What is health expectancy?

Health expectancies were first developed to address whether or not longer life is being accompanied by an increase in the time lived in good health (the compression of morbidity scenario) or in bad health (expansion of morbidity). So health expectancies divide life expectancy into life spent in different states of health, from say good to bad health. In this way they add a dimension of quality to the quantity of life lived.

How is the effect of longer life measured?

The general model of health transitions (WHO, 1984) shows the differences between life spent in different states: total survival, disability-free survival and survival without chronic disease. This leads naturally to life expectancy (the area under the ‘mortality’ curve), disability-free life expectancy (the area under the ‘disability’ curve) and life expectancy without chronic disease (the area under the ‘morbidity’ curve).


To address this, the European Union has decided to include a small set of health expectancies among its European Community Health Indicators (ECHI) to provide summary measures of disability (i.e., activity limitation), chronic morbidity and perceived health. Therefore the Minimum European Health Module (MEHM), composed of 3 general questions covering these dimensions, has been introduced into the Statistics on Income and Living Conditions (SILC) to improve the comparability of health expectancies between countries.* In addition life expectancy without long term activity limitation, based on the disability question, was selected in 2004 to be one of the structural indicators for assessing the EU strategic goals (Lisbon strategy) under the name of “Healthy Life Years” (HLY).

Further details on the MEHM, the European surveys and health expectancy calculation and interpretation can be found on www.eurohex.eu.

What is in this report?

This report is produced by the Joint Action European Health and Life Expectancy Information System (EHLEIS) as part of a country series. In this report we present:

- Life expectancies and Healthy Life Years (HLY) at age 65 for the country of interest and for the overall 25 European Union member states (EU25), using the SILC question on long term health related disability, known as the GALI (Global Activity Limitation Indicator), from 2005 to 2011. The wording of the question has been revised in 2008. When available, we provide previous HLY series based on the disability question of the 1995-2001 European Community Household Panel (ECHP);
- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References


* Before the revision of 2008, the translations of the module used in some countries were not optimum (See Eurostat-EU Task Force on Health Expectancies common statement about the SILC data quality). This revision is being evaluated.
**Key points:**

Danish life expectancy (LE) at age 65 has increased by 1.8 years for women and 2.1 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average. In 2011 LE for both sexes was below the EU25 (21.6 for women and 18.0 for men).

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data remained almost stable. The proportion of HLY (or years without self-reported limitations due to health condition or disability), within the total expected years, increased for both sexes, being close to 56% for women and 59% for men in 2001. Between 1995 and 2001 HLY in Denmark was close to the EU15 average.

Because the wording of the GALI question in the Danish survey was changed in 2008 to better reflect the EU standard, HLY estimates for Denmark are shown only from 2008. The Danish values were much higher than the EU25 average in 2011 (8.6 for women and 8.8 for men), 4.4 and 3.6 years higher for women and men respectively. Therefore, Danish women and men at age 65 can expect to spend 65% and 72%, respectively, of their remaining life without self-reported long-term activity limitations. Moreover HLY increased between 2009 and 2011 in Denmark.
Key points:

In 2011, LE at age 65 in Denmark was 20.1 years for women and 17.3 years for men.

Based on the SILC 2011, at age 65, women spent 13.0 years (65% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)) 5.2 years (26%) with moderate activity limitation and 1.9 years (9%) with severe activity limitation.*

Men of the same age spent 12.4 years (72% of their remaining life) without activity limitation, 3.0 years (17%) with moderate activity limitation and 1.9 years (11%) with severe activity limitation.*

Although for all the health expectancies the years of life spent in positive health were slightly greater for women than men, women spent a larger proportion of their life in ill health.

These results should be interpreted cautiously given the lack of the institutional population, such as people living in nursing homes, and the small sample size. Thus, the sample size for Denmark comprised 626 women and 578 men aged 65+ years in 2011.

* These may not sum to LE expectancy due to rounding.

Publications and reports on health expectancies for Denmark

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but women spent a larger proportion of their life in ill health and these years of ill health were more likely to be years with severe health problems.

About the Joint Action EHLEIS

The current Joint Action EHLEIS (European Health and Life Expectancy Information System) and EurOhex (www.eurohex.eu) are co-funded by 11 Member States, the European Commission, DG SANCO, and two French institutions: the Ministry of Health and the National Solidarity Fund for Autonomy (CNSA). It is a collaboration between: Austria (Statistik Austria, Vienna Institute of Demography of the Austrian Academy of Sciences, European Centre for Social Welfare), Belgium (Scientific Institute of Public Health – ISP-WIV), the Czech Republic (Institute of Health Information and Statistics of the Czech Republic - UZIS CR), Denmark (Danish National Board of Health - SST; Economic Council of the Labour Movement - AE; University of Southern Denmark - IPH; University of Copenhagen - UCPH), France (National Institute of Health and Medical Research - INSERM; National Institute of Demography - INED; University of Montpellier - UM2), Germany (Robert Koch Institute - RKI; Rostock Center for Demographic Change - UROS), Greece (Hellenic Statistical Authority - ELSTAT), Italy (University La Sapienza - DSSEAD), The Netherlands (Erasmus Medical Center - EMC; National Institute for Public Health and the Environment - RIVM; Statistical Office - CBS), Sweden (National Board of Health and Welfare - SoS/NBHWW) and the United Kingdom (Office for National Statistics - ONS; Newcastle University - UNEW). The JA:EHLEIS and Eurohex aim to provide a central facility for the co-ordinated analysis, interpretation and dissemination of life and health expectancies to add the quality dimension to the quantity of life lived by the European populations. Further details about the Joint Action can be found on the websites: www.eurohex.eu and www.healthylife-years.eu

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The Danish SILC surveys are collected by use of nationwide registers supplied by telephone interviewing and postal questionnaire. The “participation rate” as to register data is almost 100% whereas that of self-reported data which include The Minimum European Health Module (MEHM) varies between 50% and 60%. Adjustments have been made in order to improve the match to the Danish population.

SILC surveys from 2008, 2009, 2010 and 2011 are combined to obtain enough data to estimate health expectancy by educational level.

Life tables by educational level are constructed for 2008-2010 on the basis of linkage of nationwide registrations of education and mortality. Educational level is divided into Low: Primary and lower secondary education, Medium: Upper secondary education (gymnasium, vocational or technical education) and High: Tertiary education.

Life expectancy and expected life years without and with activity limitations from age 30 are shown on the figure. Life expectancy for 30-old men with low educational level was 44.8 years; for men with medium and high educational level it was 48.0 years and 51.1 years, respectively. For 30-old women with low educational level life expectancy was 49.4 years, among those with a medium level it was 52.4 years and among women with a high educational level it was 54.3 years. Thus, the gap between low and high educational levels was 6.3 years for men and 4.9 years for women. It appears from the figure that the social gradient in expected life years without activity limitations is steeper. Social inequality is seen for life years with mild as well as severe limitations.

Due to differential response rate and health status one might expect that poor health be more underreported among disadvantaged people than people in a favourable social position. If this is the case the limitation of self-reported health data would probably imply that the social gradient in health expectancy is underestimated.