

HEALTH STATUS

JULIANNA BOROS – KATALIN KOVÁCS

MAIN FINDINGS

- » It is commonly known that mortality among men is less favourable than among women; however, women suffer more frequently from illnesses. In 2015, Hungarian men had an average healthy life expectancy of 59.6 years, while for women this indicator was 60.2 years. This period is then followed by an average of 12.8 unhealthy life years for men, and 19 years for women.
- » Regarding the severe health risk factors of smoking, alcohol consumption and inappropriate diet, between 2000 and 2014 smoking decreased slightly among younger age groups, but rose somewhat among those over the age of 65. A similar increase was detectable between 2009 and 2014 among young men. Alcohol consumption was decreasing up until 2010, but the figure has since stagnated.
- » Between 2001 and 2016, the proportion of people whose health status was unsatisfactory decreased for both sexes, but especially for women. However, inequalities in health status by educational level and income increased.
- » One indicator of inappropriate diet is the proportion of obese and overweight people. Among the over-15s, 48% of women and 61% of men in Hungary are either overweight or obese (based on self-reported weight and height information). Obesity is already a serious problem among children: according to data provided by school doctors, every ninth child is obese.
- » Between 2009 and 2014, the proportion of disabled people dropped; yet this only applies to those with minor limitations. The proportion of the severely disabled shows no significant change. The proportion of individuals (of both sexes) with limited health was three times greater among those who had completed at most eight years of primary education as among those with tertiary education.
- » Prevention seems to be neglected. For example, between 2000 and 2014, among people over the age of 64, the proportion of those who had an influenza vaccination halved, and is currently still considerably lower than in other European countries.

» With regard to preventive measures for women, the number of those participating in breast cancer screening tests – though still low – does not differ significantly from European figures. However, the frequency of screening tests for cervical cancer – despite doubling between 2009 and 2014 – is still significantly lower than in other European countries.

INTRODUCTION

It is commonly known that women have higher life expectancy than men, and yet their health status is less favourable. It is less well known that higher female life expectancy is historically a fairly recent development: in developed countries this difference in life expectancy appeared in the twentieth century, and in the most developed countries it is already shrinking. In Hungary, however, the difference between male and female life expectancy and health status is significant. Bearing in mind the findings of other countries, it would not be advisable to oversimplify the reasons for – or the consequences of – this difference. When taking into account the various reasons, alongside the wide range of context-dependent biological factors, it is worth considering the (rapidly changing) socio-economic factors and the multitude of gradually developing, habitual behaviours. These might include, for example, the difference in resistance to childhood diseases; the difference between men and women in labour market opportunities, education or social power, which might directly influence access to health care; or a potential difference between men and women in their willingness to take risks, which might manifest itself in how the sexes relate to disregarding speed limits or to alcohol consumption. There is no scientific consensus concerning the decisive factor (Gjonça et al. 1999). Among the various consequences, several dimensions of social equity might be cited: longer retirement, but a lower pension for women; the amount of unpaid work done during their lifetime; and many other factors whose effect has yet to be fully investigated (Tsuchiya and Williams 2005). The aim of this chapter is to present an extensive overview of the factors describing and influencing men's and women's health.

MEASURING HEALTH STATUS AND HEALTHY LIFE EXPECTANCY IN HUNGARY IN AN INTERNATIONAL CONTEXT

The concept of health is a complex one, and people may have different interpretations of it. Despite this, it is fairly simple to describe one's health status even without a thorough medical check-up. Self-perceived health – that is, subjective health status (henceforth 'health status' or just 'health') – is a health indicator that can be established using a questionnaire; the results of such (subjective) surveys correlate closely with the (objective) mortality data for a given community (Idler and Benyamini 1997). Thus, self-perceived health is a valid and reliable indicator of health status. This (i.e. the validity within the given linguistic-cultural community) is true even though there exist minor differences in health evaluation in the various social and demographic groups (those with higher or lower education, younger or older). Subjective health status is usually measured by asking individuals to evaluate their own health on a scale ranging from 1 to 5, where 1 indicates very poor health and 5 – very good health.

Assessment of health status within a group of individuals who speak the same language (as well as of the various differences that emerge) provides reliable information that is suitable for presenting changes over time and social differences. However, the comparison of findings between various communities might raise questions, most of which are due to the different wording of questions.

The latest and most reliable data come from the European Social Survey (ESS) of 2014. Depending on the given country, the responses from participants aged 25–75 showed considerable variation in terms of whether they considered their health status to be very good or good

(5 and 4, respectively), or worse. The highest proportion of those who answered ‘very poor’ or ‘poor’ was in Portugal (53%), followed by Estonia (50%), Lithuania (46%), Slovenia (45%) and Hungary (44%). At the other end of the scale we find Sweden (21%), Switzerland (17%) and Ireland (16%). In all countries, those with better qualifications and higher income considered their health status to be better (Balaj et al. 2017).

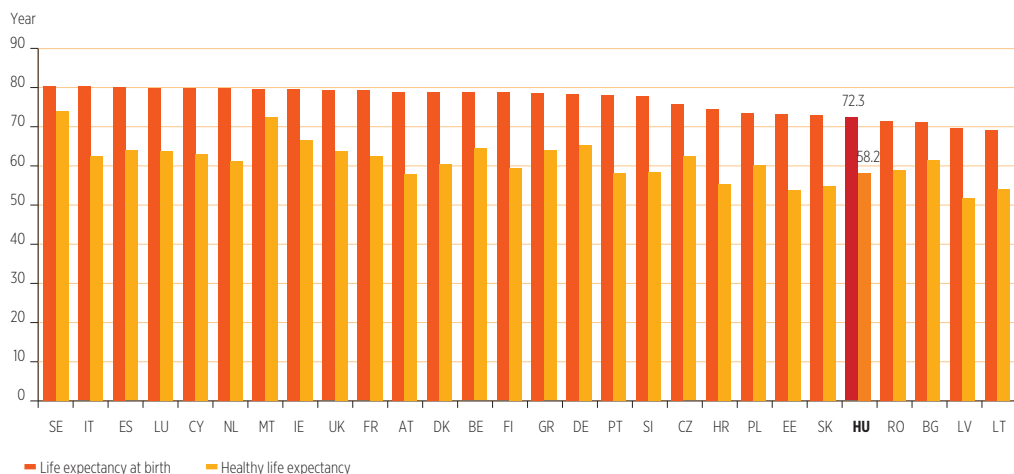
*Healthy life expectancy*⁶ can be calculated by combining self-perceived health with life expectancy. International comparative figures for this are available for 2015, and are shown – together with life expectancy – in *Figures 1 and 2*.

Healthy life expectancy for men was the lowest in Latvia (51.8 years), which can be considered very low if total distribution is taken into account. Figures for healthy life expectancy were the highest in Iceland and Norway (not shown), Malta and Sweden (between 71.5 and 74 years). The figures for

men in other countries vary from 54 to 66 years, including in Hungary – 58.2 years in 2015. Thus, it can be said that – according to their own evaluation – Hungarian men spend an average of 80% of their lives in good health and a fifth in poor health. This, however, must be treated with some caution: apart from cultural and linguistic differences, it would be difficult to explain why healthy life expectancy is lower in Austria than in Hungary, or why it is higher in Romania and Bulgaria.

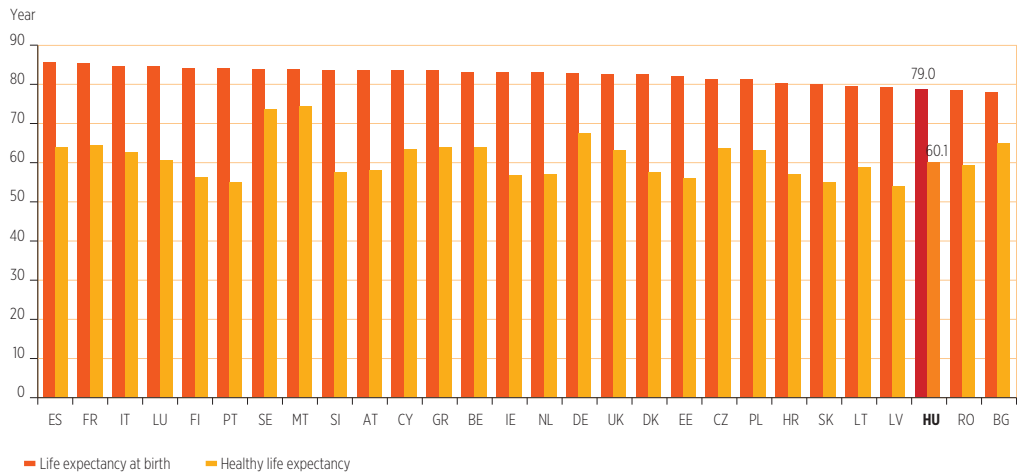
The lowest figure for women is 54.1 years (in Latvia) and the highest is 74.6 years (in Malta). Standard low healthy life expectancy can be regarded as 57–58 years. Such figures appear in Romania and Lithuania, and somewhat surprisingly in the Netherlands, Denmark and Austria, as well as in Switzerland (not shown). Among countries with higher (but not yet extremely high) female healthy life expectancy, figures range from 63 to 68 years. These countries include Spain (and

Figure 1: Male life expectancy at birth and male healthy life expectancy in EU countries, 2015



Source: HCSO, Yearbook of Health Statistics, 2016.

Figure 2: Female life expectancy at birth and female healthy life expectancy in EU countries, 2015



Source: HCSO, Yearbook of Health Statistics, 2016.

Norway), as well as the Czech Republic and Bulgaria. Healthy life expectancy for women in Hungary was 60.1 years in 2015.

Considering the past 10 years, it can be stated that healthy life expectancy at birth in Hungary has risen. At the same time, it must be noted that the difference in total healthy life expectancy between men and women is insignificant. This means that women are likely to spend a shorter proportion of their total life span in good health than are men – who, while they may not live as long, can expect to suffer illness for a shorter proportion of their lives. Thus, women born in 2015 can expect to live for an average of 60.2 healthy years and 19 non-healthy years; meanwhile men can expect to live for only an average of 59.6 healthy years, with a further 12.8 years of illness (which is less than a fifth of their total life span).

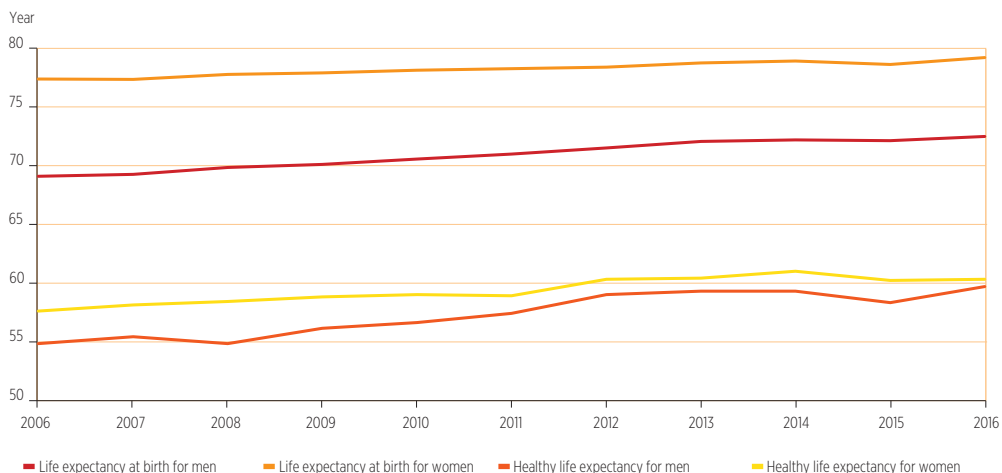
Between 2008 and 2012, male healthy life expectancy increased, but has since stagnated. Between 2012 and 2016, few differences in health status – and, as a con-

sequence, healthy life expectancy – emerged between men and women; however, in terms of mortality – that is, life expectancy – a difference of eight years narrowed to seven (Figure 3).

Regional differences in healthy life expectancy are significant: while the difference in total life expectancy between the regions with the highest and the lowest figures is 2–3%, when it comes to healthy life expectancy the difference is 13% (i.e. 7.4 years for women and 7.2 years for men). Thus, while life expectancy for women living in Western Hungary is the same as the EU average,¹ and life expectancy for men in Central Hungary is similar, the shortfall among those (both men and women) living in the north-eastern part of Hungary seems unlikely to be overcome in the near future. While women from this region spend 28% of their (already shorter) lives suffering from various illnesses (and men 23%), this can be said of ‘only’ 19.5% of women from Western Transdanubia and 15% of men from Central Hungary.

¹ The latest available data for the EU were from 2015; therefore, comparisons were made on the basis of those figures.

Figure 3: Life expectancy and healthy life expectancy at birth in Hungary, 2006–2016



Source: HCSO, System of indices for social advancement.

CHANGES IN HEALTH STATUS IN HUNGARY – SOCIAL DIFFERENCES

Changes in health status in Hungary can be traced through the first, third and fifth waves of the *Turning Points of the Life-course* questionnaire-based survey; consequently, changes between 2001, 2008 and 2016 can be taken into account. Due to the characteristics of the survey, we can only focus on changes in the health status of the middle-aged population of the country.

Rather than a conventional five-level scale, here the data were collected using an eleven-point scale, where 0 stood for the worst health status and 10 for the best. We considered individuals to be in good health if their score was above six; six or below indicated poor health.

As mentioned above, figures for subjective health status can best be used to present differences within a given society. In the following analysis, standardized

percentages² were used to determine the proportion of individuals in poor health, in order to avoid any possible distortions due to differences in the age distribution of social groups by education or financial status.

In 2001, those men who had completed at most eight years of primary education reported approximately twice as many instances of poor health as those who had completed secondary education. The health evaluation of those with vocational training and a school leaving certificate fell between these two extremes. Between 2001 and 2008, the health status of all educational groups improved: the proportion of those in poor health decreased and, although the basic pattern of inequality did not change, the inequalities themselves decreased slightly: i.e. in several social groups the rates narrowed. Between 2008 and 2016, the proportion of those in poor health dropped slightly in the two best-educated groups, but rose in the other two groups (with

² Based on the age distribution of the 2016 microcensus.

low levels of education), and therefore the inequality increased.

In 2001, the proportion of women in poor health was higher than the proportion of men with similar qualifications – except in the case of women with a university degree. In 2001, health inequality (measured as the ratio of those in worst health to those in best health) among women was slightly higher than among men, while the pattern of inequality was very similar. Between 2001 and 2008, the proportion of women in poor health declined across all educational groups (as was also the case for men) and inequalities decreased slightly. Between 2008 and 2016, the proportion of women in poor health only increased among those with vocational training. Among those women with a higher secondary or tertiary education or tertiary education, the proportion living in poor health basically did not change, while among those with the lowest educational level the proportion increased slightly. This explains why the inequalities between the various groups according to education increased over the period.

Overall, between 2001 and 2016, the proportion of individuals in poor health

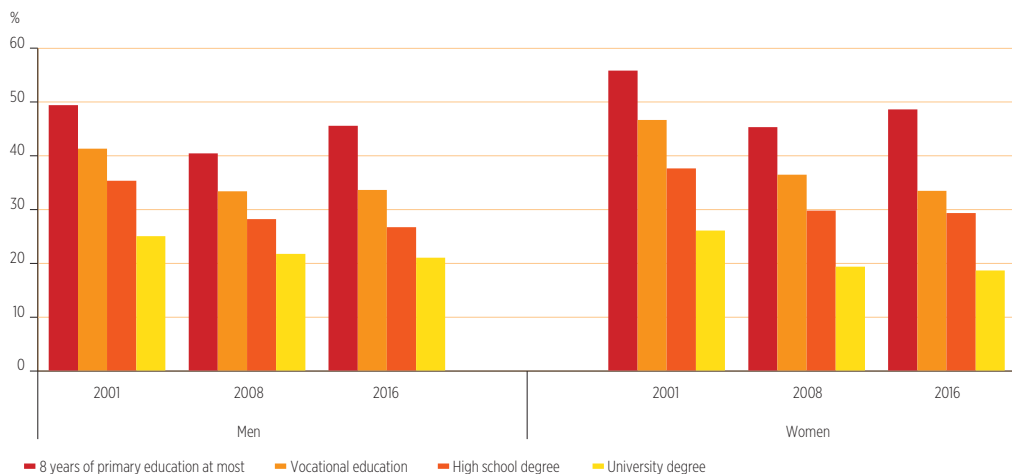
decreased, and this shift was more significant among women.

Inequality in the improvement in health (that is, a decrease in the proportion of those in poor health) was apparent not only in groups according to education, but also according to income. Here we show how a family's income affects inequalities in health.

The health status of men in the poorest group basically did not change over the decade and a half under consideration; however, the health status of those in the middle-income group ('can just make ends meet by budgeting carefully') improved (that is, the proportion of those living in poor health decreased) – especially between 2008 and 2016. During the same period, the position of the wealthiest group ('live without problems') also grew better. However, generally between 2001 and 2016 – but especially between 2008 and 2016 – comparing the proportion of the poorest and the wealthiest groups, health inequality increased.

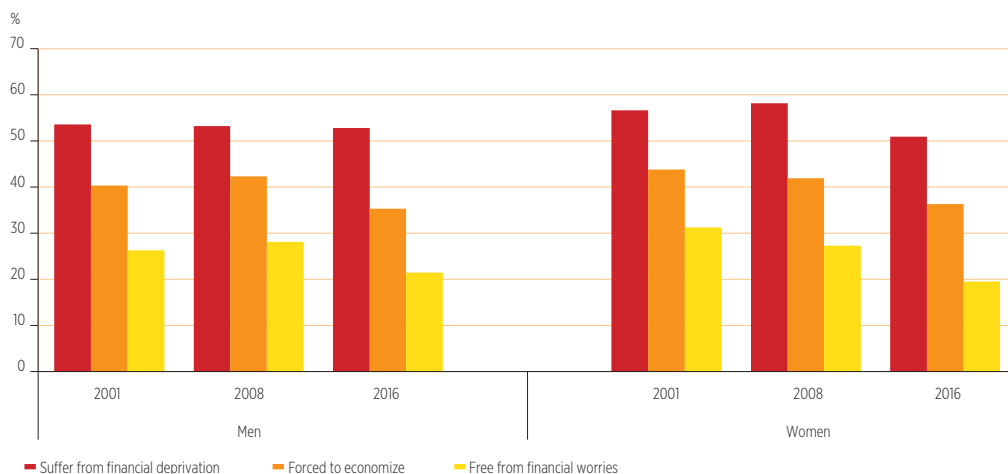
The proportion of women in the poorest group with poor health remained basically the same between 2001 and 2008, but decreased between 2008 and 2016.

Figure 4: Proportion (age-standardized percentage) of individuals aged 30–64 in poor health, by education and sex, 2001, 2008, 2016



Source: HDRI GGS Turning Points of the Life-course survey, Waves 1, 3 and 5; authors' calculations.

Figure 5: Proportion (age-standardized percentages) of individuals aged 30–64 with poor health, by subjective evaluation of income and sex, 2001, 2008, 2016



Source: HDRI GGS Turning Points of the Life-course survey, Waves 1, 3 and 5; authors' calculations.

A slight decrease can also be observed in the other two groups between 2001 and 2008 – a trend that becomes more apparent between 2008 and 2016. All in all, we can conclude that – measured as the ratio of the rate of poor health in the poorest and in the wealthiest groups – the inequality among women increased between 2001 and 2016 (especially between 2008 and 2016), and by 2016 the comparatively moderate inequality of 2001 among women had reached the same level as among men (Figure 5).

DISEASES AND COMPLAINTS

General evaluation of health is mostly affected by the presence or absence of illness.

The incidence of chronic, non-communicable disease is very high in the Hungarian adult population. Based on data gathered through self-evaluation (which – for all its subjectivity – nevertheless provides accurate estimates, according to the relevant literature) in 2014, according to the

European Health Interview Survey (EHIS), 45% of the population over the age of 15 were suffering from some kind of illness that had lasted for least six months; meanwhile, among those over the age of 65 the figure was 80%. Women were more affected by chronic disease in all age groups.

In Hungary, the most common forms of chronic disease are hypertension, cardiovascular and musculoskeletal problems, although digestive and respiratory issues also affect the lives of many people. A third of the adult population reported having suffered from hypertension in the year prior to the survey; and although among younger people this health problem was more typical of men, by middle age the difference between the sexes had almost disappeared, and in old age it was rather women who were affected. Apart from being a separate health problem, high blood pressure is one of the main causes of cardiovascular disease. That is why it is important to note that in the previous year almost three-quarters of the population overall had had their blood pressure measured by a health professional; of those who suffer from

hypertension, the figure was 90% – thus 10% of people diagnosed with hypertension neglect to have their blood pressure tested. Of those aware of their condition, 95% take antihypertensive medication.

According to the findings of the EHIS, the proportion of individuals with cardiovascular problems is 13%. Although many believe (probably based on mortality figures) that more men are affected by such diseases, the data show that cardiovascular problems are more prevalent among women. The most common cardiovascular problem is cardiac arrhythmia: this affects 9% of the population, with significant difference between the sexes (6% of men and 12% of women reported it). The majority of individuals with heart problems take medicine to mitigate the effects – between 85% and 95%, depending on the type of disease.

Of all the musculoskeletal problems, back pain affects the greatest number of people. Almost a third of those aged 15 and over reported such problems, and two-thirds of them had been diagnosed by a doctor. A considerably higher proportion of women suffer from such issues, especially in old age: of those people aged 65 and over, 45% of women and ‘only’ 35% of men reported such problems. Spinal pains are further aggravated by neck pain: the everyday life of 11% of the adult population is hampered by this. It is also worth mentioning osteoporosis, which typically affects elderly women (a third of women aged 75 or over), although it should be noted that 7% of men aged 75 and over suffer from this condition.

However, there are diseases with a different age pattern – where, rather than elderly people, it is typically younger generations who are affected. For example, 15% of individuals under the age of 35 suffer

from some kind of allergy (compared to only 10% of those aged over 35).

Another frequent chronic disease is diabetes, which affects 8% of the adult population; moreover, every fifth elderly person (aged 65 and over) has to be careful with their carbohydrate intake.

According to a comprehensive international study (Vos et al. 2016), in Hungary most of the 10 biggest causes of limitation affect the number of years lived with a limitation to a greater degree than the country’s socio-economic situation would lead one to imagine:³ the number of years lived with limitation is 2.69 times greater than in other countries in the case of accidental falls, 1.98 times greater in the case of ischaemic stroke, 1.5 times greater in the case of back pain, 1.49 times greater in the case of impaired hearing and arthritis, 1.21 times greater in the case of diabetes and 1.08 times greater in the case of migraine. However, depression (0.97), neck pain (0.95) and anxiety (0.81) have a similar or lower effect on the number of years lived with limitation in Hungary than in other countries.

DISABILITY IN HUNGARY CAUSED BY HEALTH REASONS

Since the international comparability of disability indicators is problematic, no such comparison is presented here. However, the information available on the social distribution of disabilities in Hungary is valuable, despite the different interpretations at different times of the similarly worded survey question.⁴

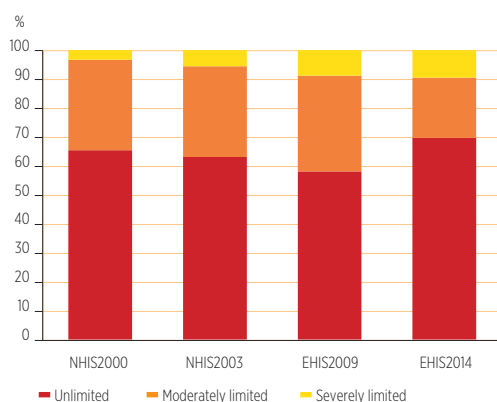
The census of 2011 and the microcensus of 2016 both reveal a clear decrease in the number of individuals with limitations.

³ The socio-demographic index of the mentioned analysis takes into consideration income per capita, educational level and total fertility rate for ranking individual countries.

⁴ ‘Do you suffer from any – health-related – physical or psychological (mental) problem/disability that hampers your everyday activity?’

However, analysis of the data from consecutive population health surveys indicates that there are more complex tendencies behind this decline. According to the estimations of the National Health Interview Surveys (NHIS) of 2000 and 2003, and the European Health Interview Surveys (EHIS) of 2009 and 2014, the decrease in the number of individuals living with some form of limitation (from 31.3% to 20.8%) is only apparent among those ‘moderately limited’; meanwhile, the proportion of those with severe limitations rose significantly (from 3.3% to 9.5%). Although these data imply an improvement in general health status, the proportion of those with very poor health increased (Figure 6).

Figure 6: Proportion of individuals with limitations of varying degree in Hungary, 2000–2014



Source: NHIS 2000, NHIS 2003, EHIS 2009, EHIS 2014.

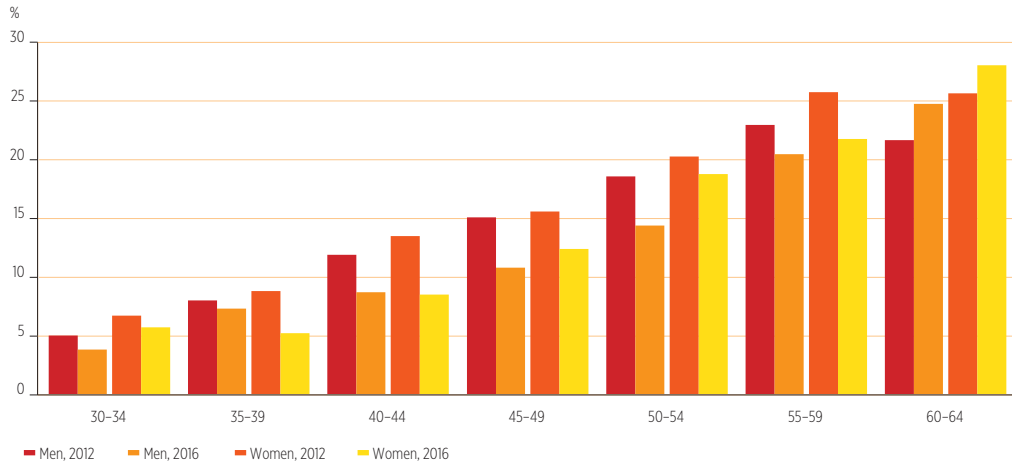
If we consider the target group for the 2014 survey – those aged 15 and over living in an individual household – almost 800,000 individuals had severe limitation, and 1.8 million had moderate limitation. Bearing in mind that, according to the findings of censuses, the proportion of those with limitations is higher among those living in an institution, we can assume that approximately a third of Hungary’s adult population struggles with some kind of limitation.

In order to present the changes in health status from a different perspective, we once again make use of the data from the Turning Points of the Life-course survey. We can showcase the changes between 2012 and 2016, since comparison of data is possible from this period.

As can be seen from Figure 7, the proportion of those with disabilities in Hungary decreased in all age groups (except 60–64), but particularly among those aged 35–59. This feature correlates with the results of the census of 2011, the microcensus of 2016 and the health surveys, all of which showed a similarly significant decrease in the proportion of individuals with limitations.

This decrease can only partially be explained by an improvement in health status. All questions about limitations – although the exact wording could vary across the range of questionnaires – contained the expression ‘activity’ (in connection with everyday tasks), which was probably interpreted by the majority of respondents as related to *economic activity*. Presumably, the notion of disability included in the questionnaires was – not exclusively, but still closely – connected by respondents to the once widespread allowance of the ‘disability pension’. In 2011, the disability pension was abolished, to be replaced by the ‘benefit for individuals with limited capacity to work’. In order to get this benefit, claimants have to meet the criteria at compulsory annual medical check-ups. The number of beneficiaries has gradually, but significantly, decreased (Table 1). As a result of the frequent check-ups, by 2017 some 120,000 individuals – i.e. a quarter of those who were entitled to various forms of disability pension in 2011 and renamed ‘individuals with limited capacity to work’ – had disappeared from the system.

Figure 7: Proportion of individuals with limitations due to health reasons, by sex and age group, 2012, 2016



Source: HDRI Turning Points of the Life-course survey, Waves 4 and 5; authors' calculations.

Table 1: Number of individuals receiving various benefits due to health damage on 1 January each year

Individuals with limited capacity to work	
2012	473,365
2013	444,014
2014	418,617
2015	404,880
2016	375,979
2017	355,188

Source: HSCO, Yearbook of Welfare Statistics, 2016.

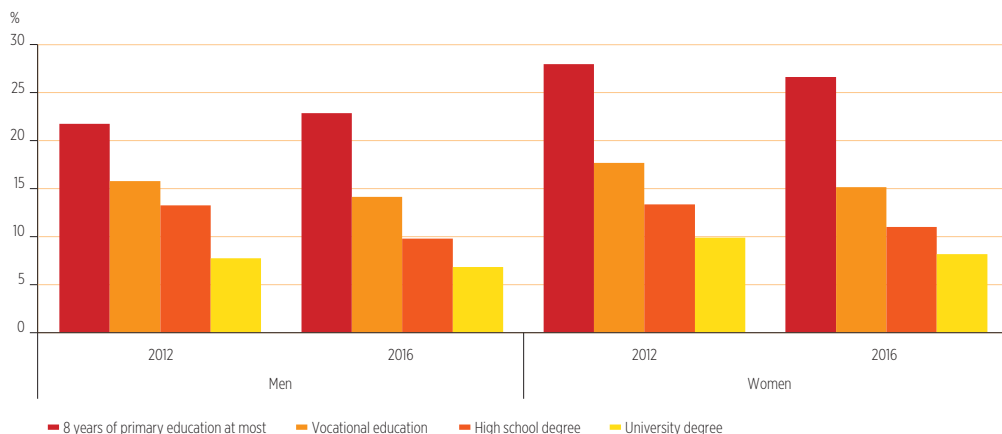
Social differences are just as significant in the case of limitations as in health status (Figure 8).

The proportion of men reporting limitations was three times greater among those with at most primary education than among those with a university degree. Between 2012 and 2016, the proportion of limitations decreased primarily among

those with vocational training and a school leaving certificate. Similar differences were discernible according to educational level among women, and these differences even increased slightly between 2012 and 2016. The decrease in the proportion of limitations was most visible among individuals of both sexes with at least vocational training.

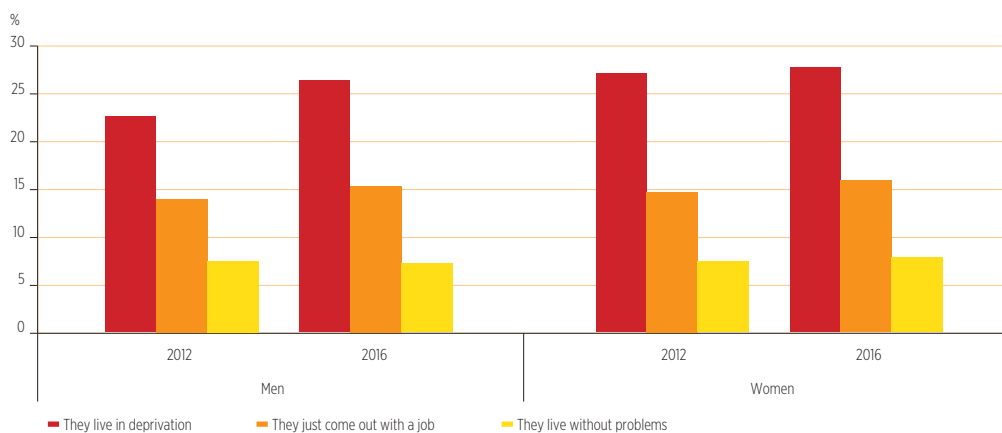
Similar differences are apparent according to self-perceived financial status as according to educational level (Figure 9). In 2001, the proportion of men with health-related limitations was three times greater among those who suffered financial deprivation than among those who lived free of financial worries, and the differences were even more significant among the corresponding groups of women. Between 2012 and 2016, the patterns showed no major change, although the proportion of limitations among people with financial worries increased slightly. This is probably a consequence of the deteriorating financial status of some of those with limitations.

Figure 8: Proportion (age-standardized percentages) of individuals aged 30–64 suffering from limitations due to health reasons, by sex and educational level, 2012, 2016



Source: HDRI Turning Points of the Life-course survey, Waves 4 and 5; authors' calculations.

Figure 9: Proportion (age-standardized percentages) of individuals suffering from limitations due to health reasons, by subjective assessment of financial status and sex, 2012, 2016



Source: HDRI Turning Points of the Life-course survey, Waves 4 and 5; authors' calculations.

HEALTH BEHAVIOUR

Health status is greatly influenced by health behaviour, which includes both health-related intentional actions (for example, a willingness to participate in screening tests) and aspects of lifestyle that have an effect on health (for example, smoking).

In what follows, we present a number of factors in relation to the Hungarian adult population (aged 15 and over) based on data provided by the 2014 EHIS and other, earlier health surveys.

Smoking is one of the most significant health-damaging factors and is responsible for approximately 6 million deaths globally

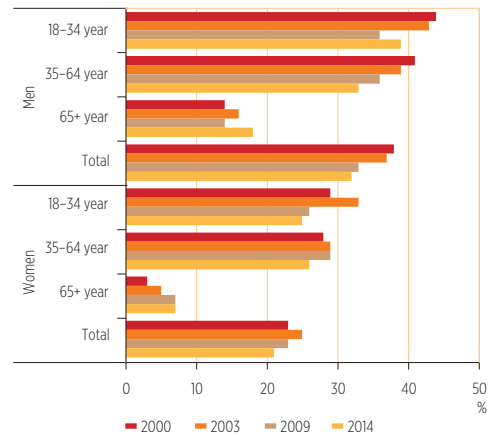
(WHO 2015). In Hungary alone, between 2000 and 2014 it contributed to the death of over 370,000 individuals, with every fifth person dying of smoking-related causes (Wéber 2016). Smoking contributes to numerous tumorous, cardiovascular and respiratory diseases.

According to the findings of the EHIS, in 2014 some 27.5% of the adult (15 and over) population smoked, most of them (25.8%) on a daily basis. The difference between the sexes is noteworthy: a third of men and over a fifth of women can be considered smokers.⁵ Also, a third of all men who currently do not smoke and a fifth of all such women did used to smoke. Since the turn of the millennium, there has been a slight decrease: a 6 percentage point drop among men and a 2 percentage point reduction among women in the proportion of those who smoked on a daily basis in 2014, compared to 2000. However, a 2009 survey shows only a modest decrease – and indeed a slight increase among young men.

Of course, as *Figure 10* shows, the differences according to age group are also substantial. Considering both men and women, the proportion of smokers is highest among young and middle-aged individuals. Among those aged 65 and over, the better figures might partly be due to the fact that many of them had quit smoking. However, clearly any survey of this sort cannot capture the elderly who had already died as a consequence of smoking-related diseases.

Of those aged 18–34, over 40% of men and 28.5% of women smoke either regularly or occasionally. Almost the same proportion of middle-aged women smoke as young women (in fact, the proportion of regular smokers is slightly higher among middle-aged women).

Figure 10: Proportion of regular smokers, by sex and age group, 2000–2014



Source: NHIS 2000, NHIS 2003, EHIS 2009, EHIS 2014.

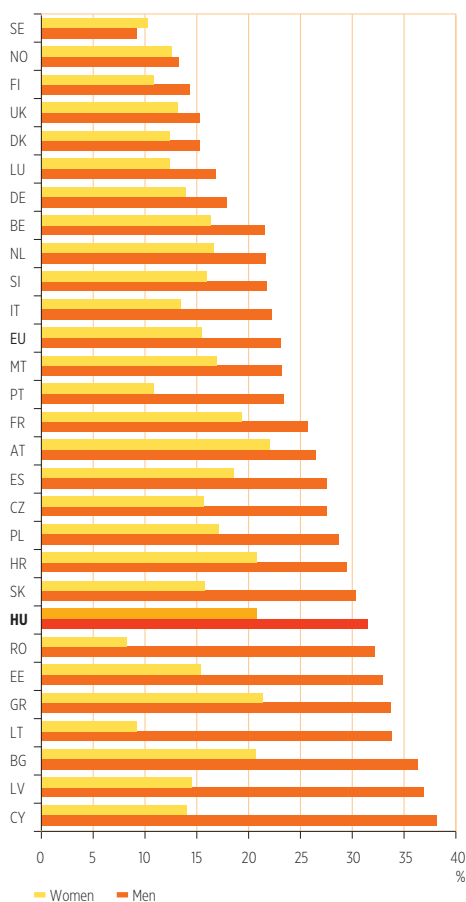
Differences can also be observed according to educational level. For both sexes, the proportion of smokers is lowest among those with a university degree (16.8% of men and 13.2% of women); while the decrease among men is linear, among women those with vocational training smoke the most, while those with at most eight years of primary education smoke rather less. The difference between the proportion of smokers with the highest educational level and the lowest is 2.5-fold among men and 2.3-fold among women.

Besides active smoking, the health-damaging effect of passive smoking must also be considered. Despite the introduction of legislation for the protection of non-smokers in 2011, according to the findings of EHIS 2014, 8.3% of the adult population has to put up with other smokers in the home on a daily basis, and another 3% more than once a week. Passive smoking is even more frequent at the workplace: almost a fifth of men (26.5% of those aged 18–34)

⁵ Regular smokers are those who smoke on a daily basis; 'regular' and 'occasional' smokers are collectively regarded as 'smokers'.

and a tenth of women reported having to occupy a room where others smoked.

Figure 11: Proportion of regular smokers among individuals aged 15 and over, by sex in around 2014



Source: Eurostat, European Health Interview Survey (EHIS) 2014.

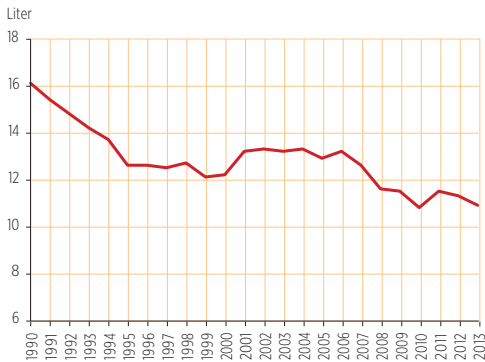
International comparison using the EHIS conducted in other EU Member States shows that Hungary is clearly a ‘smoker’ country. The figures are especially significant in the case of Hungarian women: among regular smokers, they were joint third (together with Croatia), with only Austria and Greece ahead of them. Among men, Cyprus is the worst country for smoking, with 38.2%

smoking on a daily basis. Otherwise, the only men who smoke more than Hungarians are from either the Baltic region or the Balkans. Interestingly, only in Sweden – which otherwise has a low prevalence of smoking – do more women smoke than men (Figure 11).

Besides smoking, another significant health risk is excessive alcohol consumption, which is responsible for the occurrence of tumorous and cardiovascular diseases, cirrhosis and numerous other diseases – together, these account for approximately 3.3 million deaths annually around the world (WHO 2014). According to data from 2015, the standardized mortality rate in Hungary in relation to alcohol consumption was 41 per 100,000 women and 139 per 100,000 men – both figures much higher than the EU average: 1.5 times higher for women and 1.7 times for men (WHO Health for All Database), although the mortality figures do indicate a decrease over the long term. Decreasing alcohol consumption is further supported by consumption data: alcohol consumption per capita in pure alcohol for individuals aged 15 and over was 10.9 litres in 2013, compared to 16.1 litres in 1990. The sharp decline after the change of regime was followed by a short period of increase during the early 2000s, but the tendency is obvious (Figure 12). There is no relevant information available from recent years.

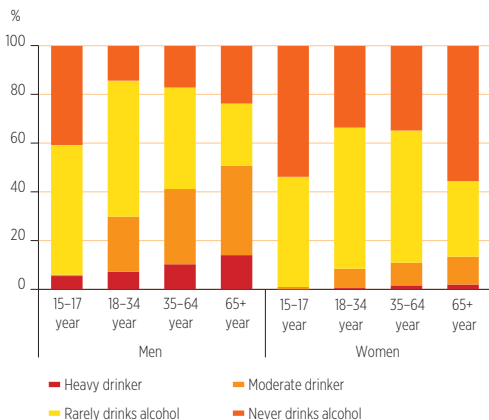
Although the EHIS also contains information on alcohol consumption, results based on self-evaluation must be regarded as underestimates. According to the data, 5.4% of the adult population (1.4% of women and 9.9% of men) can be considered heavy drinkers, based on self-reported quantities of alcohol consumption. The highest proportion (14.1%) of heavy drinkers can be found among men aged 65 and over. Total abstinence was reported by 40% of women and 18.3% of men (Figure 13).

Figure 12: Alcohol consumption per capita in pure alcohol for individuals aged 15 and over, 1990–2013



Source: WHO Health for All Database.

Figure 13: Alcohol consumption habits, by sex and age group, 2014



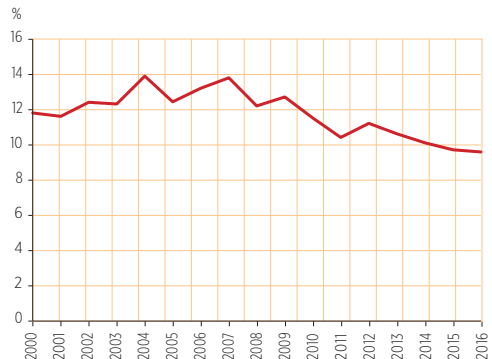
Source: EHIS 2014.

Apart from the direct effect of alcohol consumption on the development of diseases, it can indirectly lead to death and damage to health through drink-driving. According to calculations by the OECD, driving under the influence of alcohol is responsible for 2–38% of road accidents and 20–25% of fatal road accidents globally (OECD/ITF 2017).

In Hungary, in 2016 a total of 1,592 road accidents with casualties could be attributed to alcohol consumption, which was almost a tenth of all road accidents. This indicator

shows a slight decrease since the turn of the millennium (Figure 14).

Figure 14: Proportion of road-traffic accidents caused by drink-driving in relation to the total number of accidents, 2000–2016



Source: HCSO, Yearbook of Health Statistics, 2016.

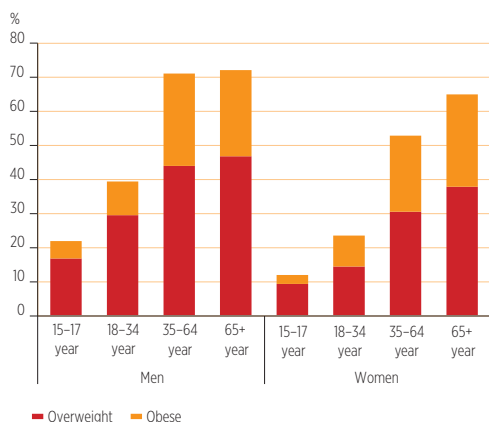
Inadequate nutrition also has a negative effect on health. Although extreme thinness also has its consequences, it is rather obesity that affects developed societies. This increases the risk of coronary heart disease, ischaemic stroke, diabetes and certain cancers, among other ailments.

The most common indicator of inadequate nutrition is *Body Mass Index (BMI)*⁶, the necessary measurements for which (namely height and weight) can most easily be collected from the population by self-reporting. Of course, this results in an underestimation of the proportion of overweight individuals, but financial considerations mean that research using standardized measurement is usually only conducted on small samples. Consequently, the fact that self-reporting leads to underestimation must be taken into account when analysing the results.

According to EHIS 2014, 48% of women and 61% of men can be considered overweight or obese. With regard to age groups, it is clearly visible that whereas less than a quarter of women aged 18–34 fall into this category, almost 40% of men

from the same age group do. However, the most significant proportions are typical of older individuals of both sexes: almost three-quarters of men aged 35 and over have a weight problem, and a significant proportion of them can be considered obese (a quarter of them). Middle-aged and elderly women show marked differences in this regard: while ‘only’ half of those aged 35–64 have a BMI over the healthy value, this is the case with three-quarters of those who are older. However, it is noteworthy that the proportion of obese women (that is, those with a BMI of over 30) is almost identical to the proportion of obese men in the same age group. Therefore, the total difference between the two sexes is due to the fact that a lower proportion of women are considered overweight (BMI between 25 and 30).

Figure 15: Proportion of overweight and obese individuals, by age group and sex, 2014

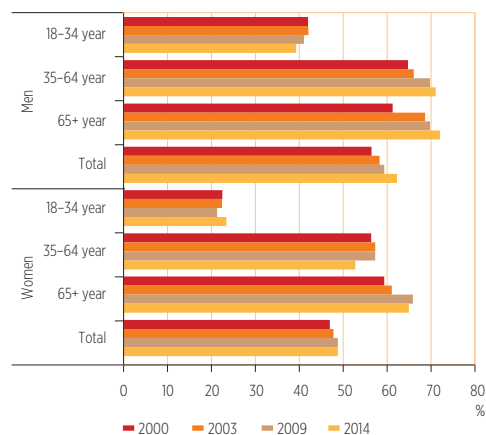


Source: EHS 2014.

Comparison over time is possible for individuals aged 18 and over (since information on this age group is available from 2000 and 2003). All in all, while the total proportion of overweight and obese men increased between 2000 and 2014, it remained stable among women, which can

primarily be explained by the change in proportions among middle-aged individuals (when analysing the information, it must be remembered that the information available was from cross-sectional, rather than longitudinal, studies). The proportion of overweight and obese individuals increased by 6% among men aged 35–64, and decreased by almost 4% among women from the same age group between 2000 and 2014. During the same period, an obvious and notable increase can be detected among the elderly of both sexes.

Figure 16: Changes in the proportion of overweight and obese individuals, by age group and sex, 2000–2014

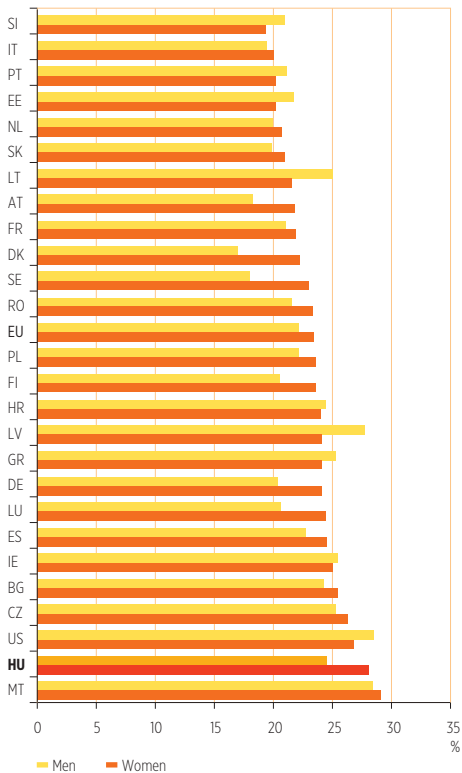


Source: NHIS 2000, NHIS 2003, EHS 2009, EHS 2014.

According to estimations of the World Health Organization (WHO), Hungary is among the most overweight and obese countries in Europe: Hungarian men are surpassed only by their Maltese counterparts, while Hungarian women rank eighth in relation to other European countries (Figure 17).

Overweight and obesity is already significant among children. According to school doctor reports, between 2011 and 2015 every ninth child was overweight. The prevalence of overweight children increased slightly during years spent in school, especially among boys. There was no

Figure 17: Age-standardized estimated proportion of overweight individuals, by sex, in EU countries, 2016



Source: WHO European Health Information Gateway.

favourable change during the early 2000s, with only a minor decrease (approximately 5%) among young girls (Table 2).

Interestingly, according to the international survey of Health Behaviour in School-Aged Children (HBSC), conducted in 2013–2014 by the WHO, although 21% of boys aged 11, 20% of boys aged 13 and 18% of boys aged 15 were overweight or obese in Hungary, according to their body image 23% of boys aged 11, 25% of boys aged 13 and 19% of boys aged 15 thought of themselves as fat. The discrepancy between girls' real body weight and perceived body image was even more obvious: while 10% of girls aged 11, 12% of girls aged 13 years and the same percentage of those aged 15 years were actually overweight or obese, 30% of girls aged 11, 42% of girls aged 13 and 46% of girls aged 15 considered themselves to be fat (Németh and Költő 2016).

One of the factors influencing BMI is exercise. According to WHO recommendations, at least 150 minutes of physical activity is required each week for any benefit to occur. As part of the EHIS 2014, besides doing sport, walking and cycling were also taken into account. Accordingly, only 15% of men and 10% of women did the recommended amount of exercise.

Table 2: Rate of 'overweight' diagnoses for 1,000 children checked, 2011–2015

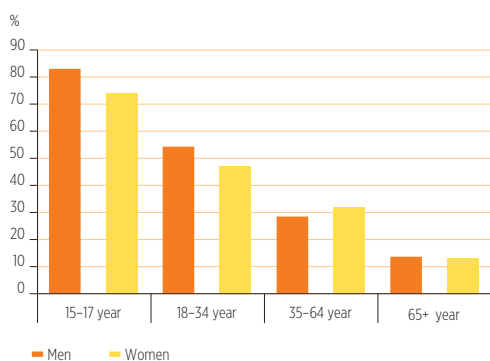
	School year	Year					
		2	4	6	8	10	12
Boys	2011/12	103.5	122.7	120.5	120.7	124.7	132.9
	2012/13	104.3	118.3	121.3	114.7	123.6	134.0
	2013/14	107.2	129.7	121.4	122.9	126.8	134.9
	2014/15	100.5	121.0	121.3	119.4	122.1	131.2
Girls	2011/12	110.7	125.9	120.4	115.8	116.4	116.4
	2012/13	110.8	123.3	116.7	118.1	119.6	124.2
	2013/14	106.9	119.3	114.5	115.0	105.8	107.7
	2014/15	103.3	119.1	115.9	113.6	113.8	117.5

Source: HCSO, Yearbooks of Health Statistics.

Analysis according to age reveals that the highest proportion of physical activity is typical of the youngest age group, although even their values are much lower than ideal: 25% of men aged 18–34 and 18% of women from the same age group do at least 150 minutes of exercise a week. Among individuals aged 65 and over, the proportion is a meagre 3–4%.

Regarding specifically sports, it can be stated that approximately every third adult does at least some form of sport on a weekly basis. Among the youngest age group (individuals aged 15–17), 83% of boys and 74% of girls claimed to do sports regularly – probably because most of them were still at school and so had compulsory daily physical education. Once people enter the world of work, however, these figures decrease significantly: even among individuals aged 18–34, only 54% of men and 47% of women do sport, with even lower proportions among older generations (*Figure 18*).

Figure 18: Proportion of individuals doing sport at least weekly, by age group and sex, 2014



Source: EHIS 2014.

Doing sport is probably not unrelated to educational level and financial status: while over half of those in the top income quintile do sport regularly, this is true of only a fifth of those in the lowest income quintile.

Similarly, half of those with a university degree do sport (both sexes), but this applies to only a fifth of women with at most primary education and men with vocational training (Boros at al. 2018).

Comparison over time is difficult, because the questionnaire about exercise changed considerably in 2014 from previous surveys: in earlier years, domestic or work-related physical activity was considered to be part of exercise, which implied that the majority of the population had an adequate amount of physical exercise. The data gathered with the new questionnaire probably reveal a more accurate picture.

DISEASE PREVENTION

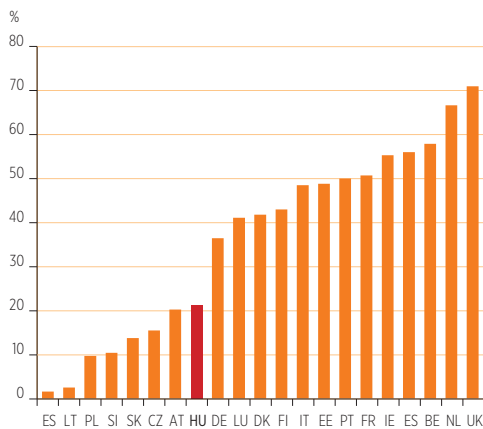
Prevention plays an important role in maintaining health. In this section, we present data related to some screening tests and other preventive actions that are beneficial to adults, with an emphasis on international comparison.

In recent times, there has been excess mortality in years when there was a significant outbreak of influenza. As a consequence, the issue of vaccination is an ever pressing one. According to the recommendation of the WHO, it is advisable to vaccinate the elderly and individuals suffering from certain chronic diseases. Accordingly, at least three-quarters of those aged 65 and over should be vaccinated in order to increase the resistance of the total population. As can be seen from *Figure 19*, this was only achieved in a few European countries in 2015. However, in some countries (most notably the Netherlands and the United Kingdom), the proportion of the elderly who are vaccinated is relatively high – three times the figure for Hungary.

As can be seen from *Figure 20*, after 2008–2009, when several different influen-

za epidemics spread across the continent, many people lost faith in vaccination, and consequently the rate of vaccination dropped in many countries. In Hungary, the rate almost halved compared to the early 2000s. However, international comparison reveals that decrease of vaccination rate was inevitable and that later on the vaccination rate actually increased in some countries.

Figure 19: Proportion of individuals aged 65 and over receiving 'flu vaccination in a given year in some European countries, 2015



Source: OECD Health Care Utilisation.

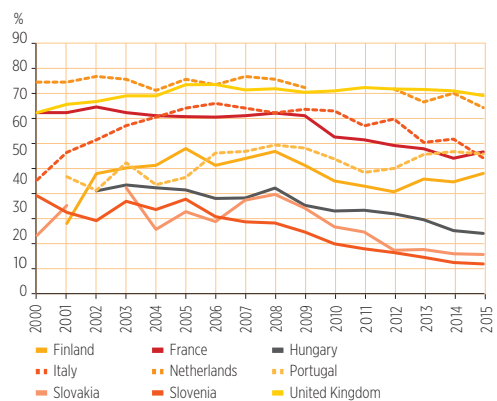
In the case of women, there are two preventive procedures of significance: breast cancer and cervical cancer screening.

International health surveys show that participation in breast cancer screening in Hungary in the mid-2010s was low, but not extremely low (Figure 21): 65% of respondents claimed to have participated in breast cancer screening in the two years prior to the survey. Among the countries involved in the EHIS, only five had lower participation, while the rate of participation in the majority of countries involved was between 77% and 91%.

However, analysis of data from the National Screening Registry (provided by the National Health Insurance Fund) showed a somewhat lower level of participa-

tion – 51% for the 2013–2014 ‘screening cycle’; that said, the rates were calculated for a different age group (45–64, rather than 50–69). Inequalities in participation can best be illustrated by comparing counties. The highest level of participation (57%) was achieved in Csongrád, Borsod-Abaúj-Zemplén and Szabolcs-Szatmár-Bereg counties; in other counties (Somogy, Zala, Vas and Nógrád) participation was especially low (between 34% and 45%).

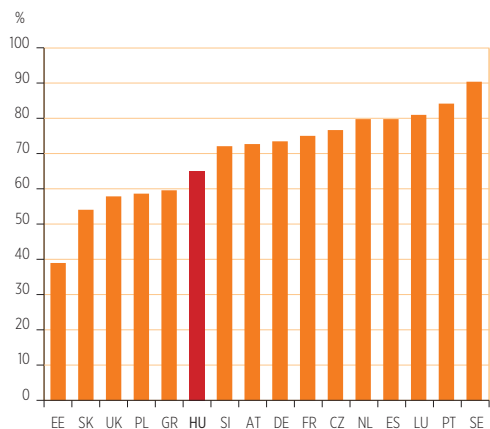
Figure 20: Proportion of individuals aged 65 and over receiving 'flu vaccination in some European countries, 2000–2015



Source: OECD Health Care Utilisation.

According to international recommendations, participation in breast cancer screening should be higher than 70% in order to significantly reduce breast cancer mortality. The primary reason for low (and non-rising) participation is the organization of screening, the quality of which deteriorated as a consequence of the reduced role of so-called county coordinators, introduced as part of the restructuring of the public healthcare system. Financial issues also cause problems, as a consequence of which healthcare institutions are not interested in maximizing the number of screening procedures carried out (Workgroup for the Performance Evaluation of the Healthcare System 2016).

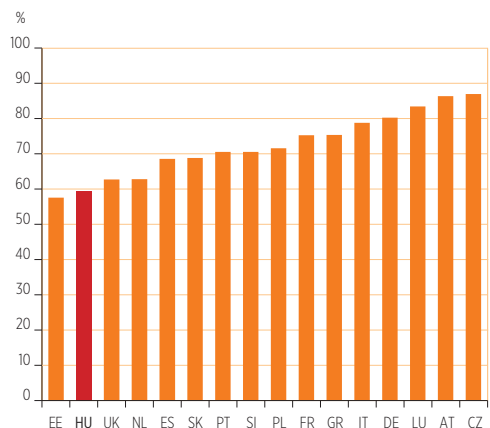
Figure 21: Proportion of women aged 50–69 participating in breast cancer screening tests in some European countries, 2014



Source: OECD Health Care Utilisation.

In the case of cervical cancer screening, the participation rate in Hungary is especially low. Participation in almost all other countries providing data exceeded Hungary's rate of 60% (Figure 22).

Figure 22: Proportion of women aged 20–69 participating in cervical cancer screening tests in some European countries, 2014



Source: OECD Health Care Utilisation.

ACCESS TO HEALTH CARE

Several surveys aim at monitoring the demands of respondents which they feel should have been met by the public healthcare system, but for whatever reason were not. According to the findings of the European Union Statistics on Income and Living Conditions (EU-SILC) survey, unmet needs due to financial reasons apply to only 4–5% of the population. And following a peak in 2012, Hungary apparently experienced a notable decline in unmet need. However, the EU-SILC survey only looks at a very limited selection of demands. Health surveys carried out around 2014 (with 1–2 years' difference in participating countries, Hungary being involved in 2014) put the actual figure at 13.8% (12.5% for men and 14.9% for women) (Table 3).

In Hungary – as in the majority of European countries – those in need of dental treatment face the most financial problems. Affording prescribed medicine takes second place – this is hard for 5.9% of the population (5% among men and 6.6% among women) (Table 3). Considering all types of problems, significant social inequalities can be detected. As an example, we use the data for the frequency of financial problems when buying prescribed medicine (this is the problem that affects men and women most differently). The most recent OECD report on Hungary refers to the high cost of medication for the population as one of the most serious problems facing the Hungarian healthcare system (OECD 2018).

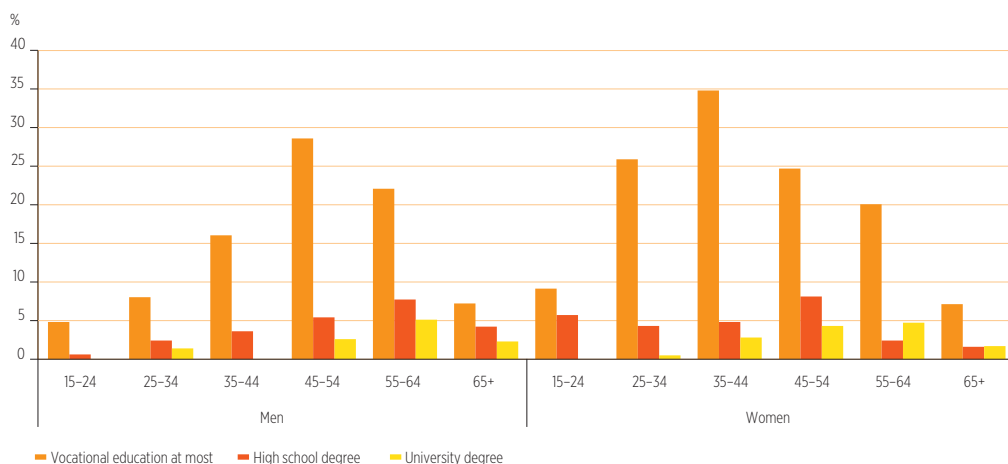
In fact, it is not the elderly – who consume the most medicine – who find it hardest to afford prescribed medicine. The subsidies on medicine for those aged 65 and over seem to be adequate – although 6–7% of individuals from that age group with a low

Table 3: Unmet healthcare services due to financial reasons, according to 2014 health surveys (percentage of those demanding it in relation to the total population)

	Total					Men					Women				
	Total	Total medical treatment	Dental treatment	Mental treatment	Prescribed medicine	Total	Total medical treatment	Dental treatment	Mental treatment	Prescribed medicine	Total	Total medical treatment	Dental treatment	Mental treatment	Prescribed medicine
Ireland	35.9	23.0	31.9	51.0	19.4	33.9	23.5	30.7	50.1	21.1	37.7	22.5	33.0	51.9	17.9
Latvia	34.2	22.6	29.8	6.3	17.3	29.4	17.7	27.4	5.1	13.0	37.7	25.9	31.5	7.2	20.2
Estonia	30.8	10.1	31.0	3.7	6.6	27.6	8.7	28.1	3.0	5.9	33.3	11.1	33.3	4.1	7.2
Portugal	28.1	12.3	32.4	31.1	10.0	23.5	9.2	28.2	21.6	7.6	31.8	14.6	35.7	34.9	11.8
Greece	25.3	18.8	20.1	9.7	14.9	20.5	14.9	16.5	7.6	13.5	29.3	21.8	23.1	11.4	16.0
Turkey	21.3	14.7	17.2	6.2	11.5	19.2	12.6	15.8	4.6	9.6	23.2	16.7	18.4	7.6	13.1
Iceland	20.7	8.1	19.4	33.1	9.5	16.9	6.4	17.2	25.0	7.6	24.2	9.6	21.6	38.4	11.1
Finland	20.1	11.8	15.1	7.4	10.6	20.6	12.6	15.5	5.7	12.8	19.7	11.1	14.8	8.8	8.9
Denmark	19.7	2.3	15.5	13.3	4.4	17.6	2.7	14.5	8.4	4.7	21.7	1.9	16.5	17.6	4.2
Italy	17.2	12.5	15.1	3.6	7.2	15.3	10.6	14.0	2.8	6.5	18.7	14.0	16.0	4.3	7.8
Spain	17.2	3.2	16.8	1.6	3.2	15.3	2.7	14.9	1.2	2.5	18.9	3.7	18.5	1.9	3.8
Bulgaria	17.0	10.7	12.6	2.3	9.6	15.4	9.8	11.3	1.6	8.0	18.2	11.4	13.7	2.9	10.7
Poland	17.0	8.5	13.0	4.1	9.4	14.7	7.1	11.8	3.0	8.4	18.8	9.5	13.9	4.9	10.2
Luxembourg	16.5	5.9	12.3	4.7	6.9	16.7	6.0	12.3	3.8	7.9	16.4	5.8	12.4	5.5	6.0
Slovenia	15.3	4.5	12.6	2.5	5.8	14.2	4.2	12.4	1.6	5.0	16.2	4.7	12.7	3.2	6.6
European Union	14.8	5.9	12.3	2.7	4.6	13.0	4.9	11.1	2.1	4.0	16.3	6.7	13.3	3.1	5.1
Romania	14.8	7.6	10.6	1.8	6.7	13.7	6.9	10.1	1.3	6.1	15.8	8.1	11.1	2.2	7.2
Sweden	14.5	3.1	10.7	3.2	4.5	13.7	3.0	10.4	2.4	4.2	15.4	3.1	10.9	4.0	4.8
Hungary	13.8	4.9	11.9	1.4	5.9	12.5	4.3	11.0	0.7	5.0	14.9	5.5	12.7	1.9	6.6
Germany	13.4	4.1	10.5	3.6	3.7	12.2	3.5	9.9	3.3	3.3	14.5	4.7	11.1	3.9	4.1
Croatia	10.8	7.8	5.6	1.7	5.7	9.4	7.1	4.7	2.0	4.6	11.9	8.4	6.2	1.5	6.6
Austria	9.8	3.4	7.5	6.5	2.2	7.0	2.2	5.6	4.4	1.7	12.3	4.6	9.3	8.3	2.8
Lithuania	8.5	2.7	11.1	4.7	3.8	7.4	2.3	10.7	5.0	3.2	9.3	2.9	11.4	4.6	4.3
Slovakia	7.2	1.9	6.1	1.6	4.3	6.0	2.0	4.9	2.0	4.1	8.1	1.9	7.1	1.3	4.6
Malta	7.1	5.0	4.6	2.1	3.4	6.4	5.3	4.0	1.2	2.9	7.7	4.8	5.2	2.9	3.8
United Kingdom	6.6	1.5	5.1	0.7	1.3	5.8	1.3	4.7	0.4	0.9	7.3	1.8	5.4	1.0	1.6
Norway	6.3	1.1	3.3	0.7	3.2	5.6	1.0	3.3	0.4	2.5	7.0	1.1	3.3	1.0	3.9
Czech Republic	6.0	4.3	1.4	1.1	3.2	4.5	2.9	1.1	0.9	2.5	7.3	5.5	1.7	1.2	3.8
Netherlands	5.7	3.3	4.2	2.1	1.9	5.3	2.9	4.3	1.4	1.8	6.1	3.6	4.0	2.8	2.0
Cyprus	4.9	4.2	4.5	7.9	2.0	4.0	3.7	4.5	9.3	1.8	5.5	4.5	4.5	7.1	2.2

Source: Eurostat.

Figure 23: Financial difficulties when buying medication in Hungary, according to sex and age group, 2014



Source: Eurostat.

level of education still find it hard to afford essential medication. Among middle-aged individuals, the problem of affording medicine increases with age across all educational levels – even 5% of the oldest middle-aged group (55–64) with tertiary education reported such difficulties. The price of medicine already poses a problem for the younger age group with a low level of education – and presumably also low income: 25–35% of women aged 25–44 and 22–28% of older middle-aged men reported having such difficulties (Figure 23).

SUMMARY

A comparison of the health status of Hungarian men and women reveals the same findings as in the relevant international

scientific literature: a higher proportion of women report more health problems and limitations than men. It is a specifically Hungarian phenomenon that health inequalities between the various social groups among women have increased more markedly than among men.

All aspects of health behaviour showed a significantly better picture for women than for men. Considering the various tendencies, only the smoking habits of young women may give cause for concern.

A minor challenge that women face was discovered with regard to the use of health care: the proportion of women unable to afford medication was higher than the proportion of men, and participation in screening is lower than in most European countries.

GLOSSARY

Healthy life expectancy: Calculated using the life tables (see chapter on 'Mortality') used to determine life expectancy by replacing mortality rates with the rates of unhealthy individuals across all age groups. Health status is measured using a five-level scale (1 = very bad, 5 = very good) self-evaluation questionnaire.

Body Mass Index: Body mass measured in kilograms, divided by the square of body height measured in metres. According to the WHO, a BMI of 25 kg/m² and above is considered overweight and a BMI of 30 kg/m² and above obese.

REFERENCES

- Balaj, M., McNamara, C.L., Eikemo, T.A. and Bamba, C. (2017): The social determinants of inequalities in self-reported health in Europe: Findings from the European social survey (2014) special module on the social determinants of health. *European Journal of Public Health*, 27(suppl. 1): 107-114.
- Boros, J., Györke, J., Pásztorné Stokker, E. and Szabó, Zs. (2018): 2014-ben végrehajtott Európai lakossági egészségfelmérés eredményei – Összefoglaló adatok [*Results of the 2014 European Health Survey: Overview*]. HCSO, Budapest.
- Gjonca, A., Tomassini, C. and Vaupel, J.W. (1999): *Male-female differences in mortality in the developed world*. MPIDR Working Paper WP 1999-009. Max Planck Institut für Demografische Forschung, Rostock. <https://www.demogr.mpg.de/Papers/Working/wp-1999-009.pdf#search=%22differences%20in%20mortality%22>
- Gyenes, P. (ed.) (2016): *A magyar egészségügyi rendszer teljesítményértékelési jelentése 2013–15. [Performance Evaluation of the Hungarian Healthcare System 2013–15]*. National Healthcare Services Centre, Állami Egészségügyi Ellátó Központ, Budapest.
- HCSO, A társadalmi haladás mutatószám-rendszere [System of social progress indicators]: <http://www.ksh.hu/thm/>
- Idler, E.L. and Benyamini, Y. (1997): Self-rated health and mortality: A review of twenty-seven community studies. *Journal of Health and Social Behavior*, 38(1): 21–37.
- Németh, Á. and Költő, A. (eds) (2016): *Egészség és egészségmagatartás serdülőkorban 2014. Az Iskoláskorú gyermekek egészségmagatartása elnevezésű, az Egészségügyi Világszervezettel együttműködésben megvalósuló nemzetközi kutatás 2014. évi felméréséről készült nemzeti jelentés [Health and health preservation during puberty 2014. National report based on the Health Behaviour of School-aged Children international survey conducted in collaboration with the WHO]*. NEFI, Budapest.
- OECD (2018): *Hungary: Country Health Profile 2017*. <https://www1.oecd.org/publications/hungary-country-health-profile-2017-9789264283411-en.htm>
- OECD/ITF (2017): *Alcohol-related road casualties in official crash statistics*. <https://www.itf-oecd.org/sites/default/files/docs/alcohol-related-road-casualties-official-crash-statistics.pdf>
- Tsuchiya, A. and Williams, A. (2005): A ‘fair innings’ between the sexes: Are men being treated inequitably? *Social Science & Medicine*, 60(2): 277–286.
- Vos, T. et al. (2016): Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: A systematic analysis for the Global Burden of Disease Study 2016. *Lancet*, 390(10100): 1211–1259.
- Wéber, A. (2016): A dohányzás halandóságra gyakorolt hatása Magyarországon 2000 és 2014 között [The effect of smoking on mortality in Hungary between 2000 and 2014]. *Statisztikai Szemle*, 94(6): 585–610.
- WHO Health for All Database: <https://gateway.euro.who.int/en/hfa-explorer/>
- WHO (2014): *Global Status Report on Alcohol and Health 2014*. http://apps.who.int/iris/bitstream/am/10665/112736/1/9789240692763_eng.pdf
- WHO (2015): *Global Report on Trends in Tobacco Smoking 2015*. http://apps.who.int/iris/bitstream/10665/156262/1/9789241564922_eng.pdf?ua=1