

# Philippines - National Demographic and Health Survey 2013

**National Statistics Office (NSO) - Philippine Statistics Authority (PSA)**

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# Sampling

## Sampling Procedure

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The sample selection methodology for the 2013 NDHS is based on a stratified two-stage sample design, using the 2010 Census of Population and Housing (CPH) as a frame. The first stage involved a systematic selection of 800 sample enumeration areas (EAs) distributed by stratum (region, urban/rural). In the second stage, 20 sample housing units were selected from each sample EA, using systematic random sampling.

All households in the sampled housing units were interviewed. An EA is defined as an area with discernable boundaries consisting of contiguous households. The sample was designed to provide data representative of the country and its 17 administrative regions.

Further details on the sample design and implementation are given in Appendix A of the final report.

## Response Rate

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For the 2013 NDHS sample, 16,732 households were selected, of which 14,893 were occupied. Of these households, 14,804 were successfully interviewed, yielding a household response rate of 99.4 percent. The household response rates in urban and rural areas are almost identical.

Among the households interviewed, 16,437 women were identified as eligible respondents, and the interviews were completed for 16,155 women, yielding a response rate of 98.3 percent. On the other hand, for the women's safety module, from a total of 11,373 eligible women, 10,963 were interviewed with privacy, translating to a 96.4 percent response rate. At the individual level, urban and rural response rates showed no difference. The principal reason for non-response among women was the failure to find individuals at home, despite interviewers' repeated visits to the household.

## Weighting

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In order for the sample estimates from the 2013 NDHS to be representative of the population, it is necessary to multiply the data by a sampling weight. The basic weight for each sample household is equal to the inverse of its probability of selection (calculated by multiplying the probabilities at each sampling stage).

Further details on the sample weight calculation are given in Appendix A.4 in the final report.

# Questionnaires

## Overview

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The 2013 NDHS used three questionnaires: Household Questionnaire, Individual Woman's Questionnaire, and Women's Safety Module. The development of these questionnaires resulted from the solicited comments and suggestions during the deliberation in the consultative meetings and separate meetings conducted with the various agencies/organizations namely: PSA-NSO, POPCOM, DOH, FNRI, ICF International, NEDA, PCW, PhilHealth, PIDS, PLCPD, UNFPA, USAID, UPPI, UPSE, and WHO. The three questionnaires were translated from English into six major languages - Tagalog, Cebuano, Ilocano, Bicol, Hiligaynon, and Waray.

The main purpose of the Household Questionnaire was to identify female members of the sample household who were eligible for interview with the Individual Woman's Questionnaire and the Women's Safety Module.

The Individual Woman's Questionnaire was used to collect information from all women aged 15-49 years.

The Women's Safety Module was used to collect information on domestic violence in the country, its prevalence, severity and frequency from only one selected respondent from among all the eligible women who were identified from the Household Questionnaire.

# Data Collection

## Data Collection Dates

Start	End	Cycle
2013-08-12	2013-09-24	N/A

## Data Collection Mode

Face-to-face [f2f]

### DATA COLLECTION NOTES

#### Training and Fieldwork

Training of the field staff was conducted in two levels. The first was the training of the Task Force for instructors, regional coordinators, and supervisors, and the second was the training of the interviewing teams. The Task Force training was conducted in Manila from July 15 to 26, 2013. Fifty-four persons participated as trainees: 35 from RSOs (consisting of Regional Statisticians and Team Supervisors), and 19 from the PSANSO Central Office. The trainers were staff of the Demographic and Social Statistics Division (DSSD) at PSA-NSO and guest lecturers and resource persons from the University of the Philippines Population Institute (UPPI), the Department of Health (DOH), the University of the Philippines School of Economics (UPEcon), and the Philippines Commission on Women (PCW).

The second-level training took place from June 29 through August 10, 2013, in 17 regional training centers: NCR, CAR, I, II, III, IV-A, IV-B, V, VI, VII, VIII, IX, X, XI, XII, XIII (Caraga) and ARMM. Instructors in this training were members of the Task Force who were trained in the first level training.

Data collection was carried out from August 12 through September 24, 2013, by 70 interviewing teams. A total of 284 field interviewers, 70 team supervisors and field editors, and 17 regional supervisors joined the workforce. However, due to the peace and order situation in Zamboanga City, the data collection in Region IX was extended up to October 16, 2013 to complete the survey. Each team consisted of a team supervisor, a field editor, and four female interviewers.

## Data Collectors

Name	Abbreviation	Affiliation
National Statistics Office	NSO	Philippine Statistics Authority (PSA)

# Data Processing

## Data Editing

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All completed questionnaires and the control forms were returned to the PSA-NSO central office in Manila for data processing, which consisted of manual editing, data entry and verification, and editing of computer-identified errors. An ad-hoc group of thirteen regular employees from the DSSD, the Information Resources Department (IRD), and the Information Technology Operations Division (ITOD) of the NSO was created to work fulltime and oversee data processing operation in the NDHS Data Processing Center that was carried out at the NSO-CVEA Building in Quezon City, Philippines. This group was responsible for the different aspects of NDHS data processing. There were 19 data encoders hired to process the data who underwent training on September 12-13, 2013.

Data entry started on September 16, 2013. The computer package program called Census and Survey Processing System (CSPro) was used for data entry, editing, and verification. Mr. Alexander Izmukhambetov, a data processing specialist from ICF International, spent two weeks at NSO in September 2013 to finalize the data entry program. Data processing was completed on December 6, 2013.

# Data Appraisal

## Estimates of Sampling Error

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors and (2) sampling errors. Nonsampling 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 2013 National Demographic and Health Survey (NDHS) to minimize this type of error, nonsampling 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 2013 NDHS is only one of many samples that could have been selected from the same population, using the same design and identical size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling error is a measure of the variability between the results of all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey data.

A sampling error is usually measured in terms of the standard error for 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 statistic 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 2013 NDHS sample is the result of a multistage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2013 NDHS is a SAS program. This program used the Taylor linearization method for variance estimation for survey estimates that are means or proportions. The Jackknife repeated replications method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate,  $r = y/x$ , where  $y$  represents the total sample value for variable  $y$ , and  $x$  represents the total number of weighted cases in the group or subgroup under consideration.

Further details on sampling errors calculation are given in Appendix B of the final report.

## Other forms of Data Appraisal

Data quality tables were produced to review the quality of the data:

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

Note: The tables are presented in APPENDIX C of the final report.





## Related Materials

### Questionnaires

#### National Demographic and Health Survey 2013, Household Questionnaire

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Title National Demographic and Health Survey 2013, Household Questionnaire  
 Author(s) National Statistics Office  
 Country Philippines  
 Language English  
 Filename Philippines\_2013\_DHS\_hh\_questionnaire.pdf

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#### National Demographic and Health Survey 2013, Individual Woman's Questionnaire

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Title National Demographic and Health Survey 2013, Individual Woman's Questionnaire  
 Author(s) National Statistics Office  
 Country Philippines  
 Language English  
 Filename Philippines\_2013\_DHS\_ind\_woman\_questionnaire.pdf

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#### National Demographic and Health Survey 2013, Women's Safety Module

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Title National Demographic and Health Survey 2013, Women's Safety Module  
 Author(s) National Statistics Office  
 Country Philippines  
 Language English  
 Filename Philippines\_2013\_DHS\_women\_questionnaire.pdf

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### Reports

#### National Demographic and Health Survey 2013, Report

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Title	National Demographic and Health Survey 2013, Report
Author(s)	Philippine Statistics Authority, Manila, Philippines ICF International, Rockville, Maryland, USA
Date	2014-08-01
Country	Philippines
Language	English
Description	This report summarizes the findings of the 2013 Philippines National Demographic and Health Survey (NDHS) carried out by the Philippine Statistics Authority (PSA).

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