

Census 2001: Metadata

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INTRODUCTION

Overview of Census 2001

Every person, young or old, present in South Africa on Census Night, 9-10 October 2001, should have been enumerated in Census 2001. The enumeration primarily took place over the period 10 October to 30 October. However, in some situations it was necessary to continue enumeration through to November to ensure that as many people as possible were included. Most respondents were interviewed, although in certain circumstances respondents were asked or allowed to complete the questionnaire themselves. Self-enumeration occurred in fewer than five per cent of cases.

Census questionnaires

Three different questionnaires were used. The differences between these are noted in the documentation on each census variable and can be seen in the electronic versions of the questionnaires provided. The three questionnaires were as follows:

1. QUESTIONNAIRE A (FOR HOUSEHOLDS)

Every household living in a housing unit, and every individual or household living in a workers' hostel, student residence, residential hotel or home for the independent aged, was enumerated on a household questionnaire. This obtained information about the household and each person present in the household on Census night, as well as about services available to the household.

Questionnaire A was administered in hostels and the other types of collective living quarters listed above, in order to capture any households resident in such places. In addition, staff and their households living on the premises of an institution (as opposed to occupants of the institution) completed Questionnaire A.

The metadata will use the term 'households' when referring to Questionnaire A.

2. QUESTIONNAIRE B (FOR INSTITUTIONS)

Questionnaire B was used to collect information on individuals who spent census night in institutions and tourist hotels. By institutions in this sense is meant hospitals, childcare institutions, boarding school hostels, homes for the disabled, initiation schools, convents, defence force barracks, prisons, community and church halls, and refugee camps. Homeless people were also enumerated with Questionnaire B. This questionnaire contains most of the questions contained in the first part of Questionnaire A, with the exception of question about family relationships. It has no questions about services. One questionnaire was completed for each individual in an institution and tourist hotel and for each homeless person found on the street.

The metadata will use the term 'institutions' when referring to Questionnaire B.

3. QUESTIONNAIRE C (FOR INSTITUTIONS)

Questionnaire C asked questions on housing and services for each institution and tourist hotel, and was completed with the cooperation of the manager or responsible person. In addition, all persons enumerated using Questionnaire B were listed on this questionnaire.

The metadata will use the term 'institutions' when referring to Questionnaire C.

Instructions for interviewers

All interviewers were given an Enumerator's Manual that included a section with instructions for each question on the questionnaires. Some extracts from these instructions have been included in the documentation as an indication of the theoretical basis of the questions. However, it is important to note that not every interviewer would have been completely familiar with all the instructions and therefore they do not necessarily reflect how the questions were asked by the interviewer. In addition, these instructions were not provided to people who completed the questionnaire themselves. In most cases the latter would have been required to give their own interpretation to questions. A single page of guidelines for self-enumeration was produced but was not always available.

Adjusting for undercount

In every census, there are bound to be some people, households, or even entire EAs, that are missed, or some people who are counted twice. During November 2001, a post-enumeration survey (PES) was undertaken to determine the degree of undercount or overcount in Census 2001. For those who are interested in the details, a separate publication describing the methodology of the PES will also be available. See the publication *Calculating the undercount in Census 2001*, Statistics South Africa (ref. no. 03-02-17 (2001)). This publication will be available upon request from Statistics South Africa as well as being on the website.

The numbers and percentages relating to households and hostels in all Census 2001 products are adjusted according to the PES findings through the application of weights. The exception is the sample database product, which provides raw and weighted data for a small sample of questionnaires. Data relating to other collective living quarters are not weighted, as the PES did not cover these places.

Confidentiality

All cells in tables referring to person information with values less than 4 are made confidential by replacing the number in the cell with a random number between 0 and 3. All post-aggregation tabular derivations are calculated from the randomly rounded values and are not rounded further. With this method, there is no difference between totals as they appear in the table and the arithmetic sum of the total's components. However, totals suffer from accumulated rounding errors and may not match values given for the same total in other tables.

Imputation

Imputation was used in Census 2001 to allocate values for unavailable, unknown, incorrect or inconsistent responses. The editing system used a combination of both 'logical' imputation techniques and 'hot decks' (dynamic imputation) when inconsistencies were found in the data. 'Undetermined' values were allowed for only a few variables, such as industry and occupation. The system tried to make the minimum number of imputations in order to remove errors and make the data consistent.

Logical imputations, in which a consistent value is calculated or deduced from other information relating to the individual or household, are usually preferred over hot deck imputations. Generally, the editing system attempts to resolve inconsistencies first by looking at other characteristics of the household or individual (for example, a married person with invalid sex would be assigned to the opposite sex of his or her spouse). If this is unsuccessful, then a consistent value is imputed from a hot deck.

More information on imputation can be obtained in the United Nations publication *Handbook on Population and Housing Census Editing*, reference: ST/ESA/STAT/SER.F/82. In addition, the complete set of editing specifications will be available on Stats SA's website www.statssa.gov.za (Ref: 03-02-43 (2001)).

The following table shows the imputation rate for each variable:

| Variable | Imputation rate % | Universe |
|-----------------------------------|-------------------|--|
| Age | 23,72 | All persons |
| Year of birth | 2,34 | |
| Sex | 1,25 | All persons |
| Relationship | 5,11 | All persons living in housing units and non-institutional collective living quarters |
| Marital status | 5,50 | All persons |
| Population group | 1,42 | All persons |
| Language | 1,02 | All persons |
| Religion | 2,97 | All persons |
| Born in South Africa | 2,48 | All persons |
| Place of birth | 3,84 | All persons born in South Africa |
| Country of birth | 3,75 | All persons not born in South Africa |
| Citizenship | 4,44 | All persons |
| Usually live | 7,28 | All persons |
| Province of usual residence | 47,30 | All persons that are not usual residents |
| Main place of usual residence | 31,48 | All persons that are not usual residents |
| Five years ago | 5,71 | All persons |
| Province of previous residence | 19,02 | All persons that have moved since the time of census 1996 |
| Mother alive | 1,90 | All persons |
| Father alive | 3,41 | All persons |
| Present school attendance | 7,51 | All persons |
| Type of institution | 9,58 | All persons attending an educational institution |
| Level of education | 8,60 | All persons aged 5 years and over |
| Field of education | 19,85 | All persons with level of education higher than matric |
| Any work 7 days before 10 October | 6,90 | All persons aged 10 years and older |

| Variable | Imputation rate % | Universe |
|-----------------------------------|--------------------------|--|
| Reason why not working | 4,73 | All persons aged 10 years and older who did not have work |
| Active steps | 17,02 | All persons aged 10 years and older who did not have work |
| Availability | 25,91 | All persons aged 10 years and older who did not have work |
| Work status | 11,03 | All persons aged 10 years and older who worked |
| Economic sector | 9,62 | All persons aged 10 years and older who worked |
| Occupation | 6,60 | All persons aged 10 years and older who worked |
| Hours worked | 8,13 | All persons aged 10 years and older who worked |
| Place of work | 12,13 | All persons aged 10 years and older who worked |
| Province of work | 38,07 | All persons aged 10 years and older who did not work in same sub-place |
| Main place of work | 4,72 | All persons aged 10 years and older who did not work in same sub-place |
| Total births | 17,43 | All women aged 12-50 years |
| Total births (boys) | 22,87 | All women aged 12-50 years |
| Total births (girls) | 23,04 | All women aged 12-50 years |
| Boys still living | 34,99 | All women aged 12-50 years |
| Girls still living | 35,46 | All women aged 12-50 years |
| Sex of last birth | 22,03 | All women aged 12-50 years |
| Last child still alive | 19,34 | All women aged 12-50 years |
| Travel to school or place of work | 15,94 | All persons |
| Income | 15,75 | All persons |
| Type of living quarters | 3,10 | All households |
| Type of housing unit | 1,36 | All households in housing units |
| More than one dwelling | 1,91 | All households in housing units |
| Rooms | 1,83 | All households in housing units |
| Sharing 1 room | 8,99 | All households in housing units with one room |
| Tenure status | 2,54 | All households in housing units |
| Piped water | 2,17 | All households and institutions |
| Source of water | 0,87 | All households and institutions |
| Toilet facility | 0,76 | All households and institutions |
| Energy source for cooking | 1,38 | All households and institutions |
| Energy source for heating | 3,23 | All households and institutions |
| Energy source for lighting | 0,92 | All households and institutions |
| Household goods – radio | 0,88 | All households and institutions |
| Household goods – television | 0,86 | All households and institutions |
| Household goods – computer | 1,93 | All households and institutions |
| Household goods – refrigerator | 0,89 | All households and institutions |
| Household goods – telephone | 1,38 | All households and institutions |
| Household goods – cell-phone | 1,52 | All households and institutions |
| Access to telephone | 5,08 | All households and institutions with no telephone or cell-phone |
| Refuse or rubbish disposal | 2,39 | All households and institutions |
| Anybody died | 3,58 | All households and institutions |
| Sex of deceased | 1,91 | All deceased |
| Age of the deceased | 7,75 | All deceased |
| Cause of death | 5,20 | All deceased |
| Deceased pregnant | 18,15 | All deceased women aged 12-50 years |

Statistics Council Census sub-committee comment

“Preliminary investigations indicate that the 2001 census probably resulted in:

- an underestimate of the number of children below age five*
- an over-estimate of the number of teenagers aged between 10 and 20
- an underestimate of the number of men relative to the number of women*
- an underestimate of the number in the white population
- higher than expected numbers aged 80 and older, in the African population
- an underestimate of the number of foreign-born, since some identified themselves incorrectly as being South African-born
- age misstatement in the range 60-74
- an overestimate of the extent of unemployment
- an underestimate of those who were employed for only a few hours per week
- an underestimate of household income
- an overestimate the number of paternal orphans and the number of fathers missing from the household.

* This is a common feature of censuses, particularly in developing countries.

In addition:

- Scanning problems caused some births to be recorded in the wrong province. The number of cases is relatively small and should not lead to too much distortion for most purposes for which these data are used; however, it does produce obviously erroneous results when one tries to estimate the extent of inter-provincial migration of those born since the previous census.
- The fertility data (numbers of children ever born, children surviving) are problematic.

For further details of these investigations see the full report of the *Census Sub-Committee*.”

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Definitions

See Census 2001 *General Manual of Concepts and Definitions* (ref. no. 03-02-03).

Abbreviations

A number of abbreviations have been used in this documentation. They are:

| | |
|---------|--|
| Cat A | Category A municipalities (Metropolitan Areas) |
| Cat B | Category B municipalities (Local Municipalities and District Management Areas) |
| Cat C | Category C municipalities (District Councils) |
| CBLC | Cross-boundary Local Council |
| CBDMA | Cross-boundary District Management Area |
| DC | District Council |
| DMA | District Management Area |
| EA | Enumeration Area |
| EC | Eastern Cape |
| Excl. | Excluding |
| FS | Free State |
| GIS | Geographic Information System |
| Govt | Government |
| GP | Gauteng |
| ID | Identification |
| KN | KwaZulu-Natal |
| Metro | Metropolitan area |
| Mnfctr. | Manufacturing |
| MP | Mpumalanga |
| Munic. | Municipality |
| N/A | Not applicable (that is, no response was required to the particular question from these households or persons) |
| NC | Northern Cape |
| NEC | Not elsewhere classified (detailed information provided by respondent, but classification does not include a detailed code for the response) |
| NFD | Not further defined (insufficient information provided by respondent to enable a more detailed code to be allocated) |
| No. | Number |
| NP | Limpopo (former Northern Province) |
| NW | North West |
| PES | Post-enumeration Survey |
| WC | Western Cape |

Terms requiring further explanation:

| | |
|-----------|---|
| Pre-coded | Questions where a list of responses was offered for the respondent to choose from. |
| Write in | Questions where the respondent/interviewer had to provide an exact response. Often a precise code was allocated at a later stage. |

Contact details

Please do not hesitate to contact Stats SA User Information Services for additional information or queries:

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