

Somalia - Multiple Indicators Cluster Survey 2006

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Overview

Identification

ID NUMBER

SOM-DNS-MICS-2006

Version

VERSION DESCRIPTION

PRODUCTION DATE

2015-03-15

NOTES

The scope of the 2006 Somali MICS/PAPFAM Survey includes:

HOUSEHOLD: Household characteristics, household listing, orphaned children, education, child labour, water and sanitation, household use of insecticide treated mosquito nets, salt iodization and maternal mortality.

WOMEN: Women's characteristics, child mortality, birth history, tetanus toxoid, maternal and newborn health, marriage, polygyny, female genital cutting, contraception, HIV/AIDS knowledge and domestic violence.

CHILDREN: Children's characteristics, birth registration and early learning, vitamin A, breastfeeding, care of illness, malaria, immunization and anthropometry.

Overview

ABSTRACT

The Multiple Indicator Cluster Survey (MICS) is a household survey programme developed by UNICEF to assist countries in filling data gaps for monitoring human development in general and the situation of children and women in particular. The Pan Arab Population and Family Health Project(PAPFAM) is a programme conducted to enable national health institutions in the Arab region to obtain a timely and integrated flow of reliable information suitable for formulating, implementing, monitoring and evaluating the family health and reproductive health policies and programs in a cost-effective manner.

MICS and PAPFAM are capable of producing statistically sound, internationally comparable estimates of social indicators. The current round of MICS/PAPFAM is focused on providing a monitoring tool for the Millennium Development Goals (MDGs), the World Fit for Children (WFFC), as well as for other major international commitments, such as the United Nations General Assembly Special Session (UNGASS) on HIV/AIDS and the Abuja targets for malaria.

Survey Objectives

The 2006 Somali Multiple Indicator Cluster Survey (MICS)/Pan Arab Population and Family Health Project(PAPFAM) has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in Somalia
- To furnish data needed for monitoring progress toward goals established in the Millennium Declaration, the goals of A World Fit For Children (WFFC), and other internationally agreed upon goals, as a basis for future action;
- To contribute to the improvement of data and monitoring systems in Somalia and to strengthen technical expertise in the design, implementation, and analysis of such systems.

Survey Content

Following the MICS global questionnaire templates, the questionnaires were designed in a modular fashion customized to the needs of Somalia. The questionnaires consist of a household questionnaire, a questionnaire for women aged 15-49 and a questionnaire for children under the age of five (to be administered to the mother or caretaker).

Survey Implementation

The Somalia MICS/PAPFAM was carried out by UNICEF with the support and assistance the Ministry of Planning and International Cooperation of the Somali Transitional Federal Government, the Ministry of National Planning and Coordination of Somaliland and the Ministry of Planning and International Cooperation of Puntland. Technical assistance and training for the survey was provided through a series of regional workshops organised by UNICEF and PAPFAM, covering questionnaire content, sampling and survey implementation; data processing; data quality and data analysis; report writing and dissemination.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

UHouseholds (defined as a group of persons who usually live and eat together)

De jure household members (defined as members of the household who usually live in the household, which may include people who did not sleep in the household the previous night, but does not include visitors who slept in the household the previous night but do not usually live in the household)

Women aged 15-49

Children aged 0-4

Scope

NOTES

The scope of the Multiple Indicator Cluster Survey includes: Household characteristics, household listing, orphaned and vulnerable children, education, child labour, water and sanitation, household use of insecticide treated mosquito nets, and salt iodization, with optional modules for child discipline, child disability, maternal mortality and security of tenure and durability of housing.

For women's characteristics, child mortality, tetanus toxoid, maternal and newborn health, marriage, polygyny, female genital cutting, contraception, and HIV/AIDS knowledge, with optional modules for unmet need, domestic violence, and sexual behavior

TOPICS

Topic	Vocabulary	URI
House Members	MICS TOPICS	
Education	MICS TOPICS	
Child Mortality	MICS TOPICS	
Vaccination	MICS TOPICS	
Child labour	MICS TOPICS	
Household Characteristics	MICS TOPICS	
Water and sanitation	MICS TOPICS	
Maternal and Newborn Health	MICS TOPICS	
Birth History	MICS TOPICS	
Married and Union	MICS TOPICS	
Contraception	MICS TOPICS	
Birth Registration	MICS TOPICS	
Breastfeeding	MICS TOPICS	
Attitudes towards domestic violence	MICS TOPICS	
Early learning	MICS TOPICS	

KEYWORDS

Mortality rate of the children under the age of 12, Underweight prevalence, Breastfeeding, Tuberculosis immunization coverage, Polio, Measles immunization coverage

Coverage

GEOGRAPHIC COVERAGE

The Somali 2006 MICS/PAPFAM covers all regions of Somalia. For the purposes of this survey, the analysis refers to the North West Zone, the North East Zone and Central South Zone according to prewar boundaries for Somaliland and Puntland and does not imply any recognition of administrative boundaries by the United Nations or the League of Arab States.

UNIVERSE

The survey covered all de jure household members (usual residents), all women aged 15-49 years resident in the household, and all children aged 0-4 years (under age 5) resident in the household. The survey also included a full birth history module which covered all live births born to ever-married women aged 15-49.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
UNICEF Somalia Support Centre	Somali Ministry of Planning and International Cooperation
	Somali Ministry of Planning and International Cooperation

OTHER PRODUCER(S)

Name	Affiliation	Role
Pan Arab Population and Family Health Project	Somali Ministry of Planning and International Cooperation	

FUNDING

Name	Abbreviation	Role
UNICEF	UNICEF	Funding of survey implementation
WHO	WHO	Part funding of survey preparation
UNFPA	UNFPA	Part funding of data entry and dissemination
GLOBAL FUND	GF	Part funding of data collection

OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
Puntland Ministry of Planning		

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Department of Statistics	DNS	Ministry of Planning Puntland State of Somalia	Collection and Production of Statistics

DATE OF METADATA PRODUCTION

2015-03-15

DDI DOCUMENT ID

DDI-SOM-DNS-MICS-2006

Sampling

Sampling Procedure

The target sample size for the Somali MICS was calculated as 6000 households. Within each zone a predetermined number of clusters were selected. In the North East and North West Zones 60 clusters were selected in each². In the Central South Zone 130 clusters were selected making a total of 250 clusters with 24 households in each cluster. Within each region of each zone districts were selected using probability proportional to size (pps); in total 57 districts, out of 114 districts in Somalia were selected. The number of clusters in each district was also allocated according to estimated population size of district. The proportion of urban to non-urban clusters was determined according to the estimated populations falling within each category within each district. The non-urban population includes both the settled population in rural areas as well as the nomadic population.

Within the selected districts permanent and temporary settlements were randomly selected also using probability proportional to size sampling³. In order to ensure that nomads were included in the sample, efforts were made to include temporary settlements near to known water points where nomads would most likely to be found.

The third stage of sampling then involved the selection of the cluster(s) within the settlements. For settlements over the estimated size of 150 households some form of segmentation was necessary. Sketch maps were prepared to divide the settlements into roughly equal sizes of estimated households. Each segment was considered as an enumeration area making it possible to randomly select the required number of clusters.

Once the final clusters had been identified, households were selected randomly using a modified expanded programme for immunisation (EPI) method. The sample was stratified by urban and non-urban and is not self-weighting. For reporting national level results, sample weights are used.

Deviations from Sample Design

No major deviations from the original sample design were made. All clusters were accessed and successfully interviewed with good response rates.

Response Rate

Of the 6000 households selected for the sample 5969 were successfully interviewed for a household response rate of 99.5 percent. In the interviewed households, 7277 women (age 15-49) were identified. Of these, 6764 were successfully interviewed, yielding a response rate of 93 percent. In addition, 6373 children under age five were listed in the household questionnaire. Of these, questionnaires were completed for 6305 which corresponds to a response rate of 98.9 percent. Overall response rates of 92.5 percent and 98.4 are calculated for the women's and under-5's interviews respectively (Table HH.1).

Weighting

The Somalia Multiple Indicator Cluster Survey sample is not self-weighted. Essentially, by allocating equal numbers of households to each of the zones in the North, different sampling fractions were used in each zone since the size of the zones varied. For this reason, sample weights were calculated at the regional level and these were used in the subsequent analyses of the survey data.

The major component of the weight is the reciprocal of the sampling fraction employed in selecting the number of sample households in that particular sampling domain:

$$W_h = 1 / f_h$$

The term f_h , the sampling fraction at the h -th stratum, is the product of probabilities of selection at each sampling domain:

$$f_h = P_{1h} * P_{2h}$$

where P_{ih} is the probability of selection of the sampling unit in the i -th stage for the h -th sampling domain.

A second component which has to be taken into account in the calculation of sample weights is the level of non-response for the household and individual interviews. The adjustment for household non-response is equal to the inverse value of:

$$RR = \text{Number of interviewed households} / \text{Number of occupied households listed}$$

After the completion of fieldwork, response rates were calculated for each sampling domain. These were used to adjust the sample weights calculated for each cluster. Response rates in the Somali Multiple Indicator Cluster Survey are shown in Table HH.1 in this report.

Similarly, the adjustment for non-response at the individual level (women and under-5 children) is equal to the inverse value

of:

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$RR = \text{Completed women's (or under-5's) questionnaires} / \text{Eligible women (or under-5s)}$

Numbers of eligible women and under-5 children were obtained from the household listing in the Household Questionnaire in households where interviews were completed.

The unadjusted weights for the households were calculated by multiplying the above factors for each enumeration area.

These weights were then standardized (or normalized), one purpose of which is to make the sum of the interviewed sample units equal the total sample size at the national level. Normalization is performed by multiplying the aforementioned unadjusted weights by the ratio of the number of completed households to the total unadjusted weighted number of households. A similar standardization procedure was followed in obtaining standardized weights for the women's and under-5's questionnaires. Adjusted (normalized) weights varied between 0.3 and 2.5 in the 250 clusters.

Sample weights were appended to all data sets and analyses were performed by weighting each household, woman or under-5 with these sample weights.

Questionnaires

Overview

Three sets of questionnaires were used in the survey: 1) a household questionnaire which was used to collect information on all de jure household members, the household, and the dwelling; 2) a women's questionnaire administered in each household to all women aged 15-49 years; and 3) an under-5 questionnaire normally administered to mothers of under-5 children; in cases when the mother was not listed in the household roster, a primary caretaker for the child was identified and interviewed. Each questionnaire comprised several modules:

The Household Questionnaire included the following:

- Household listingo
- Educationo
- Water and Sanitationo
- Household characteristicso
- Child Labouro
- Insecticide Treated Netso
- Maternal Mortalityo
- Salt Iodizationo

The Questionnaire for Individual Women included the following:

- Child Mortalityo
- Birth Historyo
- Tetanus Toxoido
- Maternal and Newborn Healtho
- Marriage/Uniono
- Contraceptiono
- Female Genital Mutilationo
- HIV/AIDSo

The Questionnaire for Children Under Five included the following:

- Birth Registration and Early Learningo
- Vitamin Ao
- Breastfeedingo
- Care of Illnesso
- Malariao
- Immunizationo
- Anthropometryo

The questionnaires are based on the MICS model questionnaire⁴ with some additional questions included to reflect PAPFAM's interests as well as some country specific questions. From the MICS English version, the questionnaires were translated into Somali and were pre-tested in urban and rural areas in each zone during June and July 2006, efforts were made to ensure that nomadic households were included in the pre-testing. Based on the results of the pre-test, modifications were made to the wording and translation of the questionnaires. A copy of the Somali MICS questionnaires is provided in Appendix F.

Data Collection

Data Collection Dates

Start	End	Cycle
2006-08-07	2006-09-26	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

The pretest for the survey took place in July 2006 in each zone. Approximately ten percent of the total sample size was pre-tested; the three pre-tests combined lasted between 1 to 2 weeks. The pre-tests were conducted by the survey coordinators with the assistance of future supervisors and interviewers.

The largest complaint regarding the questionnaires in the pretest was the length. For a household, the minimum time the questionnaires were completed in was one and a quarter hours, the maximum time was around two and a half hours. Supervisors noticed however that in the latter days of pre-testing interviewers gained much more speed. Therefore in the first week of data collection it was necessary to allow more time for survey teams to complete clusters but the time steadily reduced as fieldwork continued.

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Data Collectors

Name	Abbreviation	Affiliation
Directorate of National Statistics	DNS	Ministry of planning and International Cooperation

Supervision

Interviewing was conducted by teams of interviewers. Each interviewing team comprised of 4 female interviewers and 4 male interviewers, a field editor and a supervisor. Each team used 4 wheel drive vehicles to travel from cluster to cluster (and where necessary within cluster).

The role of the supervisor was to coordinate field data collection activities, including management of the field team, supplies and equipment, finances, maps and listings, coordinate with local authorities concerning the survey plan and make arrangements for accommodation and travel. Additionally, the field supervisor assigned the work to the interviewers, spot checked work, maintained field control documents, and sent completed questionnaires and progress reports to the central office

The field editor was responsible for reviewing each questionnaire at the end of the day, checking for missed questions, skip errors, fields incorrectly completed, and checking for inconsistencies in the data. The field editor also observed interviews and conducted review sessions with interviewers.

Responsibilities of the supervisors and field editors are described in the Instructions for Supervisors and Field Editors, together with the different field controls that were in place to control the quality of the fieldwork.

The Somali MICS also recruited field coordinators who were responsible for coordinating the work of several field teams. Field visits were made by coordinators throughout fieldwork. Planning, monitoring and evaluation staff of UNICEF also made regular visits to field teams to provide support and to review progress. The Somali MICS Coordinator visited several field teams during data collection across the country.

Data Processing

Data Editing

Multiple Indicator Cluster Survey data editing took place at a number of stages throughout the processing, including:

- a) Office editing and coding
 - b) During data entry
 - c) Structure checking and completeness
 - d) Secondary editing
 - e) Structural checking of SPSS data files
- data had been edited by field supervisors in the collection stage, then subsequently

Data Appraisal

Estimates of Sampling Error

Estimates from a sample survey are affected by two types of errors: 1) non-sampling errors and 2) sampling errors. Non-sampling errors are the results of mistakes made in the implementation of data collection and data processing. Numerous efforts were made during implementation of the 2005-2006 MICS to minimize this type of error, however, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors can be evaluated statistically. The sample of respondents to the 2006 MICS is only one of many possible 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 in the results of the survey between all possible samples, and, although, the degree of variability is not known exactly, it can be estimated from the survey results. The sampling errors are measured in terms of the standard error for a particular statistic (mean or percentage), which is the square root of the variance. Confidence intervals are calculated for each statistic within which the true value for the population can be assumed to fall. Plus or minus two standard errors of the statistic is used for key statistics presented in MICS, equivalent to a 95 percent confidence interval.

If the sample of respondents had been a simple random sample, it would have been possible to use straightforward formulae for calculating sampling errors. However, the 2005-2006 MICS sample is the result of a multi-stage stratified design, and consequently needs to use more complex formulae. The SPSS complex samples module has been used to calculate sampling errors for the 2005-2006 MICS. This module uses the Taylor linearization method of variance estimation for survey estimates that are means or proportions. This method is documented in the SPSS file CSDescriptives.pdf found under the Help, Algorithms options in SPSS.

Sampling errors have been calculated for a select set of statistics (all of which are proportions due to the limitations of the Taylor linearization method) for the national sample, urban and rural areas, and for each of the five regions. For each statistic, the estimate, its standard error, the coefficient of variation (or relative error -- the ratio between the standard error and the estimate), the design effect, and the square root design effect (DEFT -- 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), as well as the 95 percent confidence intervals (+/-2 standard errors).

Details of the sampling errors are presented in the sampling errors appendix to the final report.

Other forms of Data Appraisal

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

- Age distribution of the household population
- Age distribution of eligible women and interviewed women
- Age distribution of eligible children and children for whom the mother or caretaker was interviewed
- Age distribution of children under age 5 by 3 month groups
- Age and period ratios at boundaries of eligibility
- Percent of observations with missing information on selected variables
- Presence of mother in the household and person interviewed for the under 5 questionnaire
- School attendance by single year age
- Sex ratio at birth among children ever born, surviving and dead by age of respondent
- Distribution of women by time since last birth
- Scatterplot of weight by height, weight by age and height by age
- Graph of male and female population by single years of age
- Population pyramid

The results of each of these data quality tables is shown in the appendix of the final report.

The general rule for presentation of missing data in the final report tabulations is that a column is presented for missing data if the percentage of cases with missing data is 1% or more. Cases with missing data on the background characteristics (e.g. education) are included in the tables, but the missing data rows are suppressed and noted at the bottom of the tables in the report (not in the SPSS output, however).

