

Mongolia - Multiple Indicator Cluster Survey 2012, Nalaikh district

**Statistics Department of the Governor's Office of Nalaikh District, United Nations
Children's Fund**

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Sampling

Sampling Procedure

The Child Development Survey is a household-based survey. Therefore, households are defined as the final sampling units. The sample for the survey was designed to provide estimates for a number of indicators on the situation of children, women and men at the district level. The total sample size was determined as 1,000 households for the district.

In total for the Nalaikh district, 40 kheseqs were selected systematically with probability proportional to size. After a household listing of the selected PSUs or the selected kheseqs was carried out by the khoroo's governor, 25 households were selected using systematic random sampling in each PSU.

Data were collected from the households in the sample, and for reporting the district level results, sample weights are used. A more detailed description of the sample design can be found in the Final Report (Appendix A) attached as a Related Material.

Deviations from Sample Design

During the data collection fieldwork in July-August 2012, we had encountered a problem due to nonappearance of families at the registered addresses, and absence of family members, because of seasonal resort and vacation period. In spite of this, we managed to collect survey data from all selected PSUs.

Response Rate

In total, 1,000 households selected for the sample, and of these 956 were found to be available for the survey. Of these, 949 households were successfully interviewed for a household response rate of 99 percent. In the interviewed households, out of the total 799 men and 929 women, age 15-49 years, enlisted for the survey, 705 men and 889 women were successfully interviewed, yielding a response rate of 88 and 96 percent respectively. In addition, 433 children under age of 5 and 896 children age 2-14 years were listed in the household questionnaire. Questionnaires were completed with mothers/ caretakers for 429 of these under-5 children and for 894 of children age 2-14, which corresponds to response rates of 99 and 100 percent respectively, within interviewed households.

Nalaikh district's overall response rates stand at 88 percent for men, 95 percent for women age 15-49 years, 98 percent and 99 percent are calculated for mothers/ caretakers of children under 5's and children age 2-14's respectively.

However, the response rate for men age 15-49 years' interviews is relatively lower than the response rates for other interviews, because of the dynamic mobility nature of men, particularly of young men.

Weighting

The Nalaikh District's Multiple Indicator Cluster Survey 2012, sample weights were calculated 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 stratum (h) and PSU (i).

Another component in the calculation of sample weights takes into account the level of nonresponse for the household and individual interviews for some reason.

Finally, the design weights were calculated by multiplying the above factors for each for target group and cluster. These weights were then standardized (or normalized), one purpose of which is to make the weighted sum of the interviewed sample units equal the total sample size at the District level.

As a result, the range of the normalized weights calculated for each target group is shown below (for the total 40 PSUs), and these sample weights were appended to all data sets and analyses were performed by weighting the each household, women age 15-49, under-5, men age 15-49, and child age 2-14 with these sample weights.

- Households - 0.382-1.542
- Women age 15-49 years - 0.385-1.555
- Children under-5 - 0.389-1.571
- Men age 15-49 years - 0.381-1.538
- Children age 2-14 years - 0.386-1.560

Questionnaires

Overview

Based on the five core questionnaires contents of the Mongolia Child Development Survey, conducted nationwide in 2010, specific supplementary module and questions were added for the Nalaikh "Child Development Survey 2012". Based on the current priorities and needs, the questionnaire for men age 15-49 years was taken in its entirety for this round of CDS.

Altogether, five types of questionnaires were used:

1. A Household Questionnaire
2. A Questionnaire for Woman, age 15-49
3. A Questionnaire for Child under 5
4. A Questionnaire for Child, age 2-14
5. A Questionnaire for Man, age 15-49

In addition to the administration of the questionnaires, fieldwork teams tested the salt used for cooking in the households for iodine content, observed the place for hand washing and measured the weights and heights of children age under 5 years.

In this round CDS 2012, internal migration questions (country specific module in household questionnaire) were asked for all household member listed in household listing module (HL).

The Questionnaire for Child under 5 was administered to mothers or caretakers of all children under 5 years of age living in the households. Normally, the questionnaire was 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.

The Questionnaire for Child age 2-14 was administered to mothers or caretakers of children age 2-14 years living in the households. Normally, the questionnaire was administered to mothers of children age 2-14; in cases when the mother was not listed in the household roster, a primary caretaker for the child was identified and interviewed.

All questionnaires modules are provided as Related Materials.

Data Collection

Data Collection Dates

Start	End	Cycle
2012-07	2012-08	N/A

Data Collection Mode

Face-to-face [f2f]

DATA COLLECTION NOTES

Training for the fieldwork personnel was conducted for nine days on 1-9 July 2012, including both forms of lectures and practice sessions.

The lectures held by the experts in the relevant field and practices were done for each group of questionnaires. In collaboration with the Nutrition Research Centre of the Public Health Institute, 20 trainees practiced child anthropometry measurements and iodine content of salts. At the end of the lectures and practices on child anthropometry measurements. Finally, the participants took tests and the interviewers, editors and supervisors were selected based on their performance on the tests.

The data were collected by two teams; each team was comprised of a supervisor, an editor and 5 interviewers (2 men assigned as main measurers). The data collection fieldwork for the Nalaikh District's "Child Development Survey-2012" was carried out in July-August 2012 for the duration of 50 days. The process and quality had been monitored by the Statistics Department of Nalaikh District. Fieldwork personnel's achievements and disadvantages had been discussed during the monitoring visits and necessary actions had been taken accordingly.

Data Processing

Data Editing

The data collected from the selected households were entered on computers using the CPro 4.0 software program by one data entry supervisor and two data entry operators from 20 August to 10 September 2012. In order to ensure quality control, all data were double entered and internal consistency checks were performed before finalization of the database. The procedures and standard programs developed under the global MICS4 programme and adapted to the Nalaikh CDS's customized questionnaires with additional module and questions were used throughout.

The data were analyzed using the standard SPSS 18.0 (Statistical Package for Social Sciences) software program and the model syntax and tabulation plans developed by UNICEF were customized for Nalaikh CDS 2012 questionnaires.

Data Appraisal

Estimates of Sampling Error

The sample of respondents selected in the Nalaikh District Multiple Indicator Cluster Survey 2012 is only one of the samples that could have been selected from the same population, using the same design and size. Each of these samples would yield results that slightly differ somewhat from the results of the actual sample selected. 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 sampling error measures for each of the selected indicators are:

- 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 18 Complex Samples module has been used.

Related Materials

Questionnaires

Mongolia, Nalaikh district - Multiple Indicator Cluster Survey 2012: Questionnaire

Title Mongolia, Nalaikh district - Multiple Indicator Cluster Survey 2012: Questionnaire
Country Mongolia
Language English
Filename Mongolia_Questionnaire.pdf

Reports

Mongolia, Nalaikh district - Multiple Indicator Cluster Survey 2012: Report (English)

Title Mongolia, Nalaikh district - Multiple Indicator Cluster Survey 2012: Report (English)
Country Mongolia
Language English
Filename Mongolia (Nalaikh District) 2012 MICS_English.pdf

Mongolia, Nalaikh district - Multiple Indicator Cluster Survey 2012: Report (Mongolian)

Title Mongolia, Nalaikh district - Multiple Indicator Cluster Survey 2012: Report (Mongolian)
Country Mongolia
Language Mongolian
Filename Mongolia (Nalaikh District) 2012 MICS_Mongolian.pdf

Technical documents

MICS4 Survey Planning Tools

Title MICS4 Survey Planning Tools
Filename <http://mics.unicef.org/tools?round=mics4>

MICS4 Sampling Tools

Title MICS4 Sampling Tools
Filename <http://mics.unicef.org/tools?round=mics4>

MICS4 Indicator List

Title MICS4 Indicator List
Filename <http://mics.unicef.org/tools?round=mics4>
