

# Yemen, Rep. - Demographic Maternal and Child Health Survey 1997

Report generated on: March 30, 2015

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# Overview

## Identification

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### ID NUMBER

YEM\_1997\_DHS\_v01\_M

## Overview

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### ABSTRACT

The 1997 Yemen Demographic Maternal and Child Health Survey (YDMCHS) is part of the worldwide Demographic and Health Surveys (DHS) program. The DHS program is designed to collect data on fertility, family planning and maternal and child health.

The YDMCHS-97 has the following objectives:

1. Provide policymakers and decisionmakers with a reliable database and analyses useful for policy choices and population programs, and provide researchers, other interested persons, and scholars with such data.
2. Update and expand the national population and health data base through collection of data which will allow the calculation of demographic rates, especially fertility rates, and infant and child mortality rates;
3. Analyse the direct and indirect factors which determine levels and trends of fertility. Indicators related to fertility will serve to elaborate plans for social and economic development;
4. Measure the level of contraceptive knowledge and practice by method, by rural and urban residence including some homogeneous governorates (Sana'a, Aden, Hadhramaut, Hodeidah, Hajjah and Lahj).
5. Collect quality data on family health: immunizations, prevalence and treatment of diarrhea and other diseases among children under five, prenatal visits, assistance at delivery and breastfeeding;
6. Measure the nutritional status of mothers and their children under five years (anthropometric measurements: weight and height);
7. Measure the level of maternal mortality at the national level.
8. Develop skills and resources necessary to conduct high-quality demographic and health surveys.

### KIND OF DATA

Sample survey data [ssd]

### UNITS OF ANALYSIS

- Household
- Children under five years
- Women age 15-49
- Men

## Scope

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### NOTES

The 1997 Yemen Demographic Maternal and Child Health Survey (YDMCHS) covered the following topics:

#### HOUSEHOLD

- Household Roster

- Fertility and Child Survival (for ever married women aged 15-49)

- General Mortality

#### HOUSING CHARACTERISTICS

- Housing

- Cooking

- Water

- Lighting

- Sanitation

- Water Disposal

- Ownership of Objects and Assets

- Salt

- Surroundings

#### MATERNAL AND CHILD HEALTH

##### REPRODUCTIVE HEALTH

- Respondent's Resources

- Reproduction

- Family Planning

- Pregnancy and Breastfeeding

- Immunization and Health

- Fertility Preferences

- Marriage and Husband's Background and Woman's Work

- Maternal Mortality

- Female Circumcision

- Height and Weight

## Coverage

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### **GEOGRAPHIC COVERAGE**

National

## Producers and Sponsors

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### **PRIMARY INVESTIGATOR(S)**

<b>Name</b>	<b>Affiliation</b>
Central Statistical Organization (CSO)	

**OTHER PRODUCER(S)**

Name	Affiliation	Role
Macro International Inc.		Technical assistance

**FUNDING**

Name	Abbreviation	Role
United States Agency for International Development	USAID	Financial assistance

## Metadata Production

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**METADATA PRODUCED BY**

Name	Abbreviation	Affiliation	Role
World Bank, Development Economics Data Group	DECDG		Generation of DDI documentation

**DATE OF METADATA PRODUCTION**

2011-06-16

**DDI DOCUMENT VERSION**

Version 1.0: (June 2011)

**DDI DOCUMENT ID**

DDI\_WB\_YEM\_1997\_DHS\_v01\_M

# Sampling

## Sampling Procedure

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### SAMPLE DESIGN

The 1997 YDMCHS was based on a national sample in order to provide estimates for general indicators for the following domains: Yemen as a whole, urban and rural areas (each as a separate domain), three ecological zones identified as Coastal, Mountainous, and Plateau and Desert, as well as governorates with a sample size of at least 500 completed cases. The survey sample was designed as a two-stage cluster sample of 475 enumeration areas (EA), 135 in urban areas and 340 in rural areas. The master sample, based on the 1994 census frame, was used as the frame for the 1997 YDMCHS. The population covered by the Yemen survey was the universe of all ever-married women age 15-49. The initial target sample was 10,000 completed interviews among eligible women, and the final sample was 10,414. In order to get this number of completed interviews, and using the response rate found in the 1991-92 YDMCHS survey, a total of 10,701 of the 11,435 potential households selected for the household sample were completed.

In each selected EA, a complete household listing operation took place between July and September 1997, and was undertaken by nineteen (19) field teams, taking into consideration the geographical closeness of the areas assigned to each team.

Note: See detailed description of sample design in APPENDIX B of the final survey report.

## Response Rate

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10,701 households, distributed between urban (3,008 households) and rural areas (7,693), households which were successfully interviewed in the 1997 YDMCHS. This represents a country-wide response rate of 98.2 percent (98.7 and 98.0 percent, respectively, for urban and rural areas).

A total of 11,158 women were identified as eligible to be interviewed. Questionnaires were completed for 10,414 women, which represents a response rate of 93.3 percent. The response rate in urban areas was 93 percent; and in rural areas it was 93.5 percent.

Note: See summarized response rates by place of residence in Table 1.1 of the final survey report.

# Questionnaires

## Overview

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Two Questionnaires were used to collect survey data:

**Household Questionnaire:** The household questionnaire consists of two parts: a household schedule and a series of questions relating to the health and socioeconomic status of the household. The household schedule was used to list all usual household members. For each of the individuals included in the schedule, information was collected on the relationship to the household head, age, sex, marital status (for those 10 years and older), educational level (for those 6 years and older) and work status (for those 10 years and older). It also collects information on fertility, general mortality and child survival. The second part of the household questionnaire included questions on housing characteristics including the type of dwelling, location, materials used in construction, number of rooms, kitchen in use, main source of drinking water and health related aspects, lighting and toilet facilities, disposal of garbage, durable commodities, and assets, type of salt the household uses for cooking, and other related residential information.

**Individual Questionnaire:** The individual questionnaire was administered to all ever-married women age 15-49 years who were usual residents. It contained 10 sections on the followings topics:

- Respondent's background
- Reproduction
- Family planning
- Pregnancy and breastfeeding
- Immunization and health
- Birth preferences
- Marriage and husband's background
- Maternal mortality
- Female circumcision
- Height and weight

## Data Collection

### Data Collection Dates

Start	End	Cycle
1997-10	1997-12	N/A

### Data Collection Mode

Face-to-face [f2f]

### Data Collection Notes

#### Training:

The CSO organized the interviewer training for the main fieldwork by recruiting interviewers from all over the country. The CSO staff from the central and regional offices who had worked on the household listing was recruited as supervisors. From almost 500 applicants, 132 were selected for training as interviewers. Some of the interviewers had participated in the 1991-92 YDMCHS. From over 55 persons who had participated in the household listing, 32 were selected as candidates for supervisors. Because of the large number of the trainees, two groups were formed to be trained separately, and training on height and weight was given in four MCH centers in Sana'a.

The training program included: 1) general lectures related to basic interview techniques and to survey topics (i.e. fertility and family planning, and maternal and child health); 2) opportunities for role playing and mock interviews; 3) field practices in areas not covered in the survey; and quizzes. Training lasted from the end of September to mid-October 1997. After the completion of training and practice interviews, 84 female candidates were selected as interviewers or editors, and 31 men were selected to work as supervisors or editors.

#### Fieldwork:

Fieldwork for the 1997 YDMCHS began on October 20, and was completed on December 30, 1997. The field staff was divided into 19 teams; each team had a male supervisor, 4-5 female interviewers, and a male or female editor. During the fieldwork period, the senior project staff from Sana'a visited the teams regularly to monitor the quality of the completed questionnaires and to solve any technical or field problems the teams encountered.

In addition, the teams were encouraged to keep the survey operations desk informed about the progress of the work and any problems requiring assistance. Whenever possible, the monitoring staff returned to Sana'a with completed questionnaires so that data processing could be carried out simultaneously with fieldwork. On receipt of the questionnaires at the central office, the process of revising, editing, coding and processing the data was carried out.

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# Data Processing

## Other Processing

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### Data Processing Activities

The central office in Sana'a was responsible for collecting questionnaires from the field as soon as each cluster was completed. Questionnaires were reviewed for consistency and completeness by office editors, and a few questions (e.g., occupation and type of illness) were coded in the office prior to data entry.

The machine entry and editing phase began while interviewing teams were still in the field. The CSO made its network of 12 computers available to the survey for data entry. The computer programs that had been prepared at Macro headquarters for use in the 1997 YDMCHS were modified to take into account the network environment. The data from the questionnaires were entered and edited using the Integrated System for Survey Analysis (ISSA), a software package developed especially for the Demographic and Health Surveys program.

Twelve data entry personnel participated in processing the survey data. During machine entry, 50 percent of each segment was reentered for verification. The data processing started at the beginning of November 1997 and was completed at the end of February 1998. Tables for the preliminary report were prepared in March 1998 and tables for the final report were completed in June 1998.

## Data Appraisal

### Estimates of Sampling Error

The estimates from a sample surveys are affected by two types of errors: (1) non-sampling error, and (2) sampling error. 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 YDMCHS-97 to minimize 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 YDMCHS-97 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 have yielded 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.

A sampling error is usually measured in terms of standard error of a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistics in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the YDMCHS-97 sample is the result of a two-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the YDMCHS-97 is the ISSA Sampling Error Module (SAMPERR). This module used the Taylor linearization method of variance estimate for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimate of more complex statistics such as fertility and mortality rates.

Note: See detailed estimate of sampling error calculation in APPENDIX C of the final survey report.

### Other forms of Data Appraisal

#### Data Quality Tables

- Household age distribution
- Age distribution of eligible and interviewed women and men
- Completeness of reporting
- Births by calendar year
- Reporting of age at death in days
- Reporting of age at death in months

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