

Comparability of published results

1. Type of available results

The results of the studies on health status and productive engagement appear either in articles in scientific journals (which generally study a particular aspect of the health status, as for example alcoholism or a specific pathology) or in reports (which provide an exhaustive panorama of the present indicators of health in surveys - often available directly on the web).

Articles search

First, we looked for the articles, which presented the results of the studies selected beforehand. This research is based on MEDLINE, EMBASE, CINDOC and IRDES Base. This first research permits to select **486 articles**.

Second, we selected:

- Articles published in French, in English, in German only on the last wave of the selected surveys (*i.e.* the wave of which we analysed the questionnaire and the methods)
- Results for surveys realized after 1995.
- By analysis of abstracts (by key-words)

In most of these articles, a specific sample of the population is studied on a particular theme (as for example the cardiovascular mortality in Averina M *and alii*, 2003¹). Besides, a few articles give detailed and general data (tables of descriptive statistics), which are exploitable in a comparative perspective.

After all, only 15 articles corresponded to these criteria.

These articles are published in eleven leading international reviews: The Journal of Epidemiology Community Health, The European Journal of Epidemiology, The Journal of Health Economics, Social Science and Medicine, the Clinical Chemistry, Health Policy, International Journal of Methods in Psychiatric Research, Preventive Medicine, European journal of Clinical Nutrition, Reviews on Environmental health and the Archives of Psychiatry and Psychotherapy.

They are concentrated on 8 surveys: BHPS, GHS, ELSA, Polish Health Survey, Arkhangelsk study (Russia), German National Health Examination and Interview Survey and Microcensus in Germany and Living Conditions Survey in Sweden.

Results are presented in the third column of the synthetic tables (appendix 4 and 5) and the corresponding bibliographical references in the fourth column.

Search of reports

The second type of available results is the reports and the online statistics. After a research on the web and with the help of our correspondents, we had an access to:

¹ Averina M, Nilssen O, Brenn T, Brox J, Kalinin AG, Arkhipovsky VL, 2003, "High cardiovascular mortality in Russia cannot be explained by the classical risk factors". The Arkhangelsk Study 2000. European Journal of Epidemiology;18:871-78. (This article was retained)

- 2 French reports (Health Barometer 2000 and SPS 2002)
- 6 English reports (the Scottish Health Survey 1998 (SHS), the Welsh Health Survey 1998 (WHS), the English Longitudinal Study of Ageing 2002 (ELSA), The General Household Survey 2002 (GHS) and two reports for the Health Survey for England (HSE))
- 1 report for the Sample Survey of the Health Status of the Czech Population 2002
- 1 report for The Russian Longitudinal Monitoring Survey 2002 (RLMS)

Most of the on-line reports are accessible on governmental sites. When the full report is not accessible, it is possible to access to general statistics: the link <http://www.stat.gov.pl/english/index.htm> gives some results about the Polish Health Survey in Poland.

The results of the Health Survey for England (HSE) are very impressive and can be found in many reports. For each year, HSE reports are focused on a scope. For 2002, the study of children is privileged. Three reports are available (<http://www.official-documents.co.uk>): The Health of Children and Young People, Maternal and Infant Health and Methodology and Documentation. In 2000, a report deals with The General Health of Older People and their use of Health Services but only for people aged 65 and over. For this survey, results of 2002 and 2000 reports are mentioned to give complete information. In France, full reports of Health Barometer 2000 (<http://www.inpes.sante.fr/Barometres/Baro2000/pdf/pagees.pdf>) and SPS 2002 (<http://www.irdes.fr/irdes/Fichenqu/enquesps.htm>) were published and partially on the web.

For a survey as important as the British Household Panel Survey, no report is available on-line. However, for each year, an inaugural BHPS research conference is organized with to the aim of providing an international forum for the exchange of research based on the web site of the BHPS² (<http://iserwww.essex.ac.uk/ulsc/bhps/>). All working papers can be downloaded but they don't give a general vision of health status in UK because they are very specific papers.

Certain official web sites don't provide English information. For the three Spanish surveys, a lot of results (in Spanish only) in particular relatives to disabilities are available on the web site of the national institute of statistics (*Instituto Nacional de Estadística*: <http://www.ine.es>). In the web site of the National Center of statistics in Sweden (<http://www.ssd.scb.se/databaser/makro/start.asp?lang=2>), data health results are not downloaded in English. In Germany, the RKI (Robert Koch Institute) web site proposes booklets on line concerning to the National Health Examination (about diseases, overweight, Hepatitis C...) but only in German.

The Italy's National Statistical Institute (www.istat.it) provides many results about disabilities, chronic diseases, and alcohol and tobacco consumptions by regions, age-groups and sex.

The reading of the tables in appendix 4 is the following. In the card index of perceived health (appendix 4A), we can find results relative to self-rated health (good / poor for active

² A list of publications based on BHPS Data is available in http://iserwww.essex.ac.uk/ulsc/bhps/doc/vola/app5_2.php.

and inactive) concerning the British Household Panel Survey between 1991 and 1998 in this bibliographic reference: Bartley M, Chandola T, Schofield P and Wiggins R, 2003³.

2. Comparability of results by indicators

If we assume that the understanding of the questions and the construction of variables are comparable (see sections III A & B) from one survey to the other, two conditions are required for comparing the results:

First, the questions of the survey must be similar to measure the same phenomenon. Second, the results have to be available and have to cover identical populations (sex, age-groups and socio-economic characteristics).

Besides, when the results consist on cross-tabulations of health indicators and productive engagement indicators, the comparison is never really possible for many reasons:

- The choice of the author to group variables in different categories. For example in the ELSA report (Marmot M et al., 2003) the occupational status are grouped in three groups: professional and managerial, intermediate and routine and manual. Based on the British household panel survey, Bartley, Clarke and Sacker (2004) class the occupational in 6 groups: higher managerial and professional, lower managerial and professional, intermediate occupations, small employers and own account, semi routine occupation and routine occupation (limiting long standing illness by sex and occupation).
- The choice of the age groups for the presentation of the results (five years age groups, ten years age group...)
- The studied sub sample (active only/ women only...)
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A big difficulty refers to the comparison of productive engagement indicators because they are defined in reference of national specificities (educational system, job market characteristics, laws, own occupational classification...). Nevertheless, concerning health indicators certain comparisons are possible but they are limited.

Perceived health status

Perceived health status' results are available for 13 surveys (ESPS, Health Barometer, GHS, HSE, SHS, WHS, BHPS, ELSA, Polish Health Survey, Czech Republic, Survey of Health Conditions of the Population and the Use of health Services, National Health Survey in Spain and Living Conditions Survey in Sweden). As we noticed before, the perceived health status indicator respects mostly the first condition. Indeed for the most of surveys, which deals with perceived health status, the question's wording and item of answers are similar. Among these ten surveys results could be comparable according to the wording in only 10 surveys (ESPS, HSE, SHS, WHS, ELSA, Polish Health Survey, Czech Republic Health Survey, Survey of Health Conditions of the Population and the Use of health Services, National Health Survey in Spain and Living Conditions Survey in Sweden).

³ Bartley M, Chandola T, Schofield P and Wiggins R, 2003, "*Social Inequalities in health by individual and household measures of social position in a cohort of healthy people*", Journal of Epidemiology Community Health, 57, pages 56-62

We can strictly compare the results of the perceived health status by sex and age groups between the Czech Republic and SHS because the question (*How is your health in general? Would you say it was? very good, good, fair, bad, very bad*) in the survey and the age groups (by ten years) are the same.

Disabilities

Disabilities results are present in 15 surveys (ESPS, Health Barometer, GHS, HSE, SHS, WHS, ELSA, Polish Health Survey, Czech Republic, German National Health Examination and Interview Survey, Survey of Health Conditions of the Population and the Use of health Services, National Health Survey in Spain, Impairments, Disabilities and Health Status Survey in Spain, Labour Force Survey ad hoc module on disability in Spain and Living Conditions Survey in Sweden). The form of results diverge significantly cause of differences in questions wording. In the Health Barometer, disabilities results appear in the Duke Health profile but no directly. ESPS survey use a very specific French score: the “level of handicap”. Even if results are very detailed (by sex, age-group, social category, education level, monthly income, sort of household) the comparison with others countries results is not evident. In GHS, the general question on disabilities and chronic diseases allows to provide numerous tables, it is not the case in others surveys.

In conclusion, many forms of results co-exist: the prevalence of disability (ESPS, HSE, Polish Health Survey, Czech Survey, Survey of Health Conditions of the Population and the Use of health Services, National Health Survey, Impairments, Disabilities and Health Status Survey, Labour Force Survey ad hoc module on disability) or the prevalence of hearing or seeing difficulties (WHS, ELSA), the average of level of handicap (ESPS), the association with other indicators or criteria (German National Health Examination and Interview Survey, Living Conditions Survey) and difficulties with ADL or IADL (ELSA, Polish Health Survey). The comparison does not seem possible with such results cause of the definition and methodology’s differences.

Chronic diseases

Many types of information are given in articles and reports for 15 surveys (ESPS, Health Barometer, GHS, HSE, SHS, WHS, BHPS, ELSA, Polish Health Survey, Czech Republic, Arkhangelsk Study, German National Health Examination and Interview Survey, Survey of Health Conditions of the Population and the Use of health Services, Labour Force Survey ad hoc module on disability and Living Conditions Survey):

- Number of diseases by person (by activity and occupational status in ESPS)
- Prevalence of diseases in general population by age and sex (ESPS, GHS, SHS, HSE, WHS, ELSA, Polish Health Survey, Czech survey) or diseases for a specific population (in Barometer for the aged population, after 65), or particular disease like cardio-vascular and stroke in Arkhangelsk study.

The most frequent results on diseases correspond to cardiovascular and respiratory diseases. We can find this information for 9 surveys (ESPS, Health Barometer, GHS, HSE, SHS, WHS, ELSA, Arkhangelsk Study and Czech survey).

Many cardio-vascular diseases are detailed in results in particular:

- Hypertension (GHS, HSE, SHS, WHS, ELSA, Arkhangelsk Study, Czech survey, Survey of Health Conditions of the Population, the Use of health Services and Living Conditions Survey)
- Heart Attack (GHS, HSE, SHS, WHS, ELSA and Arkhangelsk Study)
- Stroke (GHS, HSE, SHS, WHS, ELSA and Czech Survey)

- Diabetes (Health Barometer, SHS, WHS, ELSA, Arkhangelsk Study, Czech survey, Survey of Health Conditions of the Population and the Use of health Services and Living Conditions Survey)

Many respiratory diseases are detailed too in results, the main diseases are following:

- Asthma (Health Barometer, GHS, SHS, WHS, ELSA, Czech survey and Survey of Health Conditions of the Population and the Use of health Services and Living Conditions Survey)
- Bronchitis and emphysema (Health Barometer, GHS, SHS, WHS, ELSA, Czech Survey and Survey of Health Conditions of the Population and the Use of health Services)
- Prevalence of diseases ever treated in the past (WHS, Survey of Health Conditions of the Population and the Use of health Services)
- Mental disorders or pain (German National Health Examination, Interview Survey and Living Conditions Survey)

The comparison of prevalence data between countries, and even between surveys in the same country is very difficult. The assessment of the prevalence is indeed very dependent on the methods of information collection. Thus, the prevalence will be probably underestimated when the interrogation is based on an open-ended question, and higher if the question is closed-ended. The results will be also different if the question asks about the presence of diseases, the presence of diagnosed diseases or on the presence of diseases under treatment. The collection conditions of the chronic diseases are very different from one country to another. As a consequence, few studies can be considered comparable.

Results of the prevalence of main diseases could be compared between 11 surveys (ESPS, GHS, SHS, HSE, WHS, ELSA, Polish Health Survey, Czech survey, German National Health Examination, Interview Survey, Survey of Health Conditions of the Population and the Use of health Services and Living Conditions Survey). Nevertheless, the type of the questions allows to compare only the following surveys:

- ESPS, the Polish Health Survey, the Czech Health survey, German National Health Examination and Interview Survey and Survey of Health Conditions of the Population and the Use of health Services (self reported diseases and semi closed-ended question)
- GHS, SHS and Living Conditions Survey (self reported diseases and open-ended question)
- WHS, the Polish Health Survey, the Czech Health survey and Living Conditions Survey (treated diseases and closed-ended or semi closed-ended questions)
- ELSA, the Polish Health Survey, the Czech Health survey and Living Conditions Survey (diagnosed disease and semi closed-ended questions)
- Living Conditions Survey (diagnosed diseases and open-ended question)
- Living Conditions Survey (treated diseases and open-ended question)

Even if comparisons are possible, for example for ELSA and the Czech Health survey, the words used in the questions differ significantly. Therefore, caution is required in comparing the results. In ELSA the question on chronic diseases is: “Has a doctor ever told you that you have (or have had) any of the conditions on this card?” whereas in the Czech Health survey, the question is: “(A) Do you have or have you ever had this disease? (B) Was this disease diagnosed by a doctor?”

To conclude, a strict comparison of disease results is correct: between the WHS and the Czech Health survey (Hypertension, Stroke, Diabetes, Asthma, Bronchitis and emphysema, and Musculoskeletal system too), between the WHS, the Czech Health survey and the Living Conditions Survey (Hypertension, Stroke, Diabetes, Asthma) and between the ELSA and the Czech Republic (Hypertension, Stroke, Diabetes, Asthma, Bronchitis and emphysema).

Tobacco consumption

Questions about smoking and drinking are the most studied. Then, a lot of results about smoking are available (14 surveys represented: ESPS, Health Barometer, GHS, HSE, SHS, WHS, ELSA, RLMS, Arkhangelsk Study, Czech survey, German National Health Examination and Interview Survey, Microcensus, Survey of Health Conditions of the Population and the Use of health Services and National Health survey).

- Prevalence of smoking: ESPS, Health Barometer, GHS, HSE, SHS, WHS, ELSA, RLMS, Arkhangelsk Study, Czech survey, Survey of Health Conditions of the Population and the Use of health Services and National Health survey).
- Prevalence of smoking with level smoking: HSE and SHS (never smoked cigarettes, never regularly smoked cigarettes, ex-regular cigarette smoker, current smoker), ELSA (light, moderate or heavy) and Czech survey (never smoked, former smoked, occasional smoker, light smoker and heavy smoker)
- Number of cigarettes per day: GHS, HSE, SHS, RLMS and Survey of Health Conditions of the Population and the Use of health Services.
- Type of tobacco: GHS.
- Association alcohol and tobacco consumption (German National Health Examination and Interview Survey)

Results of smoking and engagement productive are available:

- Prevalence of smoking by education level: ESPS.
- Prevalence of smoking by income level: ESPS, Health Barometer
- Prevalence of smoking by activity: ESPS, GHS.
- Prevalence of smoking by occupational status: ESPS, Health Barometer, GHS (manual, non-manual), ELSA, Microcensus.

A study of the global prevalence of smokers and non-smokers is possible for 12 surveys.

Alcohol consumption

Drinking results concern 12 surveys (Health Barometer, GHS, HSE, SHS, WHS, ELSA, RLMS, Arkhangelsk Study, Czech survey, German National Health Examination and Interview Survey, Aspects of daily living in Italy and National Health Survey in Spain). Information about drinking is numerous; it can be resumed in two dimensions: Frequency and volume.

Frequency:

Last 12 months: Health Barometer, National Health Survey in Spain

Last month: Arkhangelsk Study

Last 7 days: GHS, HSE, SHS (Never drunk alcohol, Ex-drinker, Under 1, 1-10, Over 10-21, Over 21-35, Over 35-50, Over 50, Mean units), Czech

Yesterday: Health Barometer

Volume:

Yesterday: Number of drinks by occupational status (Health Barometer)

Per day:

- Frequency of alcohol use (twice a day or more, 2 daily or almost daily, 3 once or twice a week, 4 once or twice a month, 5 special occasions only, 6 or, not at all), by occupational class, age and sex. (ELSA)
- Mean daily amount of alcohol consumption: RLMS
- By BMI, socio-economic status: German National Health Examination and Interview Survey
- *By type of alcohol*: Aspects of daily living

Per week: GHS, Arkhangelsk Study

To assess alcohol consumption, these results do not allow comparing because they consider different periods (day, week or month) with many definitions of volume or frequency. In addition we found results on the CAGE questionnaire only in the Health Barometer in France.

Finally, few results relative to Body Mass Index (in Health Barometer, GHS, HSE, SHS, WHS, ELSA, Arkhangelsk study, Polish Health Survey, Czech Survey, German National Health Examination and Interview Survey), Health Related Quality of Life (SF-36 in WHS and in German National Health Examination and Interview Survey), GHQ-12 in Poland and by economic status in BHPS, CES-D in ELSA) are available.