

# Philippines - National Demographic and Health Survey 2013

**Philippine Statistics Authority, National Statistics Office**

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## Overview

### Identification

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ID NUMBER  
PHL-PSA-NDHS-2013-v0

### Version

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VERSION DESCRIPTION  
Version 0

### Overview

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#### ABSTRACT

The 2013 NDHS is conducted in the country every five years since 1968 to monitor and evaluate impact of population programs being implemented in the country. It is designed to provide information on fertility, family planning, and health.

#### KIND OF DATA

Sample survey data [ssd]

#### UNITS OF ANALYSIS

household, individual

### Scope

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#### NOTES

Survey Questionnaires

#### 1. NDHS Form 1 - Household Questionnaire

The Household Questionnaire is a 16-page booklet which is used to:

- ; List all members of the household and visitors;
- ; Record information on the demographic characteristics of each person such as name, relationship to household head, sex, residence, age, health insurance coverage and education.
- ; Identify eligible women to be interviewed. All women aged 15 to 49 years who are listed in the Household Questionnaire of all sample households are eligible for the individual interview.
- ; Investigate the health seeking behavior of household members, their utilization of health facilities and cost of treatment.
- ; Determine awareness of cancer, heart disease, diabetes, dengue fever and tuberculosis;
- ; Record household conveniences and characteristics such as drinking water, toilet facility, tenure status of the land, main material of the floor, roof and outer walls.

How to fill-out NDHS Form 1 is discussed in detail in Chapter 5 of this manual.

#### 2. NDHS Form 2 - Individual Woman's Questionnaire

The Individual Woman's Questionnaire is used to interview all women aged 15 to 49 years who are identified from the Household Questionnaire. It collects information on the following topics:

? Background characteristics. Questions on place of residence, age, marital status, education, employment status, religion and ethnic group are included

in order to provide information on characteristics of eligible respondent that have influence on fertility and contraceptive behavior and health practices. If a woman has ever been married or lived with a man, questions are also asked about the husband or partner.

? Reproductive behavior and intentions. Questions are intended to collect data on pregnancy history, current pregnancy status of women, pregnancy termination and survival status of births, living arrangement of children, and future childbearing intentions.

? Knowledge and use of contraception. Questions are designed to determine knowledge and use of specific family planning methods. For women and their husbands/partner who are not using family planning method, questions about reasons for non-use and intentions for future use are included.

? Availability of family planning. Questions are included to determine where a user obtained her family planning method and whether non-users know of places to get family planning supplies or avail of family planning services.

? Women's health. Information is collected on prenatal care, delivery and postnatal care, and tetanus toxoid immunization.

? Breastfeeding. Questions include information on breastfeeding initiation, frequency of breastfeeding, prelacteal feeding and bottle feeding.

? Children's health. Questions pertain to immunization and recent occurrences of diarrhea, fever, and cough for all children born in the past five years.

? HIV/AIDS. Questions are included to ascertain knowledge or misconceptions about ways to reduce HIV/AIDS, transmission, stigma and access to HIV testing.

? Other Health Issues. Questions on smoking and problems in getting medical care are included.

Chapter 6 presents the detailed contents of the NDHS Form 2 and instructions on how to fill in the questionnaire.

### 3. NDHS Form 3 - Women's Safety Module

The Women's Safety Module is used to interview one selected respondent from all eligible women aged 15 to 49 years who are identified from the Household Questionnaire. It collects information on the following topics:

? Measures of Violence. Questions are asked to currently married women with reference to their current husband/partner; the last husband/partner, for formerly married women. These measure the evidence of ostensibly less severe physical violence, to more severe physical violence, the prevalence of emotional violence, economic and sexual violence.

? Women's experience of violence since age 15 and recent violence in the 12 months preceding the survey.

? Violence during pregnancy. This carries additional risks to women's health and survival and to the health and survival of the unborn child.

? Marital control. Attempts by husbands/partners to control the different aspects of the lives of their wives can be precursors to violent behaviors.

? Inter-spousal violence. Husbands/partners are not always the perpetrators of spousal violence; sometimes wives initiate spousal violence.

? Experience of forced sex at sexual initiation.

? Help-seeking behavior by women who have experienced violence.

? Awareness on Barangay Protection Order and various help desks.

Chapter 7 presents the detailed contents of the Women's Safety Module and instructions on how to fill in the questionnaire.

## TOPICS

Topic	Vocabulary	URI
Population and migration	Philippine Statistics Authority	
Health	Philippine Statistics Authority	
Gender and special population groups	Philippine Statistics Authority	
Household surveys	Philippine Statistics Authority	

## Coverage

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## GEOGRAPHIC COVERAGE

National, Regional

Region:

National Capital Region

Cordillera Administrative Region

I -Ilocos Region

II-Cagayan Valley

III-Central Luzon

IVA - CALABARZON

IVB-MIMAROPA

V-Bicol

VI-Western Visayas

VII-Central Visayas

VIII-Eastern Visayas

IX-Zamboanga Peninsula

X-Northern Mindanao

XI-Davao

XII-SOCCSKSARGEN

XIII-Caraga

ARMM

## UNIVERSE

all private households

all women 15 to 49 years old

## Producers and Sponsors

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PRIMARY INVESTIGATOR(S)

Name	Affiliation
Philippine Statistics Authority	National Economic and Development Authority
National Statistics Office	National Economic and Development Authority

## FUNDING

Name	Abbreviation	Role
Philippine Statistics Authority	PSA	Full funding

## OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
ICF Macro International	USAID	Technical Assistance
Dr Mercedes B. Concepcion	NAST	Technical Assistance on development of questionnaires
	Breastfeeding Phil	Technical Assistance on development of questionnaires
	Commission on Population	Technical Assistance on development of questionnaires
	Department of Health	Technical Assistance on development of questionnaires
	Department of Social Welfare and Development	Technical Assistance on development of questionnaires
	Food and Nutrition Research Institute	Technical Assistance on development of questionnaires
	National Economic and Development Authority	Technical Assistance on development of questionnaires
	National Statistical Coordination Board	Technical Assistance on development of questionnaires
	Philippine Commission on Women	Technical Assistance on development of questionnaires
	Philippine Health Insurance Corporation	Technical Assistance on development of questionnaires
	Philippine Institute for Development Studies	Technical Assistance on development of questionnaires
	Philippine Legislators Committee on Population Development	Technical Assistance on development of questionnaires
	United Nations Population Fund	Technical Assistance on development of questionnaires
	United States Agency for International Development	Technical Assistance on development of questionnaires
	University of the Philippines Population Institute	Technical Assistance on development of questionnaires
	University of the Philippines School of Economics	Technical Assistance on development of questionnaires
	World Health Organization	Technical Assistance on development of questionnaires

## Metadata Production

## METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Demographic and Health Statistics Division	DHSD	Philippine Statistics Authority	Documenter

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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 CPH as a frame. The first stage involves the selection of 800 sample 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 the households in the sampled housing units were interviewed. An EA is defined as an area of discernable boundaries consisting of contiguous households. The sample was designed to provide data representative of the country and its 17 administrative regions.

### Response Rate

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Household response rate = 99.4

Eligible women response rate = 98.3

Women Safety Module response rate = 96.4

### Weighting

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See External Resources-Appendix A of Final Report

# Questionnaires

## Overview

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Household Questionnaire, Individual Woman's Questionnaire, Women Safety Module

## 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

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. 1

### Questionnaires

Household Questionnaire, Individual Woman's Questionnaire, Women Safety Module

### Data Collectors

Name	Abbreviation	Affiliation
Philippine Statistics Authority	PSA	National Economic and Development Authority

### Supervision

Three pretests were conducted prior to finalizing the design and development of survey materials. The first pretest was conducted on March 27, 2013 in Barangay Talaba II, Bacoor, Cavite. It was aimed at checking the flow, clarity of questions, and the sustainability of the respondent's attitude and motivation in answering the questions. The second pretest was carried out in San Jose del Monte, Bulacan Province on April 8-9, 2013, to see if the Tagalog translation of the questionnaire was suitably worded and also to improve the prescribed field operation procedures. The training for the pretests field staff took place in DSSD, NSO Central Office in Manila from April 2-5, 2013. For the third pretest, a trainer's training was conducted on May 20, 24 and 25, 2013 in Mandaluyong City, participated in by selected central office personnel and field staff of Regions V, VII and VIII. In each of the pretest regions, a four-day training for interviewers was conducted prior to data collection. Pretest III involved five teams. Each of the four teams was composed of four interviewers, a field editor and a supervisor while the team from Region VII was composed of six interviewers and a team supervisor who also acted as field editor. All five teams had their respective observer from Central Office. The objective of the third pretest was to test the correctness and clarity of the translations of the NDHS questions into the five major languages- Ilocano, Bicol, Waray, Hiligaynon and Cebuano- in the regions where these dialects are spoken.

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 PSA-NSO 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 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.

### Other Processing

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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

ESTIMATES OF SAMPLING ERRORS (see Appendix B of Final Report)

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. The variance of  $r$  is computed using the formula given below, with the standard error being the square root of the variance:

$$var(r) = \frac{1}{n} \sum_{h=1}^H \sum_{i=1}^{m_h} (y_{hi} - r x_{hi})^2$$

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in which

$$z_{hi} = y_{hi} - r x_{hi}, \text{ and } z_h = y_h - r x_h$$

where  $h$  represents the stratum which varies from 1 to  $H$ ,  $m_h$  is the total number of clusters selected in the  $h$ th stratum,  $y_{hi}$  is the sum of the weighted values of variable  $y$  in the  $i$ th cluster in the  $h$ th stratum,

The  $x_{hi}$  is the sum of the weighted number of cases in the  $i$ th cluster in the  $h$ th stratum, and  $f_h$  is the sampling fraction of PSUs in the  $h$ th stratum, which is small and ignored.

The Jackknife repeated replications method derives estimates of complex rates from each of several replications of the parent sample and calculates standard errors for these estimates using simple formulae. Each replication considers all but one cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2013 NDHS, there were 800 non-empty clusters. Hence, 800 replications were created. The variance of a rate  $r$  is calculated as follows:

$$var(r) = \frac{1}{k} \sum_{i=1}^k (r_i - r)^2$$

22)(1)var()  
in which

$$r_i = \frac{1}{k-1} \sum_{j \neq i}^k r_j$$

where  $r$  is the estimate computed from the full sample of 800 clusters,  $r(i)$  the estimate computed from the reduced sample of 799 clusters ( $i$ th cluster excluded), and  $k$  is the total number of clusters.

In addition to the standard error, the program computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design, such as multistage and cluster sampling. The program also computes the relative standard error and the confidence limits for the estimates.

Sampling errors for the 2013 NDHS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for each of the 17 geographical regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.21 present the value of the statistic ( $R$ ), its standard error (SE), the number of unweighted ( $N$ ) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits ( $R \pm 2SE$ ), for each indicator. The DEFT is considered undefined when the standard error based on a simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for the proportion of married women currently using any contraceptive method) can be interpreted as follows: the overall proportion from the national sample is 0.551 and its standard error is 0.006. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e.,  $0.551 \pm 2 \times 0.006$ . There is a high probability (95 percent) that the true proportion of married women using any method is between 0.539 and 0.563.

For the total sample, the value of the DEFT, averaged over all variables, is 1.186. This means that, because of multi-stage clustering of the sample, the average standard error is increased by a factor of 1.186 over that from a simple random sample of the same size.

## **Other forms of Data Appraisal**

See External Resources -Appendix C of Final Report