Solomon Islands - Demographic and Health Survey 2006-2007

National Statistics Office (SINSO) - Government of Solomonl Islands

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Overview

Identification

ID NUMBER
SLB_2006_DHS_v01_M

Overview

ABSTRACT
The principal objective of the SIDHS was to provide current and reliable data on fertility and family planning behaviour, child mortality, adult and maternal mortality, children's nutritional status, the use of maternal and child health services, and knowledge of HIV and AIDS. Specific survey objectives were to:

- collect data at the national level, which will allow the calculation of key demographic rates;

- analyse the direct and indirect factors that determine the level and trends of fertility;

- measure the level of contraceptive knowledge and practice among women and men by method, urban-rural residence and region;

- collect high-quality data on family health, including immunisation coverage among children, prevalence and treatment of diarrhoea and other diseases among children under 5 years, and maternity care indicators, including antenatal visits, assistance at delivery, and postnatal care;

- collect data on infant and child mortality;

- obtain data on child feeding practices, including breastfeeding, and collect 'observation' information to use in assessing the nutritional status of women and children;

- collect data on knowledge and attitudes of women and men about sexually transmitted infections and HIV and AIDS, and evaluate patterns of recent behaviour regarding condom use; and

- collect data on support to mentally ill people as well as information on the incidence of suicides.

This information is essential for informed policy decisions, planning, monitoring, and evaluating programmes on health in general, and reproductive health in particular, at both the national level as well as in urban and rural areas. A long-term objective of the survey is to strengthen the technical capacity of government organisations to plan, conduct, process, and analyse data from complex national population and health surveys. Moreover, the 2006/2007 SIDHS provides national, rural and urban estimates on population and health that are comparable with data collected in similar surveys in other Pacific DHS pilot countries and other developing countries.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
- Household

- Women age 15-49

- Men age 15-59

Scope

NOTES
The 2006-2007 Solomon Islands Demographic and Health Survey covered the following topics:

HOUSEHOLD

- Household identification

- Household schedule/ demographic characteristic

- Household characteristics

- Weight, height and hemoglobin measurement for children age 0-5

- Weight, height, blood pressure, and hemoglobin measurment for women age 15-49

- Weight, height, blood pressure, and hemoglobin measurment for men age 15 or over

WOMEN

- Respondent background

- Reproduction

- Contraception

- Pregnancy and post-natal care

- Child immunization and health and child's and woman's nutrition

- Marriage and sexual activity

- Fertility preferences

- Husband's background and woman's work

- HIV/AIDS

- Other health issues

MEN

- Respondent background

- Reproduction

- Contraception

- Marriage and sexual activity

- Fertility preferences

- Employment and gender roles

- HIV/AIDS

Coverage

GEOGRAPHIC COVERAGE
National

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Statistics Office (SINSO)	Government of Solomonl Islands

OTHER PRODUCER(S)

Name	Affiliation	Role
Macro International Inc.	MEASURE DHS	Provided technical assistance
Solomon Islands Ministry of Health	Government of Solomonl Islands	Collaborated with National Statistics Office (SINSO) to excute the project
Secretariat of the Pacific Community		Executing agency for the project

FUNDING

Name	Abbreviation	Role
Asian Development Bank	ADB	Funded the project
Australian Agency for International Development	AusAID	Funded the project
New Zealand Agency for International Development	NZAID	Funded the project
United Nations Population Fund	UNFPA	Funded the project
Government of Solomon Islands		Provided financial assistance interms of in-kind contribution of government staff time, office space, and logistical support.

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
World Bank, Development Economics Data Group	DECDG		Documentation of the study

DDI DOCUMENT VERSION
Version 1.1: (February 2013)

DDI DOCUMENT ID
DDI_SLB_2006_DHS_v01_M

Sampling

Sampling Procedure

Sample design
The sample SIDHS was designed to provide reliable estimates of total fertility and infant mortality rates at the national level, with urban and rural breakdown and relatively stable estimates for selected provinces. Although the design considered an urban-rural split, this was not carried out during the sample selection of the enumeration area (EA). The sample was not spread out geographically in proportion to the population; as a result, the SIDHS sample is not self-weighting at the national level and sample weighting factors have been applied to survey records in order to bring them into proportion.

The sample for the survey is a three-stage stratified, nationally representative sample of households. The sampling frame consisted of the estimated number of households in each EA by province and was prepared by SPC from the 1999 population census data and estimated urban and rural population growth rates. Honiara, which is urban in its entirety and selected enumeration areas of Guadalcanal and other provinces, comprise the country's urban areas. The rest of Guadalcanal and all other provinces are rural. Five domains were identified: Honiara, remaining Guadalcanal, Western, Malaita, and the combined group of smaller provinces (Choiseul, Isabel, Central, Makira/Ullawa, Rennell/Bellona and Temuto). The primary sampling units, comprising 215 EAs, were selected in each province using systematic random sampling with probability proportional to the estimated number of households in the EA. It was not possible to cover several of the selected sample EAs: 5 EAs were damaged or destroyed during the tsunami of 1 April 2007; 5 EAs were refused permission to survey by village elders or the community; and 23 EAs (11 in Honiara, 7 in Western, 4 in Malaita and 1 in Guadalcanal) were not covered due to poor team leadership or poor field monitoring. In Western Province, 7 EAs were not covered due to internal migration of residents after the tsunami. Thus, the survey covered 182 EAs — 60 urban and 122 rural.

Mapping and listing households in each sample EA were undertaken by the interviewers. In each sample point, 20 households were selected by the team supervisor using systematic random sampling. The sample was designed to cover a target sample of 4,300 households with an expected household response rate of 95%. All women aged 15–49 who slept in the sample household on the night prior to the interview date were eligible to be interviewed for the Women's Questionnaire, and for the anthropometric (height and weight), blood pressure and haemoglobin measurements. Every second household was sub-selected for the male survey. All men aged 15 or over in the sub-selected households were eligible to be interviewed for the Men's Questionnaire, and for anthropometric and blood pressure measurements. All children aged 0–5 years were eligible for anthropometric measurement, and those aged 6 months to 5 years, for anaemia testing.

Response Rate

In total, 3,632 households were selected in the sample, of which 3,475 were found occupied at the time of the fieldwork. The shortfall is largely due to households that were away for an extended period of time. Of the existing households, 3,259 were successfully interviewed, yielding a household response rate of 94%.

Among the households interviewed in the survey, 4,409 eligible women were identified, of whom 3,823 were successfully interviewed yielding a response rate of 87%. With regard to male survey results, 2,598 eligible men were identified, of whom 2,056 were successfully interviewed, yielding a response rate of 79%. Response rates are lower in the urban sample than in the rural sample, especially for women. Response rates were lowest in Honiara and highest in Malaita.

The principal reason for non-response among eligible women and men was a failure to find individuals at home despite repeated visits to the household, followed by refusal to be interviewed. The substantially lower response rate for men reflects the more frequent and longer absence of men from the households.

Questionnaires

Overview

Three questionnaires — a household questionnaire, a women's questionnaire and a men's questionnaire —were used in the SIDHS. The contents of these questionnaires were based on model questionnaires developed by the MEASURE DHS program at Macro International.

In consultation with MOH, SINSO and Macro, staff modified the DHS model questionnaires to reflect relevant issues in population, family planning, HIV and AIDS, and other health issues in the Solomon Islands. The questionnaires were translated into Pidgin and back-translated in order to check accuracy.

The household questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The main purpose of the household questionnaire was to identify women and men who were eligible for the individual interview. The household questionnaire also collected information on characteristics of the household's dwelling unit, such as source of water, type of toilet facilities, materials used for the floor and roof of the house, ownership of various durable goods, and ownership and use of mosquito nets. In addition, this questionnaire was also used to record height and weight measurements of women aged 15–49, men aged 15 and above, and children under the age of 5 years, as well as consent from women, and children's parent or guardian to give blood samples for anaemia and blood pressure testing among women and men.

The women's questionnaire was used to collect information from all women aged 15–49 on:
• Background characteristics (education, residential history, media exposure, etc.)
• Reproductive history and child mortality
• Knowledge and use of family planning methods
• Fertility preferences
• Antenatal and delivery care
• Breastfeeding and infant feeding practices
• Vaccinations and childhood illnesses
• Marriage and sexual activity
• Woman's work and husband's background characteristics
• Infant and child feeding practices
• Awareness and behaviour about AIDS and other sexually transmitted infections.

The men's questionnaire collected similar information contained in the women's questionnaire, but was shorter because it did not contain questions on reproductive history, contraceptive calendar, and maternal and child health and nutrition.

Both informal and formal pre-tests of the questionnaires were undertaken. In July 2006, an informal pre-test was done through self-administration of the individual women's and men's questionnaires, respectively, by six female and four male SINSO staff members.

A more formal three-week pre-test was undertaken for the interviewers from 21 August to 2 September 2006, inclusive of Saturdays. The pre-test training for the nurses/health technicians started a few days later, and went from 25 August to 2 September. Twelve pre-test interviewers (seven males and five females) were expected to become team supervisors and field editors during the main enumeration. Four nurses/health technicians were trained for accuracy and reliability of the various measurements. Most pre-test interviewers had experience as interviewers in the 2006 Household Income and Expenditures Survey. Recruitment was done through radio advertisement and recommendation of SINSO staff.

Pre-test training for the interviewers consisted of classroom lectures, demonstration interviews, front-of-class interviews, mock interviews, quizzes and tests, and three days of field practice. Instructional materials included the household questionnaire, the women's questionnaire, the men's questionnaire, four field control forms, and various PowerPoint presentations. A whiteboard, an electronic projector and a laptop computer were also used during the pre-test training. The pre-test resulted in revising the translation of some questions and skip instructions.

Data Collection

Data Collection Dates

Start	End	Cycle
2006-10	2007-04	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

Training
Interviewer training for the main enumeration was undertaken from 11–30 September, 2006. In total, 74 candidates (who comprised 12 teams plus 2 reserve interviewers) were trained. Each team consisted of three female interviewers, one male interviewer, one field editor and one team supervisor and a nurse/health technician. Training was mostly done by Macro Inc's long-term consultant to the project.

A separate training for the 12 nurses/health technicians was conducted. However, due to the delayed delivery of the blood pressure measuring equipment and the weighing scales, training in how to use this equipment was delayed until the equipment was received in the first week of October.

A few days after the main training, a condensed training for five SINSO staff who would act as field supervisors or office editors/coders was carried out for 2.5 days. However, there was no actual practice on editing/coding due to time constraints.

Another condensed training for reserve interviewers was undertaken immediately after the training for field supervisors/office editors. This was a special training for eight (6 females and 2 males) newly recruited reserve interviewers to replace those not performing well in the field. All the questionnaires, forms and instructions were discussed thoroughly in five days as in the main training, with only one day of mock interviewing but no demonstration interviews.

For these trainings, the same techniques, materials, and equipment were used as in the pre-test training. In addition, a sound system was provided due to the large number of participants.

Fieldwork
As mentioned above, each of the 12 data collection teams comprised one supervisor, one field editor, three female interviewers, one male interviewer, and one nurse/health technician. Five senior staff from SINSO were designated as field coordinators. Data collection started on 9 October 2006. The field enumeration for Honiara and Guadalcanal were first, but without the measurement component of the survey. The teams had to make call backs for the measurements after the health technicians' training on the use of the weighing scale and sphygmomanometer. Data collection continued until April 2007.

The field teams faced several challenges:
1. A considerable number of households and individual respondents refused to be interviewed. The field editors and team supervisors had to make last attempt call-backs to interview problem households and respondents.
2. In Western Province, local health officials campaigned to residents not to cooperate because they were not informed about the survey. A SINSO senior staff visited the province to resolve the issue.
3. Tribal leaders of five EAs did not allow the interviewing team to conduct the survey, resulting in EA non-response.
4. Twelve EAs in Western Province were affected by the tsunami, resulting in missing questionnaires for the entire EA and non-coverage due to exodus of residents.

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Data Processing

Data Editing

The computer processing of SIDHS data began a few weeks after the fieldwork began. The Macro Inc data processing consultant held a training from 30 October 30 to 10 November 2006. A data processing specialist from SPC, the data processing head from SINSO, and two data processing staff from the Republic of the Marshall Islands attended. The training included how to set up the data entry system, data entry, and how to run the field check tables to monitor data quality and teams' and interviewers' performance.

Completed questionnaires were returned periodically from the field to the SINSO office in Honiara. Data processing began in the first week of November 2006 and was completed in the last week of June 2007. The data processing staff consisted of 2 supervisors from SINSO, 4 questionnaire administrators/coding clerks, and 14 data entry operators. Data were entered using the CSPro computer package. All data were entered twice (100% verification). The concurrent data processing was a distinct advantage for data quality, since SIDHS staff were able to advise field teams of errors detected during data entry. Upon completion of data entry, final editing and preliminary tabulation were undertaken in the last week of June 2007. However, 33 of the 215 clusters were missing — either not enumerated, completed but destroyed by the tsunami, or refused by tribal leaders. Adjustment for non-response was done for the missing clusters. Sampling weights were then calculated and incorporated into the household and individual records.

Data Appraisal

Estimates of Sampling Error

Estimates from a sample survey are affected by two types of errors: non-sampling and sampling. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2006/2007 Solomon Islands Demographic and Health Survey (SIDHS) to minimise this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2006/2007 SIDHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

Sampling errors are the errors that result from taking a sample of the covered population through a particular sample design. Non-sampling errors are systematic errors that would be present even if the entire population was covered (e.g. response errors, coding and data entry errors, etc.). For the entire covered population and for large subgroups, the SIDHS sample is generally sufficiently large to provide reliable estimates. For such populations the sampling error is small and less important than the non-sampling error. However, for small subgroups, sampling errors become very important in providing an objective measure of reliability of the data.

Note: See detailed sampling error tables in APPENDIX B of the final survey report.

Other forms of Data Appraisal

Data Quality Tables
- Household age distribution
- Age distribution of eligible and interviewed women
- Age distribution of eligible and interviewed men
- Completeness of reporting
- Births by calendar years
- Reporting of age at death in days
- Reporting of age at death in months
- Nutritional status of children

Note: See detailed tables in APPENDIX C of the final survey report.