Cross-national comparisons of non-harmonised Healthy Life Years indicators may lead to more confusion than clarification

27 May 2009
Ola Ekholm & Henrik Brønnum-Hansen
National Institute of Public Health
Cross-national comparisons of non-harmonised Healthy Life Years indicators

Life expectancy (LE) and healthy life years (HLYs) at 50 years of age among men for all EU countries

Life expectancy (LE) and healthy life years (HLYs) at 50 years of age among women for all EU countries

Clippings from Danish and Swedish media November 17, 2008

Ældre i Danmark er sundest
Chancen for at have det godt også efter de 50 år er størst her.

Danske ældre er de mest raske i Europa
Danske ældre er raske og nåede i mange flere år end mange andre borgerne i EU.

Svenskarna flitigast i EU
Många skolar kring SG

REVES 2009, Copenhagen, Denmark, 27-29 May 2009
The Minimum European Health Module (MEHM)

The MEHM is adopted as an essential part of the European Health Survey System and consists of three general disability/health items:

- Self-rated health
- Long-standing illness
- Activity limitations

The MEHM is included in the Survey on Income and Living Conditions (SILC)
Purpose

- To present the disagreement between the question on activity limitation in MEHM/SILC and the question used in the Danish-SILC

- To investigate if this disagreement influence the Danish HLY estimates
**SILC - Denmark**

- Yearly survey on income and living conditions carried out in all EU member states. Data in the present study derives from the surveys in 2005-2008

- The reference populations is private households residing in Denmark and members of these households (excluding institutionalised persons)

- SILC has a rotating panel design

- Sample size: approximately 9,500 persons/households (16 years or older) selected from the Central Population Register.

- Response rate: approximately 60%

- Data were collected via telephone interview and postal questionnaires by Statistics Denmark
Activity limitation

**SILC/MEHM:** For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do?

Yes, strongly limited  
Yes, limited  
No, not limited

**SILC-Denmark (unofficial translation -2007):** Have you been hampered in your daily activities by this chronic problem or by other health-related problems for longer time-periods within the past 6 months?

Yes  
No

The questions and responses were made similar in 2008
Statistical analysis

We used life tables from the EHEMU database and the age-specific prevalence of long-term activity limitation and calculated HLYs at 50 years of age by sex by Sullivan’s method

SILC 2005-2008
Figure 1. Healthy life years (HLYs) at 50 years of age in Denmark by year
Life expectancy (LE) and healthy life years (HLYs) at 50 years of age among men for all EU countries


Modified
Life expectancy (LE) and healthy life years (HLYs) at 50 years of age among women for all EU countries

In addition...

In Denmark, data was collected via telephone interview and postal questionnaires.

In most other countries, data was collected via face-to-face interviews.

It is well known that the mode of data collection may affect response distributions.

For example, the mode itself may affect the responses and those who respond to mail surveys can be different from those who participate in interview surveys.
We used data from the Danish SILC-2008 and the Danish Health Interview Survey 2005 to investigate the effects of mode of data collection.

Because no comparable question on long-term activity limitation was asked in the Health Interview Survey in 2005, the MEHM question on long-standing illness was used to illustrate the discrepancy.
The Danish Health Interview Surveys

- The Danish National Institute of Public Health, University of Southern Denmark has carried out national representative health interview surveys since 1987.

- The purpose of the surveys is to describe the status and trends in health and morbidity in the adult population (16 years or older) and in the factors that influence health status.

- The survey in 2005 was based on a random sample of 21,832 Danish citizens. The response rate was 67%.

- Data were collected via face-to-face interview at the respondents’ home.

- Institutionalised persons were excluded.
Questions on long-standing disease

HIS: Do you have any long-standing disease, disorder or illness, long-standing effects of injury, any functional impairment or any other long-standing health problem? (Any that has lasted 6 months or more)

-Yes
-No

MEHM/SILC: Do you have any long-standing illness or [long-standing] health problem? [By long-standing I mean illnesses or health problems which have lasted, or are expected to last, for 6 months or more]

-Yes
-No
Expected lifetime without long-standing illness at age 50 in Denmark according to the Danish Health Interview Survey 2005 and SILC-2008.
Conclusion

Methodological details such as formulation of a question, how questions are filtered in a questionnaire, survey mode and subsequent differences in patterns of non-response must be addressed to ensure harmonisation in cross-national comparisons.

Results from non-harmonised indicators should be interpreted cautiously as they may lead to incorrect conclusions.