West Bank and Gaza - Family Survey 2010

United Nations Children's Fund, Palestinian Central Bureau of Statistics

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Sampling

Sampling Procedure

The primary objective of the sample design for the Palestinian Family Survey was to produce statistically reliable estimates of most indicators, at the national level, for urban and rural areas, refugee camps and for the sixteen governorates (11 in the West Bank and 5 in the Gaza Strip). Urban and rural areas and the refugee camps in each of the sixteen governorates were defined as the sampling strata.

A multi-stage, stratified cluster sampling approach was used for the selection of the survey sample.

The sampling frames used has been established in PCBS,and basically comprises the list of enumeration areas. (The enumeration area is a geographical area containing a number of buildings and housing units of about 120 housing units on average.)

The total frame consists of the following two parts:
1- West Bank and Gaza Sampling Frame: containing enumeration areas drawn up in 2007. In the West Bank: each enumeration area consists of a list of households with identification data to ascertain the address of individual households. In Gaza: each enumeration area contains a list of housing units with addresses to ascertain the address of individual households, plus identification data of the housing units.
2- Jerusalem Sampling Frame (J1): contains enumeration areas only, geographically divided with information about the total number of households in these areas. However, there is no detailed information about addresses inside enumeration areas and the size of the enumeration area can be ascertained without the ability to identify the addresses.

Both frames were used in the sample design and selection and therefore, the sample will differ from one frame to another. Also, the method of reaching the sample units by interviewers may differ.

In the survey, two variables were chosen to divide the population into strata, depending on the homogeneity of parts of the population.
Previous studies have shown that Palestinian households may be divided as follows:
1- Governorates: there are 16 governorates in the State of Palestine: 11 governorates in the West Bank and 5 in the Gaza Strip.
2- Locality Types: there are three types : urban, rural and refugee Camps.

After determining the sample size, which equals 15,355 households, we selected a probability sample - a multi-stage stratified cluster sample as follows:
1- First stage: selecting a sample of clusters (enumeration areas) using PPS without replacement method to obtain 644 enumeration areas from the total enumeration area frame.
2- Second stage: selecting 24 households from each selected enumeration area of the first stage and using the systematic sample method. When reaching households, all individuals were interviewed from the eligible groups i.e. women 15-54 years, elderly aged 60 years or above and children aged 0-4 years
3- Third stage: selecting one child of age group 2-14 years for part of the questionnaire and one young person from the 15-29 age group to answer the youth attachment in the questionnaireThe Kish table was used to select one child at random.
4- Also in the women's health section, the questionnaire was administered to a maximum of three randomly selected women aged 15-54 years irrespective of their marital status living in the households. In the case where 3 or less women aged 15-54 were listed in the HH all women were interviewed. As for Households with 4 or more women in this age group 3 were interviewed based on the availability of these women in the household at the time of the interview. The unselected women were further treated in the dataset as non-response cases. As for Households with 4 or more women in this age group 3 were interviewed based on the availability of these women in the household at the time of the interview. The unselected women were further treated in the dataset as non response cases.
5- The elderly age 60 years and above questionnaire was administered for all elderly persons within the household.
6- The Youth questionnaire was administered by randomly selecting a youth member from households with odd household numbers assigned at the enumeration area level. Within this sample female and male youth were alternatively selected.

The sample was allocated with proportionally using the design strata of the governorates and the locality type according to the proportion of the population in the 2007 Census.

The sampling procedures are more fully described in "Palestinian Family Survey 2010 - Final Report" pp.167-171.

Response Rate

Of the 15,355 households selected for the sample, 14,817 were found to be occupied. Of these, 13,629 were successfully interviewed achieving a household response rate of 92 percent.

In the interviewed households, 12,322 ever- married women (age 15-49 years) were identified. Of these, 12,005 were successfully interviewed, yielding a response rate of 90 percent within interviewed households.

In addition, 11,273 children under age five were listed in the household questionnaire. Questionnaires were completed for 11,110 of these children, which corresponds to a response rate of about 98.6 percent within interviewed households.

Overall response rates of 89.6 and 90.7 percent are calculated for the women's and under-5's interviews respectively.

Weighting

Sampling weights are necessary to make the results of the sample are representative to the target population, and to adjust the bias resulting from differences between the sample characteristics and the reference population characteristics which mainly coming from the non-response and non-coverage of the frame.

The steps of calculation the design weight:

1- In the first stage: the weight of enumeration areas (PSUs) were calculated depending on the probability of each enumeration area((PPS) sample selection).

2- In the second stage: the weight of households were calculated in each enumeration area.

3- Design households weights resulted from product of weights of first stage and second stage.

4- Merging design households weights to the households file and to the household individuals file, each individual obtained the weight of his/her household weight ,and it is considered initial weight for individuals (all households members)

Adjustment of sample weights for non-response:

The weights of the households and individuals were adjusted to non-response cases, which are explained in the result of the interview, and we got the adjusted weights for non- response of the sample.

The adjustment factor for household non-response is equal to:

Fnr = sample of occupied households in stratum h /sample of interviewed households in stratum h

Similarly, the adjustment factor for non-response at the individual level (women and under-5 children) for each stratum is equal to:

Fnr = Eligible women (or under-5s) in stratum h /Completed women's (or under-5's) questionnaires in stratum h These factors were multiplied by the design weights to get the adjusted weights for non-response.

Weights Calibration (post-stratification):

This form of weighting adjustment compensates for differences between the achieved distribution for the sample for some characteristic and known population distribution for that characteristic (hlweight). The source of distributions are population counts from projections. Furthermore, the population in the control totals should match the population surveyed. For example, if a population was excluded from the survey due to age groups, the same population should be excluded from the projections. the post-stratification method of adjustment was used to compensate for non-coverage.

Standardization of weights:

Standardized weights obtained from dividing the weights of the sample unit by the average of the weights, so the weights were standardized in such way that the total weighted sample interviewed is equal to the total unweighted.

Questionnaires

Overview

The design of the survey complied with the standard specifications of health surveys previously implemented by PCBS. In addition, the survey included indicators of MICS4 to meet the needs of all partners.

Five sets of questionnaires were used in the survey, three are considered as main questionnaires and are based on MICS4 standard questionnaires,viz.: 1) a household questionnaire which was used to collect information on all de jure household members (usual residents), the household, and the dwelling; and a section on general health and knowledge of HIV and AIDS adminstered to three randomly selected women 15-54 years in each houehold, irrespective of marital status, 2) a women's questionnaire administered in each household to all ever-married women aged 15-54 years (to allow for comparison with the previous survey, however, all the tables and analysis were undertaken for the women aged 15-49 only; 3) an under-5 questionnaire, administered to mothers or caretakers for all children under-5 years living in the household. The two additional country specific questionnaires were, 4) the youth aged 15-29 years old questionnaire; and 5) the elderly (60+ years old) questionnaire.

• Household Questionnaire: Covers demographic and educational characteristics, chronic disease, smoking, discipline of children (2-14 years), child labor (5-14 years), education of children (5-24 years) and housing characteristics.
• Women's Health (15-54 years) Questionnaire: regardless of marital status, awareness about AIDS, anemia in women aged 15-49 years.
• Ever married women (15-54 years) Questionnaire: Covers general characteristics of eligible women, reproduction, child mortality, maternal care, reproductive morbidity, family planning, and attitudes towards reproduction.
• Children under age of 5 Questionnaire: Covers children's health, vaccination against childhood diseases, early childhood development, chronic disease, and anemia.

Supplementary Questionnaires
• Youth (15-29 years) Questionnaire: Covers general characteristics, awareness and perception of family planning, health status, awareness about sexually transmitted diseases and reproduction.
• Elderly (60 years and over) Questionnaire: Covers general characteristics, social relations, activities, time-use, health status, and use of mass media.

The main three questionnaires (household, women and children under-5) are based on the MICS4 model questionnaires. Using the Arabic version of the MICS4 statndard questionnaires, the questionnaires were customized to the local context and were piloted in February 2010. Based on the results of the pilot, modifications were made to the wording and translation of the questionnaires.

Data Collection

Data Collection Dates

Start	**End**	**Cycle**
2010-05	2010-09	N/A

Data Collection Mode

Face-to-face [f2f]

DATA COLLECTION NOTES

Training for the fieldwork was conducted for 13 days in April 2010. Training included lectures on interviewing techniques and the topics covered in the questionnaires. Mock interviews were conducted between trainees to gain practice in asking questions. The data were collected by 22 teams; each having of 4 or 5 interviewers, one editor, one measurer and a supervisor. Fieldwork began in May 2010 and concluded in September 2010.

Data Collectors

Name	**Abbreviation**	**Affiliation**
Palestinian Central Bureau of Statistics	PCBS	

SUPERVISION

There is one supervisor for each of the 22 data collection teams in the field.

Data Processing

Data Editing

Data were entered using the CSPro software. The data were entered on 50 microcomputers and carried out by 50 data entry operators and one data entry supervisor. In order to ensure quality control, all questionnaires were double entered and internal consistency checks were performed. Procedures and standard programs developed under the global MICS4 programme were adapted to the Palestinian Family Survey questionnaire and used throughout. The implementation of all processes was supervised by the technical director of the project. Data processing began simultaneously with data collection in June 2010 and was completed in December 2011. Data were analysed using the Statistical Package for Social Sciences (SPSS) software program, Version 19, and the model syntax and tabulation plans developed by UNICEF were used for this purpose.

Data Appraisal

Estimates of Sampling Error

Sampling errors are a measure of the variability between the estimates from all possible samples. The extent of variability is not known exactly, but can be estimated statistically from the survey data.

The following sampling error measures are presented in this Annex for each of the selected indicators:
• Standard error (se): Sampling errors are usually measured in terms of standard errors for particular indicators (means, proportions etc). Standard error is the square root of the variance of the estimate. The Taylor linearization method is used for the estimation of standard errors.
• Coefficient of variation (se/r) is the ratio of the standard error to the value of the indicator, and is a measure of the relative sampling error.
• Design effect (deff) is the ratio of the actual variance of an indicator, under the sampling method used in the survey, to the variance calculated under the assumption of simple random sampling. The square root of the design effect (deft) is used to show the efficiency of the sample design in relation to the precision. A deft value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a deft value above 1.0 indicates the increase in the standard error due to the use of a more complex sample design.
• Confidence limits are calculated to show the interval within which the true value for the population can be reasonably assumed to fall, with a specified level of confidence. For any given statistic calculated from the survey, the value of that statistic will fall within a range of plus or minus two times the standard error (r + 2.se or r – 2.se) of the statistic in 95 percent of all possible samples of identical size and design.

For the calculation of sampling errors from MICS data, SPSS Version 19 Complex Samples module has been used. The results are shown in the tables that follow. In addition to the sampling error measures described above, the tables also include weighted and unweighted counts of denominators for each indicator.

Sampling errors are calculated for indicators of primary interest, for the national level, for the regions, and for urban and rural areas. One of the selected indicators is based on households, 8 are based on household members, 16 are based on women, and 18 are based on children under 5. All indicators presented here are in the form of proportions.

Other forms of Data Appraisal

A series of data quality tables are available to review the quality of the data and include the following:

- Age distribution of the household population
- Age distribution of eligible and interviewed women
- Age distribution of children under 5 in household and children under 5 questionnaires
- Women's completion rates by socio-economic characteristics of households
- Completion rates for under-5 questionnaires by socio-economic characteristics of households
- Completeness of reporting
- Completeness of information for anthropometric indicators
- Heaping in anthropometric measurements
- Observation of under-5s birth certificates
- Observation of vaccination cards
- Presence of mother in the household and the person interviewed for the under-5 questionnaire
- School attendance by single age
- Sex ratio at birth among children ever born and living
- Births by calendar years
- Reporting of age at death in days
- Reporting of age at death in months

The results of each of these data quality tables are shown in appendix D in document "Palestinian Family Survey 2010 - Final Report" pp.186-201.

Related Materials

Questionnaires

Palestinian Family Survey 2010 - Questionnaire

Title	Palestinian Family Survey 2010 - Questionnaire
Country	Palestine
Language	English
Table of contents	Household Questionnaire Individual women Questionnaire Children under five Questionnaire Youth Questionnaire Elderly Questionnaire
Filename	WBG_2010_MICS_Questionnaire_En.pdf

MICS4 Changes To Questionnaires v2.1 to v3.0

Title	MICS4 Changes To Questionnaires v2.1 to v3.0
Language	English
Filename	http://www.childinfo.org/mics4_questionnaire.html

MICS4 Questionnaire Form For Child Disability v3.0

Title	MICS4 Questionnaire Form For Child Disability v3.0
Language	English
Filename	http://www.childinfo.org/mics4_questionnaire.html

MICS4 Questionnaire Form For Vaccinations At Health Facility v3.0

Title	MICS4 Questionnaire Form For Vaccinations At Health Facility v3.0
Language	English
Filename	http://www.childinfo.org/mics4_questionnaire.html

Reports

Palestinian Family Survey 2010 - Report

Title	Palestinian Family Survey 2010 - Report
Author(s)	Palestinian Central Bureau of Statistics United Nations Children's Fund (UNICEF)
Date	2013-10-01
Country	Palestine
Language	English
Filename	https://mics-surveys-prod.s3.amazonaws.com/MICS4/Middle%20East%20and%20North%20Africa/State%20of%20Palestine/2010/Final/State%20of%20Palestine%202010%20MICS_English.pdf

Technical documents

Changes to MICS Tabulation Plan, Data Quality Tabulations, and Sampling Error

Tables since Version 2.1

Title	Changes to MICS Tabulation Plan, Data Quality Tabulations, and Sampling Error Tables since Version 2.1
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 01 Household Sample and Survey Characteristics (HH)

Title	MICS4 01 Household Sample and Survey Characteristics (HH)
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 02 Child Mortality (CM)

Title	MICS4 02 Child Mortality (CM)
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 03 Nutrition (NU)

Title	MICS4 03 Nutrition (NU)
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 04 Child Health (CH)

Title	MICS4 04 Child Health (CH)
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 05 Water and Sanitation (WS)

Title	MICS4 05 Water and Sanitation (WS)
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 06 Reproductive Health (RH)

Title	MICS4 06 Reproductive Health (RH)
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 07 Child Development (CD)

Title	MICS4 07 Child Development (CD)
Language	English
Filename	http://www.childinfo.org/mics4_plan.html

MICS4 08 Education (ED)

Title	MICS4 08 Education (ED)

Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 09 Child Protection (CP)

Title   MICS4 09 Child Protection (CP)
Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 10 HIV-AIDS, Sexual Behaviour and Orphanhood (HA)

Title   MICS4 10 HIV-AIDS, Sexual Behaviour and Orphanhood (HA)
Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 11 Access to Mass Media and ICT Technology (MT)

Title   MICS4 11 Access to Mass Media and ICT Technology (MT)
Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 12 Subjective Well-Being (SW)

Title   MICS4 12 Subjective Well-Being (SW)
Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 13 Tobacco and Alcohol Use (TA)

Title   MICS4 13 Tobacco and Alcohol Use (TA)
Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 Data Quality Tabulation Plan (DQ)

Title   MICS4 Data Quality Tabulation Plan (DQ)
Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 Sampling Errors (SE)

Title   MICS4 Sampling Errors (SE)
Language English
Filename http://www.childinfo.org/mics4_plan.html

MICS4 Changes To Indicator List v2.1 to v3.0

Title   MICS4 Changes To Indicator List v2.1 to v3.0
Language English
Filename http://www.childinfo.org/mics4_questionnaire.html

MICS4 List of Indicators v3.0

Title   MICS4 List of Indicators v3.0
Language English
Filename http://www.childinfo.org/mics4_questionnaire.html

MICS4 Manual-Anthropometry

Title   MICS4 Manual-Anthropometry
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Data Editing Guidelines

Title   MICS4 Manual-Data Editing Guidelines
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Designing and Selecting the Sample

Title   MICS4 Manual-Designing and Selecting the Sample
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Designing the Questionnaires

Title   MICS4 Manual-Designing the Questionnaires
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Getting Started

Title   MICS4 Manual-Getting Started
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Global Positioning Systems

Title   MICS4 Manual-Global Positioning Systems
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Instructions for Interviewers

Title   MICS4 Manual-Instructions for Interviewers
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Instructions for Supervisors Editors and Measurers

Title   MICS4 Manual-Instructions for Supervisors Editors and Measurers

Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Model Questionnaires

Title   MICS4 Manual-Model Questionnaires
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Preparing for Data Collection and Conducting Fieldwork

Title   MICS4 Manual-Preparing for Data Collection and Conducting Fieldwork
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Processing the Data

Title   MICS4 Manual-Processing the Data
Language English
Filename http://www.childinfo.org/mics4_manual.html

MICS4 Manual-Salt Iodization Testing

Title   MICS4 Manual-Salt Iodization Testing
Language English
Filename http://www.childinfo.org/mics4_manual.html