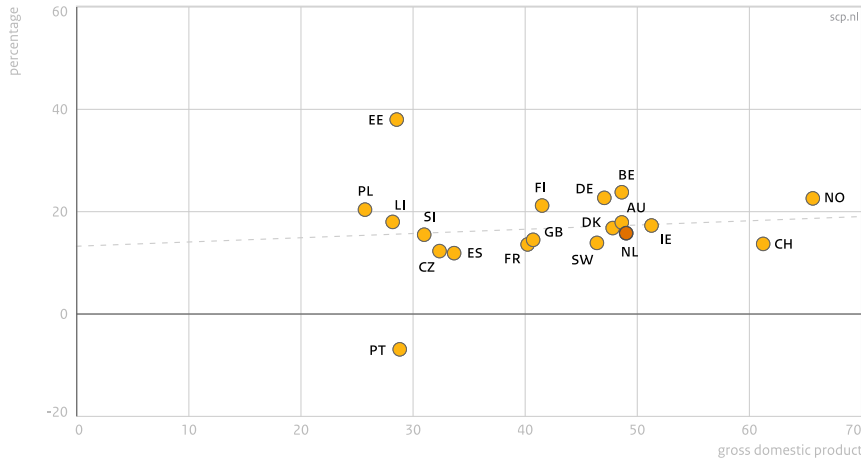
## Are there differences between countries which would enable us to understand the education gap better?

A logical follow-up question is whether the education gap in health-related behaviour in the various European countries is also associated with core characteristics of those countries. Figure 4.2 illustrates the relationship between a country's economic development (expressed as GDP) and the six expressions of health-related behaviour that are the focus of this study.

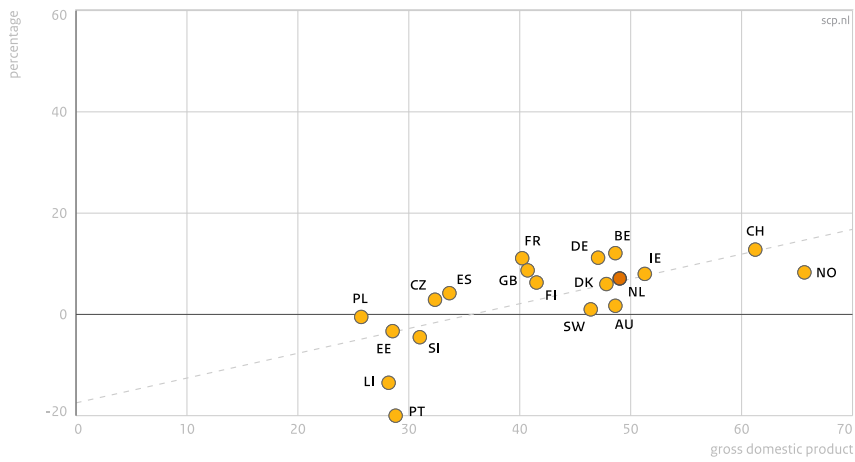
Figure 4.2

Relationship between national wealth and the education gap in health-related behaviour in Europe [Relationship between affluence and the education gap in health-related behaviour, EU population aged 25-70 years, 2014-2015.]

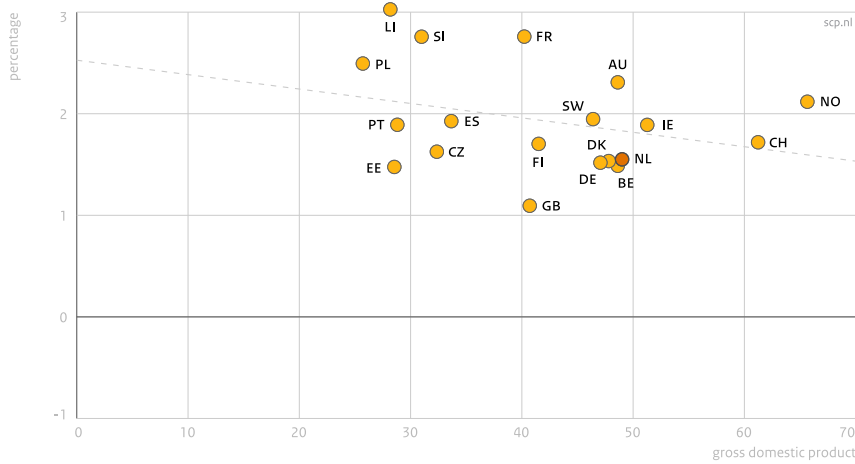
Smokes



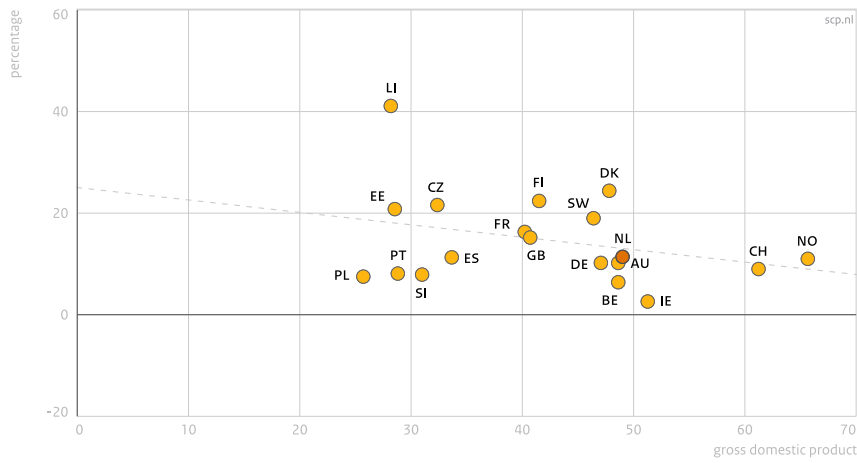
Drinks >1x per week



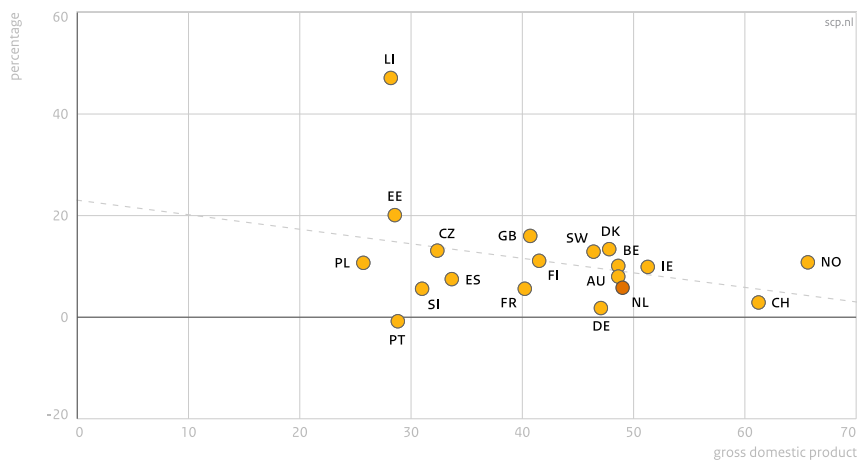
Average BMI



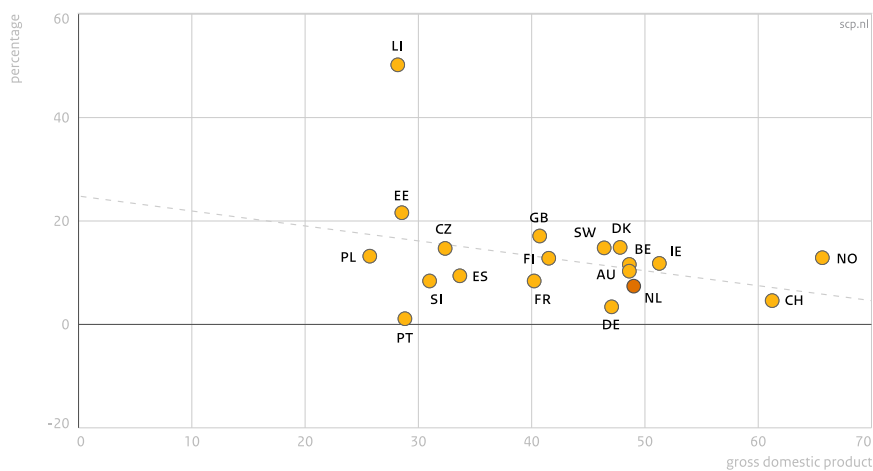
Eats vegetables daily



Eats fruit daily



Takes exercise



Source: European Social Survey Netherlands, Round 7, 2014-2015 (n=25,538)



*Smoking and alcohol consumption*

We can see from the figure that the education gap in smoking in the various countries shows virtually no increase with rising national wealth. This contrasts with the relationship for alcohol consumption, where the educational differences in alcohol consumption do increase with rising economic prosperity (expressed as GDP). It is noteworthy that people with a higher educational level more often consume alcohol, leading to the suspicion that a higher general level of prosperity in a country is mainly associated with increased alcohol consumption by those with higher education. Although it is an unhealthy lifestyle habit, alcohol consumption may also be more widely accepted in wealthier countries; see also [Education as a dividing line](#). It is also possible that people with a high educational level living in more affluent countries more often seek to set themselves apart from their lower-educated compatriots through their cultural lifestyle, for example by drinking good wines or exclusive spirits.

*BMI, fruit and vegetable consumption and physical activity*

When examining national differences in BMI, by contrast, we find a negative relationship between national wealth and the education gap: the greater the prosperity in a country, the smaller the differences in BMI between those with high and low education. We also find that greater national wealth (GDP) is associated with a shrinking of the education gap as regards eating fruit and vegetables and engaging in physical activity, all regarded as healthy lifestyle expressions. A healthy diet and physical activity evidently become acceptable, accessible and attainable for more people as national wealth increases. As with smoking, however, we note that the association between national wealth and the education gap in BMI, consuming fruit and vegetables and engaging in sufficient physical activity is negligible, unlike the relationship found for alcohol consumption.

[Cite this card](#)

André, S., Meuleman, R., and Kraaykamp, G. (2018). The Netherlands in Europe. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/the-netherlands-in-europe>.

[Publication date](#)

22 October 2018

[Notes](#)

- 1 Select alcohol consumption in figure 4.1.

# Family and lifestyle habits

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

Social-scientific research shows that parents exert a major influence in many ways on the preferences and behaviours of their children (Kraaykamp 2009). A good deal is also known about the intergenerational transfer of lifestyle characteristics, such as risky behaviours (Ten Cate et al. 2013; De Neve & Kawachi 2017); see also [Education as a dividing line](#).

Researchers often assume that tastes and preferences deployed in parenting are transmitted both through (conscious) instruction and through (subconscious) role model behaviour (Kraaykamp 2009). *Instruction* is concerned with the structuring of behaviour by providing rules and structures. *Role model behaviour*, or ‘modelling’, is about subconscious learning, in which the behaviours of key role models are automatically adopted. Since parents are key role models for their children, we assume that they are also important in the development of preferences in terms of health-related behaviour.

Here we use the parental educational level as an indicator, based on the assumption that the cultural and financial resources associated with education are closely related to the lifestyle preferences that are central to this study. We look at the highest educational level attained by (one of the two) parents.

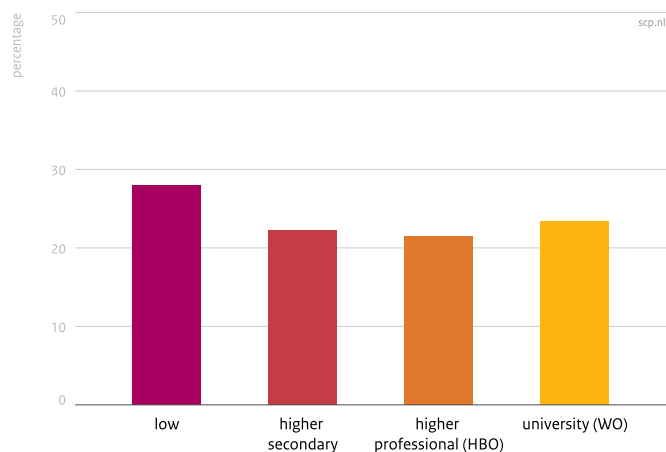
## Educational level of parents, smoking and alcohol consumption

Figure 5.1 reveals no relevant differences in smoking based on parental educational level; smoking appears to be explained more by the educational level of the respondent themselves than that of their parents; see also [Health-related behaviour in the Netherlands](#).

Figure 5.1

Smoking by educational level of parents

[Smokes,<sup>a</sup> Dutch population aged 25-70 years, by educational level of respondent’s parents, 2014 (in percentages).]



a Smoking here includes smoking every day as well as smoking less regularly than every day. For more information on the variables, see [Acknowledgements and sources](#).

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

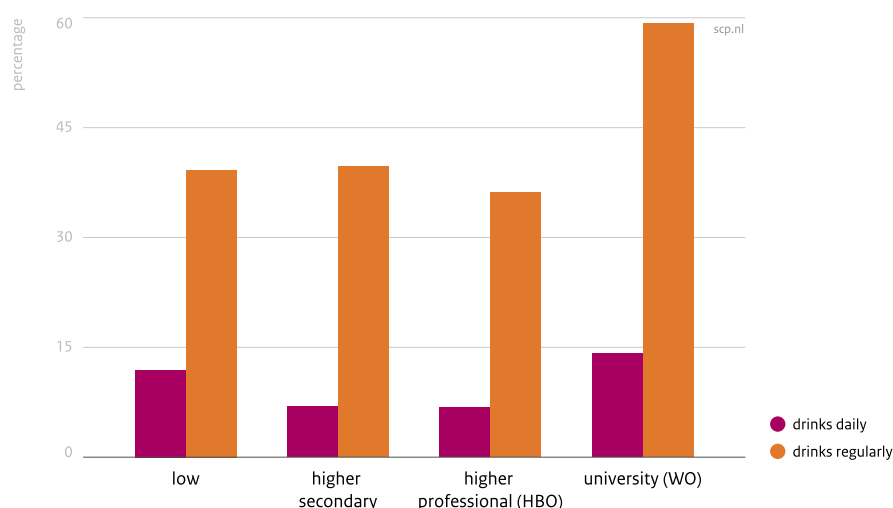
Figure 5.2 shows regular alcohol consumption in the Netherlands is closely linked to the educational level of the family in which the respondent grew up. Similar to the differences in alcohol consumption by own educational level, we find that people with university-educated parents, in particular, consume alcohol regularly [More than once per week]: 59.2% versus less than 40% of respondents with parents with a lower educational level; see also [Health-related behaviour in the Netherlands](#).

Daily alcohol consumption is also associated with parental educational level. Among respondents with university-educated parents, 14.2% drinks every day, compared with around half those whose parents are educated to intermediate and higher professional level. It is also interesting to note that those with the lowest-educated parents and the highest-educated parents show the greatest correspondence in alcohol consumption, so that the preferences of the two extremes in the educational distribution resemble each other quite closely. It is however likely that, given that this is an expression of lifestyle, the type of alcohol (beer, wine, spirits) will differ considerably.

Figure 5.2

### Alcohol consumption by parental education

[Drinks alcohol daily and drinks alcohol regularly<sup>a</sup>, Dutch population aged 25-70 years, by level of education of parents, 2014 (in percentages).]



a More than once per week

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Social mobility and health-related behaviour

Although people generally tend to resemble their parents, including as regards their education, it is interesting to examine whether people who have risen or fallen on the social ladder<sup>1</sup> exhibit different habits from their parents. It seems likely that people whose social position has remained stable (who have attained the same educational level as their parents) will behave in a way that conforms to their group, while upwardly and downwardly mobile persons will show a mix of the lifestyle preferences of two educational groups (namely those of their parental milieu and that associated with their own present educational level).

Table 5.1 first shows how many people have risen or fallen relative to their parents in terms of educational level. People on the diagonal are stable (44.5%): they have attained the same educational level as their parents. 48.8% have risen up the scale, while 6.7% have fallen compared

with their parents (in the Netherlands, 2014). This picture corresponds with the expansion in education which has taken place in the Netherlands since the 1960s, which has seen a growing proportion of the Dutch population participate in (higher) education.

**Table 5.1**

Mobility by education of parents and child [Educational mobility of child, a Dutch population aged 25-70 years, by level of education of parents, 2014 (in percentages).]

Level of education parents		Level of education of child			(n)
		low	higher secondary	high	
low	low	27.8	24.7	14.1	(438)
	higher secondary	2.2	7.6	10.0	
	high	0.9	3.6	9.1	
		(508)	(508)	(469)	(1415)

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

Table 5.2 presents the same data in the form of a transition matrix. The rows in this matrix add up to 100% and, as in table 5.1, we see that most children are upwardly mobile in comparison with their parents.

**Table 5.2**

Transition matrix: education of parents and child [Transition matrix of child, Dutch population aged 25-70 years, by education of parents, 2014 (in percentages).]

Level of education parents		Level of education of child			total
		low	higher secondary	high	
low	low	42	37	21	100
	higher secondary	11	39	50	100
	high	7	26	67	100

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

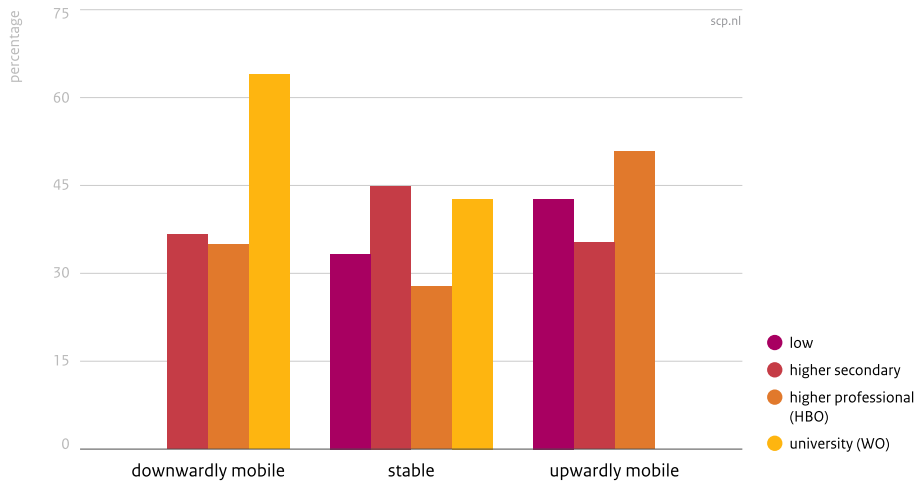
### *Alcohol consumption*

We then look at whether someone's educational mobility is related to their alcohol consumption. Figure 5.3 shows that downwardly mobile respondents with university-educated parents are most often regular drinkers (64.0%); among other downwardly mobile respondents the figure is only around 35%. Drinking alcohol regularly is apparently more accepted among people with a university background, and downwardly mobile children from this group adhere more to the lifestyle in which they were brought up, regardless of the educational level they themselves attain; see also [Health-related behaviour in the Netherlands](#).

The differences among respondents with an educational level which is the same as that of their parents are not very pronounced. Stable higher professional (hbo) graduates, in particular, are relatively moderate in their alcohol consumption.

Upwardly socially mobile respondents tend to drink regularly more often than socially stable respondents; in particular, university graduates who have risen up the social ladder (with hbo-educated parents) drink relatively often on a regular basis (50.8%).

**Figure 5.3**  
Regular alcohol consumption by educational mobility and parental educational level  
[Drinks more than once per week, Dutch population aged 25-70 years, by educational mobility and educational level of parents, 2014 (in percentages).]

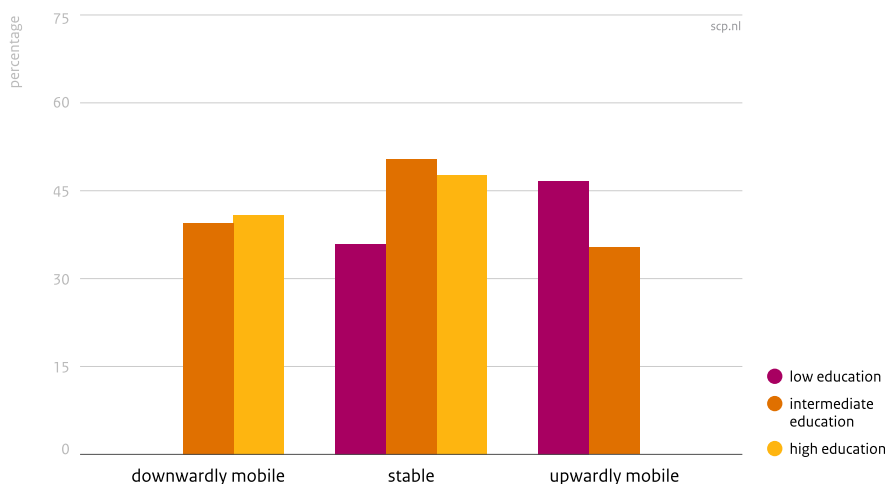


Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

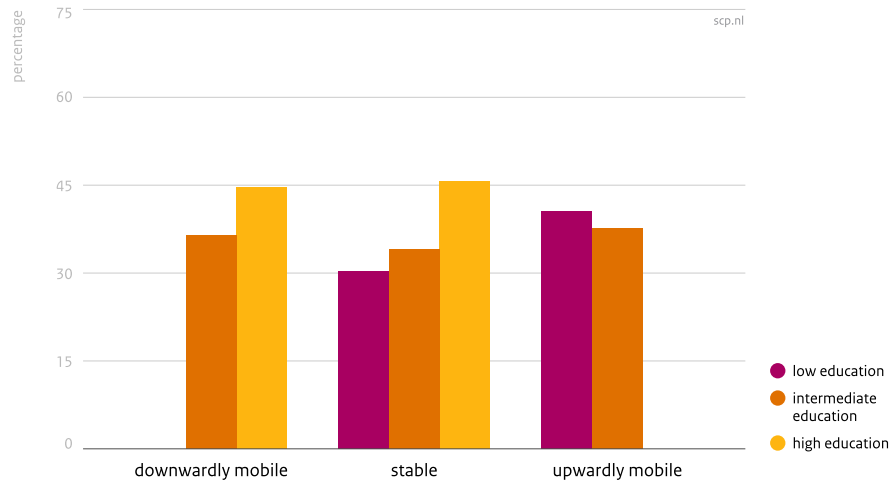
A European comparison (see figure 5.4) reveals clear country differences in the frequency of drinking alcohol regularly among downwardly socially mobile, socially stable and upwardly socially mobile respondents. It shows that in Lithuania and Portugal downwardly socially mobile people with an intermediate education are more likely to drink regularly, while in Germany and the United Kingdom this is more frequent among the upwardly socially mobile people with an intermediate education, for example.

**Figure 5.4**  
Social mobility in Europe by level of education  
[Social mobility, EU population aged 25-70 years, by education, 2014 (in percentages).]

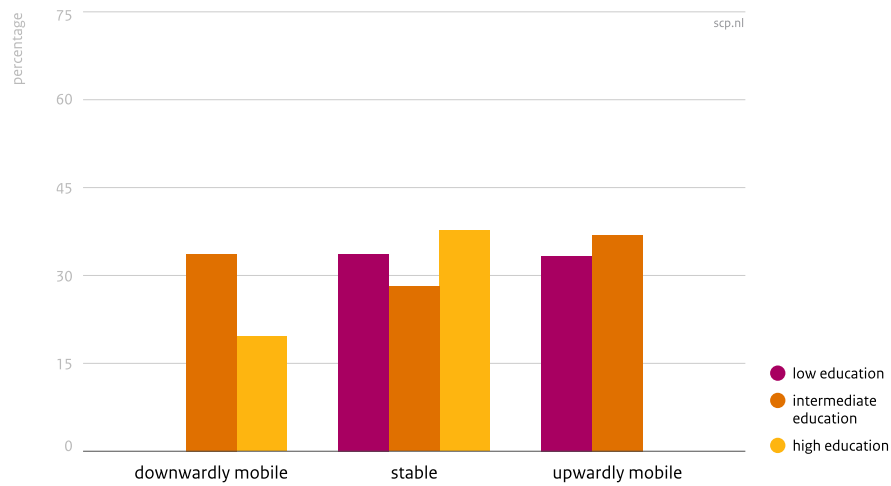
The Netherlands



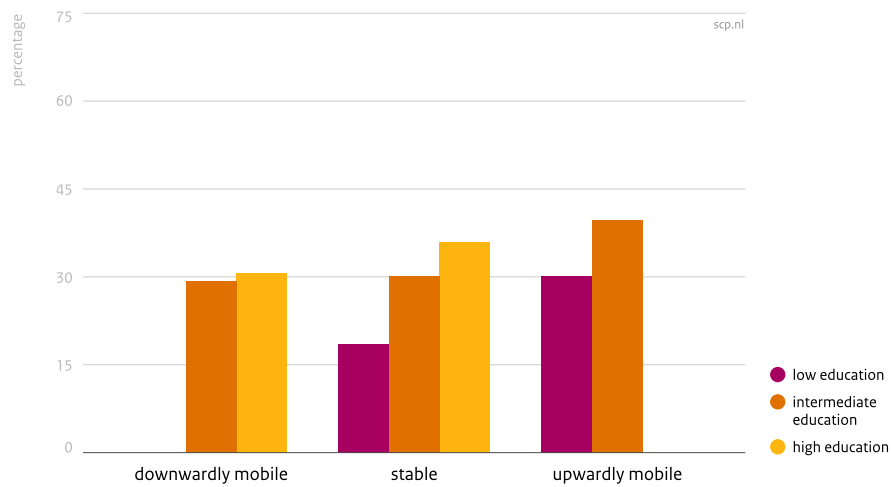
### Belgium



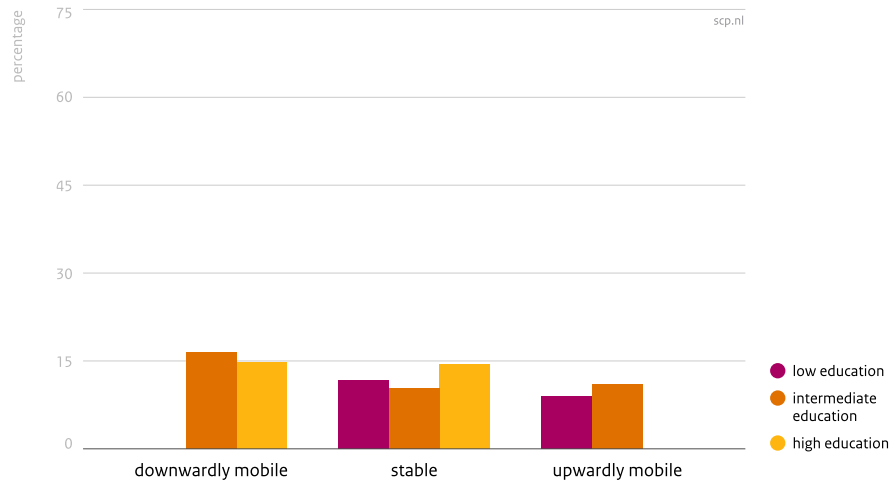
### Denmark



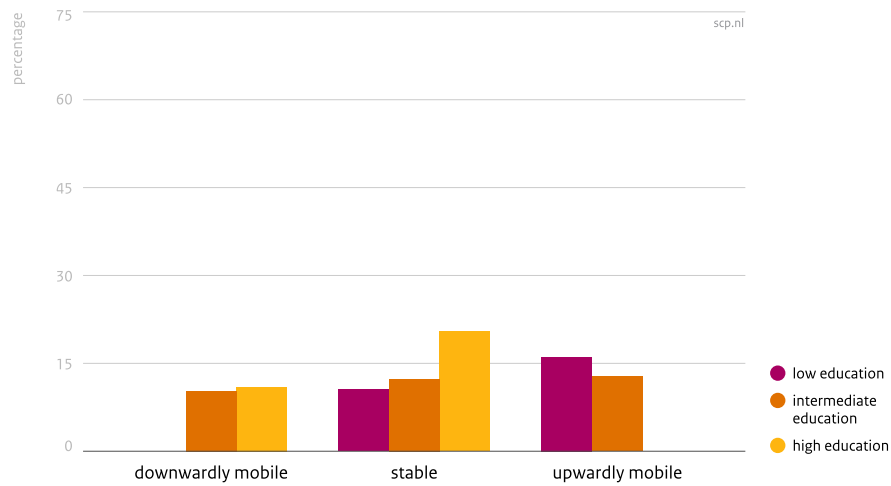
### Germany



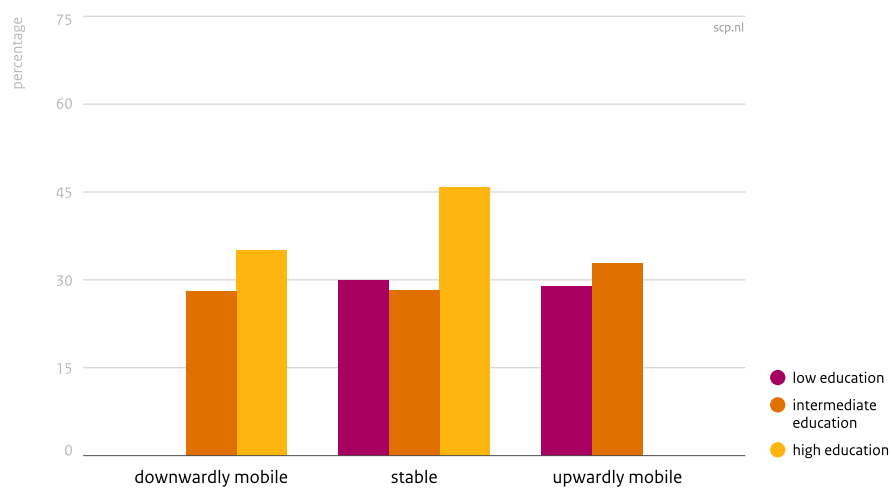
Estonia



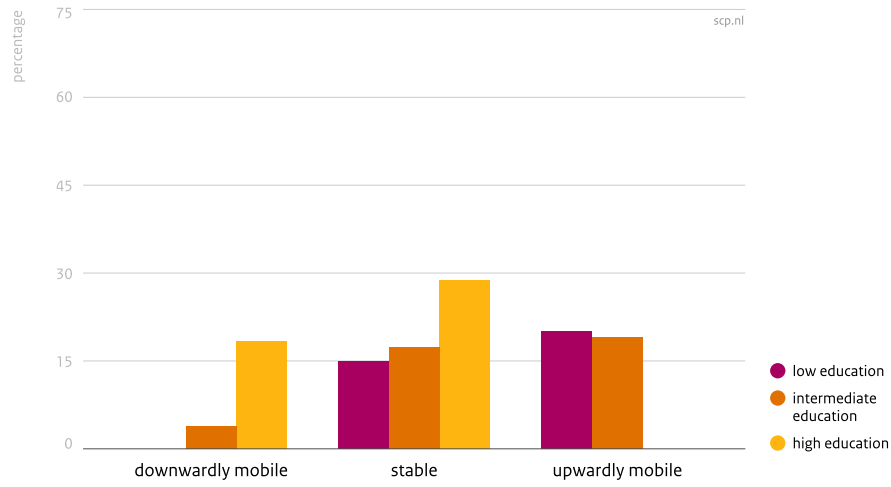
Finland



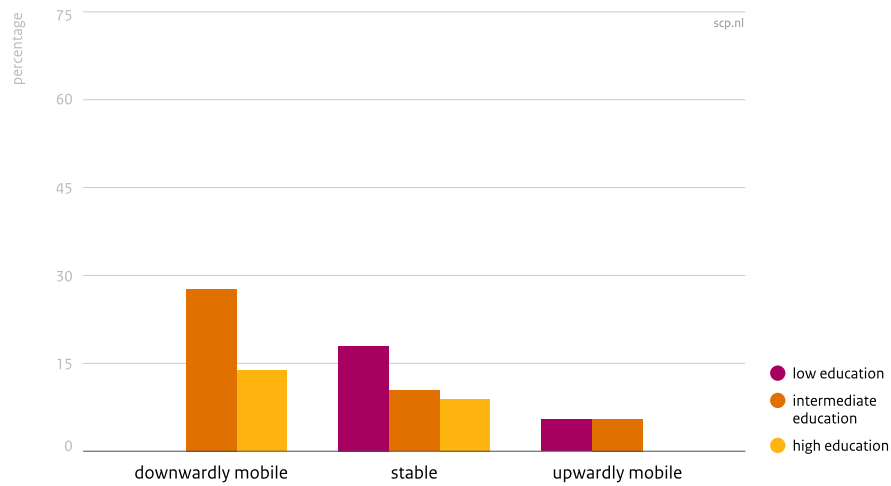
France



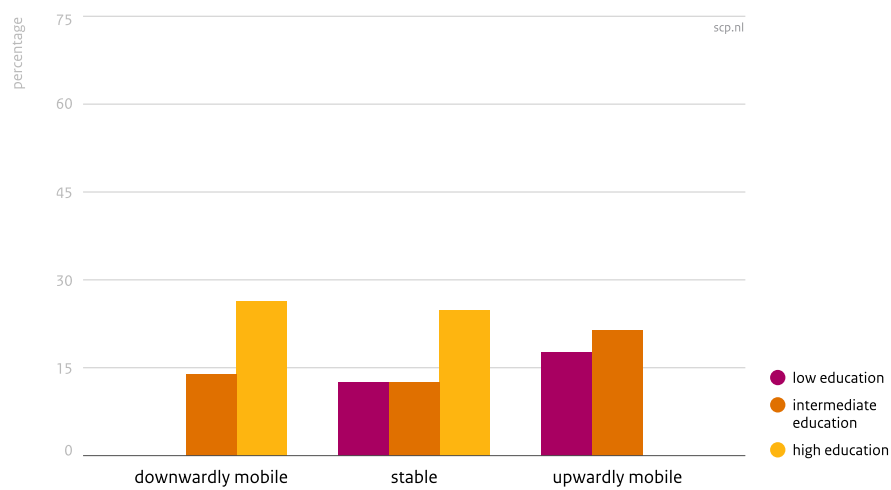
Ireland



Lithuania

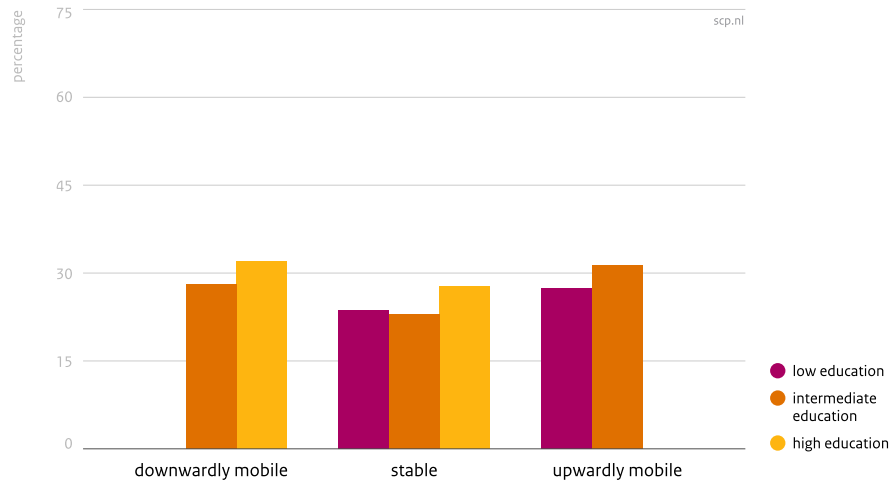


Norway

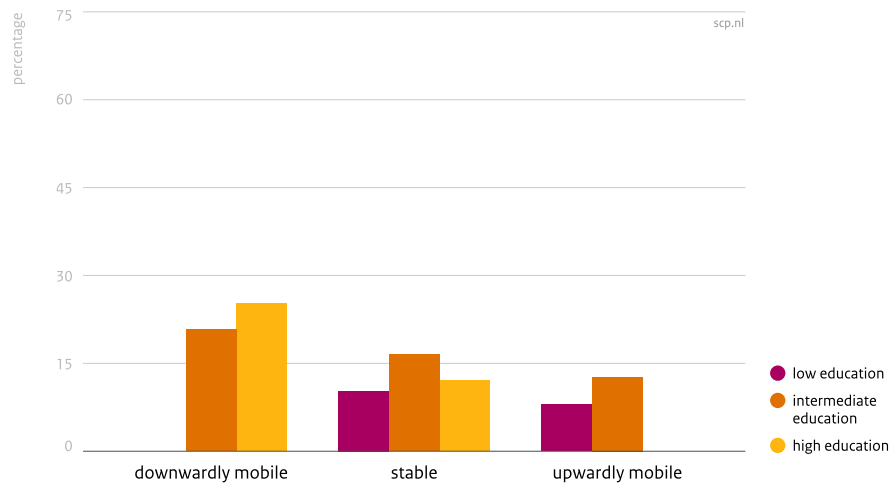




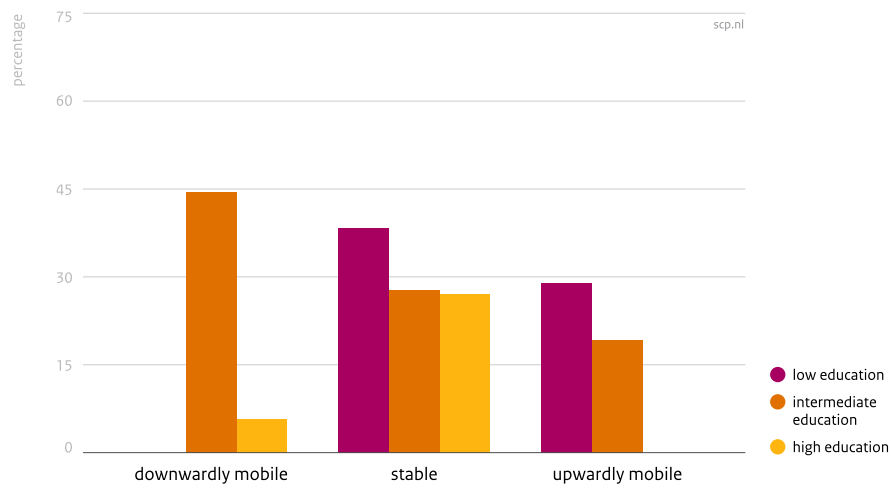
Austria



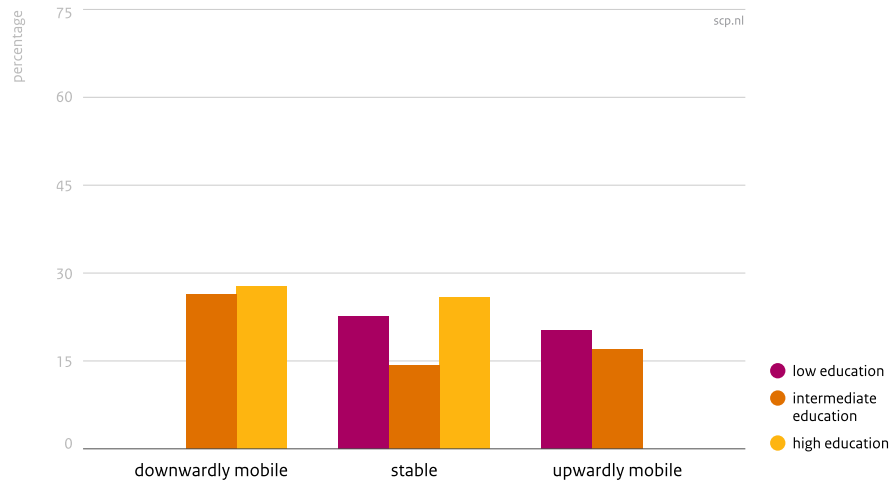
Poland



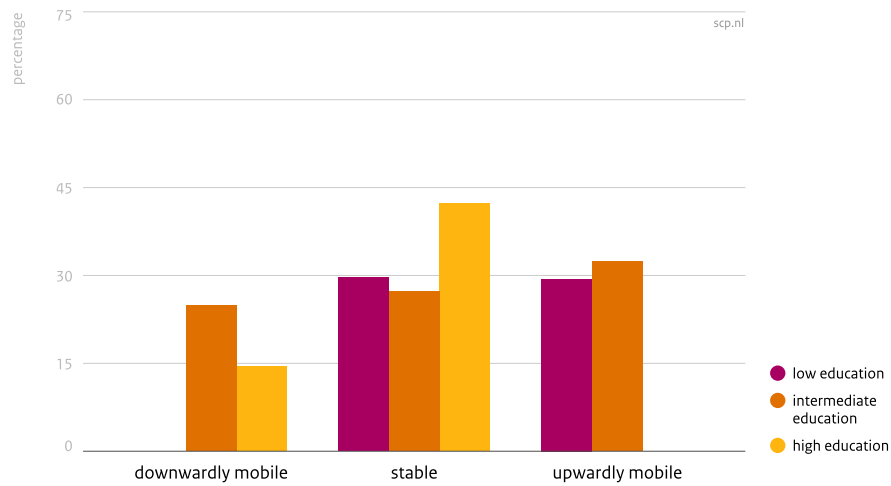
Portugal



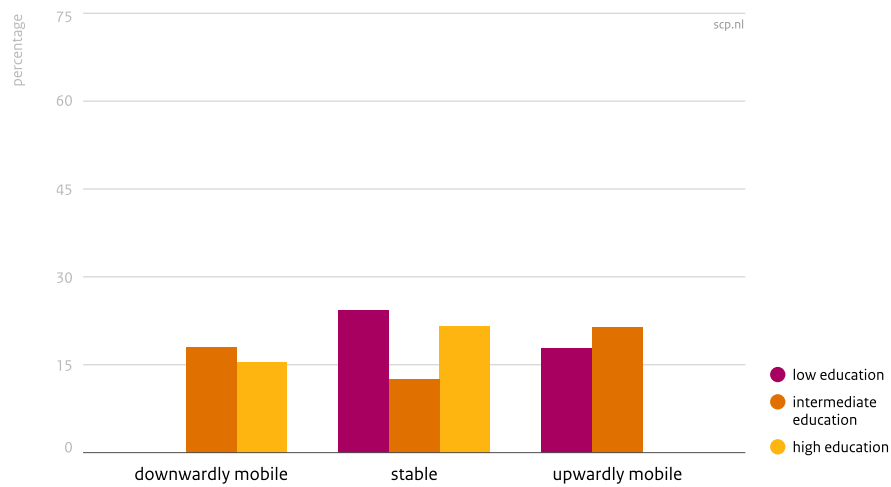
Slovenia



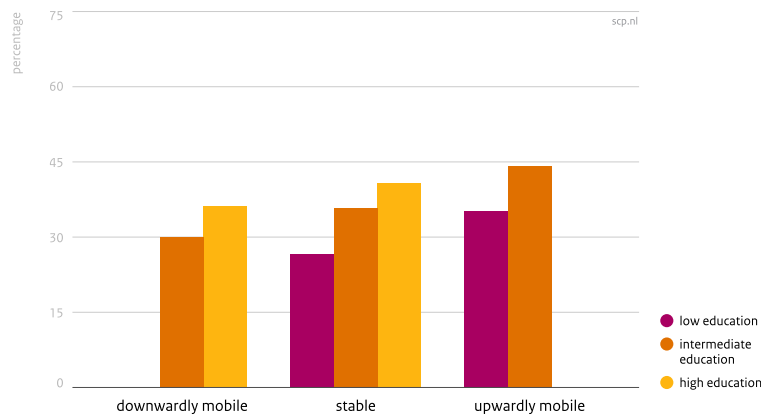
Spain



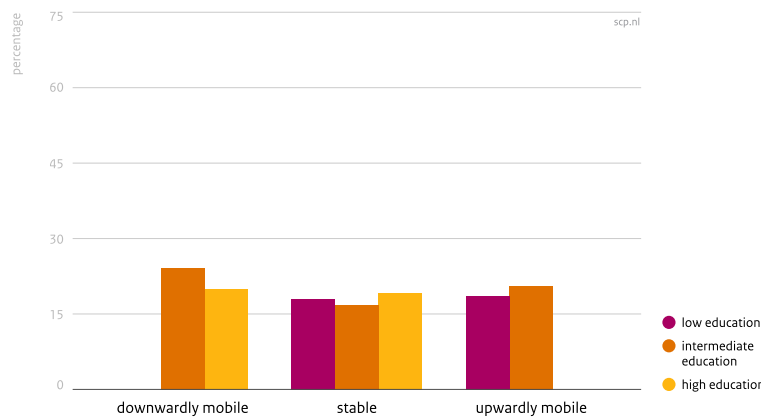
Czech Republic



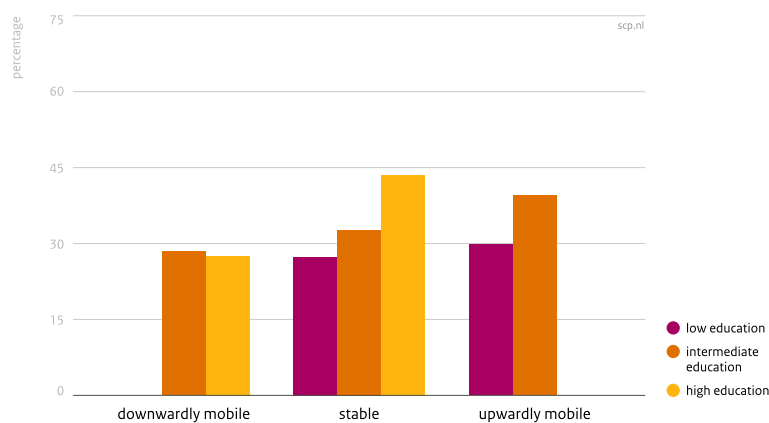
United Kingdom



Sweden



Switzerland



Source: European Social Survey Netherlands, Round 7, 2014-2015 (n=25,538)

### Social and physical mobility

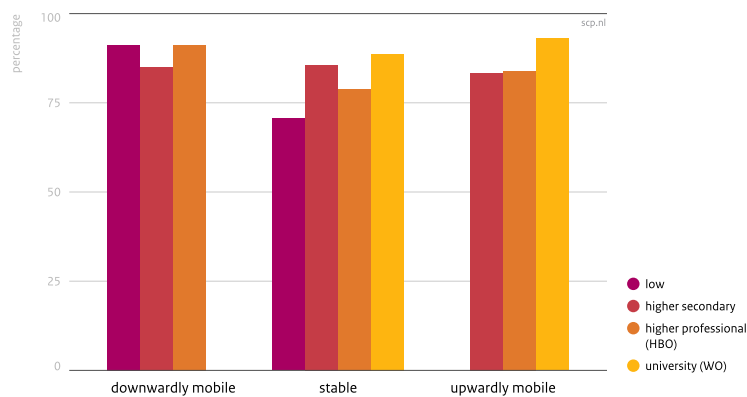
We see from figure 5.5 that those with a university education most often engage in intensive physical activity, regardless of whether they are upwardly socially mobile or stable. Relatively speaking, downwardly mobile respondents with university-educated parents also engage in

physical activity just as often as university graduates. Among socially stable respondents, we see that those with a low educational level and from a low-educated background least often engage in physical activity (70.6%). Here, the parents' educational level is more important than the respondent's own educational level. One possible explanation may be that lack of physical activity is passed on from parent to child.

Figure 5.5

Physical activity by educational mobility and educational level

[Vigorous physical activity at least once per week, Dutch population aged 25-70 years, by educational mobility and educational level, 2014 (in percentages).]



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Cate, A. ten, T. Huijts & G. Kraaykamp (2013). Intergenerationele overdracht van risicogedrag. Rookgedrag, alcoholgebruik en ongezonde eetgewoonten van ouders en hun volwassen kinderen. In: *Mens en Maatschappij*, jg. 88, nr. 2, p. 150-176.

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Neve, J.W. de & I. Kawachi (2017). Spillovers between siblings and from offspring to parents are understudied. A review and future directions for research. In: *Social Science & Medicine*, vol. 183, pp. 56-61.

## Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). Family and lifestyle habits. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/family-and-lifestyle-habits>.

## Publication date

22 October 2018

## Notes

1 Social mobility.

# Partner and health-related behaviour

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

The partner is one of the most important people in terms of influencing a person’s lifestyle and risk habits (Monden et al. 2003; De Neve & Kawachi 2017). This is after all the person with whom someone eats and drinks, engages in physical activity and who is likely to show rejection or acceptance of smoking. It therefore also seems likely that someone’s health-related behaviour will be related to the educational level of their partner.

Here we look at the effects of living with a partner with a tertiary education versus a partner with a primary or secondary educational level. We opted for this twofold division in order to simplify the comparison.

Table 6.1 relates the respondent’s own educational level to whether or not they have a partner and, if so, to whether that partner has a higher professional/university education or a lower educational level. We find a clear association: people mainly choose a partner with a similar educational level. Furthermore, there is virtually no education gap in having or not having a partner.

**Table 6.1**  
Education of respondent and partner [Highest educational level attained, Dutch population aged 25-70 years, by education of partner, 2014 (in percentages)]

Partners educational level	respondent's educational level				(n)
	low	higher secondary	higher professional (HBO)	university (WO)	
no partner	26.3	23.3	21.7	23.4	
low/higher secondary	67.7	59.5	33.5	18.7	
higher professional (HBO)/university (WO)	6.0	17.2	44.8	57.9	
total	100	100	100	100	(1415)

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Smoking and partner’s educational level

Figure 6.1 first shows that having a partner influences the chance of being a smoker. Respondents educated to low, intermediate and higher professional (*hbo*) level smoke more often if they do not have a partner; 45.3% of lower-educated respondents without a partner smoke, compared with 29.6% of lower-educated respondents with a low/intermediate-educated partner and 17.2% of those with a partner educated to tertiary level.

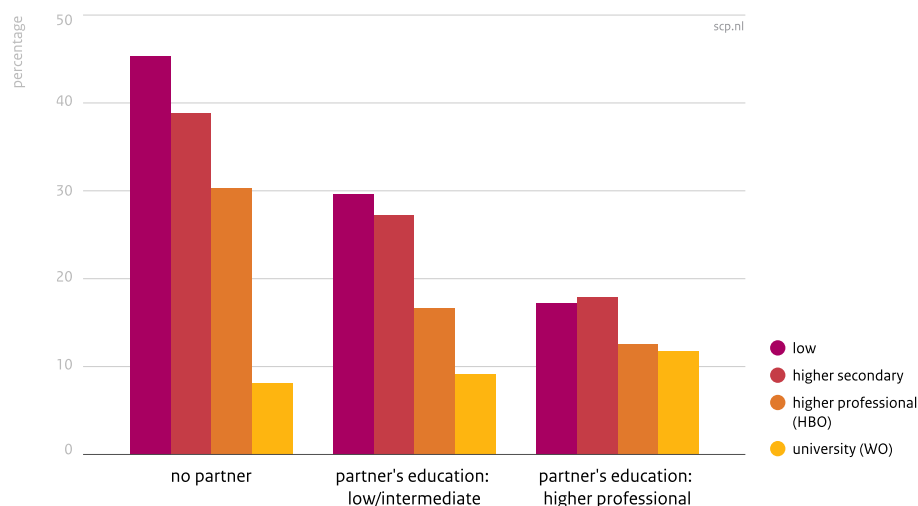
Where someone has a partner, the educational level of that partner also makes a difference: having a partner with a tertiary education leads to a relatively lower probability of smoking in

all educational groups. This partner influence is particularly substantial among lower-educated respondents (17.2%) compared with those with a low-educated partner (29.6% smokers) or no partner (45.3%). This therefore indicates that having a highly educated partner offers more protection against smoking, thus promoting good health. Another explanation could of course be that highly educated people mainly select non-smoking partners.

Figure 6.1

Smoking by educational level of respondent and partner

[Smokes,<sup>a</sup> Dutch population aged 25-70 years, by educational level of respondent and partner, 2014 (in percentages).]



a Smoking here includes smoking every day as well as smoking less regularly than every day. For more information on the variables, see [Acknowledgements and sources](#).

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

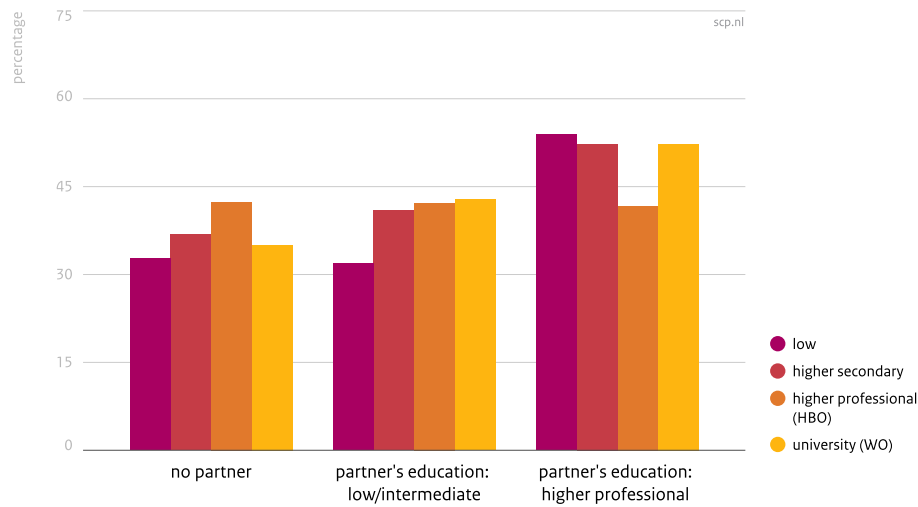
## Alcohol consumption and partner's educational level

What are the potential health-promoting partner effects in relation to drinking alcohol? Is this social activity influenced in a different way from smoking? In line with the findings on educational differences in alcohol consumption by respondents themselves in [Health-related behaviour in the Netherlands](#), figure 6.2 shows that having a highly educated partner is often associated with regular alcohol consumption; 52.3% of university-educated respondents with a partner who also has a tertiary education drink regularly, whereas the figure is substantially lower (35.0%) among university graduates without a partner.

Figure 6.2

## Regular alcohol consumption by educational level of respondent and partner

[Drinks more than once per week, Dutch population aged 25-70 years, by educational level of respondent and partner, 2014 (in percentages).]



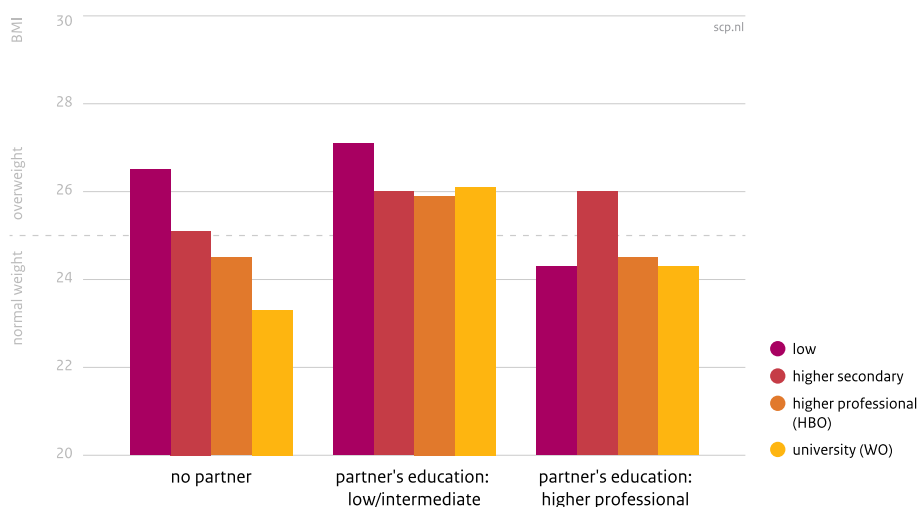
Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Is the partner's education also related to being overweight?

Being overweight is an important and growing problem in Dutch society. A high BMI is generally the result of exercising too little, eating too much and consuming high-calorie foods. Meals are often shared with a partner. The question is therefore to what extent the partner also has an influence on a person's BMI. It can be seen from figure 6.3 that having a partner is clearly related to being overweight. First, we see that the education gap is greatest among persons without a partner: an average BMI of 26.5 for those with the lowest educational level, compared with a BMI of 23.3 for university graduates. Living with a partner with a low or intermediate educational level appears to be associated for all respondents with a higher average BMI<sup>1</sup> compared with not having a partner; this effect is also relevant for those with a low and higher secondary educational level.

Figure 6.3

Average BMI by educational level of respondent and partner

[Average BMI,<sup>a</sup> Dutch population aged 25-70 years, by educational level of respondent and partner, 2014 (in percentages).]

a The dotted line represents the threshold for being overweight (BMI > 25)

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## References

Lenthe, F.J. van & J.P. Mackenbach (2006). Neighbourhood and individual socioeconomic inequalities in smoking: the role of physical neighbourhood stressors. In: *Journal of Epidemiology & Community Health*, vol. 60, nr. 8, p. 699-705.

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Neve, J.W. de & I. Kawachi (2017). Spillovers between siblings and from offspring to parents are understudied. A review and future directions for research. In: *Social Science & Medicine*, vol. 183, pp. 56- 61.

## Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). Partner and health-related behaviour. In: *(Un) healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/partner-and-health-related-behaviour>.

## Publication date

22 October 2018

## Notes

1 Age effects are also relevant here.



# The neighbourhood and health-related behaviour

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

The social setting can be an important factor in understanding health-related habits and preferences; see also [Education as a dividing line](#). The social setting may consist of the respondent's immediate family or circle of friends, but can also often include living in particular neighbourhoods (Carpiano 2007; Van Lenthe & Mackenbach 2006). The immediate and day-to-day residential setting is important because it gives an indication of the availability of facilities. It also provides an idea of what is usual in terms of the health-related behaviour of those surrounding an individual (Carpiano 2007). In this card we therefore seek to determine whether there are substantial differences between neighbourhoods in terms of the six health-related lifestyle indicators [[Smoking](#), [alcohol consumption](#), [fruit and vegetable consumption](#), [overweight](#), [physical activity](#)]. More specifically, we want to explore whether the quality of the residential environment influences the health-related behaviour of residents and what role educational differences play in that process.

## Quality of the residential environment: population density

As an indicator of the quality of the residential setting, we look first at the population density (number of persons per square kilometre) in a neighbourhood. In more densely populated neighbourhoods, there are fewer opportunities on average to engage in physical activity outdoors and more temptations to unhealthy behaviour (ready availability of fast food, supermarkets, etc.). Second, we look at the percentage of owner-occupied homes in a neighbourhood. Neighbourhoods with a high proportion of owner-occupied homes generally experience less crime, are better maintained, suffer less from decay and neglect, have a wide range of amenities and enjoy greater social cohesion (Rohe et al. 2013). The number of respondents for this card is slightly lower than in the previous cards (1,369 versus 1,415)<sup>1</sup>.

## Healthy behaviour and the neighbourhood

### *Population density*

First of all, we find (figure 7.1) that engaging in sufficient physical activity is less common in more densely populated neighbourhoods. The more people per square kilometre living in a neighbourhood, the lower the percentage of residents who engage in physical activity for 30 minutes on at least one day per week.

Around 85% of those living in sparsely populated neighbourhoods are physically active, compared with 79% in intermediately and densely populated neighbourhoods. This is very likely connected to the availability of outdoor space in densely populated neighbourhoods, with fewer opportunities for physical activity. However, it could also be linked to the population profile of the neighbourhood. Wider availability of public transport in more urbanised neighbourhoods could also mean that residents less often use a bicycle, for example.

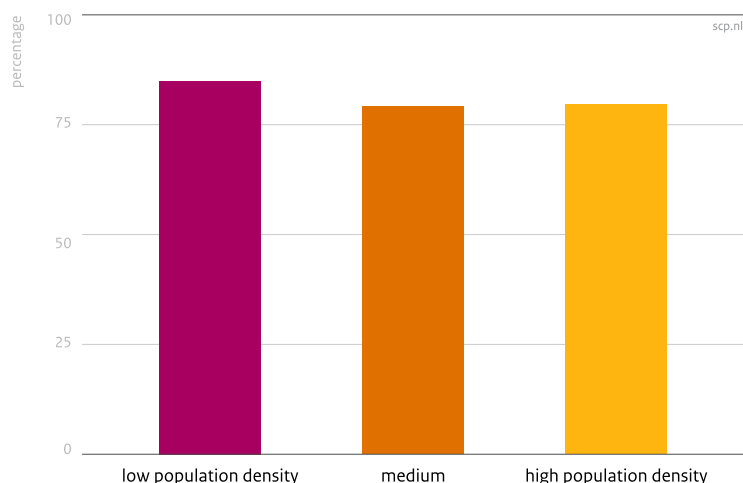
## Neighbourhood context and composition

We are not able to distinguish here between context (what the neighbourhood looks like) and composition (which people live in a neighbourhood). We will focus on this in a later publication.

Figure 7.1

### Physical activity by population density of neighbourhood

[Intensive physical activity for more than 30 minutes on at least one day per week, Dutch population aged 25-70 years, by population density of neighbourhood, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,369)

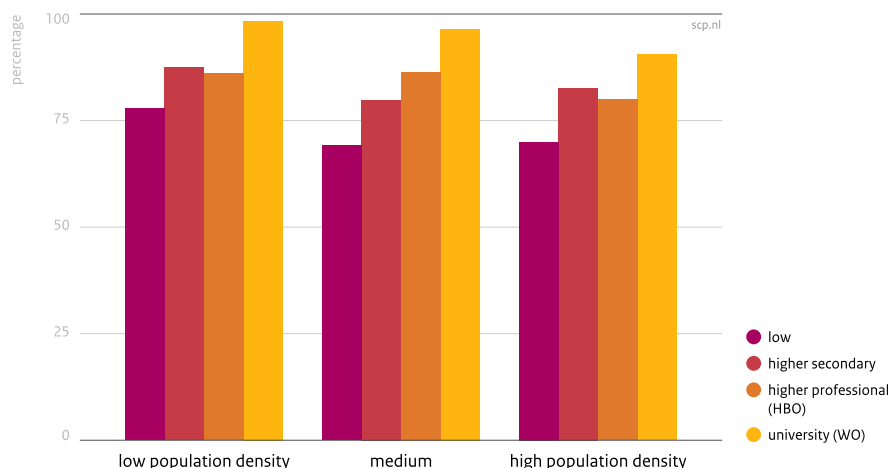
### Educational differences

The fact that people in neighbourhoods with low population density more often engage in intensive physical activity than residents of densely populated neighbourhoods applies across all educational groups (figure 7.2). Interestingly, the neighbourhood differences in terms of education are not especially pronounced; the pattern is more or less the same for all degrees of urbanisation. Even in the most highly urbanised setting, 90.5% of highly educated residents engage in intensive physical activity at least once per week. In the least urbanised neighbourhoods, the figure is 98.4% – a relatively small difference. The differences are comparable for the other educational groups. We therefore conclude that neighbourhood characteristics do not have a strong influence on educational inequality in health-related behaviour in this instance.

Figure 7.2

## Exercise by population density and educational level

[Exercises intensively for more than 30 minutes on at least one day per week, Dutch population aged 25-70 years, by population density of the neighbourhood and educational level of respondent, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,369)

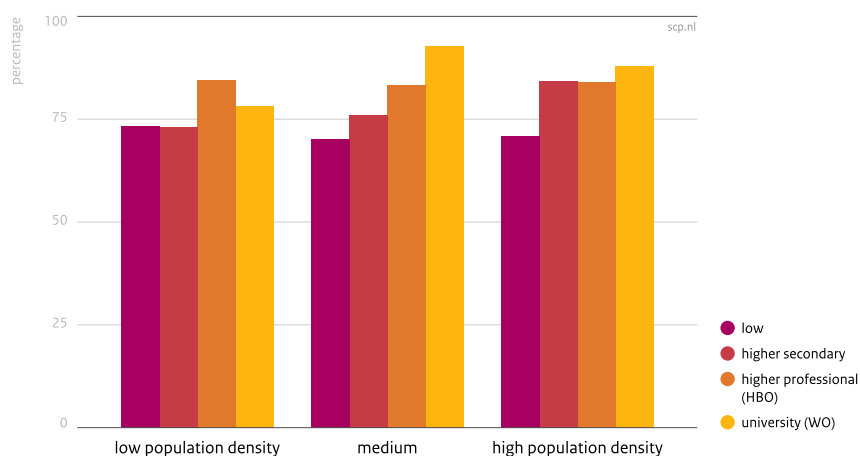
*Eating vegetables*

We also find educational differences based on population density in relation to daily consumption of vegetables (figure 7.3). Highly educated people living in neighbourhoods with a lower population density eat less healthy than their counterparts in neighbourhoods with an average population density. The gap compared with low-educated residents is 4.7 percentage points in neighbourhoods with a low population density, while in densely populated neighbourhoods it is no less than 17 percentage points. Determining whether these differences are due to a selective influx of residents with relatively unhealthy habits or whether it is the neighbourhood that reinforces or suppresses health-related behaviour requires further research.

Figure 7.3

## Daily vegetable consumption by population density and educational level

[Eats vegetables daily, a Dutch population aged 25-70 years, by population density of the neighbourhood and educational level of respondent, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,369)

## Quality of the residential environment: homogeneous or heterogeneous neighbourhoods?

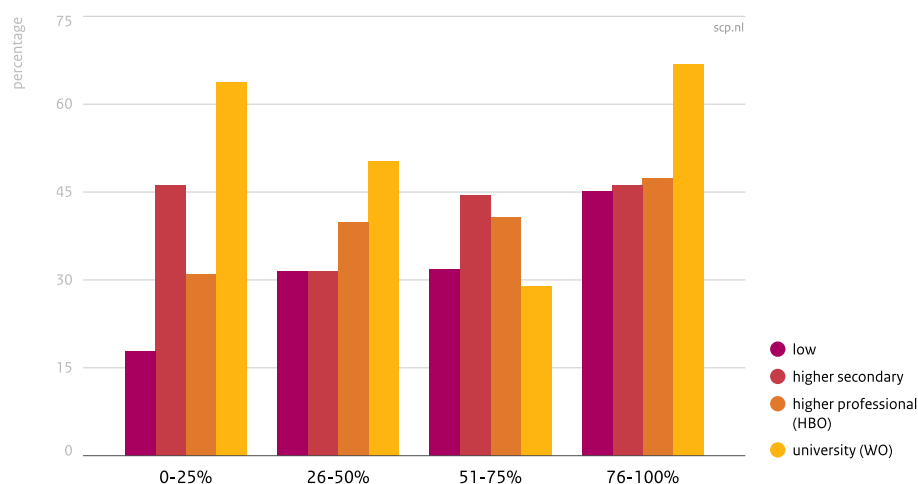
### Alcohol consumption

Figure 7.4 portrays regular alcohol consumption and relates it to the prosperity of the neighbourhood [Measured by the percentage of owner-occupied homes.] where someone lives. The assumption is that people in more affluent neighbourhoods will take more care of the physical and social setting, which may promote healthier behaviour. The pattern found earlier where university graduates most often drink alcohol regularly, in [Health-related behaviour in the Netherlands](#), is repeated here. University graduates from neighbourhoods with a high proportion of owner-occupied houses, and also those from neighbourhoods with virtually no owner-occupied houses, are particularly likely to drink regularly (66.8% and 63.8%, respectively). The educational differences are much less pronounced in neighbourhoods with a more balanced distribution of owner-occupied and rented houses. The education gap in alcohol consumption is thus greatest in homogeneous neighbourhoods with a predominance of owner-occupied or rented houses.

Figure 7.4

Regular alcohol consumption by percentage of owner-occupied houses in the neighbourhood and educational level

[Drinks alcohol more than once per week, Dutch population aged 25-70 years, by percentage of owner-occupied houses in the neighbourhood and educational level of respondent, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,369)

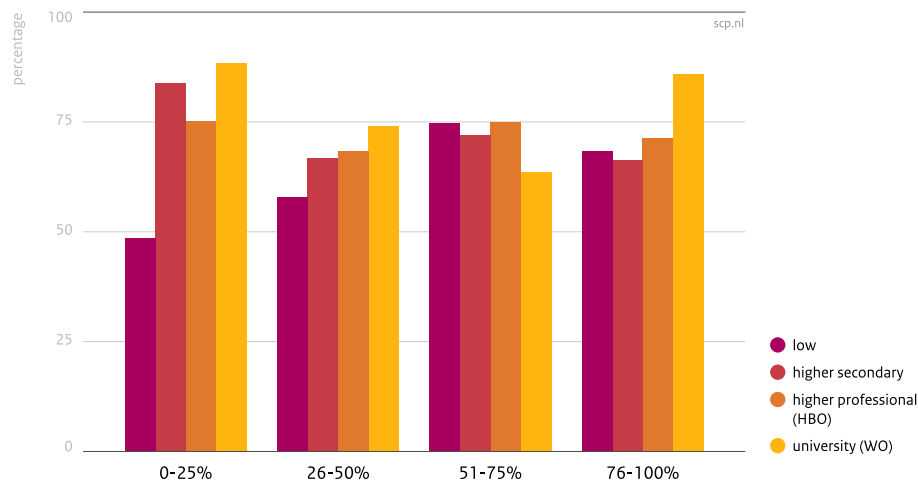
### Eating fruit

Figure 7.5 shows that the education gap as regards eating fruit daily is greatest in neighbourhoods with few owner-occupied houses. In other words, the less affluent a neighbourhood is, the greater the differences in fruit consumption between those with a low and high educational level, with those with a high educational level more often eating fruit daily than low-educated residents. People with a low educational level thus appear to adopt more healthy behaviour in affluent neighbourhoods and eat relatively healthy, perhaps because of the greater opportunities and seeing more healthy examples. Further research is needed to ascertain to what extent structural and cultural neighbourhood characteristics may reinforce or weaken lifestyle habits.

Figure 7.5

Daily consumption of fruit by percentage of owner-occupied houses in the neighbourhood and level of education

[Eats fruit daily,<sup>a</sup> Dutch population aged 25-70 years, by percentage of owner-occupied houses in the neighbourhood and educational level of respondent, 2014 (in percentages).]



Source: EC/NWO (ESS Netherlands 2014/'15, Round 7) (n = 1369)

## References

Carpiano, R.M. (2007). Neighborhood social capital and adult health: an empirical test of a Bourdieu-based model. In: *Health & Place*, vol. 13, no. 3, pp. 639-655.

Rohe, W.M., S. Van Zandt & G. McCarthy (2013). The social benefits and costs of homeownership. A critical assessment of the research. In: *The Affordable Housing Reader*, vol. 40, pp. 196-213.

## Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). The neighbourhood and health-related behaviour. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/the-neighbourhood-and-health-related-behaviour>.

## Publication date

22 October 2018

## Notes

- 1 This is because neighbourhood data are not available on all neighbourhoods from ESS Round 7 from Statistics Netherlands (CBS).

# Accumulation of risk factors

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

Health-related behaviour is unlikely to be determined by one single good or bad habit, but rather by an accumulation of healthy and unhealthy behaviours. These are ingrained habits, which form part of someone's personal lifestyle. Over time, these behaviours can have consequences for a person's health.

A further important aspect is the tendency to combine several healthy/unhealthy habits, which means that health-related behaviour is not expressed in just one area, but in several domains. To study this phenomenon, we have created an accumulation index of three unhealthy lifestyle factors: drinking regularly [[More than once per week.](#) ], smoking and being overweight [[BMI > 25](#)]. The question is how often these aspects occur in combination and whether this accumulation bears any relation to educational level.

On average, 45.7% of 25-70-year-old respondents exhibit one risky behaviour, 29% combine two such behaviours and 4.7% combine all three; 20.6% do not exhibit any of the risk factors included in this study.

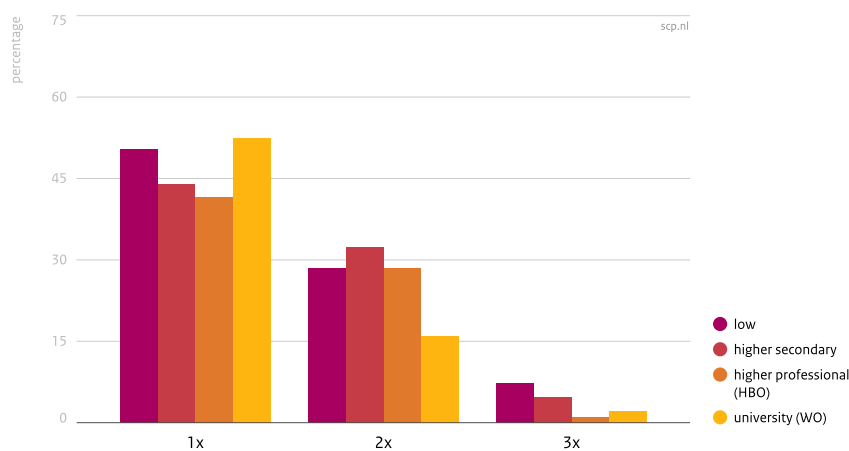
## Unhealthy behaviour: accumulation and educational differences

Figure 8.1 shows that an accumulation of risk factors is related to education; combining several risky behaviours is associated with a wider education gap. The difference between those with a low, intermediate and higher educational level is fairly small for having one risky behaviour; the high score for those with the highest educational level is mainly attributable to their regular consumption of alcohol. The picture changes completely when we look at those who combine three risky habits: this time, we find more than six times as many people with a low educational level as people with a higher professional education. This illustrates that the group with a low educational level more often combines several risk factors than the highly educated group.

Figure 8.1

Cumulative index of unhealthy behaviour

[Cumulative index of smoking, drinking alcohol regularly and being overweight, Dutch population aged 25-70 years, by educational level, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

Healthy behaviour: accumulation and educational differences

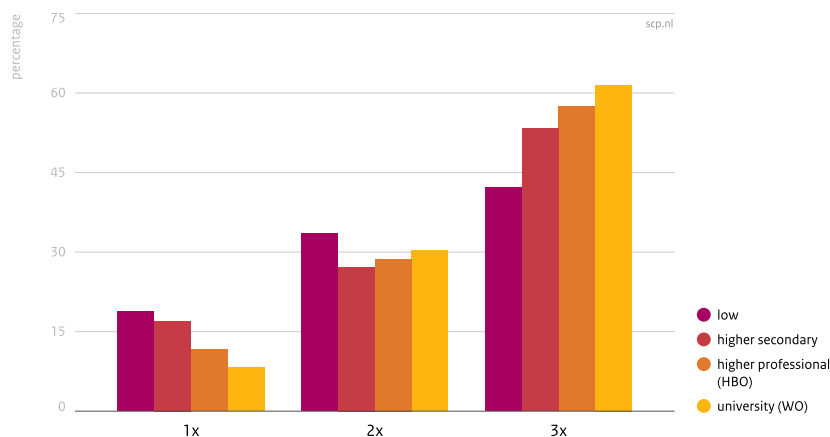
Figure 8.2 illustrates the accumulation of healthy behaviours. We have created an index consisting of daily consumption of fruit, daily consumption of vegetables and engaging in intensive physical activity at least once per week. Only 3.1% of respondents report that they have no healthy habits. Those with the highest educational level include the most healthy behaviours in their lifestyle: no fewer than 61.5% of all university graduates report that they combine all three of the healthy behaviours studied here.

Generally speaking, the accumulation of healthy behaviour increases with rising educational level, and is found least often among those with the lowest educational level.

Figure 8.2

Cumulative index of healthy behaviour by educational level

[Eats fruit and vegetables daily, intensive physical activity for 30 minutes at least once per week, Dutch population aged 25-70 years, by educational level, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## A concurrence of healthy and unhealthy behaviour?

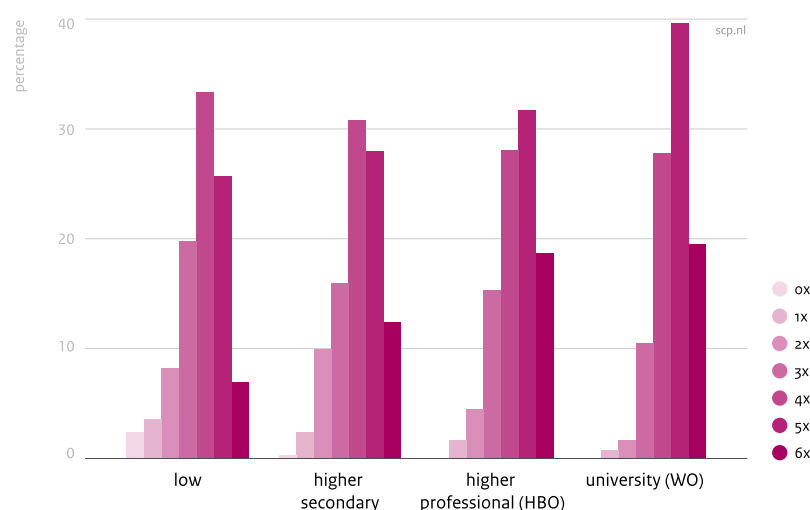
Finally, it is interesting to consider whether and how healthy and unhealthy behaviours occur together. A single index was created for this (figure 8.3), in which unhealthy behaviours are mirrored as healthy behaviours (i.e. as not smoking, not drinking regularly and not being overweight).

The first clear observation is that there is a very strong cumulation of healthy behaviour among those with the highest educational level: 59.1% of university graduates report five or more healthy lifestyle behaviours. This compares with just 32.7% of the group with a low educational level. The figure also shows that 2.4% of the lowest-educated group exhibit no healthy behaviours at all – something that does not occur in the highly educated group, demonstrating once again that unhealthy lifestyle behaviours tend to cumulate. It also illustrates that we need to look at the education gap in health behaviours as a whole; it is not simply the case that certain groups display one or more specific behaviours, but rather that inequalities in unhealthy behaviour accumulate mainly in the group with the lowest educational level.

**Figure 8.3**

Cumulation of healthy behaviour

[Cumulation of healthy behaviour,<sup>a</sup> Dutch population aged 25-70 years, 2014 (in percentages).]



a Not smoking, not drinking regularly, not overweight, eating vegetables, eating fruit, physical activity

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

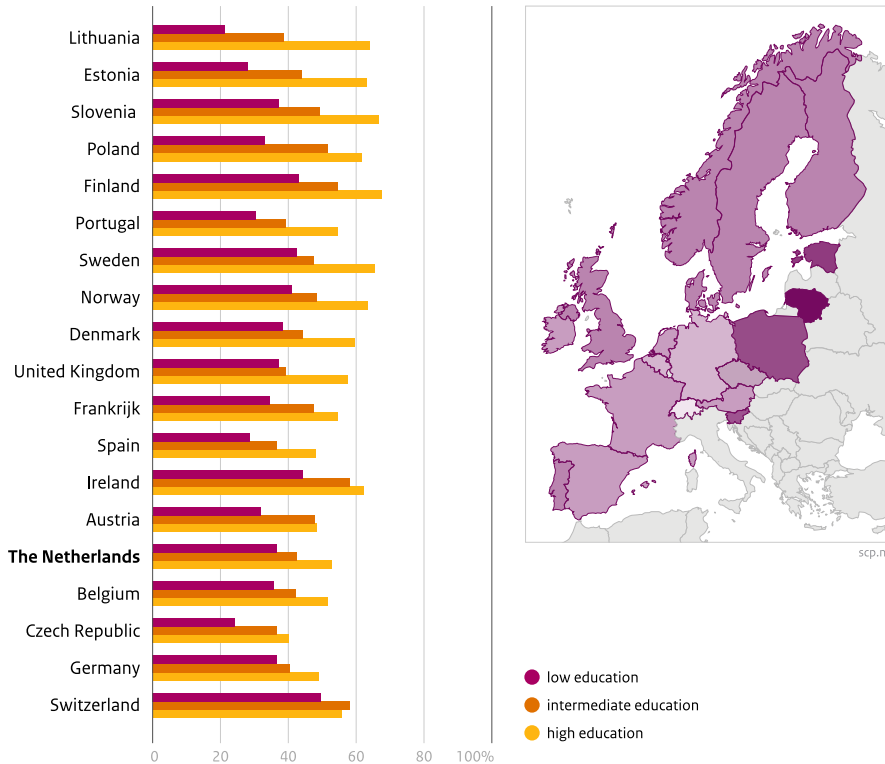
The map of Europe shows the education gap in relation to the cumulation of (un)healthy behaviour in various countries included in the European Social Survey. Figure 8.4 plots the percentage of respondents reporting five or six healthy behaviours against the percentage reporting four or fewer healthy behaviours. Our results show that the education gap in accumulation of health-related behaviour is smallest in Switzerland (5.4%) and greatest in Lithuania (42.9%). The Netherlands also has a relatively small education gap (16.4%).



Figure 8.4

The education gap in cumulation of healthy behaviour in Europe

[The education gap in healthy behaviour, EU population aged 25-70 years, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (n=25,538)

Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). Accumulation of risk factors. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/accumulation-of-risk-factors>.

Publication date

22 October 2018

# Sex and the discrepancy in health-related behaviour

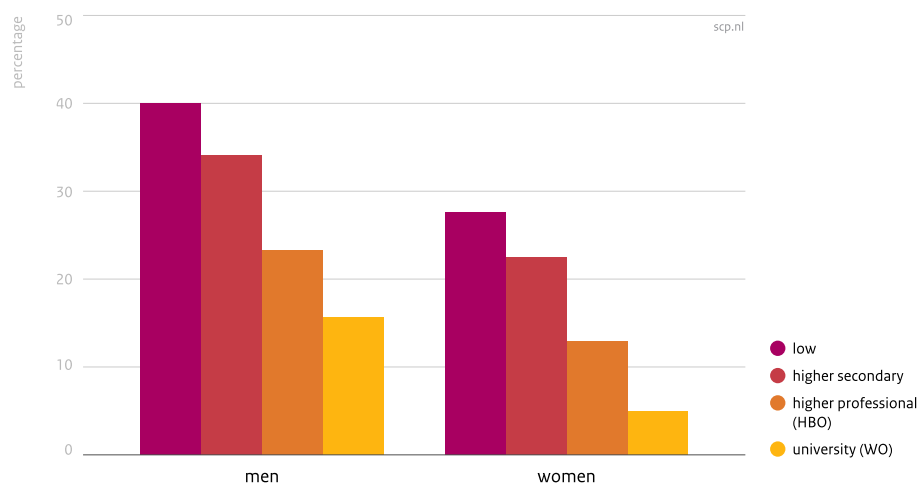
Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

Earlier research has shown that there are clear differences in the health-related behaviour between the sexes, with men generally reporting a less healthy lifestyle than women (Deeks et al. 2009; Ross & Mirowsky 2010). However, the question is to what extent these differences in health-related behaviour are linked to the education gap in health-related behaviour. We therefore examine the relationship between sex and the education gap in health-related behaviour.

## Smoking

The educational gradient in figure 9.1 reveals that people with a low educational level smoke more often than people with a high educational level. The difference between men and women is also clear: men smoke more often than women (university graduates are the only group where this difference is not statistically significant). This is particularly the case for men with a low educational level. Smoking therefore appears to be relatively common mainly among men with a low educational level (40%).

**Figure 9.1**  
Smoking by educational level and sex  
[Smokes,<sup>a</sup> Dutch population aged 25-70 years, by educational level and sex, 2014 (in percentages).]



a Smoking here includes smoking every day as well as smoking less regularly than every day. For more information on the variables, see [Acknowledgements and sources](#).

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Male and female drinking: are there educational differences?

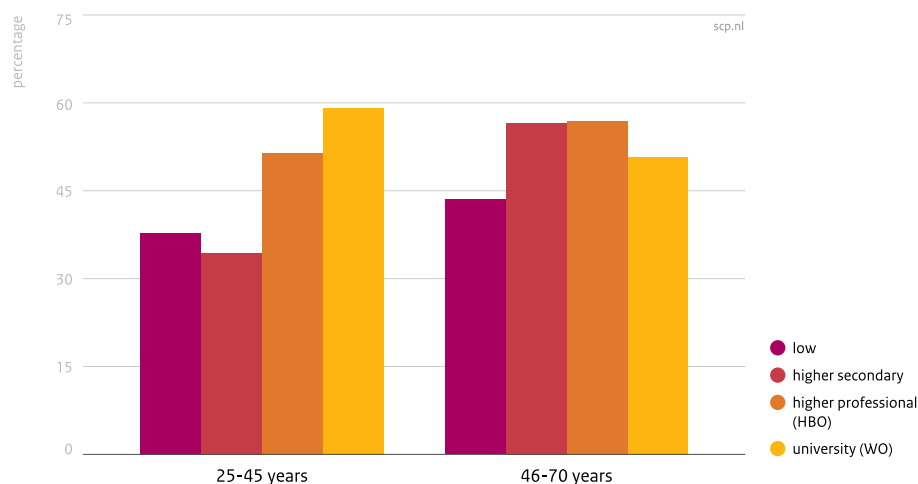
Figures 9.2 and 9.3 show the educational differences for men and women in regular alcohol consumption; the figures also show a breakdown by age. Young women in all educational groups drink less regularly than men. Interestingly, educational differences in regular drinking are most prominent among women aged 46-70 years; 29.4% of the lowest-educated women in this group drink regularly, compared with 60.4% of university-educated women. The differences are much less pronounced in younger women.

The picture for men is reversed; here we find the biggest educational differences in the younger category; young highly educated men in particular drink relatively often (59.1%), while men with a secondary and low education are more moderate (34.4% and 37.8%, respectively). Drinking is a very ingrained habit among men aged 45 years and older: around 50% of all educational groups drink alcohol regularly. Only the (in absolute terms) small group of men with a low educational level is slightly more moderate, with 43.5% regular drinkers. Financial factors may offer an explanation for this difference.

**Figure 9.2**

Regular alcohol consumption by education, men

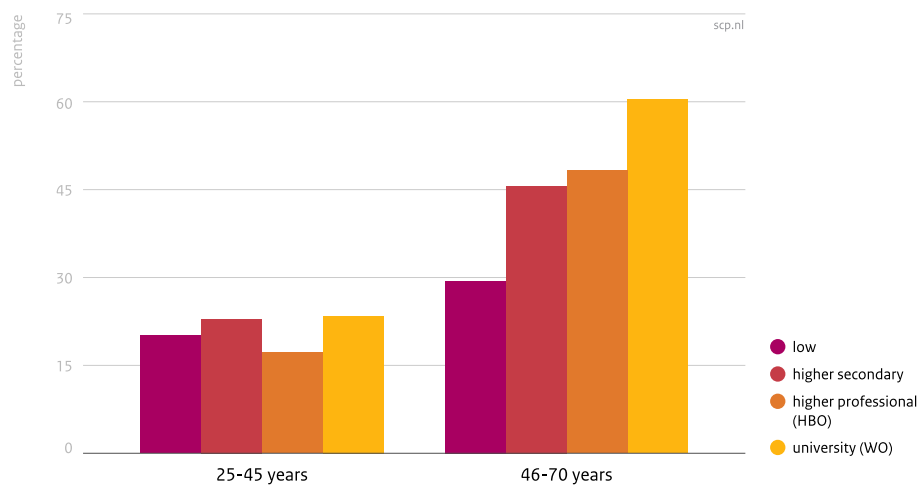
[Drinks alcohol more than once per week, Dutch men aged 25-70 years, by education, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

**Figure 9.3****Regular alcohol consumption by educational level, women**

[Drinks alcohol more than once per week, Dutch women aged 25-70 years, by educational level, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## Sex, being overweight and vegetables

### BMI

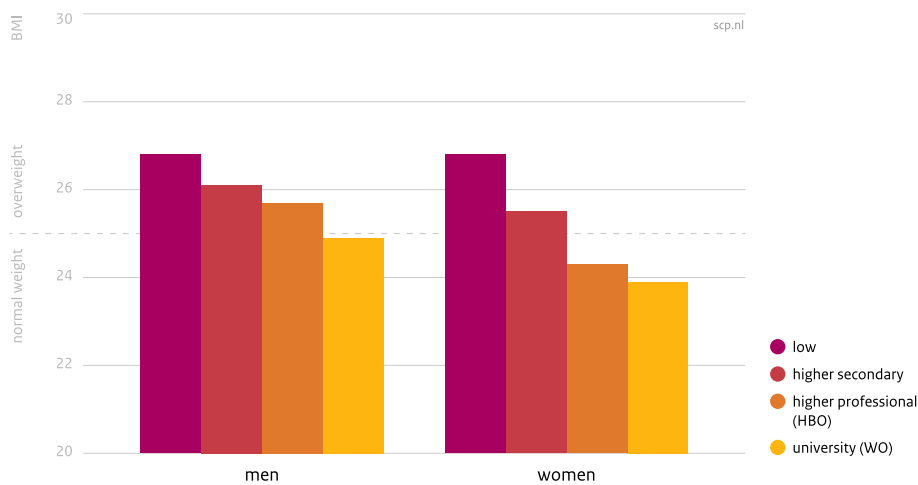
One of the biggest problems in affluent Western societies is the prevalence of overweight [BMI 25-30] and obesity [BMI > 30]. Figure 9.4 shows the average BMI for men and women by educational level. The dotted line represents the lower threshold for overweight.

Highly educated women (higher professional and university) are on average not overweight. Among men, university graduates are strictly speaking the only group reporting a healthy weight on average. There is also a clear distinction between men and women as regards educational differences: the education gap in BMI between women with a low and higher secondary education on the one hand and those with a higher professional or university education on the other is clearly more pronounced than among men in the same categories, where the boundary lies between men with a higher professional and a university education.

Figure 9.4

## Average BMI by educational level and sex

[Average BMI,<sup>a</sup> Dutch population aged 25-70 years, by educational level and sex, 2014 (in percentages).]



a The dotted line represents the threshold for being overweight (BMI > 25).

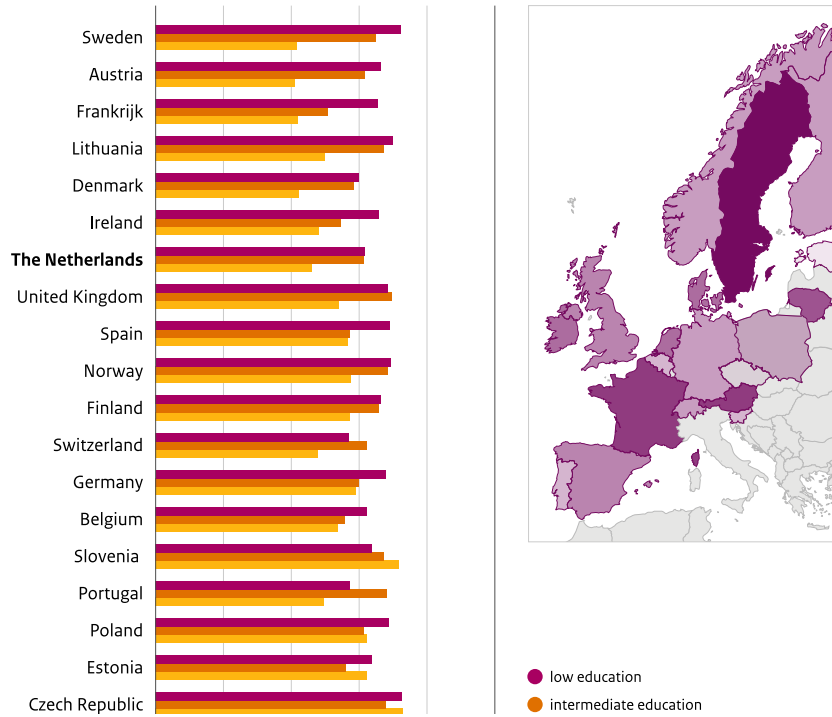
Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

If we look at the sex-specific education gap in BMI in Europe (figure 9.5), we see that men with a low educational level in Slovenia are less often overweight than men with a high educational level. In all other countries, precisely the reverse is true. The educational difference among men is greatest in Sweden, where 41.5% of highly educated men and 72.3% of men with a low educational level are overweight.

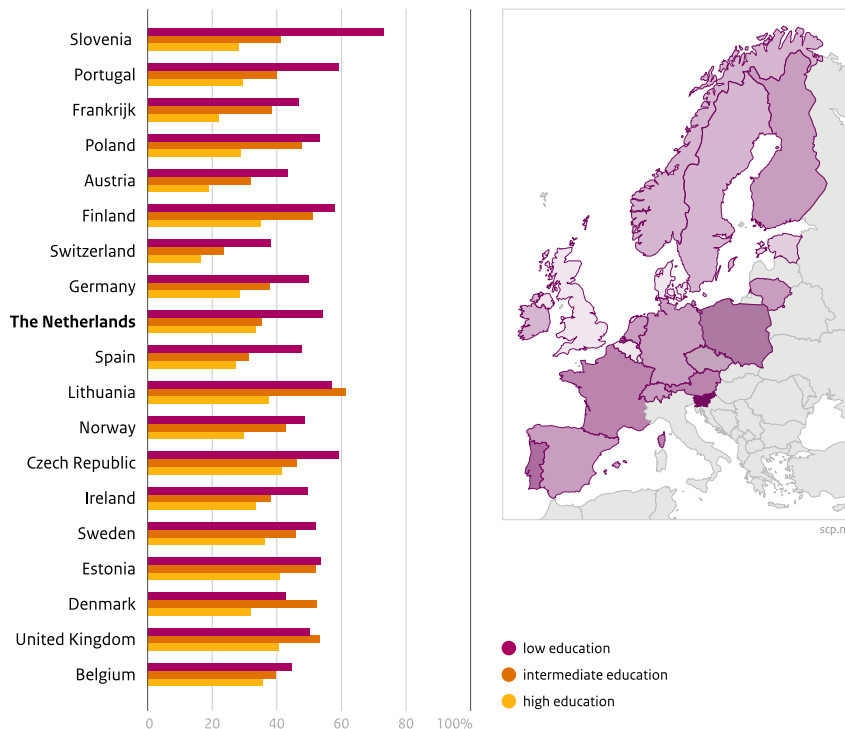
The education gap in BMI in the Netherlands is relatively wide, with a difference of 15.6 percentage points among men and no less than 20.8 percentage points among women. In all the countries studied, overweight is more common among women with a low educational level than women with a high educational level.

**Figure 9.5**  
**Overweight in Europe by sex**  
 [Overweight (BMI > 25), EU population aged 25-70 years, by sex, 2014 (in percentages).]

Men



Women



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N= 25,538)

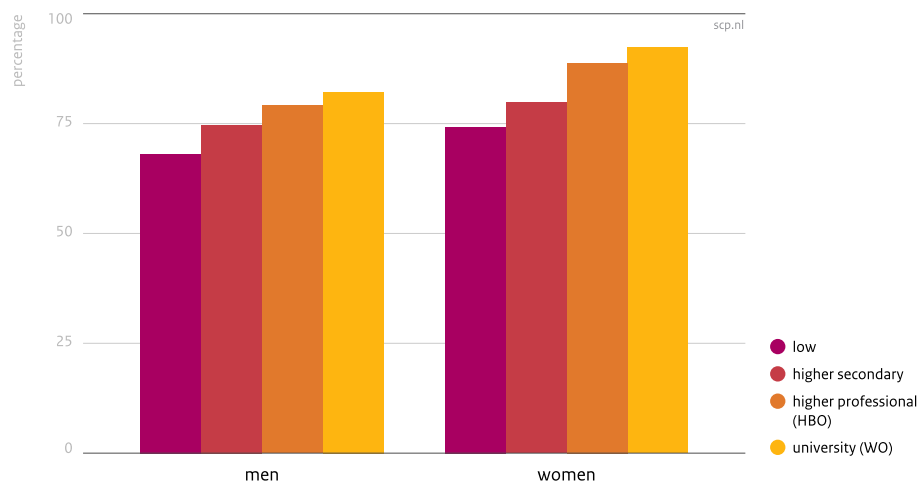
### Eating vegetables

Figure 9.6 also shows a clear pattern in educational differences in daily vegetable consumption. The differences are greater among women than men, with university-educated women, in particular, eating vegetables daily more often than women with a low educational level (92.3% versus 74.2%). The difference between university-educated men and men with a low educational level is substantially smaller (82.2% and 68.1%, respectively).

**Figure 9.6**

Daily vegetable consumption by educational level and sex

[Eats vegetables daily, Dutch population aged 25-70 years, by educational level and sex, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## References

Deeks, A., C. Lombard, J. Michelmore & H. Teede (2009). The effects of gender and age on health related behaviors. In: *BMC Public Health*, vol. 9, no. 1, p. 213.

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## Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). Sex and the discrepancy in health-related behaviour. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/sex-and-the-discrepancy-in-health-related-behaviour>.

## Publication date

22 October 2018

# Health-related behaviour by age

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

Health-related behaviour is known to be strongly related to age (Deeks et al. 2009). Research shows that there is a steady decline in both objective and subjective health status with advancing age. Do we also find this relationship with age in the health-related behaviours specified in our study? And to what extent is this age differentiation linked to educational differences?

## Alcohol and age differences

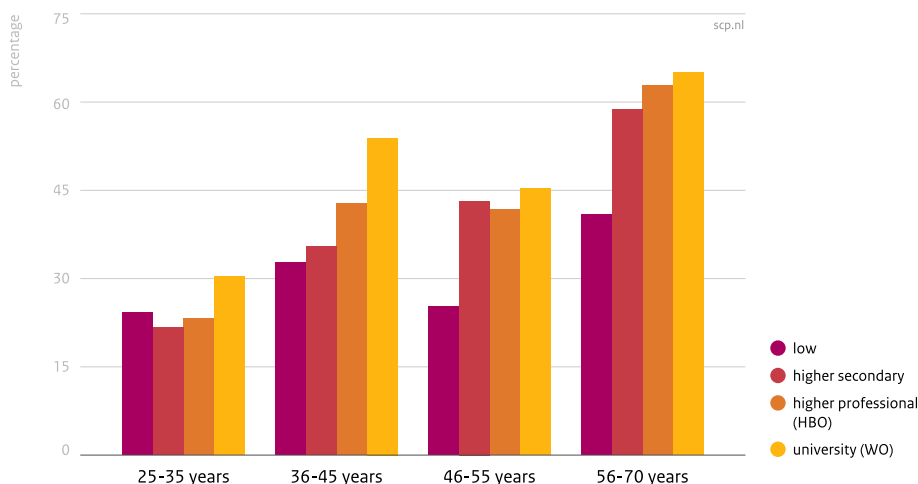
Figure 10.1 breaks down regular alcohol consumption [[More than once per week.](#)] by age and highest completed education. We find a fairly consistent picture. University graduates in all age groups most often drink alcohol regularly, while those with a low educational level are more moderate. These educational differences appear to be more marked among older respondents. In other words, the number of regular drinkers increases with rising age to a greater extent among university graduates (from 30.4% to 65.0%) than among those with a lower educational level (from 24.3% to 40.9%).

Drinking alcohol is thus a risky behaviour which most closely fits the lifestyle of those with the highest educational level in the older age category. It is evidently more socially accepted in these circles to drink alcohol regularly. These groups moreover also more often have the necessary financial resources.

Figure 10.1

Regular alcohol consumption by educational level and age

[Drinks alcohol more than once per week, Dutch population aged 25-70 years, by educational level and age, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)



## Age and education in relation to health-related behaviour

### Overweight

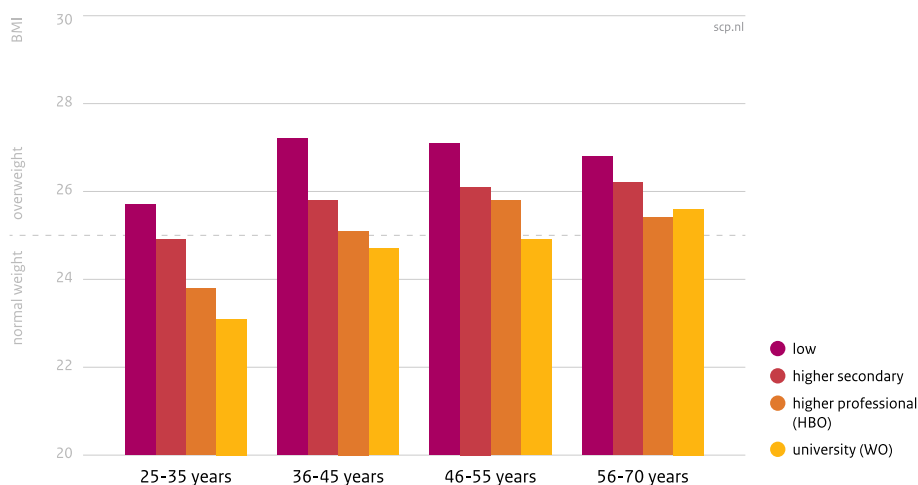
In general, the chance of being overweight increases with age (CBS StatLine 2018). This phenomenon is illustrated in figure 10.2. The average BMI among 56-70-year-olds is substantially higher than among 25-35-year-olds. Interestingly, there is a clear education gap in overweight among young people, while the differences in overweight are smaller among older age groups. Among 25-35-year-olds, only those with a low educational level are overweight on average (BMI = 25.7); university graduates have a relatively healthy weight, with an average BMI of 23.1.

These educational differences steadily reduce over a person's life course; in the oldest age category, people in all educational groups are overweight on average, and the education gap has shrunk from 2.6 to 1.2 BMI points.

**Figure 10.2**

Average BMI by education and age

[Average BMI,<sup>a</sup> Dutch population aged 25-70 years, by education and age, 2014 (in percentages).]



a The dotted line represents the threshold for being overweight (BMI > 25).

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

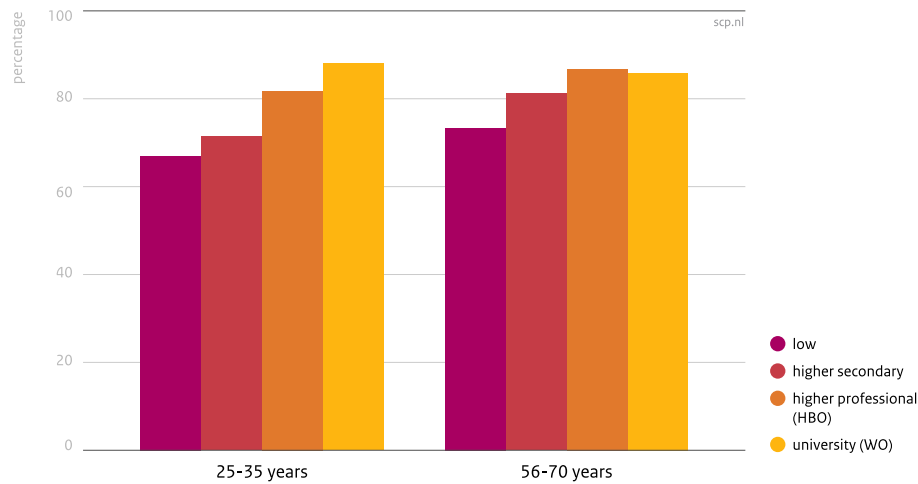
### Eating vegetables

Figure 10.3 shows that eating vegetables daily with meals is fairly common in all groups. Despite this, we once again find differences by educational level, especially among the young. Young people with a low educational level (aged 25-35 years), in particular, appear to eat vegetables less frequently (67.0%); while older persons with a low educational level (56-70 years) do so somewhat more often (73.3%). Whether this is related to growing up in an era when eating vegetables was still very common, the rise of ready meals which are consumed especially by young people, or the fact that eating together as a family is more common among older people, is something that requires further research.

Figure 10.3

Daily vegetable consumption by educational level and age

[Eats vegetables daily, Dutch population aged 25-70 years, by educational level and age, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

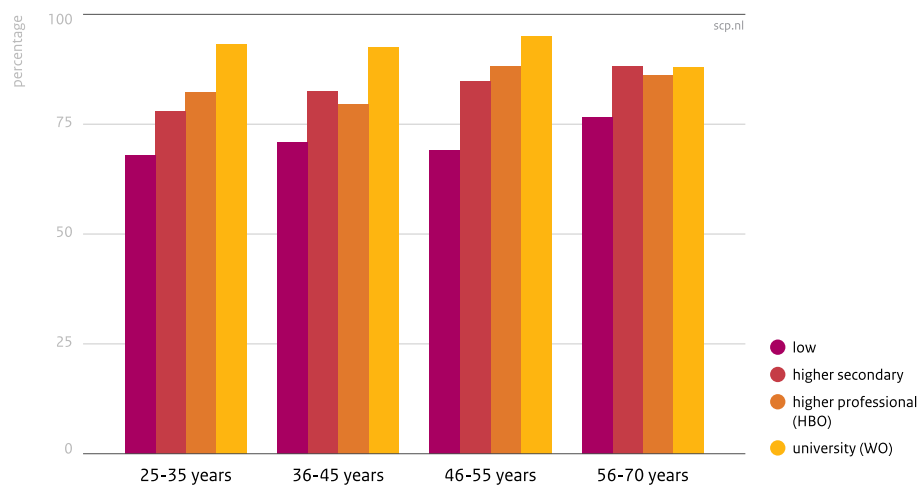
*Physical activity*

Figure 10.4, finally, shows that intensive physical activity is least popular among the lowest-educated in all age groups. The figure also shows that the education gap in physical activity is greatest among 25-35-year-olds, and considerably smaller in older age groups. It may be that differences in available leisure time are slightly smaller in this older age category, or that the need to engage in physical activity increases with age. Given that risk factors accumulate over a person's life course, this is a point that warrants attention: if young people with a low educational level in particular are failing to undertake sufficient physical activity, this can have consequences in the longer term.

Figure 10.4

Physical activity by educational level and age


[Intensive physical activity for 30 minutes at least once a week, Dutch population aged 25-70 years, by educational level and age, 2014 (in percentages).]



Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

## References

Deeks, A., C. Lombard, J. Michelmore & H. Teede (2009). The effects of gender and age on health related behaviors. In: *BMC Public Health*, vol. 9, no. 1, p. 213.

CBS Statline (2018). Lengte en gewicht van personen, ondergewicht en overgewicht; vanaf 1981. Accessible at: <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/81565NED/table?ts=1529397175143> .

## Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). Health-related behaviour by age. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/health-related-behaviour-by-age>.

## Publication date

22 October 2018

# Alternative medicine

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

In the discussion of health-related behaviour, prevention [[Preventive measures for maintaining or promoting health.](#)] is also a relevant factor. Increasing attention is being devoted to diet; people are more aware of their health and seek to influence it through their behaviour. The use of alternative medicine is a further background factor in this trend.

Highly educated women with a good income are regarded as the most frequent users of alternative medicine in industrialised countries (Ernst 2000). Does this picture hold for the Netherlands in 2014? To establish this, we use a measurement instrument to ascertain whether people have used any of 11 alternative therapies during the past 12 months. The therapies concerned are acupuncture, acupressure, Chinese medicines, chiropractic, osteopathy, homeopathy, herbal medicine, hypnotherapy, massage therapy, reflexology and spiritual healing.

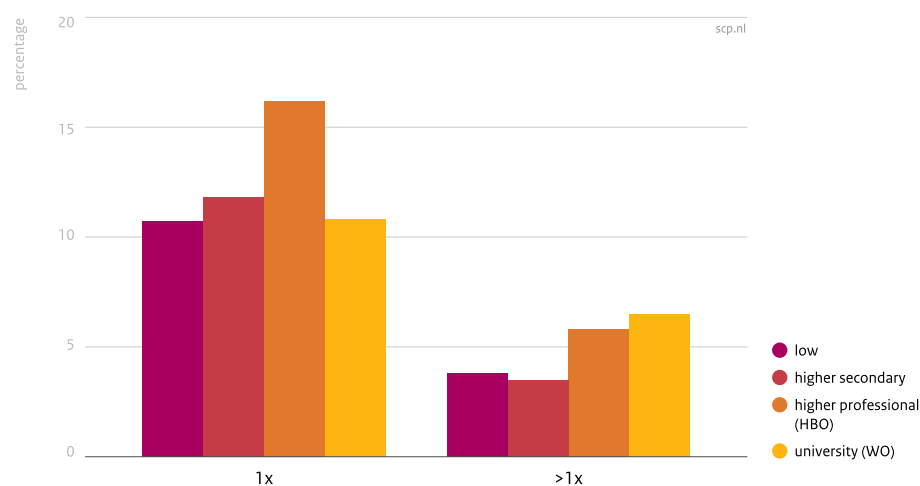
## Use by educational level

Figure 11.1 illustrates the educational differences in the use of alternative medicine by Dutch people aged between 25 and 70 years. These therapies are used most by people with a higher professional (*hbo*) education (22.0%) and least by people with a low educational level (14.5%). Additionally, higher professional and university graduates appear to use several alternative therapies more often than people with a low and intermediate education.

Figure 11.1

Use of alternative medicine by educational level

[Use of alternative medicine,<sup>a</sup> Dutch population aged 25-70 years, by educational level, 2014 (in percentages).]



a Acupuncture, acupressure, Chinese medicines, chiropractic, osteopathy, homeopathy, herbal medicine, hypnotherapy, massage therapy, reflexology and spiritual healing.

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

### Use by sex

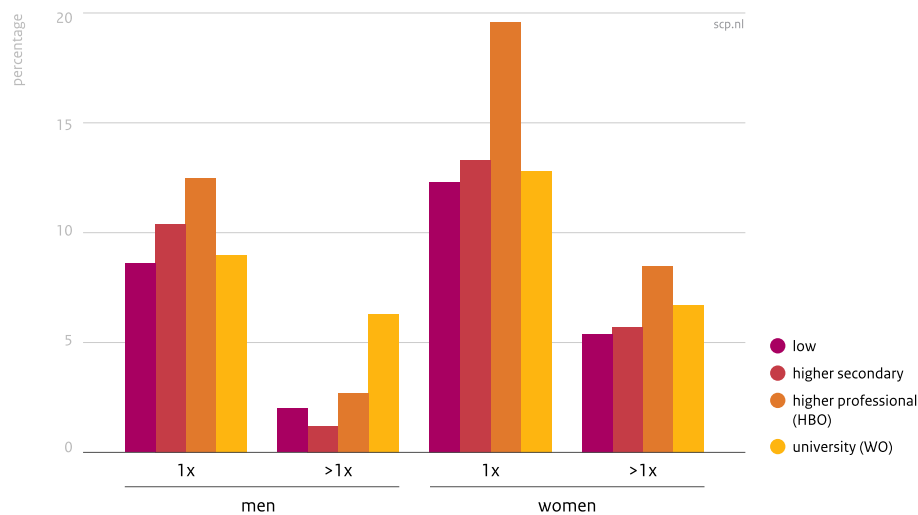
In figure 11.2 we break down the use of alternative medicine for men and women. It is abundantly clear that women use more alternative therapies than men, and this applies within all educational groups. Women with a higher professional (*hbo*) education are particularly heavy users of alternative therapies, with 28.1% using these therapies one or more times per year. The corresponding figure for *hbo*-educated men is 15.2%.

The small educational disparities among men are striking: in all education groups, just over 10% have used an alternative therapy once or more during the year. The percentages are systematically higher among women, and especially those with a higher professional education.

Figure 11.2

Use of alternative medicine by educational level and sex

[Use of alternative medicine,<sup>a</sup> Dutch population aged 25-70 years, by educational level and sex, 2014 (in percentages).]



a Acupuncture, acupressure, Chinese medicines, chiropractic, osteopathy, homeopathy, herbal medicine, hypnotherapy, massage therapy, reflexology and spiritual healing.

Source: European Social Survey Netherlands, Round 7, 2014-2015 (N=1,415)

### Alternative medicine in Europe

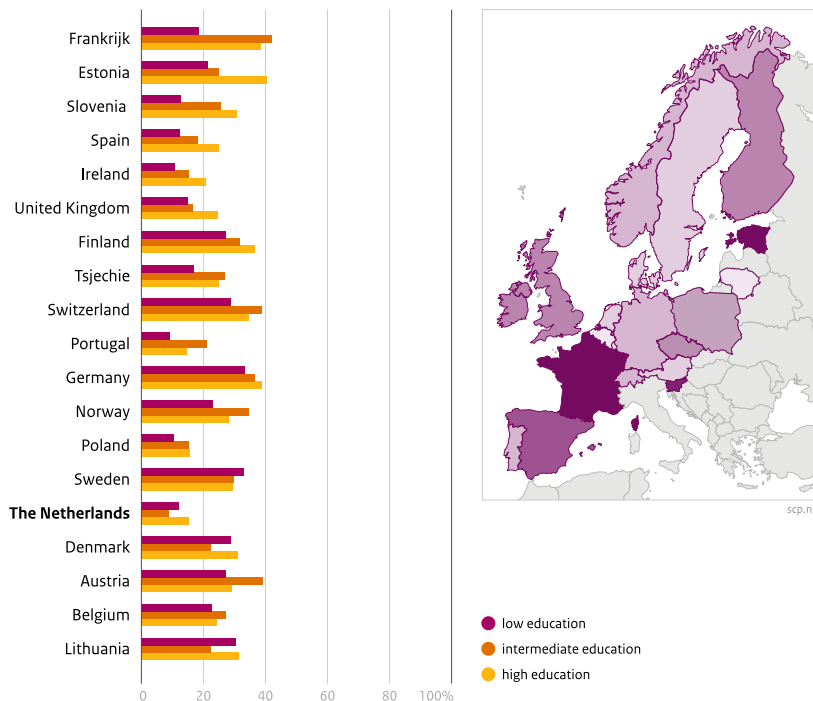
Is the use of alternative therapies equally widespread throughout Europe? The answer to this question is 'no': there is a clear distribution in the degree to which alternative medicine is used. Figure 11.3 shows that, for example, in Germany both men and women use alternative therapies more than twice as often as in the Netherlands. The education gap in the use of alternative medicine is greatest in Estonia, for both men and women.

Figure 11.3

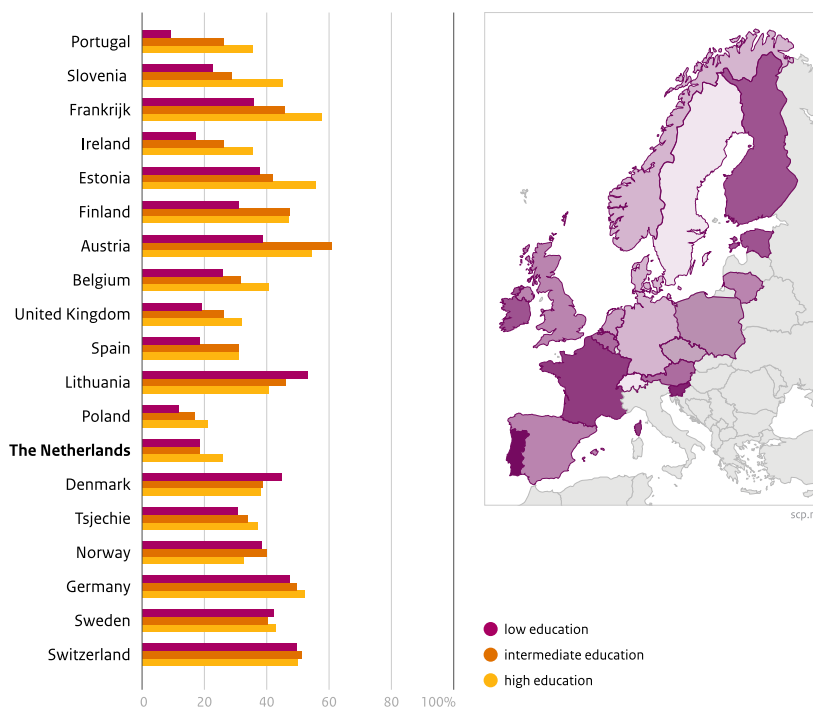
Educational differences in alternative medicine in Europe

[Educational differences in alternative medicine,<sup>a</sup> EU population aged 25-70 years, by educational level, 2014 (in percentages).]

Men



Women



a Acupuncture, acupressure, Chinese medicines, chiropractic, osteopathy, homeopathy, herbal medicine, hypnotherapy, massage therapy, reflexology and spiritual healing.

Source: European Social Survey Netherlands, Round 7, 2014-2015 (n=25,538)

## References

Ernst, E. (2000). Prevalence of use of complementary/alternative medicine: a systematic review. In: *Bulletin of the World Health Organization*, vol. 78, no. 2, pp. 252-257.

## Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). Alternative medicine. In: *(Un)healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/alternative-medicine>.

## Publication date

22 October 2018

# The education gap and policy relevance

Auteurs: [Gerbert Kraaykamp](#) and [Ronald Batenburg](#)

Although a number of healthy behaviours occur frequently in the Netherlands, unhealthy behaviour is still fairly widespread in the Dutch population. This means there are still many health gains to be made by promoting healthier lifestyle habits. But is policy that focuses on health promotion and lifestyle likely to succeed? And how can the education-related disparities that we have established throughout this study be taken into account?

## Persistent differences in health-related behaviour

The fact that there are differences in health in the Netherlands is in itself not surprising, and has been demonstrated in several studies; see also [Education as a dividing line](#). What is however disconcerting is that there are substantial and significant differences in healthy and unhealthy habits between different educational groups (Ruwaard 2011). Our study also reveals a fairly robust social dividing line between those with high and low education, which remains after correcting for other background characteristics (sex, age) and contextual factors (family, neighbourhood, country).

The most risky behaviour – smoking – is for example most common among those with a low level of education, whereas intensive physical activity and healthy eating are less common in this group; this very probably also results in a higher BMI. Conversely, on average we find that those with a university education in particular exhibit more healthy behaviour and have on average a BMI that does not indicate being overweight. One exception to this is consumption of alcohol, which is relatively frequent precisely among those with the highest educational level.

Our results thus support the idea that health-related behaviour is culturally determined; it forms part of the lifestyle and identity of a social group or class. Since education, lifestyle and culture are so closely interwoven, the differentiation in health-related behaviour presented here is also a strong indicator of robust differences between social groups in the Netherlands.

Differences can be bridged, however, and policy could and should play a role to obtain this goal. Despite lifestyle and cultural differences, good health is and always will be of essential importance for everyone. And where certain individuals or social groups have few opportunities to improve their health through their own efforts, the government and society can play a role in offering help and support (McCartney et al. 2013).


Prevention and public information are the best-known examples of this, but also the most intractable. Greater efforts than ever before are now being made to develop policy focusing on prevention rather than cure, and on behaviour rather than illness. A major first step in this direction was provided in the publication by the Council for Public Health and Health Care (RVZ) of the discussion paper 'From illness and care to behaviour and health' (*Van ziekte en zorg naar gedrag en gezondheid*) (RVZ 2010). More recently, in a report entitled 'Desire for cohesion' (*Verlangen naar samenhang*), the Dutch Council for Health and Society (RVS) again stressed that differences in personal, economic, social and cultural capital mean that people have differentiated care and help needs (RVS 2016).



## A role for government and care providers

Care providers are increasingly being assigned a role in influencing personal health-related behaviour. As a consequence, increasing attention is being given in the training of care professionals in the socio-communicative aspects of the profession. Under the motto ‘the art of saying no’, care professionals are increasingly playing a guiding and supporting role, with responsibility being placed on the individual citizen where possible.


How can public information on diet, smoking, drinking, exercise and physical activity reach the lower educational groups who need this help the most? And are these target groups then able to take the step towards healthier behaviour and a different lifestyle? These are relevant questions, as we see that differences in health-related behaviour between educational groups are linked to lower competencies, more financial constraints, smaller social networks and various aspects of cultural identity; see also [Education as a dividing line](#). It is logical to assume that these factors also explain why policy may sometimes have less impact on this most vulnerable group.

The goal of the government has of course always been to promote the health of the population. This study shows once again that investing in (differentiated) policy to limit unhealthy lifestyle habits is an essential part of this. The assumption with regard to many lifestyle habits is that providing information and knowledge can turn behaviour around. Accordingly, providing information and knowledge forms the basis of the recently deployed National Prevention Agreement (Nationaal Preventieakkoord). The idea is that if people are first made more aware of their behaviour and its possible harmful consequences, they can then be encouraged to manage their own behaviour. As unhealthy lifestyle factors are clustered mainly in the group with a low educational level, prevention policy could target this group specifically (in this regard see e.g. [Centre for Healthy Living](#) .

## Development of health skills

Health-related skills [[Skills in obtaining information about health, understanding, assessing and using that information in taking health-related decisions \(Pharos Centre of Expertise on Health Disparities\)](#).] can be developed, although people with a low educational level have less often learned these skills in childhood and the prevailing norms in their social networks are less open to them. In our study, for example, we find that a person’s partner and family have a fairly strong influence on their health-related behaviour. However, this could also provide an opportunity for policy, by targeting not just individual citizens about their unhealthy lifestyle, but involving their partner and other family members as well. Social support, provision of information and financial incentives could all form part of this, if not at national level, then at regional or local level. More and more local authorities are working with care providers and health insurers to develop campaigns and projects to promote healthier behaviour in hard-to-reach population groups.

People with a low educational level generally have less trust in information that comes from the government, and their attitude towards centrally run organisations (health insurers) tends to be more one of antipathy than warmth (Hoefman et al. 2015; Rademakers 2014). Working through the neighbourhood and social networks could then offer a route for giving practical meaning to

abstract concepts such as ‘positive health’, ‘precaution’ and ‘health skills’. The role of care providers and support workers should not be underestimated here, both in primary care and in community social care teams. Specific policy aimed at reaching and persuading groups with a low educational level on aspects such as health awareness, courses on quitting smoking and exercise programmes thus requires local customisation, in which the social setting (partner, family) is also involved (see: [Health in](#) .

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Hoefman, R.J., A.E.M. Brabers & J.D. de Jong (2015). *Vertrouwen in zorgverzekeraars hangt samen met opvatting over taken zorgverzekeraars*. Utrecht: NIVEL.

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RVS (2016). *Verlangen naar samenhang*. The Hague: Raad voor de Volksgezondheid en Samenleving.

RVZ (2010). *Van zz naar gg. Acht debatten, een sprekend verhaal*. The Hague. Raad voor de Volksgezondheid en Zorg.

Ruwaard, D. (2011). Ongezonde leefstijl: wiens zorg. In: *Tijdschrift voor gezondheidswetenschappen*, vol. 89, no. 6, pp. 293-295.

## Cite this card

Kraaykamp, G., and Batenburg, R. (2018). The education gap and policy relevance. In: *(Un)healthy lifestyles. Education as a dividing line*. Geraadpleegd op [...] via <https://digital.scp.nl/lifestyles/the-education-gap-and-policy-relevance>.

## Publication date

22 October 2018

# Acknowledgements and sources

Authors: [Stéfanie André](#), [Roza Meuleman](#) and [Gerbert Kraaykamp](#)

In creating this card stack, we drew on data from the seventh round of the European Social Survey (ESS, [www.europeansocialsurvey.org](http://www.europeansocialsurvey.org)), a representative survey conducted in 2014/15 and containing a rotating module on health and health-related behaviour (Eikemo et al. 2017). The ESS is an international comparative questionnaire-based survey which is conducted among persons aged 15 years and older living in independent households, regardless of nationality or language. Interviews in the Netherlands are conducted in person (face-to-face) by trained interviewers in the respondent's home.

## Respondent selection and response

Respondents were selected for this study who were aged between 25 and 70 years at the time of the survey. This therefore means that young people (explicitly including students) were excluded from the sample. People aged over 70 were also excluded, because health problems are more common in this group and may cause them to adapt their health-related behaviour.

For our analyses it was also important that information was available on essential characteristics such as the sex and educational level of the respondent and their parents; respondents for whom this information was missing were therefore excluded. Where we only lacked information on the educational level of a respondent's parents (a total of 62 respondents), multiple imputation was used to assign values to 46 persons. In the remaining 16 cases this was not possible due to inadequate information; these respondents were also excluded. As a result of these selections, the same group of respondents was studied for all cards (with the exception of the 'neighbourhood' card) (n = 1,415).

In the Dutch section of the European Social Survey, persons living at 3,452 addresses were approached with a request to participate; a total of 1,919 respondents ultimately took part in the survey. After exclusion of the unavailable addresses (business premises, derelict properties, uninhabited), the response rate was 59% (ESS 7 Data Documentation Report 3 January 2014). The data presented for this card stack were weighted using the post-stratification weights prescribed by the ESS. This corrects for the sample design used in a country<sup>1</sup> and for selective nonresponse (for example because young people less often take part in surveys than older people).

## The measurement instruments


Education was divided into four categories:

- low-educated (primary education (*lo*), new-style primary education (*bao*), lower secondary education (*lbo*), lower secondary education (*mullo*), junior general secondary education (*mavo*), preparatory secondary vocational education (*vmbo*), short senior secondary vocational courses (*kmbv*), senior secondary vocational education, level 1 (*mbo 1*))
- higher secondary education (senior general secondary education, levels 2-4 (*mbo 2-4*), secondary school for girls (*mms*), senior general secondary education (*havo*), pre-university education (*vwo*),

- modern grammar school (*hbs*), short higher professional education (*kort hbo*), enhanced senior secondary vocational education (*'mbo-plus'*) (*mbo+*), university foundation course (*propedeuse wo*)
- higher professional (*hbo*) (Bachelor's and Master's)
  - research university (Bachelor's and Master's, *kandidaats* and *doctoraal*)

For specific cards, it was decided in some cases to merge categories; where this was done, this is stated.

All outcomes described in the cards are based on answers given by respondents to survey questions about their behaviour. This self-reported behaviour may differ from actual behaviour for all kinds of reasons, for example due to social desirability or forgetfulness. It is assumed in this study that the difference between self-reported behaviour and actual behaviour is no different for people with a low educational level and people with a high educational level.

For four of the six measurements of health-related behaviour in the ESS, 'show cards' were used as a means of showing respondents prescribed standardised response categories. The content of the show cards as shown to respondents can be viewed by clicking on the [show card](#) . The question formulations are also reproduced below.

---

## Smoking

Let's now talk about smoking cigarettes. Which of the statements on this card comes closest to describing your smoking behaviour?

- I smoke every day.
- I smoke, but not every day.
- I don't smoke now, but I used to smoke in the past.
- I've only smoked a couple of times.
- I have never smoked.

The first two categories are classified as 'smoking', because smoking regularly but not daily is also unhealthy; the other categories are coded as 'not smoking'.

---

## Drinking

How often have you drunk alcohol over the last 12 months, in other words since [day, month, year]? For example, wine, beer, spirits or other alcoholic drinks.

- every day
- several times per week
- once per week
- two or three times per month
- once a month.
- less than once a month
- never

The first two categories were combined as 'regular drinking'.

---

### Overweight

Two measures were used to calculate overweight, namely the respondent's height and weight. The questions asked were as follows:

1. How tall are you without shoes on?
2. How much do you weigh without shoes on?

A person's BMI was calculated using the formula  $\text{weight (kg)} / (\text{height in metres} \times \text{height in metres})$ . A BMI above 25 indicates overweight, while a BMI above 30 indicates obesity.

---

### Eating fruit

Using this card, can you say how often you eat fruit? Drinking fruit juice does not count.

- three times a day or more
- twice per day
- once per day
- less than once per day, but at least four times per week
- less than four times per week, but at least once per week
- less than once per week
- never

(We coded the first three answers as 'at least once per day'; the other answers were coded as 'less than once per day').

---

### Eating vegetables

Using this card, can you say how often you eat vegetables or salads? Eating potatoes does not count.

- three times a day or more
- twice per day
- once per day
- less than once per day, but at least four times per week
- less than four times per week, but at least once per week
- less than once per week
- never

(We coded the first three answers as 'at least once per day'; the other answers were coded as 'less than once per day').

---

## Physical activity

On how many of the last seven days have you walked at a brisk pace, played sport or engaged in other physical activity for 30 minutes or longer? (Information for the interviewer: the physical activity need not have been continuous in order to be counted).

The distribution of the responses shows that the question was interpreted in different ways by different respondents. As we are concerned with general physical activity and not doing sports, we decided to include everyone who had undertaken any 'vigorous' physical activity on at least one day per week in the category 'physical activity', and to place all other respondents in the category 'no physical activity'.

---

## The European charts

In compiling interactive charts for European countries, the same measurements and selections were used as for the Netherlands. Respondents were selected from the group aged 25-70 years who were not students and for whom the educational level of the respondent themselves and their parents was known. In all European countries, the parental educational level of 8% of respondents was unknown. This information was imputed for 890 respondents; the remaining 1,352 respondents (5.2% of the total) were excluded from the survey. This meant that we used information on a total of 25,832 respondents in Europe for the interactive comparative maps.

Two countries from the ESS were left out of consideration: Hungary, due to insufficient information about the educational level of respondents and their parents, and Israel, because its geographical location means it was not regarded as a European country.


## Testing

Educational differences were tested using a  $\chi^2$  test. All effects of education presented are statistically significant. Where this is not the case, this is stated and only a description is given, not a comparison.

Where we looked at individual educational categories, differences were tested using Anova with Tuckey's post-hoc tests. Where there were two variables (e.g. education of parents and education of respondent), the interaction between the two categories was tested using a two-way Anova.

## Supplementary information from Dutch-language and international websites

As this study focuses on the education gap in health-related behaviour and draws on representative European comparative research, it is possible to relate the picture for the Dutch population to that in other countries. We have also attempted to present the results in the most accessible way possible in order to enhance their appeal for a broad interested readership. Although this means that our study contains a number of innovations, it naturally builds on earlier research on lifestyle habits. A number of Internet links where supplementary information can be found are presented below.

1. The National Institute for Public Health and the Environment (RIVM) produces the [Lifestyle Monitor](#) . This Monitor mainly focuses on unhealthy habits among young people, and draws on

the Health Survey and data from the Health Behaviour in School-aged Children survey (HBSC). Educational differences are not a central focus.

2. In [StatLine](#), published by Statistics Netherlands (CBS), users are able to create their own tables for various lifestyle indicators. Data from the annual Dutch Health Survey are generally used for this. Trends in the prevalence of lifestyle behaviours can also be consulted. Lifestyle and sex differences are often a central focus in CBS publications, but analysis based on education is also possible.
3. The Municipal Health Service (GGD) provides information on a great many lifestyle indicators on the website <https://www.gezondheidinsociaaldomein.nl/>, making it possible to compare different municipalities. This is primarily descriptive information.
4. The [Health Council of the Netherlands](#) publishes a register of health-related research as well as more specific guidelines on healthy behaviour with regard to smoking, drinking, physical activity and diet.
5. The World Health Organization (WHO) publishes [fact sheets](#) covering various aspects of health, including lifestyle aspects. These contain the most up-to-date knowledge and information on the topic, including its relevance and context. An interesting [infographic](#) on smoking can also be found on the WHO site.
6. Finally, the [Centre for Healthy Living](#) contains a policy-rich inventory of lifestyle interventions based on various criteria such as target group, setting or theme.

[The translation of this cardstack was made possible by the ESS-SUSTAIN program](#). The authors would like to thank the reading committee at SCP, consisting of [Ineke Stoop](#), [Frieke Vonk](#), [Sander Steijn](#) and [Sjoerd Kooiker](#) for their constructive comments on earlier versions of this publication. Naturally, the content of this publication fully remains the responsibility of the authors.

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## Cite this card

André, S., Meuleman, R., and Kraaykamp, G. (2018). Acknowledgements and sources. In: *(Un) healthy lifestyles. Education as a dividing line*. Retrieved [...] from <https://digital.scp.nl/lifestyles/acknowledgements-and-sources>.

## Publication date

22 October 2018

## Notes

- 1 E.g. for unequal inclusion probabilities, chance sample errors.