Palestinian National Authority
Palestinian Central Bureau of Statistics

Palestinian Family Survey, 2010

User Guide

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Introduction

The Palestinian Family Survey 2010 is the fifth in a series of surveys completed by PCBS over a period of ten years. Beginning with the first survey in 1996, the second survey was completed in 2000, the third in 2004, the fourth in 2006, and the fifth in 2010. The availability of the 2010 survey data makes it possible to examine trends over time related to demography, fertility, infertility, and maternal and child health in the context of changing population circumstances, and to utilize such information in future policy making and planning endeavors. The survey will enable us to disseminate the majority of the survey indicators at governorate level.

The survey is designed to collect, analyze, and disseminate demographic and health data pertaining to the Palestinian population living in the Palestinian Territory, with a focus on demography, fertility, infertility, family planning, unmet needs, and maternal and child health, in addition to youth and the elderly. The 2010 survey includes new sections and elements, such as basic health and socio-economic information on different groups within the population: ever married woman less than 55 years and children aged less than five years, child labor in the age 5-14 years, child discipline 2-14 years, person education 5-24 years, youth aged 15-29 years, and elderly people over the age of 60.

The Palestinian Central Bureau of Statistics hopes that this report will enable planners and decision makers to perform their duties of caring for and promoting health in the Palestinian Territory and will inform decision and policy makers engaged in comprehensive national development.

Concepts and Definitions

AIDS:
Acquired Immune Deficiency Syndrome - a serious (often fatal) disease of the immune system transmitted through blood products, especially by sexual contact or contaminated needles.

Anemia among women:
Women aged 15-49 with a hemoglobin level of less than 12.0 g\dl, according to WHO.

Anemia among pregnant women:
Pregnant women aged 15-49 with a hemoglobin level of less than 11.0 g\dl, according to WHO.

Anemia among children:
Children aged 6-59 months with a hemoglobin level of less than 11.0 g\dl, according to WHO.

Breast feeding:
Refers to the method of feeding infants and children and is defined as a child fed breast milk directly from the breast or expressed.

Diarrhea:
The passage of loose or liquid stools more frequently than is normal for the individual. Diarrhea may be defined as it is understood by respondents or mothers. The interviewers used the mother's definition in this survey.

Exclusive breastfeeding:
Children aged 0-5 months who are breastfed and have not received any other food or drink, except for vitamins and medication.

Experience minor physical punishment:
Children aged 2-14 years who were exposed to the following during the previous three days: shaken or hit on the bottom, or elsewhere on the body, with something like a belt, hairbrush, or using hands.

Experience psychological aggression as punishment:
Children aged 2-14 years who were exposed to the following during the previous three days: shouted at, yelled at or screamed at, or called dumb, lazy, or another such term.

Experience only non-violent aggression:
Children aged 2-14 years who were exposed to the following during the previous three days: removal of privileges, forbidden something they like or not allowed to leave the house, given an explanation as to why behavior was wrong, or given something else to do.

Family Planning:
This is a method used for delaying or preventing pregnancy. Modern methods include the pill, IUD, injection, vaginal methods, female gel, female sterilization, male sterilization, and condoms.

Fertility:
The actual reproductive performance of an individual, a couple, a group, or a population.

Folic Acid Tablets:
Medication containing folic acid in the form of a tablet to prevent or treat folic acid deficiency, especially during pregnancy.

Height for Age:
This parameter reflects the achieved linear growth and its deficit. indicates long-term cumulative inadequacies of health or nutrition. Two related terms are used when describing this parameter: length and stature. Length is the measurement while in a recumbent position and is used for children under 2 years of age, while stature refers to standing height. For simplification, the term height is used for both measurements in this report. Low height for age (below –2SD of the NCHS/WHO reference) ranges from 5 to 65% among less-developed countries. In low prevalence countries, it is most likely due to normal variation, i.e. shortness: in less-developed countries it is likely to be due to a pathological process, resulting in stunting. A pathological process can be from the past or a continuous process. children whose height for age is less than –2SD are considered as stunted children (moderate and severe) while acute stunting reflects those who are below –3SD.

Weight for Age:
This parameter is influenced by both the height and weight of the child. It reflects the long and short-term health of an individual or population. Lightweight and underweight have been used to describe normal and pathological processes. children whose weight for age is less than –2SD are considered as underweight children (moderate and severe) while acute underweight reflects those who are below –3SD.

Weight for Height:
This parameter reflects body weight to height. Its use carries the advantage of requiring no knowledge of age. However, it is not a substitute for the other indicators. Low weight for height is called thinness if normal, or wasting if pathological, and can reflect a recent acute weight for height. Prevalence in non-disaster areas is around 5%. children whose weight for height is less than –2SD are considered as wasted children (moderate and severe) while acute wasting reflects those who are below –3SD. Lack of evidence of wasting in a population does not imply the absence of existing nutritional problems.

Iodized Salt:
Food salt fortified with an adequate amount of Iodine 15 ppm and above to prevent iodine deficiency disorder, including goiter, in adults and children and mental handicap in children.

Infant:
A live-born child from the moment of birth through the completion of the first year.

Infant Mortality Rate:
The number of infant deaths under one year of age per 1,000 live births during a given year.

Iron Tablets:
Medication containing iron supplement given in the form of a tablet or syrup to prevent or treat iron deficiency anemia.

Live Birth:
A birth is considered live if the newborn has shouted, cried, or shown any signs of life upon birth.

Malnutrition:
Malnutrition means 'badly nourished' but is more than a measure of what we eat or fail to eat. Clinically, malnutrition is characterized by inadequate intake of protein, energy, and micronutrients and by frequent infections or disease. Nutritional status is the result of the complex interaction between the food we eat, our overall state of health, and the environment in which we live – in short, food, health and caring, the three "pillars of well-being".

Mild Anemia:
Hemoglobin level between 10.0-10.9 g\dl among pregnant women 15-49 years and children 6-50 months, and 10.0-11.9 g\dl among non-pregnant women, according to WHO.

Moderate Anemia:
Hemoglobin level between 7.0- 9.9 g\dl among pregnant women 15-49 years and children 6-50 months, and non-pregnant women 15-49 years, according to WHO.

Nutritional Status:
Nutritional status is the state of nutrition of individuals and is one of the indicators of the level of development in a given country. Nutritional status is linked to the availability and type of food consumed, food habits and practices, as well as the level of poverty in a given society. It is usually assessed using anthropometric parameters and growth (weight, height, i.e., wasting and stunting) body mass, as well as dietary intake of selected foods important for growth and good nutrition.

Reproductive Health:
Reproductive health is defined by WHO as a state of physical, mental, and social well-being in all matters relating to the reproductive system at all stages of life. Reproductive health implies that people have the capability to reproduce and the freedom to decide if, when, and how often to do so. Implicit in this is the right of men and women to be informed and to have access to safe, effective, affordable, and acceptable methods of family planning of their choice, and the right to appropriate health-care services that enable women to have a safe pregnancy and childbirth.

Persons with Chronic Disease:
Any person who suffers from at least one medically diagnosed chronic disease and receives continuous treatment for that disease.

Primary Infertility:
Currently married women aged 15-49 years who had no children, are not using contraceptive methods, and attempt to become pregnant for one year and over.

Secondary Infertility:
Currently married women aged 15-49 years who had at least one child during the two years preceding the survey, are not using contraceptive methods and try to become pregnant during that period.

Severe Anemia:
Hemoglobin level of less than 7.0g\dl among pregnant women aged 15-49 years and children 6-50 months, and non-pregnant women 15-49 years, according to WHO.

Smoker:
An individual (10 years and over) who smokes one cigarette or more a day, including pipe and narghileh smokers.

Suspected Pneumonia:
Children aged 0-59 months who suffer from coughing during the two weeks preceding the survey, who are short of breath or have difficulty breathing due to a problem in the chest or in both the chest and a blocked nose.

Tetanus:
A life-threatening disease caused by toxins produced by the bacterium Clostridium tetani, which often grows at the site of a cut or wound. Tetanus usually occurs after an acute injury, such as a puncture wound or laceration that has been contaminated with dirt containing the clostridium spores.

Under-Five Mortality:
The proportion of children born alive who die before reaching their fifth birthday.

Vitamin A/D:
Vitamin A and D drops. They are given to children from birth until one year of age by child health clinics belonging to the Ministry of Health. They are not given by UNRWA clinics.

Survey Questionnaires

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.

1. **Main questionnaire with the following parts:**
- 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.

- Health of women (15-54 years) regardless of marital status, awareness about AIDS, anemia in women (15-49 years).

- Ever married women (15-54 years): Covers general characteristics of qualified women, reproduction, child mortality, maternal care, reproductive morbidity, family planning, and attitudes towards reproduction.

- Children under age of 5: Covers children's health, vaccination against childhood diseases, early childhood development, chronic disease, and anemia.

2. **Attached questionnaires**
- Youth questionnaire (15-29 years): Covers general characteristics, awareness and perception of family planning, health status, awareness about sexually transmitted diseases and reproduction.

- Elderly questionnaire (60 years and over): Covers general characteristics, social relations, activities, time-use, health status, and use of mass media.

Data Set Linkage

The data set for users consists of two primary files that are related by identification variables (keys). A description of the files is below.

File Name	Content	Identification Variable
HH_S.SAV	Data on dwelling characteristics and child discipline for children aged 2-14 yrs.	HH1: cluster number. HH2: household number
HL_S.SAV	Households members' data and labour force status for persons aged 5-14 yrs	HH1:Cluster number HH2: Household number HL1: Member's serial number
WH_S.SAV	Data on women health status aged 15-54 yrs regardless of their marital status and knowledge of aids. Note: when you work on the file, you should use variable compl = 1.	HH1: Cluster number HH2: Household number LN: Member's serial number
WM_S.SAV	Data on ever married women aged 15-54 yrs, child birth and child mortality, and maternal care for the last birth during the last 2 years preceding the survey, chronic diseases and ill health due to childbirth, family planning and attitudes towards reproduction and unmet need.	HH1:cluster number. HH2: Household number LN: Member's serial number
Births.sav	Data on reproduction history for ever married women aged 15-54 yrs	HH1: cluster number HH2: Household number WM4: Woman's line number
Child.sav	Data on health status and vaccination for children under five	HH1: cluster number HH2: Household number HL1: Member's serial number UF6: Mother / Caretaker's line number
Youth	Data on youth aged 15-29 yrs	HH1: cluster number. HH2: Household number HL1: Member's serial number
Elderly	Data on elderly people aged 60+ yrs	HH1:cluster number. HH2: Household number HL1: Member's serial number

Filtering and Grouping of Respondents

Units of analysis (Other units are generally derived from these) and filtering instructions are as follows:

Unit	file	Filtering
Person	HL_S.SAV	Families who were interviewed
Family	HH_S.SAV	Characteristics of housing for families who were interviewed.

Ever married women	WM_S.SAV	Women who were interviewed (15-54) years who have been married
Children under five yrs	Child.sav	Children under five years.
Women	WH_S.SAV	Women who were interviewed (15-54 years) regardless of their marital status
Children – labour force	HL_S.SAV	Children aged 5-14 years
Children – child discipline	HH_S.SAV	Children aged 2-14 years
Births	Births	Births of women in all their reproductive life
Youth	Youth	Youth aged 15-29 years who were interviewed
Elderly	Elderly	Elderly people aged 60 or over.

Target Population

The target population of the survey consists of all the following groups:

1- All Palestinian households normally residing in the Palestinian Territory.
2- Females aged 15 – 54 years.
3- Elderly people aged 60 or over.
4- Children aged 0 – 14 years and divided into the following categories: 0-5 years, 2-14 years, 5-14 years, with parts of the questionnaire customized for each group.
5- Youth aged 15 – 29 years and divided into the following categories: 15-24 years, 25-29 years, with parts of the questionnaire customized for youth.

Sampling Frame

We relied on sampling frames established in PCBS and basically comprising 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 (inside checkpoints): 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.

Design Strata

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 Palestinian Territory: 11 governorates in the West Bank and 5 in the Gaza Strip.
2- **Locality Types:** there are three types : urban, rural and refugee camps.

All the available frames contain the strata variables.

Sample Size

We use the following formula to estimate the sample size:

$$n = \frac{[4(r)\,(1-r)f\,(1.15)]}{[(0.07r)^2\,p(n_h)]}$$

Where:

- **n**: sample size requested for the main indicator or main estimate
- **4**: is a factor to achieve a 95 percent level of confidence
- **r** is the predicted or anticipated prevalence (coverage rate) for the indicator
- being estimated
- **1.15** is the factor necessary to raise the sample size by 20 percent for non-response
- **f** is the design effect
- **0.07r** is the margin of error to be tolerated at the 95 percent level of confidence, defined as 7 percent of r (7 percent represents the relative sampling error of r)
- **p** is the proportion of the total population upon which the indicator, r, is based
- **n_h** is the average household size

To estimate the sample size of the survey we rely on the percentage of children under 5 years who suffer from stunting. We consider it as the main indicator for the survey (r) and it equals 10.2% (from MICS3 data –2006).

Also, by returning to census data in 2007 we find the percentage of children aged 0 – 4 years =14.1%.

Finally, the sample size = **15,355**

Sample Design and Type

After determining the sample size, which equals 15456 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, we enumerate all the targeted individuals from the groups: women (15-54) years, elderly aged 60 and more, children aged 0-5 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 questionnaire. We use the Kish table to select one person at random.

Weighing

1. In the first stage, the weight of enumeration areas 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. Initial households weights resulted from product of weight of first stage and weight of second stage ,final households weights obtained after adjustment of initial weights with the households estimates mid 2010 on the level of design strata (governorate, locality type) .
4. Final households weights were checked by comparing the sum of weight and sum of estimates of household in the strata.
5. Final households weights were merged to all individuals file ,each individual obtained the weight of his/her household weight ,and it is considered initial weight for individual .
6. Final individual weights resulted after calibration the initial weights with population estimates on the level of post – strata (region (West bank, Gaza),gender, age group).
7. Final individuals weights were checked by comparing sum of weights with population estimates on the level of post-strata .

Variance Calculation

It is necessary to compute standard errors of the principal survey estimations, so that a user can identify the accuracy of estimations and the survey reliability.

Variable	Estimate %	Standard Error %	Coefficient of Variation %	95% Confidence Interval		Observations
				Lower %	Upper %	
Percentage of women (15-49 years old) reporting currently using a form of family planning at time of survey	0.5254	.00528	0.011	0.515	0.536	10,617
Percentage of women (49-15 years old) who reported receiving ante-natal care during births taking place during the past two years	0.9797	0.00254	0.003	0.975	0.985	4,471
Percentage of births taking place in health institutions reported by women during the past two years	0.9799	0.00339	0.004	0.973	0.987	4,471
Percentage of women who delivered by Cesarean section	0.1671	0.00588	0.035	0.155	0.179	4,471
Exclusive breastfeeding under 6 months	0.2883	0.01269	0.044	0.263	0.314	747
Underweight prevalence	0.0371	0.00226	0.061	0.033	0.042	9,158
Stunting prevalence	0.1093	0.00402	0.037	0.101	0.117	8,964

The tables above indicate a high level of data accuracy.

Reference period:
The period of data collection in West Bank extended from 3/5/2010, to 12/8/2010. While data collection in Gaza strip extended from 9/2010 to 11/2010.

Data Collection
The training manual for interviewers was prepared to include all relevant topics of fieldwork and questionnaire completion. The manual included the tasks of every member of the fieldwork team, the mechanism to access households, interviewing, and completing the questionnaire. The training manuals for supervisors and editors were also prepared in order to train the team to master all necessary skills to ensure successful survey. The training program was prepared to include all topics of the questionnaire.

At the end of the training an exam was held for the trainees in the training material and trainees were evaluated on specific basis: 40% for daily assessment and 60% for final exam, supervisors, editors and assistants who got the highest marks were selected.

After selecting supervisors, editors and assistants another training course were held for one day to three days, included the group's tasks, supervision and follow-up mechanisms and audit, in addition to the rules of the audit, review, and methods of control work and solving the problems of field and meet the models set for the field work.

The interviewers were selected on the basis of qualification, efficiency and evaluation of the researchers, the researchers were trained theoretically and practically on the questionnaires, models and maps for 14 days, with training in separate rooms, training has been initiated on 30/3/2010 and continued until 14/4/2010.

Data Processing :Processing of data was implemented in parallel with data collection. The data processing of the survey was ended in January 2011. The Census and Survey Processing System program (CSPRO) was used in the processing of the survey data.

Response Rate

Number of households, qualified women, youth, elderly and response rate by region

Sample and response rate	Palestinian Territory	West Bank	Gaza Strip
Households in the sample	15,355	10,027	5,328
Interviewed households	13,629	8,740	4,889
Response rate	**%92.0**	**%90.5**	**%94.8**
Sampled ever- married females aged 15-49 years	12,322	7,657	4,665
Interviewed ever- married females aged 15-49 years	12,005	7,381	4,624
Response rate	**%97.4**	**%96.4**	**%99.1**
Sampled under-5 children	11,273	6,524	4,749
Interviewed under-5 children	11,110	6,386	4,724
Response rate	**%98.6**	**%97.9**	**%99.5**
Sampled youth 15-29 years	7,726	5,061	2,665
Interviewed youth 15-29 years	4,405	2,616	1,789
Response rate	**%57.0**	**%51.7**	**%67.1**
Sampled elderly 60 years and over	3,866	2,614	1,252
Interviewed elderly 60 years and over	3,634	2,391	1,243
Response rate	**%94.0**	**%91.5**	**%99.3**

Data Quality

There are many aspects related to the concept of data quality. This comprises the initial planning of the survey, the dissemination of the results, and how well users understand and use the data. There are three components to the quality of statistics: accuracy, data comparability, and quality control.

To ensure the high quality of the data, a series of steps were undertaken:
- Inspect and review all the tools of the survey.
- Training of researchers on the questionnaires for sufficient time according to international recommendations and by qualified trainers.
- The constant supervision of all areas and all phases of fieldwork.
- Examination of the questionnaires in the field and auditing at office.
- Continuous examination of the data entered in terms of consistency and rationality.
- During the fieldwork, field-testing the use of tables (16 tables) that examine the distribution and collection of questionnaires depending on the difference, sex ratio, age heaping, target groups, and other relevant tests.
- After receipt of the raw data file it has been cleaned and examined the abnormal values and examine the consistency between the different questions on the questionnaire .

Accuracy of data comprises different aspects of the survey, mainly statistical errors due to the use of a statistical sample, as well as non-statistical errors due to staff and survey tools, in addition to response rates in the survey and its effect on estimates.

Statistical Errors
Since the data reported in this survey are based on a sample survey and not on a complete enumeration, there may be sampling errors as well as non-sampling errors.

Data from this survey may be affected by statistical errors due to use of the sample. Therefore, the emergence of certain differences from the real values obtained through censuses is possible.

Non-Statistical Errors
Procedures were developed to ensure that non-statistical errors were minimized as much as possible. Fieldworkers were selected based on strict criteria with adequate qualifications and experience in data collection. All fieldworkers underwent training on data collection best practices, topics of the questionnaires, and how to interview and obtain accurate answers from respondents.

In addition, office editors were also trained on editing guidance to ensure data was consistent and complete. Data entry programs were also designed to resemble the structure of the questionnaire itself to ensure consistency within the data in each record and cross-records. All entered data were verified by different data entry clerks to ensure that all data were entered correctly.

The fieldworkers reported that respondents sometimes had difficulty understanding some of the questions and terminology. However, fieldworkers were able to overcome these difficulties due to the good training and proper understanding of the survey's instruments.

The main non-statistical errors that emerged during the implementation of the survey can be summarized as:
1. Errors resulting from the way a question was presented by the fieldworker during the interview.
2. Errors resulting from the way the respondent understood and answered the questions of the survey.

Assessment of Data
Different methods were applied in the assessment of the survey data, including:
1. Occurrences of missing values and answers like "other" and "do not know".
2. Examining inconsistencies between the various sections of the questionnaire, including within record and cross-record consistencies.
3. Comparability of data with previous surveys 2000, 2006 and showed logical homogeneity in the results.

The results of these assessment procedures show that the data are of high quality and consistency.

Derived Variables

Variable name	Description	Values
Region	Region	1. West Bank 2. Gaza Strip
HH6	Type of locality	1. Urban 2. Rural 3. Camps
anemia	anemia	1. non anemic 2. Mild anemia 3. Moderate anemia 4. Severe anemia 98. others
underweight		1. < -3sd 2. -2sd-(-3sd) 3. other
stunting		1. < -3sd 2. -2sd-(-3sd) 3. other
wasting		1. < -3sd 2. -2sd-(-3sd) 3. other
WAZ	weight for age	value
LAZ	hight for age	value
WLZ	weight for hight	value
BAZ	body mass index	value
Flaged	Flaged	value
AG2	Child Age	age