This background article sheds some light on the health data collected from the European Union’s (EU) statistics on income and living conditions (SILC), a data set that provides information on income and poverty across the EU. SILC contains seven variables on health status and access to health care.

The article provides information on the main features of these data in so far as they concern the health variables, their historical development and current legal basis, some main methodological features, information concerning data quality and finally an overview of the uses of the data that come from this source.

This article is one of a set of background articles concerning the methodology for the production of health statistics in the EU and accompanies a number of statistical articles which make up an online publication on health statistics.

**Main features**

**Statistical objectives**

SILC is the reference source for comparative statistics on income distribution and social inclusion across the EU. It provides data for some of the indicators used to monitor the [Europe 2020 strategy](https://ec.europa.eu/eurostat/statisticsexplained/).

SILC is also the source for some key indicators on health status that are given high importance in the overarching EU strategy [“Together for Health: A Strategic Approach for the EU 2008–2013”](https://ec.europa.eu/eurostat/statisticsexplained/), as well as in more topical policies such as active and healthy ageing, health inequalities, social protection and social inclusion.

**Scope of the data**

In general, SILC provides statistics on income distribution and monetary poverty, social inclusion, and living conditions. SILC contains a small module on health, composed of three variables on health status and four variables on unmet needs for health care.

The variables on health status are called the [minimum European health module](https://ec.europa.eu/eurostat/statisticsexplained/) and concern:

- **self-perceived health**;
- **chronic morbidity** (people having a long-standing illness or health problem);
- **activity limitation** (self-perceived long-standing limitations in usual activities due to health problems).

The variables on unmet needs for healthcare target two broad types of services: medical care and dental care. For each of these, the variables refer to i) the respondent’s own assessment of whether he or she needed the respective type of examination or treatment but did not have it and if so ii) what was the main reason for not having it.

The SILC target population consists of all persons living in [private households](https://ec.europa.eu/eurostat/statisticsexplained/) residing in the territory of...
one of the Member States. Persons living in collective households and in institutions are generally excluded. All persons aged 16 and over within the household are eligible for questions relating to individuals, including all health questions.

**Development and legal basis**

**Development and history**

SILC was launched in 2003, with coverage expanding as Member States joined the EU in subsequent years. See the section on time and geographical coverage below for more details.

**Legal basis**

SILC operates under Regulation (EC) No 1177/2003 of the European Parliament and of the Council and a series of European Commission implementing Regulations. For some more information on legislation see the legislation section of the SILC dedicated section and for a full list of implementing legislation see point 6.1 of the ESMS metadata file for income and living conditions.

**Methodology**

**Main sources**

In SILC information is collected either from interviews or from registers (administrative sources). For interviews, there are four different ways to collect the data (in decreasing order of use across the EU): computer-assisted personal interview (which is most commonly used); paper-assisted personal interview; computer-assisted telephone interview (which is mainly used in countries where income data are extracted from registers); or self-administrated questionnaire.

Health variables are exclusively collected through interviews as they are not available from administrative sources.

**Statistical units**

The statistical units in SILC are both households and individuals.

**Main concepts and definitions**

**Self-perceived health, morbidity and activity limitation**

The concept of self-perceived health is surveyed through a question on how a person perceives his/her health in general, using one of the following answer categories: very good, good, fair, bad or very bad. It refers to health in general rather than the present (perhaps temporary) state of health and concerns physical, social and emotional functions and biomedical signs and symptoms.

The concept of chronic morbidity is surveyed through a question asking if the respondent suffers from any longstanding (defined as having lasted or is expected to last for at least six months) illness or health problem.

The concept of activity limitation is surveyed through a question on limitation in activities people usually do because of one or more health problems. The limitation should have lasted for at least six months prior to the date of interview. Three answer categories are possible: severely limited; limited but not severely; not limited at all. This variable is used as a proxy for identifying disabled persons, and those who are limited or severely limited in their activity.

**Self-reported unmet needs for medical and dental care**

Self-reported unmet needs concern a person’s own assessment of whether he or she needed examination or treatment for a specific type of health care, but did not have it or did not seek it.
Medical care refers to individual healthcare services (medical examination or treatment excluding dental care) provided by or under direct supervision of medical doctors or equivalent professions according to national healthcare systems.

Dental care refers to individual healthcare services provided by or under direct supervision of stomatologists (dentists). Health care provided by orthodontists is included.

In case of unmet need the respondent is then asked to provide the main reason with the following categories (multiple answers are not allowed):

- could not afford care (too expensive);
- waiting list;
- could not take time (to visit the practitioner) because of work, care for children, or other reasons;
- too far to travel or no means of transportation;
- fear of doctors / dentists, hospitals, examination or treatment;
- wanted to wait and see if problem got better on its own;
- did not know any good medical doctor / dentist;
- other reasons.

Reference period

Self-perceived health and chronic morbidity refer to the situation at the date of the survey. Data relating to activity limitations concern limitations for at least six months. Data relating to unmet medical needs concern such needs during the previous 12 months.

The demographic and educational characteristics used for the analysis of health variables are collected on the date of the survey. The reference period for the labour status (also used for the analysis of health variables) is the income reference period, which is a fixed 12-month period (such as the previous calendar or tax year) for all countries except Ireland for which the survey is continuous and income is collected for the previous 12 months and the United Kingdom for which the income reference period is the current year.

The various statistics are generally presented on an annual basis (the survey year, whatever the underlying income reference period).

Main classifications

SILC makes use of the following international classifications:

- The regional codes are those from the classification of territorial units for statistics (NUTS) and the corresponding statistical regions for the EFTA and candidate countries;
- Educational attainment is compiled according to the 2011 version of the international standard classification of education (ISCED 2011);
- Occupation in employment uses the 2008 version of the international standard classification of occupations (ISCO-08);
- The economic sector in employment is collected according to the section level (one letter) of the 2008 revision of the statistical classification of economic activities in the European Community (NACE Rev. 2).

Further methodological information

More information on SILC methodology in general is available from the relevant dedicated section of Eurostat’s website or in the article on EU statistics on income and living conditions methodology.

Files with definitions for all primary and secondary SILC variables are available including the definitions of health variables.
Data quality

Since 2005 comparability over time is ensured by a common data source (SILC). SILC is based on a common framework defined by harmonised lists of target primary and secondary variables, common concepts, a recommended design, common requirements (for imputation, weighting, calculation of sampling errors) and classifications; these are aimed at maximising the comparability of the information produced.

The harmonisation of the implementation of national health variables has improved over time but the process is still on-going and the comparability of the results needs to be further improved for some Member States. Major progress was reached between 2007 and 2008 based on an agreement on harmonisation and closer cooperation between national SILC and European health interview survey (EHIS) teams.

There is also an on-going work related to the improvement and harmonisation of survey methodology. At present, Member States use different ways of collecting data for EU-SILC and perform differently according to various quality-related indicators, which could potentially have an impact on data comparability, among others:

- The fieldwork period varies between 1 to 12 months, which can have effect on some results due to seasonal effects.
- The overall individual non-response rate varied in 2010 between 3 % in Romania and 48 % in Denmark.
- Different practice and extent of using proxy interviews (someone other than the intended person answers the questions in cases when the intended interviewee could not answer for a variety of reasons).
- Data may be obtained from registers or through interviews. For the interviews a mixture of data collection techniques were used.
- Sample design and the sample size differ between Member States with an impact on the accuracy of results.

More information on the quality of SILC in general is available from the ESMS metadata file for income and living conditions and from the Comparative EU quality reports as well as National quality reports.

Health data from SILC and health expectancy indicators

More information on implementation is available in an ESMS metadata file for health variables in SILC. Equally, more information is provided in an ESMS metadata file for two indicators combining mortality data with the SILC variables on activity limitation or self-perceived general health: healthy life years and healthy life expectancy based on self-perceived health.

Data dissemination

Published data

Statistical data are available in various formats. Statistics Explained articles and publications provide data and analysis, while Eurobase provides a set of multi-dimensional databases and information in a simpler format as main tables.

Direct access to anonymised microdata is only provided by means of research contracts. Access is in principle restricted to universities, research institutes, national statistical authorities and central banks within the EU. More information is provided at http://ec.europa.eu/eurostat/web/microdata/overview and specifically for the SILC at http://ec.europa.eu/eurostat/web/microdata/europeanunionstatisticsonincomeandlivingconditions.

Health data from SILC

Disseminated health data are broken down by age and sex and one other dimension: educational attainment level, income quintile group or labour status.

The education attainment levels of individuals are classified according to the 1997 version of International Standard Classification of Education (ISCED) and are grouped as follows:
• pre-primary, primary and lower secondary education (levels 0–2);
• upper secondary and post-secondary non-tertiary education (levels 3 and 4);
• tertiary education (levels 5 and 6).

The labour status is the most frequent or main status (derived from self-reported data on the number of months of a year spent in a particular status). The following categories are used for data dissemination: employed persons; unemployed persons; retired persons; other inactive persons.

The income quintile is computed on the basis of the total equivalised disposable income attributed to each member of the household (for more details on the definition, please consult the income and living conditions ESMS metadata file). The first quintile group represents the 20 % of the population with the lowest income and the fifth quintile group the 20 % of the population with the highest income.

Health expectancy indicators

Health expectancy indicators are calculated by combining data on mortality with data on health status from SILC. More specifically:

• data on self-perceived health are used to calculate the indicator of healthy life expectancy based on self-perceived health;
• data on activity limitation are used to calculate the indicator of healthy life years.

Data are disseminated for women and men separately and for selected ages (at birth, aged 50 and aged 65).

Time and geographical coverage

Health data from SILC

SILC was progressively implemented as follows:

• 2003: Belgium, Denmark, Ireland, Greece, Luxembourg, Austria and Norway
• 2004: Estonia, Spain, France, Italy, Portugal, Finland, Sweden and Iceland
• 2005: the Czech Republic, Germany, Cyprus, Latvia, Lithuania, Hungary, Malta, the Netherlands, Poland, Slovenia, Slovakia and the United Kingdom
• 2006: Bulgaria and Turkey
• 2007: Romania
• 2008: Switzerland
• 2010: Croatia and the former Yugoslav Republic of Macedonia
• 2013: Montenegro and Serbia

Health indicators have been disseminated annually since reference year 2004.

Concerning EU aggregates, data for the EU-27 has been calculated since 2005 (only as an estimate for both 2005 and 2006) and data for the EU-28 has been released since 2010.

Health expectancy indicators

Data for healthy life years and healthy life expectancy based on self-perceived health are available from 2004. In 2004 the data were mainly available for the EU-15 Member States. The coverage widened further in subsequent years as the EU enlarged, with the main expansion in coverage occurring in 2005.

In addition, historical data for healthy life years are published for the period from 1995 to 2003, mainly covering EU-15 Member States.

As for the other health indicators, data for the EU-27 has been calculated since 2005 (only as an estimate for both 2005 and 2006) and data for the EU-28 has been released since 2010.
Units

Health data from SILC

Most SILC indicators — including all of the health related indicators — are reported in terms of percentages.

Health expectancy indicators

Healthy life years and healthy life expectancy based on self-perceived health are reported as the number of years and as percentages of the (total) life expectancy.

Timing of data release

Health data from SILC

The SILC-based health indicators are disseminated for individual Member States from the fourth quarter of year N+1 (where N = year of data collection) onwards and for EU aggregates by the end of February N+2.

Health expectancy indicators

Healthy life years and healthy life expectancy based on self-perceived health for year N are usually published by the end of March N+2 for all Member States and for EU aggregates.

See also

Online publications

- Health in the European Union — facts and figures
- Disability statistics

Health related statistical articles based on data from the EU statistics on income and living conditions

- Functional and activity limitations
- Healthy life years
- Quality of life indicators - natural and living environment
- Quality of life indicators - health
- Self-perceived health statistics

General health statistics articles

- Health statistics introduced

Main tables

- Health care (t_hlth_care)

Self reported unmet need for medical examination or treatment, by income quintile (tsdph270)

Database

- Health status (hlth_state)
- Health care (hlth_care)
Dedicated section

- Health
- Income and living conditions

Methodology

- EU statistics on income and living conditions methodology
- Healthy life expectancy based on self-perceived health (hlth_silc_17) (ESMS metadata file — hlth_silc_17_esms)
- Healthy life years (from 2004 onwards) (ESMS metadata file — hlth_hlye_esms)
- Health variables of SILC (ESMS metadata file — hlth_silc_01_esms)
- Income and living conditions (ilc) (ESMS metadata file — ilc_esms)

External links

- European Commission — Directorate-General for Employment, Social Affairs and Inclusion — Social protection and social inclusion — EU social indicators
- European Commission — Directorate-General for Health and Food Safety — Public health — ECHI — European Core Health Indicators
- European Commission — Directorate-General for Health and Food Safety — Public health — Indicators — Policy
- European Commission — Directorate-General for Health and Food Safety — Public health — Social determinants and Health Inequalities

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