Philippines - National Demographic and Health Survey 2008

National Statistics Office (NSO)

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Sampling

Sampling Procedure

The 2008 NDHS used the 2003 master sample created by NSO for its household-based surveys. The 2008 NDHS used one of the four replicates of the master sample. The NDHS sample was designed to represent each of the country's 17 administrative regions. In each region, a stratified three-stage sample design was employed. At the first stage, primary sampling units (PSUs) were selected with probability proportional to the estimated number of households from the 2000 Census. PSUs consisted of one barangay or a group of contiguous barangays. At the second stage, enumeration areas (EAs) were selected within sampled PSUs with probability proportional to size. At the third stage, housing units were selected with equal probability within sampled EAs.

An EA is defined as an area with discernable boundaries within barangays and consisting of about 150 contiguous households. These EAs were identified during the 2000 Census.

The 2008 NDHS sample contains 794 enumeration areas (EAs). From each EA, an average of 17 housing units was selected using systematic sampling. All households in a sampled housing unit were interviewed, except when there were three or more households in the housing unit. For such a housing unit, three households were selected using simple random sampling. Over 13,500 households were selected for the 2008 NDHS. The sampled households per EA ranged from as low as 3 to as high as 32.

Response Rate

In the 2008 NDHS a total of 13,764 households were selected in the sample, of which 12,555 households were occupied. Of these households, 12,469 were successfully interviewed, yielding a household response rate of 99 percent.

In the interviewed households 13,833 women were identified for the individual interview. A total of 13,594 women were successfully interviewed, yielding a response rate of 98 percent. A total of 9,458 women were identified as eligible for the Women's Safety Module, of whom 9,316 were interviewed with privacy, yielding a response rate of 99 percent. Response rates in urban and rural areas were similar.

Questionnaires

Overview

Three questionnaires were used for the 2008 NDHS: a) the Household Questionnaire, b) the Women's Questionnaire and c) the Women's Safety Module. These questionnaires were based on the standard questionnaires developed by the MEASURE DHS program and modified-as recommended by the technical working groups and approved by the Steering Committee-to address relevant family planning and health issues in the Philippines. The three questionnaires were translated from English into six major dialects-Tagalog, Cebuano, Ilocano, Bicol, Hiligaynon, and Waray.

a) The Household Questionnaire was used to list all the usual members and visitors in the selected households, as well as some background information on each person listed such as age, sex, relationship to head of the household, health insurance coverage, and education. The main purpose of the Household Questionnaire was to identify women who were eligible for the individual interview. Information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor, roof, and walls of the house, and ownership of various durable goods was recorded in the Household Questionnaire. These items are indicators of the household's socioeconomic status. Finally, this questionnaire was used to gather information on prevalence of common noncommunicable and infectious diseases, health-seeking behavior, and utilization of health facilities by household members.

b) The Women's Questionnaire was used to collect information from all women age 15-49. These women were asked questions on the following topics:
- Background characteristics (e.g., education, media exposure)
- Reproductive history
- Knowledge and use of family planning methods
- Prenatal, delivery, and postnatal care and breastfeeding
- Child immunization and health and nutrition of mothers and children
- Marriage and sexual activity
- Fertility preferences
- Woman's work and husband's background characteristics
- Awareness and behavior regarding HIV/AIDS
- Other health issues

c) The Women's Safety Module was used to interview one respondent selected from all eligible women age 15 to 49 years who were identified from the Household Questionnaire. It collected information on the following topics:
- Women's experience of violence since age 15 and in the 12 months preceding the survey
- Violence during pregnancy
- Marital control
- Interspousal violence
- Experience of forced sex at sexual initiation
- Help-seeking behavior by women who have experienced violence

Three pretests were conducted in 2008 prior to finalizing the survey instruments. The first was conducted in March, the second in April, and the third in May. The pretests primarily aimed to test the questionnaires for clarity and correctness of the new questions; the suitability of the translations in the six dialects (Tagalog, Cebuano, Ilocano, Bicol, Hiligaynon, and Waray); the sustainability of respondents' participation in the survey; and the actual field operation procedures.

Data Collection

Data Collection Dates

Start	End	Cycle
2008-08	2008-09	N/A

Data Collection Mode

Face-to-face

DATA COLLECTION NOTES

Training of the field staff was conducted at two levels. The first was Task Force training for the instructors and regional supervisors; this was followed by training for the interviewing teams. The Task Force training was conducted in Manila on July 7-18, 2008. There were 36 participants, including 17 regional supervisors and 19 central office staff. Selected staff from the Demographic and Social Statistics Division (DSSD) at the NSO and professors from the University of the Philippines served as trainers. A consultant from ICF Macro and staff from the Department of Health, the National Commission on the Role of Filipino Women, and the Department of Social Welfare and Development served as resource persons.

The second-level training for the interviewers took place in 12 training centers from July 21 through August 5, 2008: Antipolo, Rizal; San Fernando Pampanga; Agoo, La Union; Lipa City, Batangas; Calapan City, Oriental Mindoro; Legazpi City; Iloilo City; Cebu City; Zamboanga City; Cagayan de Oro City; Davao City; and Cotabato City. Instructors for the training were members of the Task Force who had been trained in the first-level training.

Data collection was carried out from August 7 to September 27, 2008 by 57 interviewing teams. Each team consisted of a team supervisor, a field editor, and 3-6 female interviewers.

Data Collectors

Name	Abbreviation	Affiliation
National Statistics Office (NSO)		

Data Processing

Data Editing

Data processing was carried out at the NSO central office in Manila. It consisted of manual editing, data entry, verification, and editing of computer-identified errors. Forty-five hired data processors who underwent training October 6-17, 2008 processed the 2008 NDHS data.

An ad hoc group composed of eight employees from the Demographic and Social Statistics Division, the Information Resources Division, and the Information Technology Operations Division of the NSO was created. They worked full time at the NDHS Data Processing Center and were responsible for various aspects of the NDHS data processing.

Manual editing began October 7, 2008 and data entry began October 21, 2008. The computer software package called CSPro (Census and Survey Processing System) was used for data entry. The data entry program was developed in Manila at NSO with the assistance of data processing specialists from ICF Macro. Data processing was completed on December 22, 2008.

Data Appraisal

Estimates of Sampling Error

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2008 NDHS 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.

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 2008 NDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2008 NDHS is a Macro SAS procedure. This procedure used the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated-replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Jackknife repeated-replication 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 2008 NDHS, there were 792 non-empty clusters. Hence, 792 replications were created.

In addition to the standard error, the procedure 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 because of the use of a more complex and less statistically efficient design. The procedure also computes the relative error and confidence limits for the estimates.

Sampling errors for the 2008 NDHS are calculated for selected variables considered to be of primary interest. The results are presented in an appendix to the Final Report 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 of the Final Report. Tables B.2 to B.21 present the value of the statistic (R), its standard error (SE), the number of unweighted (N-UNWE) and weighted (N-WEIG) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R2SE), for each variable. The DEFT is considered undefined when the standard error considering 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 children ever born to women 40-49) can be interpreted as follows: the overall average from the national sample is 3.964 and its standard error is 0.060. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 3.964±0.060. There is a high probability (95 percent) that the true average number of children ever born to all women is between 3.845 and 4.083. For the total sample, the value of the DEFT, averaged over all variables, is 1.219. This means that, because of multi-stage clustering of the sample, the average standard error is increased by a factor of 1.219 over that in an equivalent simple random sample.

Other forms of Data Appraisal

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 2008 Philippines National Demographic and Health Survey (NDHS) to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Related Materials

Questionnaires

2008 National Demographic Survey - Household questionnaire

Title	2008 National Demographic Survey - Household questionnaire
Author(s)	National Statistics Office
Date	2008-08-01
Country	Philippines
Language	English
Contributor(s)	ICF Macro
Description	The Household Questionnaire was used to list all the usual members and visitors in the selected households, as well as some background information on each person listed such as age, sex, relationship to head of the household, health insurance coverage, and education. The main purpose of the Household Questionnaire was to identify women who were eligible for the individual interview. Information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor, roof, and walls of the house, and ownership of various durable goods was recorded in the Household Questionnaire. These items are indicators of the household's socioeconomic status. Finally, this questionnaire was used to gather information on prevalence of common noncommunicable and infectious diseases, health-seeking behavior, and utilization of health facilities by household members.
Filename	PHL_DHS_2008_Questionnaire_Household_En.pdf

2008 National Demographic Survey - individual Woman's Questionnaire

Title	2008 National Demographic Survey - individual Woman's Questionnaire
Author(s)	National Statistics Office
Date	2008-08-01
Country	Philippines
Language	English
Contributor(s)	ICF Macro
Description	The Women's Questionnaire was used to collect information from all women age 15-49. These women were asked questions on the following topics: - Background characteristics (e.g., education, media exposure) - Reproductive history - Knowledge and use of family planning methods - Prenatal, delivery, and postnatal care and breastfeeding - Child immunization and health and nutrition of mothers and children - Marriage and sexual activity - Fertility preferences - Woman's work and husband's background characteristics - Awareness and behavior regarding HIV/AIDS - Other health issues
Filename	PHL_DHS_2008_Questionnaire_Woman_En.pdf

2008 National Demographic Survey - Women's Safety Module

Title	2008 National Demographic Survey - Women's Safety Module
Author(s)	National Statistics Office
Date	2008-08-01
Country	Philippines
Language	English
Contributor(s)	ICF Macro

Description	The Women's Safety Module was used to interview one respondent selected from all eligible women age 15 to 49 years who were identified from the Household Questionnaire. It collected information on the following topics: - Women's experience of violence since age 15 and in the 12 months preceding the survey - Violence during pregnancy - Marital control - Interspousal violence - Experience of forced sex at sexual initiation - Help-seeking behavior by women who have experienced violence
Filename	PHL_DHS_2008_Questionnaire_Woman_Safety_En.pdf

Reports

Philippines National Demographic and Health Survey 2008 - Final report

Title	Philippines National Demographic and Health Survey 2008 - Final report
Author(s)	National Statistics Office
Date	2009-12-01
Country	Philippines
Language	English
Contributor(s)	ICF Macro
Description	This report summarizes the findings of the 2008 Philippines National Demographic and Health Survey (NDHS) carried out by the National Statistics Office (NSO). The NDHS is part of the worldwide MEASURE Demographic and Health Surveys program, which is designed to collect information on a variety of health-related topics including fertility, family planning, and maternal and child health. The United States Agency for International Development (USAID) provided financial assistance for some activities during the preparatory and processing phases of the project, as well as funding for technical assistance through ICF Macro, an ICF International Company. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of USAID, the Government of the Philippines, or donor organizations.
Filename	http://www.dhsprogram.com/pubs/pdf/FR224/FR224.pdf

Philippines National Demographic and Health Survey 2008 - Key Findings

Title	Philippines National Demographic and Health Survey 2008 - Key Findings
Author(s)	National Statistics Office
Date	2009-12-01
Country	Philippines
Language	English
Contributor(s)	ICF Macro
Description	This report summarizes the findings of the 2008 Philippines National Demographic and Health Survey (NDHS) carried out by the National Statistics Office (NSO). The NDHS is part of the worldwide MEASURE Demographic and Health Surveys program, which is designed to collect information on a variety of health-related topics including fertility, family planning, and maternal and child health. The United States Agency for International Development (USAID) provided financial assistance for some activities during the preparatory and processing phases of the project, as well as funding for technical assistance through ICF Macro, an ICF International Company. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of USAID, the Government of the Philippines, or donor organizations.
Filename	http://www.dhsprogram.com/pubs/pdf/SR175/SR175.pdf