

Standard Report
on
Methods and Quality (v1)
for
NATIONAL DISABILITY SURVEY

This documentation applies to the reporting period:

<2008 >

Last edited: <July 2009>

CENTRAL STATISTICS OFFICE

Skehard Road, Cork

021 4535000

www.cso.ie

Table of Contents

1 Overview

2 General Information

- 2.1 Statistical Category
- 2.2 Area of Activity
- 2.3 Organisational Unit Responsible, Persons to Contact
- 2.4 Objectives and Purpose; History
- 2.5 Periodicity
- 2.6 Client
- 2.7 Users
- 2.8 Legal basis

3 Statistical Concepts, Methods

- 3.1 Subject of the Statistics
- 3.2 Units of Observation/Collection Units/Units of Presentation
- 3.3 Data Sources
- 3.4 Reporting Unit/Respondents
- 3.5 Type of Survey/Process
- 3.6 Characteristics of the Sample/Process
 - 3.6.1 Population and Sampling Frame
 - 3.6.2 Sampling Design
- 3.7 Survey Technique/Data Transfer
- 3.8 Questionnaire (including explanations)
- 3.9 Participation in the Survey
- 3.10 Characteristics of the Survey/Process and its Results
- 3.11 Classifications used
- 3.12 Regional Breakdown of Results

4 Production of the Statistics, Data Processing, Quality Assurance

- 4.1 Data Capture
- 4.2 Coding
- 4.3 Data Editing
- 4.4 Imputation (for Non-Response or Incomplete Data Sets)
- 4.5 Grossing and Weighting
- 4.6 Computation of Outputs, Estimation Methods Used
- 4.7 Other Quality Assurance Techniques Used

5 Quality

- 5.1 Relevance
- 5.2 Accuracy and Reliability
 - 5.2.1. Sampling Effects, Representativity
 - 5.2.2. Non-Sampling Effects
 - 5.2.2.1 Quality of the Data Sources used
 - 5.2.2.2 Register Coverage
 - 5.2.2.3 Non-response (Unit and Item)
 - 5.2.2.4 Measurement Errors
 - 5.2.2.5 Processing Errors
 - 5.2.2.6 Model-related Effects

- 5.3 Timeliness and Punctuality
 - 5.3.1 Provisional Results
 - 5.3.2 Final Results
- 5.4 Coherence
- 5.5 Comparability
- 5.6 Accessibility and Clarity
 - 5.6.1 Assistance to Users, Special Analyses
 - 5.6.2 Revisions
 - 5.6.3 Publications
 - 5.6.3.1 Releases, Regular Publications
 - 5.6.3.2 Statistical Reports
 - 5.6.3.3 Internet
 - 5.6.4 Confidentiality

6 Additional documentation and publications

1 Overview

Two questions on disability were included in the 2006 Census of Population. In order to provide more detail on the characteristics and situation of the population with a disability, and to establish the prevalence, severity and impact of disability, a post-Census survey – the National Disability Survey (NDS) was conducted in Sep-Oct 2006.

Persons responding positively to the two Census questions on disability formed the population from which a 'Census Disability Sample' of 14,518 was drawn. In order to identify the extent of 'false negatives', a smaller sample of 1,551 – the 'General Population Sample' was drawn from persons in private households who indicated that they did not have a disability in the Census.

The first set of results from the NDS focused on nine specific disability types examined in the NDS and these results were published in October 2008. A subsequent report will present data on education, work, transport, the built environment (adaptations within the home, workplace or public buildings to facilitate access for people with disabilities) and social participation for people with disabilities.

2 General Information

2.1 Statistical Category

Primary statistical survey

2.2 Area of Activity

Social statistics

2.3 Organisational Unit Responsible, Persons to Contact

Social Statistics Integration Division

Gerry Brady Tel.: 498 4201, e-mail: gerry.brady@cso.ie
John McCartney Tel.: + 353 1 4984215 e-mail: john.mccartney@cso.ie

2.4 Objectives and Purpose; History

Two questions on disability had been included in the Irish Census of Population for the first time in 2002. However, given the wide ranging nature of the Census, these inevitably provided limited detail on disability in Ireland. In 2003, therefore, the National Disability Authority (NDA) commissioned research to develop and pilot an appropriate research instrument which would be capable of providing more detail on the prevalence and impact of disability in Ireland. This pilot study fed into a Government decision in 2004 for the CSO to conduct a National Disability Survey.

In 2006 two slightly more detailed questions on disability were included on the Census form. Persons who responded positively to these questions formed the sampling frame for the new National Disability Survey. The purpose of this survey was to examine a wider range of disability types than was possible in the Census, and to provide more detail on the prevalence, severity and impact of disability.

The NDS questionnaires were based on the *social model of disability* which defines disability as the outcome of the interaction between a person with an impairment and the environmental and attitudinal barriers s/he may face.

This first set of results from the NDS focused on the prevalence and severity of the nine disability types examined in the NDS, and provided information on their correspondence with key demographic variables such as age, sex and region. The first NDS Volume, published in October 2008 also provided information on the use of and need for aids for particular disability types, causes of disabilities and age of onset.

A subsequent report will present data on education, work, transport, the built environment and social participation for people with disabilities.

The results of the NDS will assist information based policy formation in the areas of health, disability, ageing, and social welfare. They will be of specific interest to various specialised groups and organisations as set out under section 2.7 below.

2.5 Periodicity

One-off post-Census of Population survey conducted in 2006.

2.6 Client

Department of Justice, Equality and Law Reform, and National Disability Authority.

2.7 Users

Department of Justice, Equality and law Reform
National Disability Authority.
Disability representative groups
Policy makers
International organisations
National Statistical Institutions

2.8 Legal basis

None

3 Statistical Concepts, Methods

3.1.1 Subject of the Statistics

Disability Statistics

3.2 Units of Observation/Collection Units/Units of Presentation

The person is the unit of observation, collection and presentation (suitably aggregated).

See 3.6.2 below

3.3 Data Sources

As outlined below, The Census of Population provided the sampling frame for the main sample in the NDS.

3.4 Reporting Unit/Respondents

- Census disability sample – individuals reporting a disability in response to Q15 in the 2006 Census, enumerated at their usual place of residence (mostly in private households, but some in communal establishments).
- General Population Sample – individuals not reporting a disability under Q15 of the 2006 Census, enumerated at their usual residence, in private households only.
- Substitutes were used if originally drawn subjects were not contactable
- Provision was made for facilitated and interpreted interviews, and, where appropriate, proxy respondents who answered on behalf of persons where were not present at the interview

3.5 Type of Survey/Process

Post Censal Survey/personal interview on paper

3.6 Characteristics of the Sample/Process

3.6.1 Population and Sampling Frame

See 3.2 and 3.4 above

3.6.2 Sampling Design

The NDS involved two separate processes. The main approach was to select a sample from among those persons who reported a disability in the Census of Population and who were enumerated at their usual residence (the “Census disability” sample). This was an efficient way of identifying the population of interest. Of the 393,800 persons reporting a disability in the Census, 370,500 were enumerated in their usual residence of a private household or a communal establishment such as a nursing home, hospital or children’s home. These 370,500 persons formed the population from which the main NDS sample was selected, 344,100 persons in private households and 26,400 persons living in communal establishments. Interviews were conducted with 14,518 individuals defined as having a disability in the Census, of which the vast majority (13,868 or 96%) were resident in private households and the remainder (650) were resident in communal establishments.

This was supplemented with a 'General population sample' drawn from all persons not indicating a disability in the Census, enumerated at their usual residence in private households. The purpose of the General population sample was to explore the extent to which the broader NDS definition would identify disability not picked up in the Census. Ultimately, this should get a more accurate estimate of the overall prevalence of disability within the Irish population.

The General population sample was drawn from among those persons enumerated at their usual residence in private households and who did not report a disability on their Census form (3.7 million persons). The sample selected from this population was smaller (1,551) than for the Census disability sample since the main focus of the survey was on those with a disability in the Census. The inclusion of this smaller sample from the population not defined as disabled in the Census was to explore the extent to which the broader NDS definition would identify disability not picked up in the Census.

3.7 Survey Technique/Data Transfer

The NDS was conducted using paper and pencil interviewing

In most cases respondents were interviewed directly on a face-to face basis. However, due to the nature or severity of some respondents' disabilities, a small number were interviewed by proxy. In total, 1,769 persons were interviewed by proxy, a figure that equates to 14% of the unweighted sample.

Data from paper questionnaires were manually uploaded to electronic format for analysis.

3.8.1 Questionnaire (including explanations)

Four separate questionnaires were used in the NDS, Each addressed at a different respondent group;

- Adults in private households: http://www.cso.ie/nds/pdf_docs/adult_household.pdf
- Adults in communal establishments;
http://www.cso.ie/nds/pdf_docs/adult_institutional.pdf
- Children in private households; http://www.cso.ie/nds/pdf_docs/child_household.pdf
- Children in communal establishments;
http://www.cso.ie/nds/pdf_docs/child_institutional.pdf

3.9 Participation in the Survey

Voluntary

3.10 Characteristics of the Survey/Process and its Results

No data transformations were conducted between collection of data and analysis.

The first results from the NDS, published in October 2008, focused on the nine disability types examined in the NDS. They included estimates of the prevalence of different disabilities, and profiled the different disability types by severity and by demographic variables such as age, sex and region.

A subsequent report will present data on education, work, transport, the built environment and social participation for people with disabilities.

3.11 Classifications used

The *International Classification of Functioning, Disability and Health (ICF)*, provides a standard language and framework for the description of health and health-related states. The ICF is a multipurpose classification of health and health-related domains. Its purpose is to describe changes in body function and structure, what a person with a health condition can do in a standard environment (their level of capacity), as well as what they actually do in their usual environment (their level of performance).

These domains are classified from body, individual and societal perspectives by means of two lists: a list of body functions and structure, and a list of domains of activity and participation. In ICF, the term *functioning* refers to all body functions, activities and participation, while *disability* is similarly an umbrella term for impairments, activity limitations and participation restrictions. ICF also lists environmental factors that interact with all these components. The ICF codes used in the National Disability Survey Questionnaires are included as Appendix D of the first volume of NDS results, published in October 2008.

http://www.cso.ie/releasespublications/documents/other_releases/nationaldisability/Appendices%20A,%20C,%20D%20and%20E.pdf

3.12 Regional Breakdown of Results

The regional classifications in this release are based on the NUTS (Nomenclature of Territorial Units) classification used by Eurostat. The NUTS3 regions correspond to the eight Regional Authorities established under the Local Government Act, 1991 (Regional Authorities) (Establishment) Order, 1993, which came into operation on 1 January 1994. The composition of the regions is set out below.

Border	Cavan, Donegal, Leitrim, Louth, Monaghan, Sligo.
Midland	Laoighis, Longford, Offaly, Westmeath.
West	Galway, Mayo, Roscommon.
Dublin	Dublin City, Dún Laoghaire-Rathdown, Fingal, South Dublin.
Mid-East	Kildare, Meath, Wicklow.
Mid-West	Clare, Limerick, North Tipperary.
South-East	Carlow, Kilkenny, South Tipperary, Waterford, Wexford.
South-West	Cork, Kerry.

4 Production of the Statistics, Data Processing, Quality Assurance

4.1 Data Capture

Face-to-face interviews conducted using paper and pencil data collection mode.

Raw data manually transferred from paper to electronic 'flat files' in ASCII format, one record per person

ASCII files read into SAS system creating SAS datasets

IT tools used - SAS

4.2 Coding

The codes were generally pre-coded onto the questionnaires. Therefore all categories within each NDS question were assigned a number or 'code' to allow them to be identified or distinguished in the subsequent analysis.

4.3 Data Editing

SAS was used for data editing.

Data editing began in the field with interviewers checking forms to ensure that they had been correctly completed

This work was overseen and checked by Regional and Field Supervisors

Automated edits were programmed into SAS to check and correct for incorrect filtering, respondents answering wrong sections etc..

A small amount of manual editing was used to correct any remaining anomalies or inconsistencies.

4.4 Imputation (for Non-Response or Incomplete Data Sets)

The Census of Population 2006 was used to get missing dates of birth, sex and for queries on these variables.

4.5 Grossing and Weighting

For the NDS private household Census disability sample, the initial weight for an individual was calculated from the probability of the selection of an Enumeration Area (EA) within the county (taking urban/rural mix into account) and the probability of selection of a person based on the age distribution within that EA.

For the NDS private household general population sample, the initial weight for an individual was calculated from the probability of the selection of an EA within the strata of urban/rural/mixed EA type and the probability of selection of a person based on the age distribution within that EA type.

For the NDS communal establishment sample, the initial weight for an individual was calculated from the probability of the selection of a communal establishment from all communal establishments of the same type and the probability of selection of a person based on the age distribution within that communal establishment type. An adjustment for communal establishment size was also included.

For all three samples, the CALMAR system was used to calibrate the initial weights against benchmark data from the 2006 Census of Population. The benchmark totals were based on the following combination of variables for the three samples:

- Private household Census disability sample - age, sex, region and urban/rural;
- Private household general population sample - age, sex and region;
- Communal establishment Census disability sample – age and sex, then region.

4.6 Computation of Outputs, Estimation Methods Used

Outputs were initially generated by SAS in CSV format. These were transferred over to MS Excel and the raw numbers were then converted into percentages. Data were tabulated and presented for publication using Excel.

4.7 Other Quality Assurance Techniques Used

This was a one-off survey.

A team of 5 Regional Supervisors and 35 Field Supervisors oversaw the fieldwork stage of the NDS,

The principal duties of field supervisors were:

1. induction and training of interviewers;
2. distribution of survey materials to interviewers;
3. establishing contact with selected institutions ;
4. sourcing interview resources, e.g. sign language interpreters as required;
5. supervision and control of the interviewers' work in the field;
6. liaising with the regional supervisor and NDS section in CSO if general or specific problems arise during field work.
7. furnishing weekly reports on the progress of the interviewers' work in their field district to the regional supervisor;
8. checking the NDS questionnaires furnished by the interviewers and certifying as to their completeness and accuracy;
9. certifying their interviewers' entitlement to fees and expenses; and
10. assessing the interviewers' performance.

The principal duties of regional supervisors were:

1. ensuring that the induction and training of interviewers in their region is conducted in accordance with the materials provided and that the field force in their region are fully competent to proceed with field work;
2. supervision of the field operation in their region;
3. liaising with NDS section in CSO if general or specific problems arise during field work.
4. furnishing weekly reports on the progress of the survey in their region to NDS section in CSO;
5. ensuring that appropriate checks on work quality and operational procedures are being implemented in their region;
6. certifying field supervisors' entitlement to expenses;
7. dealing with problem cases in relation to interviewer pay and expense claims; and
8. assessing field force personnel performance.

5 Quality

5.1 Relevance

The development of the NDS questionnaires was carried out in discussion with a consultative group comprising:

- Economic and Social Research Institute;
- Government Departments: Education and Science; Health and Children; Justice, Equality and Law Reform; Social and Family Affairs; Taoiseach; and Transport;
- Health Research Board;
- National Disability Authority;
- People with Disabilities in Ireland;
- The Equality Authority;
- UCD Centre for Disability Studies; and
- Western Alliance for Mental Health.

5.2 Accuracy and Reliability

5.2.1 Sampling Effect & representivity

Estimates of the total number of persons with disabilities in Ireland from the NDS main disability sample are shown to be robust with a margin of error of + or – 2,300. The margin of error on the General population sample is in the order of 70,000 reflecting the smaller sample size relative to the target population.

5.2.2 Non-Sampling Effects

5.2.2.1 Quality of the Data Sources used (other than survey register)

The Census of Population was used to select the NDS sample.

5.2.2.2 Register Coverage

Responses to Census of Population questions on disability were used to identify a sampling frame from which the 'Census disability sample' for this more detailed survey was drawn. This raises the possibility of 'false negatives' – i.e. people not classified as having disability under the Census who would be so classified using the broader NDS definition. The extent of this problem was quantified by also including a smaller 'general population' sample. Chapter 1 of *National Disability Survey 2006 – 1st Results* deals with this issue in detail.

The NDS introduced a severity threshold as a criterion for defining persons as disabled. Also, while it specifies 9 disability types, the open category of disability in the Census was dropped. These factors and other methodology differences also allow the possibility of 'false positives' – i.e. people who indicated a disability in the Census of Population, but who are not so defined in the NDS. An analysis of these persons was also conducted and is detailed in Chapter 1 of the First Results report.

The overall conclusion is that there is high consistency between the Census of Population and the NDS.

The general population sample only covered private households so it does not represent the non-disabled population resident in communal establishments. Both samples exclude persons not enumerated at their usual residence. This non-coverage is small, about 6% (23,300) of the Census disabled population and 5% (180,200) of the remaining general population.

5.2.2.3 Non-response (Unit and Item)

Due to the use of substitutes, the response rate of the survey is proving difficult to definitively establish. Inevitably this creates difficulties in quantifying the extent of non-response bias.

5.2.2.4 Measurement Errors

The National Disability Authority initially conducted a pilot survey in 2002-2003 which included qualitative testing of the questions. A pilot was also undertaken before the NDS to test the questions and to determine how long interviews would take under field conditions. This pilot study resulted in the elimination of some ambiguities and inconsistencies within the draft survey instrument.

5.2.2.5 Processing Errors

- a. Data capture errors
 - The potential for errors at the interview stage of the NDS process was addressed by;
 - Use of experienced interviewers who had previously worked on the Census of Population
 - Development of detailed interviewer manuals for the NDS questionnaires
 - Extensive interviewer training (5 days)
 - Use of 40 Regional and Field Supervisors to supervise and control the interviewers' work in the field. Inter alia, this involved checking completed questionnaires and certifying their completeness and accuracy.
 - Use of a pilot study to develop the NDS survey instrument (see 5.2.2.4 above).
- b. Data editing
 - Data cleaning and editing was predominantly achieved through a programmatic approach. This involved developing SAS programmes to detect 'impossible results' that could potentially have arisen due to incorrect filtering, use of wrong questionnaire etc.. This approach automatically identified and corrected the majority of errors that could have arisen in data capture.
- c. Coding error
 - Use of a pre-coded questionnaire minimised the risk of coding error. Some minor coding issues were dealt with through a combination of programmed and manual editing.

5.2.2.6 Model-related Effects

The general population sample is small – only 1,551 persons – and when weighted up to the population it represents, each individual contributes a greater weight to the total estimates than in the Census disability sample. As a result, when grossed up to population totals, the General population sample contributes more in terms of estimated numbers of disabled people in the population, but the estimates deriving from the general population sample have wider confidence intervals than those deriving from the Census disability sample.

5.3 Timeliness and Punctuality

5.3.1 Provisional Results

National Disability Survey 2006 – 1st Results published 23rd October 2008.

T + 2

5.3.2 Final Results

A second report examining barriers to participation will be published in 2009.

An anonymised micro data file will be lodged in The Irish Social Science Data Archive in 2009.

T+3

5.4 Coherence

See item 5.2.2.2 above

The purpose of the NDS was to populate gaps in the existing data on disability in Ireland.

However, some official statistics on disability were available prior to the NDS. These can be viewed at www.statcentral.ie

5.5.1 Comparability

This was the first full disability survey undertaken in Ireland.

Comparisons of results from country to country –

The disability prevalence rate from the Census is low in Ireland compared with that of other countries. The table below (Table 1.13 from the First Results report) shows the disability rate from Censuses of Population in other countries and from specific surveys on disability. While the definitions and measurement of disability used in other countries vary, the indicative total population estimate incorporating the general population sample and using the broader definition of disability in the NDS brings the rate more in line with those found elsewhere.

Table 1.13 National disability rates – most recent years available

Country	Year	Data source	Disability rate
Ireland	2006	Census of Population	9.3%
Ireland	2006	NDS total population sample	18.5%
USA	2002	Census of Population and Housing ¹	19.3%
Canada	2001	Census of Population	16.0%
United Kingdom	2001	Census of Population (England and Wales) – Persons with a long term limiting illness	18.2%
	2001	Census of Population (Northern Ireland) – Persons with a long term limiting illness	19.7%
	2006	Northern Ireland Survey on Disability and Activity Limitation.	18.0%
New Zealand	2003	Household Disability Survey &	20.0%

¹ Disability rate refers to population aged 5 years and over.

5.6 Accessibility and Clarity

5.6.1 Assistance to Users, Special Analyses

Large print and audio versions of NDS First Results report available online at;
http://www.cso.ie/releasespublications/NDS_AudioandLargePrintMaterial.htm

Additional detailed tables, not published in hardcopy report, are available online at;
http://www.cso.ie/releasespublications/documents/other_releases/nationaldisability/Detailed%20Tables.pdf

5.6.2 Revisions

Not relevant.

5.6.3 Publications

5.6.3.1 Releases, Regular Publications

National Disability Survey 2006 – 1st Results – 23rd October 2008

5.6.3.2 Statistical Reports

An anonymised micro data file will be lodged in The Irish Social Science Data Archive in 2009

5.6.3.3 Internet

See publication on CSO website at;

<http://cmintra01/cso.ie/releasespublications/nationaldisabilitysurvey06first.htm>

5.6.4 Confidentiality

All data are treated as strictly confidential in accordance with the Statistics Act, 1993.

6 Additional documentation and publications

The WHO ICF classification system.

<http://www.who.int/classifications/icf/en/>