

Jordan - Population and Family Health Survey 2012

Department of Statistics (DoS) - Government of Jordan

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Sampling

Sampling Procedure

Sample Design

The 2012 JPFHS sample was designed to produce reliable estimates of major survey variables for the country as a whole, urban and rural areas, each of the 12 governorates, and for the two special domains: the Badia areas and people living in refugee camps. To facilitate comparisons with previous surveys, the sample was also designed to produce estimates for the three regions (North, Central, and South). The grouping of the governorates into regions is as follows: the North consists of Irbid, Jarash, Ajloun, and Mafraq governorates; the Central region consists of Amman, Madaba, Balqa, and Zarqa governorates; and the South region consists of Karak, Tafila, Ma'an, and Aqaba governorates.

The 2012 JPFHS sample was selected from the 2004 Jordan Population and Housing Census sampling frame. The frame excludes the population living in remote areas (most of whom are nomads), as well as those living in collective housing units such as hotels, hospitals, work camps, prisons, and the like. For the 2004 census, the country was subdivided into convenient area units called census blocks. For the purposes of the household surveys, the census blocks were regrouped to form a general statistical unit of moderate size (30 households or more), called a "cluster", which is widely used in surveys as a primary sampling unit (PSU).

Stratification was achieved by first separating each governorate into urban and rural areas and then, within each urban and rural area, by Badia areas, refugee camps, and other. A two-stage sampling procedure was employed. In the first stage, 806 clusters were selected with probability proportional to the cluster size, that is, the number of residential households counted in the 2004 census. A household listing operation was then carried out in all of the selected clusters, and the resulting lists of households served as the sampling frame for the selection of households in the second stage. In the second stage of selection, a fixed number of 20 households was selected in each cluster with an equal probability systematic selection. A subsample of two-thirds of the selected households was identified for anthropometry measurements.

Refer to Appendix A in the final report (Jordan Population and Family Health Survey 2012) for details of sampling weights calculation.

Response Rate

In all, 16,120 households were selected for the survey and, of these, 15,722 were found to be occupied households. Of these households, 15,190 (97 percent) were successfully interviewed.

In the households interviewed, 11,673 ever-married women age 15-49 were identified and interviews were completed with 11,352 women, or 97 percent of all eligible women.

Questionnaires

Overview

The 2012 JPFHS used two questionnaires, namely the Household Questionnaire and the Woman's Questionnaire (see Appendix D). The Household Questionnaire was used to list all usual members of the sampled households, and visitors who slept in the household the night before the interview, and to obtain information on each household member's age, sex, educational attainment, relationship to the head of the household, and marital status. In addition, questions were included on the socioeconomic characteristics of the household, such as source of water, sanitation facilities, and the availability of durable goods. Moreover, the questionnaire included questions about child discipline. The Household Questionnaire was also used to identify women who were eligible for the individual interview (ever-married women age 15-49 years). In addition, all women age 15-49 and children under age 5 living in the subsample of households were eligible for height and weight measurement and anemia testing.

The Woman's Questionnaire was administered to ever-married women age 15-49 and collected information on the following topics:

- Respondent's background characteristics
- Birth history
- Knowledge, attitudes, and practice of family planning and exposure to family planning messages
- Maternal health (antenatal, delivery, and postnatal care)
- Immunization and health of children under age 5
- Breastfeeding and infant feeding practices
- Marriage and husband's background characteristics
- Fertility preferences
- Respondent's employment
- Knowledge of AIDS and sexually transmitted infections (STIs)
- Other health issues specific to women
- Early childhood development
- Domestic violence

In addition, information on births, pregnancies, and contraceptive use and discontinuation during the five years prior to the survey was collected using a monthly calendar.

The Household and Woman's Questionnaires were based on the model questionnaires developed by the MEASURE DHS program. Additions and modifications to the model questionnaires were made in order to provide detailed information specific to Jordan. The questionnaires were then translated into Arabic.

Anthropometric data were collected during the 2012 JPFHS in a subsample of two-thirds of the selected households in each cluster. All women age 15-49 and children age 0-4 in these households were measured for height using Shorr height boards and for weight using electronic Seca scales. In addition, a drop of capillary blood was taken from these women and children in the field to measure their hemoglobin level using the HemoCue system. Hemoglobin testing was used to estimate the prevalence of anemia.

Data Collection

Data Collection Dates

Start	End	Cycle
2012-09	2012-12	N/A

Data Collection Mode

Face-to-face [f2f]

DATA COLLECTION NOTES

The fieldwork was organized to ensure control over field logistics by DoS field offices all over the country. The workload, the dispersion of sample units, and transportation facilities served as criteria for identifying the number of field staff in each area. The field staff consisted of 26 field teams, each made up of one supervisor, one field editor, one biomarker technician, and three to four interviewers; two field coordinators supervised the 26 teams. During field work, these teams were combined or reformulated as necessary. Fieldwork was carried out between 9 September and 20 December, 2012.

To facilitate data collection, each interviewing team was assigned a number of clusters in the sample area. Each field supervisor, in collaboration with the field coordinator, divided his team so as to ensure that all adjacent sampled households were completed by one interviewer. To ensure good data quality, interviewers were asked to conduct fewer interviews during the first three days of data collection; the completed questionnaires were then checked by the field editor and the supervisor to ensure completeness and consistency of data. Under the supervision of the survey director and field coordinators, the field editor and the supervisor conducted spot checks by randomly visiting some sampled households and reinterviewing respondents with the household schedule. The original questionnaires were then matched to the reinterview questionnaires, and any differences were discussed with the interviewer and reconciled where necessary.

Interviewers made at least three call backs to attempt to successfully complete the interview of eligible women. Once a cluster was finished, the questionnaires were delivered to the DoS central office in Amman for processing.

Data Collectors

Name	Abbreviation	Affiliation
Department of Statistics	DoS	Government of Jordan

Data Processing

Data Editing

Fieldwork and data processing activities overlapped. Data processing began two weeks after the start of the fieldwork. After field editing of questionnaires for completeness and consistency, the questionnaires for each cluster were packaged together and sent to the central office in Amman, where they were registered and stored. Special teams were formed to carry out office editing and coding of the openended questions.

Data entry and verification started after two weeks of office data processing. The process of data entry, including 100 percent reentry, editing, and cleaning, was done by using PCs and the CSPro (Census and Survey Processing) computer package, developed specially for such surveys. The CSPro program allows data to be edited while being entered. Data processing operations were completed by early January 2013. A data processing specialist from ICF International made a trip to Jordan in February 2013 to follow up on data editing and cleaning and to work on the tabulation of results for the survey preliminary report, which was published in March 2013. The tabulations for this report were completed in April 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 2012 Jordan Population and Family Health Survey (JPFHS) 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 2012 JPFHS 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 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 2012 JPFHS 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 2012 JPFHS is an SAS program. This program used the Taylor linearization method for 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 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 cases in the group or subgroup under consideration.

Refer to Appendix B in the final report (Jordan Population and Family Health Survey 2012) for details of estimates of sampling errors.

Other forms of Data Appraisal

The following data quality tables are produced:

- 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
- Nutritional status of children based on the NCHS/CDC/WHO International Reference Population

See the tables in Appendix C of the final report (Jordan Population and Family Health Survey 2012).

Related Materials

Questionnaires

Jordan Population and Family Health Survey 2012, Household Questionnaire

Title Jordan Population and Family Health Survey 2012, Household Questionnaire
 Author(s) Department of Statistics
 Date 2012-03-08
 Country Jordan
 Language English
 Filename Jordan_2012_DHS_household_questionnaire.pdf

Jordan Population and Family Health Survey 2012, Woman's Questionnaire

Title Jordan Population and Family Health Survey 2012, Woman's Questionnaire
 Author(s) Department of Statistics
 Date 2012-03-05
 Country Jordan
 Language English
 Filename Jordan_2012_DHS_woman_questionnaire.pdf

Reports

Jordan Population and Family Health Survey 2012, Preliminary Report

Title Jordan Population and Family Health Survey 2012, Preliminary Report
 Author(s) Department of Statistics, Amman, Jordan ICF International, Calverton, Maryland, USA
 Date 2013-03-01
 Country Jordan
 Language English

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Filename	http://www.dhsprogram.com/pubs/pdf/PR32/PR32.pdf	

Jordan Population and Family Health Survey 2012, Report

Title	Jordan Population and Family Health Survey 2012, Report
Author(s)	Department of Statistics, Amman, Jordan ICF International, Calverton, Maryland, USA
Date	2013-10-01
Country	Jordan
Language	English
Description	This report summarizes the findings of the 2012 Jordan Population and Family Health Survey (JPFHS) carried out by the Department of Statistics (DoS).

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Jordan Population and Family Health Survey 2012, Key Findings

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