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Egypt Demographic and Health Survey 2005

Preliminary Report

Ministry of Health and Population

National Population Council

El-Zanaty and Associates

MEASURE DHS
ORC Macro

The 2005 Egypt Demographic and Health Survey (2005 EDHS) was conducted on behalf of the Ministry of Health and Population and the National Population Council by El-Zanaty and Associates. The 2005 EDHS is part of the worldwide MEASURE DHS project which is funded by the United States Agency for International Development (USAID). USAID/Cairo was the main contributor of funding for the survey. Support for the survey also was provided by UNICEF and the Ford Foundation. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID, UNICEF, or the Ford Foundation.

Additional information about the 2005 EDHS may be obtained from the National Population Council, P.O. Box 1036, Cairo, Egypt; Telephone: 20-2-5240504 or 20-2-5240505 and Fax: 20-2-5240219.

Information about DHS surveys may be obtained from the Measure DHS Project, ORC Macro, 11785 Beltsville Drive, Calverton, MD 20705 USA; Telephone: 301-572-0200, Fax: 301-572-0999, E-mail: reports@orcmacro.com, Internet: http://www.measuredhs.com.

EGYPT
DEMOGRAPHIC AND HEALTH SURVEY
2005

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PREFACE

Health for all is the main health objective of the Egyptian government. The Ministry of Health and Population (MOHP) has given a high priority to implementing this objective, developing a national system of health facilities providing services at all levels. The MOHP is committed to increasing the quality and coverage of the health care system in Egypt, especially in rural areas, emphasizing preventive care and children's immunization.

To monitor and evaluate the achievement of health development, reliable data are needed. These data can be obtained from service administration (service-based data) and collected directly from the community (household-based data). The two types of data complement each other in enhancing the information available to monitor progress in the health sector.

Beginning in 1980, a number of surveys have been carried out in Egypt to obtain data from the community on the current health situation, including a series of Demographic and Health Surveys in which 2005 EDHS is the most recent. The preliminary results of the 2005 EDHS show that the family planning program in Egypt continues to be successful in helping couples to plan their families. The survey also found that key maternal and child health indicators, including antenatal care coverage, medical assistance at delivery, and infant and child mortality have improved.

The findings of the 2005 EDHS together with the service-based data are very important measuring the achievements of family planning and health programs. Based on the above-mentioned considerations, the results of the 2005 EDHS should be disseminated at different levels of health management, in the central offices as well as local governments, and to the community at large.

Prof. Dr. Awad Tag El-Din
Minister of Health and Population

FOREWORD

The Egyptian family planning program has made substantial progress in supporting the efforts of Egyptian families to meet their reproductive goals. A reason for this success has been the considerable body of population research that has been undertaken over the past decades. This research has helped the program to monitor the impact of its effort and identify key areas for further intervention.

The 2005 Egypt Demographic and Health Survey is the fifth cycle in the full-scale EDHS series. The purpose of the survey was to provide the Ministry of Health and Population (MOHP) of Egypt with information on fertility, reproductive practices of women, maternal care, child health and mortality, child nutrition practices, breastfeeding, and anemia. This information is important for understanding the factors that influence the reproductive health of women and the health and survival of infants and young children.

This report summarizes the results of more than one year of continuous work preparing and carrying out different activities of the 2005 EDHS, including fieldwork, data processing, and analysis of the findings presented in this preliminary report.

I would like to express my appreciation to all parties who assisted in the implementation of the 2005 EDHS. Their efforts resulted in the successful completion of the 2005 EDHS activities and the rapid issuance of this preliminary analysis of the survey results.

Dr. Safaa El-Baz
Assistant Minister of Health and Population
for National Population Council Affairs

ACKNOWLEDGMENTS

The Egypt Demographic and Health Survey represents the continuing commitment and efforts in Egypt to obtain data on fertility and contraceptive practice. The survey also reflects the strong interest in information on key maternal health and child survival issues. The wealth of demographic and health data that the survey provides will help in charting future directions for the population and health programs.

This important survey could not have been implemented without the active support and dedicated efforts of a large number of institutions and individuals. The support and approval of H.E. Prof. Dr. Awad Tag El-Din was instrumental in securing the implementation of the EDHS. Dr. Safaa El-Baz Assistant of Minister of Health and Population for NPC Affairs, provided strong continuing support to the project and has shown great interest in the survey results.

USAID/Cairo through its bilateral health and population projects was the main contributor of funding for the survey. UNICEF and the Ford Foundation also provided financial support. Technical assistance came from the USAID-sponsored MEASURE DHS project.

I am deeply grateful to the Ministry of Health and Population staff who contributed to the successful completion of this project, especially Dr. Yehia El-Hadidi, Under-Secretary of the Ministry of Health and Population and head of the Population Sector, and Dr. Essmat Mansour, Under-Secretary for Primary Health Care and head of the Maternal and Child Health Project, for their continuous help during the survey.

I also gratefully acknowledge the Population and Health Office staff at USAID/Cairo, especially Ms. Kathryn Panther, Director of the Population and Health Office, and Ms. Shadia Attia, Research and Monitoring Advisor, Population and Health Office, for their support and valuable comments throughout the survey activities.

I also acknowledge with gratitude Ms. Roumiana Gantcheva, Monitoring and Evaluation Office, UNICEF, and Dr. Maha El-Adawy, Reproductive Health and Rights Program Officer, Ford Foundation, for facilitating the successful implementation of the survey.

Dr. Ann Way of ORC Macro, who worked closely with us on all phases of EDHS, deserves special thanks for all her efforts throughout the survey and during the preparation of this report. My thanks also are extended to Dr. Alfredo Aliaga for his advice and guidance in designing the sample. Ms. Jeanne Cushing deserves my deepest thanks for her assistance in data processing and tabulation required for this report. Jasbir Sangha provided invaluable assistance with the organization of the anemia-testing component of the survey

I would like to express my appreciation for all the senior, office, and field staff at El-Zanaty and Associates for the dedication and skill with which they performed their tasks.

Finally, I would like to express my appreciation to all households and women who responded in the survey; without their participation this survey would have been impossible.

Fatma El-Zanaty
Technical Director

I. Background

The 2005 Egypt Demographic and Health Survey (2005 EDHS) is the most recent in a series of national-level population and health surveys in Egypt.[1] The 2005 EDHS was conducted under the auspices of the Ministry of Health and Population and the National Population Council. ORC Macro provided technical support for the survey through the MEASURE DHS project. The MEASURE DHS project is sponsored by the United States Agency for International Development (USAID) to assist countries worldwide to obtain information on key population and health indicators. USAID/Cairo was the main contributor of funding for the survey under its bilateral population and health projects. UNICEF and the Ford Foundation also provided financial support for the survey.

The 2005 EDHS was undertaken in order to obtain data on fertility and family planning behavior, child mortality, the utilization of maternal and child health care services and other issues relating to the health and welfare of women and children in Egypt. The survey obtained detailed information on these issues from a sample of ever-married women in the reproductive ages. Additional information relating to anemia levels among women, children under age 6, and adolescents was obtained from a subsample of the interviewed households.

The 2005 EDHS results are intended to provide the information needed to monitor the performance of the family planning and maternal and child health programs in Egypt. The survey findings are useful for assessing the current health situation of women and their children and planning further interventions to improve Egypt's maternal and child health programs.

This preliminary report presents initial findings relating to the principal topics in the survey. The early publication of these results is intended to facilitate use of the information in the planning and management of population and health programs in Egypt. A more detailed report will be issued in the first half of 2006. The figures in this preliminary report are not expected to differ markedly from the findings presented in the more detailed report; nevertheless, the results presented here should be considered provisional and subject to modification.

[1] Full-scale DHS surveys were conducted in 1988, 1992, 1995, and 2000. In addition, interim DHS surveys were carried out in 1997, 1998, and 2003. Other national-level surveys for which results are shown in this report include the Egyptian Fertility Survey (1980 EFS), the 1984 Egypt Contraceptive Prevalence Survey (1984 ECPS) and the 1991 Egypt Maternal and Child Health Survey (1991 EMCHS).

II. Survey Implementation

A. Sample Design

The sample for the 2005 EDHS was designed to provide estimates of population and health indicators including fertility and mortality rates for the country as a whole and for six major subdivisions (Urban Governorates, urban Lower Egypt, rural Lower Egypt, urban Upper Egypt, rural Upper Egypt and the Frontier Governorates[2]). The sample allows for separate estimates of all key indicators for seven governorates (Fayoum, Beni Suef, Menya, Qena, and Aswan in Upper Egypt and Cairo and Alexandria) that are focal governorates for USAID-supported population, health and nutrition programs. In addition, the sample is sufficiently large in most other governorates to allow for governorate-level estimates of major variables, with the exception of fertility and mortality rates and anemia levels. In the Frontier Governorates, the sample size for individual governorates is not sufficiently large to allow for separate governorate-level estimates.

In order to allow for the regional and governorate-level estimates, the number of households selected from each of the sampling domains was disproportionate to the size of the population in the domain. Thus, the 2005 EDHS sample is not self-weighted at the national level.

B. Sample Selection

The sample for the 2005 EDHS was selected in three stages. A list of shiakhas/towns constituted the primary sampling frame for urban areas, and a list of villages served as the frame for rural areas. The Central Agency of Public Mobilization and Statistics (CAPMAS) updated these lists, which had been originally prepared for the 1996 census, to reflect the situation in 2004.

In order to provide for implicit geographic stratification, the lists of shiakhas/towns and villages in each governorate were arranged in serpentine order according to their location from north to south within the governorate. During the first stage selection, a total of 682 primary sampling units (289 shiakhas/towns and 393 villages) were chosen for the 2005 EDHS sample.

The second stage of selection involved several steps. First, for each of the primary sampling units (PSU), maps were obtained and divided into a number of parts of roughly equal size (assuming approximately 5000 persons per part). In large shiakhas/towns or villages (approximately 20,000 and more population), two parts were selected from each PSU. In the remaining smaller shiakhas/towns and villages, one part was selected. A quick count was carried out in the selected parts in each PSU to provide the information needed to divide the parts into a number of segments of roughly equal size. After the quick count was completed, two segments were then selected from each PSU. In large shiakhas/towns and villages where there were two parts, one segment was chosen from each part. In small shiakhas/towns and villages where only one part had been selected, two segments were chosen from that part.

A household listing was obtained for each segment. Using the household lists, a systematic sample of 22,807 households was chosen for the 2005 EDHS. All ever-married women 15-49 who were present in the sampled households on the night before the interview were eligible for the survey. A subsample of one-third of all households in each segment was selected for the anemia-testing component. In this subsample, information on anemia levels was collected for all eligible women, children under age 6, and children between the ages of 10 and 19 (hereafter referred to as

[2] The Frontier Governorates were not included in 1988 and 1992 DHS surveys nor in the 1997, 1998 and 2003 interim surveys. However, they were part of the 1995 and 2000 EDHS samples. The inclusion of the Frontier Governorates in the 2005 EDHS will not affect comparisons of the 2005 DHS results with earlier surveys in which these governorates were not part of the samples since only around one percent of the Egyptian population resides in the Frontier Governorates.

adolescents). One woman in each household in the subsample in which anemia testing was carried out was also selected to be asked questions about domestic violence.

C. Questionnaires

Two questionnaires were used in the 2005 EDHS: a household questionnaire and an individual questionnaire. The household and individual questionnaires were based on the questionnaires that had been used in earlier EDHS surveys and on model survey instruments developed in the MEASURE DHS program. The questionnaires were developed in English and translated into Arabic. A pretest of the household and individual questionnaires that involved around 300 households was conducted in January 2005.

The household questionnaire was used to enumerate all usual members of and visitors to the selected households and to collect information on the socioeconomic status of the households as well as on the nutritional status of women and children and on levels of anemia among women, children under age 6, and adolescents. The first part of the household questionnaire collected information on the age, sex, marital status, educational attainment, work status and relationship to the household head of each household member or visitor. This information provides basic demographic data for Egyptian households. It was also used to identify the women who were eligible for the individual interview (i.e., ever-married women 15-49) as well as children and adolescents eligible for anemia testing and height and weight measurement. In the second part of the household questionnaire, there were questions on housing characteristics (e.g., the number of rooms, the flooring material, the source of water and the type of toilet facilities) and on ownership of a variety of consumer goods. Finally, specially trained staff obtained and recorded information on the height and weight of all eligible women, children under age 6, and adolescents. These staff also collected data on anemia levels from eligible women, children under age 6, and adolescents in a subsample of one-third of the EDHS households.

The individual questionnaire for women obtained information on the following topics: respondent's background characteristics, reproduction, contraceptive knowledge and use, fertility preferences and attitudes about family planning, pregnancy and breastfeeding, child immunization and health, children's education and labor, female circumcision, husband's background, women's work and decision-making, and domestic violence.

D. Data Collection and Processing

The EDHS data were collected by 14 teams; each team consisted of three to four interviewers and a field editor, who were female, and the team supervisor. In addition, two staff (at least one of whom had a medical background) with special training in anthropometric measurement and anemia testing were assigned to each team to collect data on height and weight and anemia levels. The field staff was trained during a five-week period beginning in March 2005. The main fieldwork began in late April and was completed by mid-June. All callbacks and reinterviews were completed by early July.

As soon as possible after a team had completed interviewing in a PSU, questionnaires were returned to the EDHS survey office in Cairo for data processing. The office editing staff first checked that questionnaires for all selected households and eligible respondents had been received from the field staff. In addition, a few questions that had not been precoded (e.g., occupation) were coded at this time. Using the CSPro software, a specially trained team of data processing staff then entered the questionnaires and edited the resulting dataset on microcomputers. The process of office editing and data processing was initiated almost immediately after the beginning of fieldwork and was completed by the end of July.

E. Coverage of the Sample

Table 1 presents information on the results of the household and individual interviews. A total of 22,807 households were selected for the 2005 EDHS sample. Household interviews were completed for 21,972 households. The household response rate was 98.9 percent.

Table 1 Sample results

Number of the households (HH) and eligible women (EW) in the sample by the result of the interview and response rates according to urban-rural residence and place of residence, Egypt 2005

Result of interview and response rate	Urban	Rural	Urban Governorates	Lower Egypt			Upper Egypt			Frontier Governorates	Total
				Total	Urban	Rural	Total	Urban	Rural		
Households											
Samples	11,164	11,643	5,231	6,656	2,071	4,585	9,998	3,247	6,751	922	22,807
Found	10,746	11,465	5,024	6,500	1,989	4,511	9,806	3,153	6,653	881	22,211
Interviewed	10,555	11,417	4,923	6,454	1,965	4,489	9,723	3,094	6,629	872	21,972
HH response rate	98.2	99.6	98.0	99.3	98.8	99.5	99.2	98.1	99.6	99.0	98.9
Eligible women											
Identified	8,147	11,418	3,568	5,918	1,560	4,358	9,177	2,486	6,691	902	19,565
Interviewed	8,095	11,379	3,538	5,903	1,553	4,350	9,132	2,471	6,661	901	19,474
EW response rate	99.4	99.7	99.2	99.7	99.6	99.8	99.5	99.4	99.6	99.9	99.5

As noted above, an eligible respondent was defined as an ever-married woman age 15-49 who was present in the household on the night before the interview. A total of 19,565 eligible women were identified in the households in the 2005 EDHS sample. Of these women, 19,474 were successfully interviewed.

III. Preliminary Findings from the 2005 EDHS

A. Background Characteristics

The distribution of the ever-married women 15-49 interviewed in the 2005 EDHS by selected background characteristics is presented in Table 2. Almost all of the respondents (93 percent) were married at the time of the interview, 4 percent were widowed, and 3 percent divorced or separated. Considering the age distribution, 19 percent of the sample were under age 25, 36 percent were in the 25-34 age group, and 45 percent were age 35 and over. The relatively small proportion of young women in the sample reflects the fact that the age at first marriage has been steadily increasing in Egypt.

Table 2 Background characteristics of respondents

Percent distribution of ever-married women by selected background characteristics, Egypt 2005

Background characteristic	Weighted percent	Number of women	
		Weighted number	Unweighted number
Marital status			
Currently married	93.4	18,187	18,134
Widowed	3.9	765	792
Divorced	2.0	394	413
Separated	0.7	128	135
Age			
15-19	4.1	803	858
20-24	15.2	2,968	3,008
25-29	19.4	3,785	3,780
30-34	16.5	3,209	3,189
35-39	16.4	3,191	3,186
40-44	14.7	2,859	2,827
45-49	13.7	2,659	2,626
Urban-rural residence			
Urban	41.3	8,033	8,095
Rural	58.7	11,441	11,379
Place of residence			
Urban Governorates	16.9	3,293	3,538
Lower Egypt	43.2	8,410	5,903
Urban	11.3	2,199	1,553
Rural	31.9	6,211	4,350
Upper Egypt	38.8	7,552	9,132
Urban	12.4	2,411	2,471
Rural	26.4	5,141	6,661
Frontier Governorates	1.1	218	901
Education			
No education	34.6	6,740	6,934
Some primary	11.3	2,197	2,214
Primary complete/Some secondary	14.0	2,719	2,756
Secondary complete/Higher	40.1	7,818	7,570
Work status			
Working for cash	16.9	3,288	3,230
Not working for cash	83.1	16,186	16,244
Total	100.0	19,474	19,474

Forty-one percent of the 2005 EDHS respondents live in urban areas, while nearly 60 percent live in rural areas. By place of residence, 17 percent reside in the Urban Governorates, 43 percent in Lower Egypt, 39 percent in Upper Egypt, and 1 percent in the Frontier Governorates.

Although the majority of women in the sample had some education, 35 percent of the respondents reported that they had never attended school. An additional 11 percent attended but did not complete primary school, 14 percent completed the primary level or had some secondary education, and 40 percent completed the secondary or higher level.

A minority of 2005 EDHS respondents (17 percent) were working at a job for which they were paid in cash.

B. Fertility

In the 2005 EDHS, retrospective reproductive histories were obtained from all respondents. In collecting these histories, each woman was first asked about the number of sons and daughters living with her, the number living elsewhere and the number who had died. She was then asked for a history of all her births, including the month and year in which each child was born, the child's name, sex and, if dead, the age at death, and, if alive, the current age and whether the child was living with the mother.

Current and cumulative fertility

The fertility measures presented in Table 3 include the total and age-specific fertility rates and the mean number of children ever born.[3] The total fertility rate represents the number of children the average woman would have by the end of her reproductive years if she were to bear children throughout the period at the age-specific rates observed during the 36-month period before the survey. The total fertility rate in Table 3 indicates that, if fertility were to remain constant at levels prevailing during the period (approximately mid-2002 through mid-2005), an Egyptian woman would bear 3.1 children over her lifetime.

Table 3 Current and cumulative fertility

Age-specific fertility rates (per 1000 women) and total fertility rate for the three years preceding the survey and the mean number of children ever born by age of the mother, Egypt 2005

Age	Age specific fertility rates	Mean number of children ever born (all women)	Number of all women
15-19	48	0.1	6,446
20-24	175	0.7	5,807
25-29	194	1.8	4,655
30-34	125	2.9	3,413
35-39	63	3.7	3,310
40-44	19	4.2	2,933
45-49	2	4.8	2,705
Total 15-44	3.1	1.8	26,565
Total 15-49	3.1	2.1	29,270

Egyptian women tend to have children early in the reproductive period. At the current age-specific rates shown in Table 3, an Egyptian woman will give birth to 1.1 children—more than one-third of her lifetime births—by age 25 and to 2.1 children—roughly two-thirds of her lifetime births—by age 30.

The effect of past high fertility among Egyptian women is evident in the mean number of children ever born in Table 3. On average, women in their early 30s have had 3 births and women nearing the end of the childbearing period have given birth to almost 5 children. The difference between the mean number of children ever born to women 45-49 and the total fertility rate is 1.7

[3] Fertility measures for the 2005 EDHS are calculated directly from the birth history data. Although information on fertility was obtained only from ever-married women, estimates are presented for all women regardless of marital status. Data from the household questionnaire on the age structure of the population of never-married women is used to calculate the all-women factors. This procedure assumes that women who have never been married have had no births.

children, indicating the rapid transition to lower fertility which Egypt has experienced in the past several decades.

Trends in fertility

Using data from earlier surveys as well as from the 2005 EDHS, Table 4 examines the trend in fertility in Egypt since the late 1970s. During the period, fertility has fallen by more than 40 percent, from 5.3 births at the time of the Egypt Fertility Survey to 3.1 births at the time of the 2005 EDHS. Between the 2000 and 2005 EDHS surveys, fertility fell by 0.4 births, a more substantial decline than was observed between the 1995 and 2000 surveys.

Table 4 Trend in fertility

Age-specific fertility rates (per 1,000 women) and total fertility rates, Egypt 1979-2005

Age	EFS 1979-1980[1]	ECPS 1983-1984[1]	1988 EDHS 1986-1988[2]	1991 EMCHS 1990-1991[1]	1992 EDHS 1990-1992[2]	1995 EDHS 1993-1995[2]	1997 Interim EDHS 1995-1997[2]	1998 Interim EDHS 1996-1998[2]	2000 EDHS 1997-2000[2]	2003 Interim EDHS 2000-2003[2]	2005 EDHS 2002-2005[2]
15-19	78	73	72	73	63	61	52	64	51	47	48
20-24	256	205	220	207	208	200	186	192	196	185	175
25-29	280	265	243	235	222	210	189	194	208	190	194
30-34	239	223	182	158	155	140	135	135	147	128	125
35-39	139	151	118	97	89	81	65	73	75	62	63
40-44	53	42	41	41	43	27	18	22	24	19	19
45-49	12	13	6	14	6	7	5	1	4	6	2
TFR 15-49	5.3	4.9	4.4	4.1	3.9	3.6	3.3	3.4	3.5	3.2	3.1

[1]Rates are for the 12-month period preceding the survey.
[2]Rates are for the 36-month period preceding the survey.
Note: Rates for the age group 45-49 may be slightly biased due to truncation.
Source: El-Zanaty and Way, 2004, Table 2.2

Fertility by residence

As Table 5 shows, rural women are having more children than urban women. At fertility levels prevailing at the time of the 2005 EDHS, rural women will have nearly 3.4 births by the end of the childbearing period while urban women will have an average of 2.7 births. By place of residence, fertility levels vary from a low of 2.5 births per woman in the Urban Governorates to 3.9 births in rural areas in Upper Egypt (Figure 1).

Using information from earlier surveys as well as the 2005 EDHS, Table 6 examines the trend in fertility in Egypt by residence since the mid-1980s. In urban areas, fertility fell from a level of 3.5 births at the time of the 1988 EDHS to the current level of 2.7 births per woman. In rural areas, fertility fell even more rapidly from a level of 5.4 births at the time of the 1988 survey to 3.4 births in the 2005 survey. Considering the trend during the period between the 2000 and 2005 surveys, urban fertility has dropped by 0.4 births (from 3.1 to 2.7 births per woman) and rural fertility by 0.5 births (from 3.9 to 3.4 births).

Figure 1
Total Fertility Rates by Place of Residence, Egypt 2005

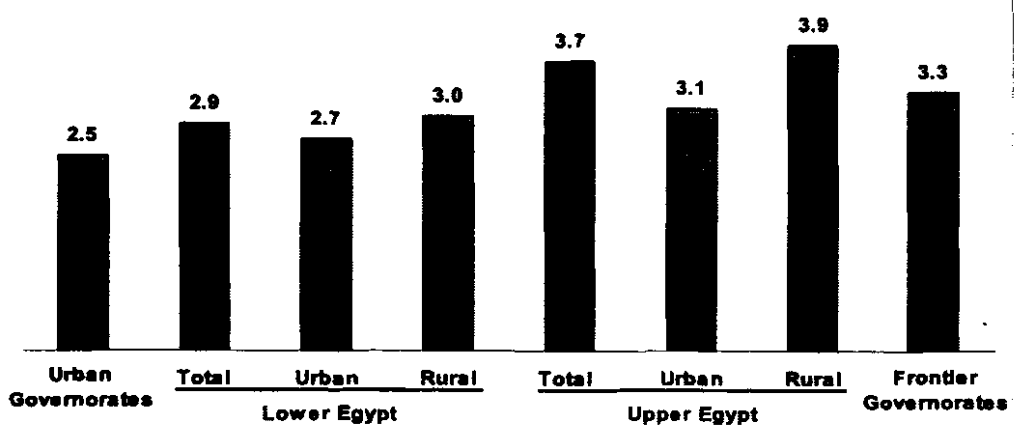

Table 5 Current fertility by residence

Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by urban-rural residence and place of residence, Egypt 2005

Age	Urban	Rural	Urban Governorates	Lower Egypt			Upper Egypt			Frontier Governorates	Total
				Total	Urban	Rural	Total	Urban	Rural		
15-19	27	62	19	41	18	47	67	40	78	26	48
20-24	143	199	118	177	154	185	202	171	217	164	175
25-29	178	206	172	190	174	195	210	188	221	179	194
30-34	120	128	112	112	123	109	145	126	155	156	125
35-39	63	63	60	48	48	47	80	76	83	114	63
40-44	18	21	17	17	16	17	24	21	26	29	19
45-49	1	3	1	1	1	1	4	3	5	0	2
TFR	2.7	3.4	2.5	2.9	2.7	3.0	3.7	3.1	3.9	3.3	3.1
GFR	91	121	81	103	86	107	127	103	138	111	108
CBR	23.6	29.6	21.3	26.1	23.4	26.9	30.7	26.6	32.7	28.1	27.1

Note: Rates for age group 45-49 may be slightly biased due to truncation.
TFR: Total fertility rate for ages 15-49, expressed per woman
GFR: General fertility rate (births divided by the number of women age 15-44), expressed per 1,000 women
CBR: Crude birth rate, expressed per 1,000 population

Table 6 Trend in fertility by residence

Total fertility rates by urban-rural residence and place of residence, Egypt 1986-2005

Residence	1988 EDHS 1986-1988[2]	1991 EMCHS 1990-1991[1]	1992 EDHS 1990-1992[2]	1995 EDHS 1993-1995[2]	Interim EDHS 1995-1997[2]	1998 Interim EDHS 1996-1998[2]	2000 EDHS 1997-2000[2]	2003 Interim EDHS 2000-2003[2]	2005 EDHS 2002-2005[2]
Urban-rural residence									
Urban	3.5	3.3	2.9	3.0	2.7	2.8	3.1	2.6	2.7
Rural	5.4	5.6	4.9	4.2	3.7	3.9	3.9	3.6	3.4
Place of residence									
Urban Governorates	3.0	2.9	2.7	2.8	2.5	2.7	2.9	2.3	2.5
Lower Egypt	4.5	U	3.7	3.2	3.0	3.1	3.2	3.1	2.9
Urban	3.8	3.5	2.8	2.7	2.6	2.4	3.1	2.8	2.7
Rural	4.7	4.9	4.1	3.5	3.2	3.2	3.3	3.2	3.0
Upper Egypt	5.4	U	5.2	4.7	4.2	4.3	4.2	3.8	3.7
Urban	4.2	3.9	3.6	3.8	3.3	3.3	3.4	2.9	3.1
Rural	6.2	6.7	6.0	5.2	4.6	4.5	4.7	4.2	3.9
Frontier Governorates	U	U	U	4.0	U	U	3.8	U	3.3
TFR 15-49	4.4	4.1	3.9	3.6	3.3	3.4	3.5	3.2	3.1

[1]Rates are for the 12-month period preceding the survey.
[2]Rates are for the 36-month period preceding the survey.
U-Unavailable
Note: Rates for the age group 45-49 may be slightly biased due to truncation.
Source: El-Zanaty and Way, 2004, Table 2.3

Looking at the trends between 1988 and 2005 by place of residence, the absolute decline was smallest in the Urban Governorates (0.5 births) and largest in rural Upper Egypt (2.7 births). Looking at the trend for the period between the last two DHS surveys, i.e., 2000 and 2005, fertility decreased in all residential categories. Rural areas in Upper Egypt experienced the largest decline, from 4.7 births in 2000 to 3.9 births in 2005.

C. Family Planning

The 2005 EDHS collected information on the knowledge and use of family planning. To obtain these data, respondents were first asked to name all of the methods that they had heard about. For methods not mentioned spontaneously, a description of the method was read, and the respondents were asked if they had heard of the method. For each method that they recognized, respondents were asked if they had ever used the method. Finally, women were asked if they were currently using a method, and, if so, where they had obtained the method that they were using.

Knowledge and ever use

Knowledge of family planning methods is universal among Egyptian women (Table 7). With regard to specific methods, almost all currently married women have heard about the pill, IUD, and injectables. More than 90 percent of women also know about the implant. Other methods recognized by at least half of all currently married women are female sterilization (66 percent) and the condom (53 percent). Prolonged breastfeeding is the most widely known traditional method (65 percent).

The 2005 EDHS found that 81 percent of currently married women in Egypt have had some experience in using family planning methods (Table 7). Almost all of the women who have ever used a method have used a modern contraceptive; 79 percent of currently married women have ever used a modern method, while 13 percent have used a traditional method.

Looking at ever use of specific methods, the IUD is the most widely adopted method; 62 percent of currently married women have used the IUD at some point in their lives. Forty percent of currently married women have ever used the pill, while 22 percent have ever used injectables. Relatively few women have experience with using other modern methods. For example, only 4 percent report ever use of condoms.

Table 7 Knowledge and ever use of family planning methods

Percentage of currently married women 15-49 who know a family planning method and who have ever used a family planning method, by method, Egypt 2005

Method	Percent knowing method	Percent ever using method
Any method	99.9	81.2
Any modern method	99.9	79.2
Pill	99.6	39.7
IUD	99.7	62.1
Injectables	99.4	21.5
Implants	93.5	1.5
Diaphragm/foam/jelly	20.7	0.6
Condom	52.6	3.9
Female sterilization	66.0	1.3
Male sterilization	8.2	0.0
Emergency contraception	6.6	0.1
Any traditional method	70.5	13.3
Periodic abstinence	35.4	2.0
Withdrawal	27.9	1.6
Prolonged breastfeeding	64.8	10.8
Other	0.5	0.1
Number of women	18,187	18,187

Among traditional methods, prolonged breastfeeding is the most frequently used method. Eleven percent of currently married women have ever used prolonged breastfeeding.

Current contraceptive use

Overall, 59 percent of currently married women in Egypt are currently using a contraceptive method (Table 8). The most widely used method is the IUD (37 percent) followed by the pill (10 percent) and injectables (7 percent).

There are marked differences in the level of current use of family planning methods by residence (Table 8). Urban women are more likely to be using than rural women (63 percent and 57 percent, respectively). Use rates are higher in the Urban Governorates (64 percent) and Lower Egypt (66 percent) than in Upper Egypt (50 percent) and the Frontier Governorates (51 percent).

Within Upper Egypt, the use rate among urban women (60 percent) is markedly higher than the rate among rural women (45 percent). Within Lower Egypt, the urban-rural differential is much narrower and, somewhat surprisingly, favors rural women; 64 percent of married women living in urban areas in Lower Egypt are using a family planning method compared to 67 percent of rural women.

Table 8 Current use of family planning methods by residence

Percent distribution of currently married women 15-49 by family planning method currently used according to urban-rural residence and place of residence, Egypt 2005

Method	Urban	Rural	Urban Gover-norates	Lower Egypt			Upper Egypt			Frontier Gover-norates	Total
				Total	Urban	Rural	Total	Urban	Rural		
Any method	62.6	56.8	63.9	65.9	64.1	66.5	49.9	60.0	45.2	50.7	59.2
Any modern method	59.8	54.2	61.2	64.2	62.3	64.8	46.1	56.1	41.4	47.2	56.5
Pill	11.0	9.1	8.2	10.0	12.3	9.2	10.3	13.5	8.8	14.4	9.9
IUD	40.5	33.6	43.9	44.0	42.3	44.5	25.2	35.0	20.6	21.9	36.5
Injectables	4.5	8.8	4.4	7.1	4.3	8.0	8.2	4.8	9.8	7.1	7.0
Implants	0.7	0.9	0.9	0.7	0.6	0.7	0.9	0.5	1.2	1.4	0.8
Diaphragm/foam/jelly	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Condom	1.7	0.5	2.5	0.8	1.0	0.7	0.5	1.0	0.3	1.5	1.0
Female sterilization	1.3	1.2	1.1	1.7	1.7	1.7	0.8	1.2	0.7	0.9	1.3
Any traditional method	2.8	2.7	2.6	1.7	1.8	1.7	3.8	3.9	3.8	3.5	2.7
Periodic abstinence	1.4	0.3	1.5	0.5	1.0	0.3	0.6	1.5	0.3	0.4	0.7
Withdrawal	0.6	0.1	0.8	0.2	0.5	0.1	0.2	0.4	0.1	0.6	0.3
Prolonged breastfeeding	0.8	2.2	0.4	1.0	0.3	1.2	2.9	1.9	3.4	2.3	1.6
Other	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Not currently using	37.4	43.2	36.1	34.1	35.9	33.5	50.1	40.0	54.8	49.3	40.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	7,490	10,697	3,078	7,884	2,057	5,826	7,019	2,230	4,789	206	18,187

Other differentials in current use are presented in Table 9. Current use rises rapidly with age, from a level of 26 percent among currently married women 15-19 to a peak of 73 percent among women 35-39. Use rates also are related to family size. Few women use before having the first birth. After the first child, contraceptive use increases sharply with the number of living children, peaking at 74 percent among women with 3-4 children, after which it declines.

Looking at education status, the main differential is between women who never attended school and those who had at least some schooling; among the latter group, there are only minor variations in use rates by the level of schooling. Women employed in a job for which they are paid in cash are more likely to use than other women (66 percent and 57 percent, respectively).

Trend in contraceptive use

Table 10 uses data from earlier surveys as well as the 2005 EDHS to examine trends in contraceptive use in Egypt during the past 25 years. Contraceptive use levels rose rapidly in the 1980s, and by 1992, the overall use rate was 47 percent, almost twice the rate reported in the 1980 Egypt Fertility Survey (24 percent). The use rate continued to rise after 1992—although at a more moderate rate—reaching 56 percent by the time of the 2000 EDHS. Since 2000, the rate has risen at about the same pace as in the latter half of the 1990s.

Looking at the trends by method, IUD use rose from a rate of 4 percent in 1980 to a level of 36 percent in 2000, where it remained essentially unchanged through 2005. Pill use declined steadily during the period 1980-1995 and then stabilized at a rate of around 10 percent beginning in 2000. Injectables first became available in the 1990s, and use of this method increased rapidly after its introduction.

Table 9 Current use of family planning methods by selected demographic and social characteristics

Percent distribution of currently married women 15-49 by family planning method currently used according to selected demographic and social characteristics, Egypt 2005

Background characteristics	Any method	Any modern	Pill	IUD	Injec-ables	Im-plant	Vagin-als	Con-Dom	Female sterili-zation	Any tradi-tional	Peri-odic absti-nence	With-drawal	Pro-longed breast-feeding	Other	Not using	Total percent	Number of women
Age																	
15-19	26.3	24.1	6.3	15.9	1.9	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0	73.7	100.0	792
20-24	44.7	41.3	8.0	27.8	4.5	0.5	0.0	0.4	0.0	3.4	0.2	0.1	3.2	0.0	55.3	100.0	2,898
25-29	57.4	54.4	11.3	34.5	7.4	0.7	0.0	0.4	0.1	3.1	0.2	0.3	2.6	0.0	42.6	100.0	3,653
30-34	69.0	66.4	11.0	44.5	8.5	1.0	0.1	0.8	0.7	2.6	0.7	0.3	1.6	0.0	31.0	100.0	3,077
35-39	73.3	71.2	11.4	45.3	10.3	1.2	0.0	1.2	1.8	2.2	0.7	0.4	1.1	0.0	26.7	100.0	3,010
40-44	70.1	67.6	11.0	43.0	7.5	1.3	0.2	2.0	2.6	2.5	1.7	0.4	0.4	0.1	29.9	100.0	2,525
45-49	47.8	45.3	6.6	27.8	4.7	0.5	0.0	1.9	3.9	2.5	1.6	0.5	0.1	0.3	52.2	100.0	2,233
Number of living children																	
0	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	99.5	100.0	1,782
1-2	58.4	55.5	10.5	38.7	4.3	0.7	0.1	1.0	0.2	2.9	0.7	0.3	1.9	0.0	41.6	100.0	6,712
3-4	74.2	71.1	11.7	46.5	9.0	0.9	0.0	1.3	1.8	3.1	0.9	0.4	1.7	0.1	25.8	100.0	6,677
5+	62.5	59.5	10.2	30.6	13.0	1.5	0.0	0.9	3.3	3.0	0.7	0.2	2.0	0.2	37.5	100.0	3,016
Education																	
No education	54.8	52.2	8.7	30.2	10.1	1.1	0.0	0.4	1.7	2.5	0.0	0.1	2.4	0.0	45.2	100.0	6,116
Some primary	61.8	59.5	9.8	36.6	9.1	1.0	0.1	1.1	1.8	2.3	0.3	0.2	1.5	0.2	38.2	100.0	2,257
Primary completed/ some secondary	60.9	58.6	10.2	38.6	7.4	0.8	0.0	0.8	0.8	2.2	0.1	0.4	1.7	0.0	39.1	100.0	2,327
Secondary comp./higher	61.5	58.4	10.8	40.8	3.8	0.6	0.1	1.5	0.9	3.1	1.6	0.4	1.1	0.0	38.5	100.0	7,488
Work status																	
Working for cash	66.2	62.5	9.8	41.6	7.2	1.1	0.1	1.3	1.5	3.6	1.9	0.4	1.2	0.1	33.8	100.0	3,780
Not working for cash	57.4	54.9	9.9	35.1	7.0	0.8	0.0	0.9	1.2	2.5	0.4	0.3	1.8	0.0	42.6	100.0	14,408
Total	59.2	56.5	9.9	36.5	7.0	0.8	0.0	1.0	1.3	2.7	0.7	0.3	1.6	0.1	40.8	100.0	18,187

Note: If more than one method is used, only the most effective method is considered in this tabulation

Table 10 Trends in current use of family planning

Percent distribution of currently married women by the family planning method currently used, Egypt 1980-2005

Method	1980 EFS	1984 ECPS	1988 EDHS	1991 EMCHS	1992 EDHS	1995 EDHS	1997 EIDHS	1998 EIDHS	2000 EDHS	2003 EIDHS	2005 EDHS
Any method	24.2	30.3	37.8	47.6	47.1	47.9	54.5	51.8	56.1	60.0	59.2
Any modern method	22.8	28.7	35.4	44.3	44.8	45.5	51.8	49.5	53.9	56.6	56.5
Pill	16.6	16.5	15.3	15.9	12.9	10.4	10.2	8.7	9.5	9.3	9.9
IUD	4.1	8.4	15.7	24.2	27.9	30.0	34.6	34.3	35.5	36.7	36.5
Injectables	U	0.3	0.1	U	0.5	2.4	3.9	3.9	6.1	7.9	7.0
Implant (Norplant)	U	U	U	U	0.0	0.0	0.1	0.0	0.2	0.9	0.8
Diaphragm/foam/jelly	0.3	0.7	0.4	U	0.4	0.1	0.2	0.1	0.2	0.1	0.0
Condom	1.1	1.3	2.4	U	2.0	1.4	1.5	1.1	1.0	0.9	1.0
Female sterilization	0.7	1.5	1.5	U	1.1	1.1	1.4	1.3	1.4	0.9	1.3
Any traditional method	1.4	1.6	2.4	3.3	2.3	2.4	2.7	2.3	2.2	3.4	2.7
Periodic abstinence	0.5	0.6	0.6	U	0.7	0.8	0.6	0.8	0.6	0.8	0.7
Withdrawal	0.4	0.3	0.5	U	0.7	0.5	0.4	0.3	0.2	0.4	0.3
Prolonged breastfeeding	U	0.6	1.1	U	0.9	1.0	1.5	1.1	1.2	2.1	1.6
Other	0.3	0.1	0.2	U	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Not using	75.8	69.7	62.2	62.2	52.9	52.1	45.5	48.2	43.9	40.0	40.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	8,012	9,158	8,221	8,406	9,153	13,710	5,157	5,971	14,382	8,445	18,187

U - Information on the method was not collected or reported.
Source: El-Zanaty and Way, 2004, Table 3.4

Trends by residence

Table 11 summarizes the trend in contraceptive use by residence since 1984. Urban prevalence rose steadily during the 1980s, appeared to plateau in the early 1990s, and then resumed a steady pattern of growth, peaking at 66 percent in 2003 before falling off slightly to 63 percent at the time of the 2005 EDHS.

Table 11 Trends in family planning use by residence

Percentage of currently married women currently using a family planning method by urban-rural residence and place of residence, Egypt 1984-2005

Residence	1984 ECPS	1988 EDHS	1992 EDHS	1995 EDHS	1997 EIDHS	1998 EIDHS	2000 EDHS	2003 EIDHS	2005 EDHS
Urban-rural residence									
Urban	45.1	51.8	57.0	56.4	63.1	59.3	61.2	65.5	62.6
Rural	19.2	24.5	38.4	40.5	47.1	45.6	52.0	55.9	56.8
Place of residence									
Urban Governorates	49.6	56.0	59.1	58.1	67.0	62.1	62.7	68.5	63.9
Lower Egypt	34.1	41.2	53.5	55.4	61.6	59.2	62.4	65.2	65.9
Urban	47.6	54.5	60.5	59.1	65.9	62.2	64.9	66.3	64.1
Rural	28.5	35.6	50.5	53.8	59.9	58.1	61.4	64.8	66.5
Upper Egypt	17.3	22.1	31.4	32.1	37.4	36.5	45.1	49.4	49.9
Urban	36.8	41.5	48.1	49.9	52.1	50.8	55.4	59.8	60.0
Rural	7.9	11.5	24.3	24.0	30.3	29.9	40.2	44.7	45.2
Frontier Governorates	U	U	U	44.0	U	U	43.0	U	49.3
Total	30.3	37.8	47.1	47.9	54.5	51.8	56.1	60.0	59.2

U – Information on the method was not collected or reported
Source: El-Zanaty and Way, 2004, Table 3.5

Looking more closely at the urban trends, although the Urban Governorates, urban Lower Egypt and urban Upper Egypt all experienced substantial increases in contraceptive use during the

period between 1984 and 2005, the pace of change was more rapid and consistently upward in urban Upper Egypt compared to the pattern in the Urban Governorates and in urban Lower Egypt. In rural Egypt, contraceptive use levels tripled between 1984 and 2005, increasing from 19 percent to 57 percent in 2005. Rural areas in both Lower Egypt and Upper Egypt showed similar absolute gains in use during the period.

Table 12 shows current use rates by governorate. At the time of the 2005 EDHS, use rates were 60 percent or higher in all of the Urban Governorates and in the nine governorates in Lower Egypt. Within the Urban Governorates, Alexandria had the highest use rate (65 percent) and Port Said (62 percent) the lowest rate. Within Lower Egypt, use rates varied from 60 percent in Ismailia to 70 percent in Gharbia.

In Upper Egypt, only Giza governorate, of which a large part is included in the Cairo Metropolitan area, had a use rate over 60 percent. Among the other governorates in Upper Egypt, use rates ranged from 33 percent in Souhag to 56 percent in Beni-Suef and Fayoum.

Looking at the trend in current use by governorate between the 2000 and 2005 DHS surveys, use levels increased in all governorates except Alexandria and Sharkia. In Lower Egypt, the largest gain in use (around nine percentage points) was observed in Behera. In Upper Egypt, the absolute change in use rates was largest in Qena (13 percentage points).

Table 12 Trends in current use of family planning methods by governorate

Percentage of currently married women 15-49 who are currently using a family planning method by governorate, Egypt 1988-2005

Governorate	1988 EDHS	1992 EDHS	1995 EDHS	2000 EDHS	2005 EDHS
Urban Governorates	56.0	59.1	58.1	62.7	63.9
Cairo	58.9	58.1	56.9	62.3	63.8
Alexandria	51.6	62.1	59.8	64.7	64.5
Port Said	48.2	60.5	59.7	57.7	61.6
Suez	50.3	57.3	62.4	58.0	64.0
Lower Egypt	41.2	53.5	55.4	62.4	65.9
Damietta	54.1	53.4	57.4	58.8	63.9
Dakhalia	41.3	52.8	54.9	62.8	64.4
Sharkia	35.2	49.2	53.1	61.4	61.2
Kalyubia	42.3	57.9	55.6	64.0	69.4
Kafr-El-Sheikh	41.7	47.2	54.4	64.2	65.8
Gharbia	50.1	55.9	55.9	65.7	69.7
Menoufia	43.9	55.7	54.3	61.3	64.2
Behera	32.5	54.7	58.7	59.8	68.7
Ismailia	41.0	50.2	58.5	58.9	59.6
Upper Egypt	22.1	31.4	32.1	45.1	49.9
Giza	45.7	49.9	50.9	60.5	62.1
Beni-Suef	15.3	29.2	30.4	53.0	56.0
Fayoum	20.2	33.3	34.0	50.4	55.9
Menya	16.6	21.9	24.3	46.7	51.4
Assuit	12.7	28.2	22.1	32.9	37.9
Souhag	16.2	19.8	21.7	27.5	32.7
Qena	12.2	24.7	26.3	34.6	47.2
Aswan	18.6	31.9	36.0	44.9	49.0

Source: El-Zanaty and Way, 2004, Table 6.7

Family planning sources

The 2005 EDHS obtained information from current users of modern methods about the source from which they had gotten their method. Table 13 presents the results of these questions. Overall, family planning users in Egypt are more likely to obtain their method from a public sector source than a private provider. In the case of the pill, more than 7 in 10 users get their method at a pharmacy. In the case of the IUD, 62 percent of all users have the method inserted at a public sector provider, principally at health units. Among injectable users, 87 percent got the method from a public sector provider. Rural health units are a particularly important source for injectables, supplying more than 4 in 10 users.

Table 13 Source for modern family planning methods

Percent distribution of current users of modern family planning methods by most recent source, according to specific methods, Egypt 2005

Source	Pill	IUD	Injectable	Condom	Female sterilization	Total
Public sector	19.4	61.8	86.6	16.7	39.1	56.6
Urban hospital(general/district)	1.7	7.8	6.1	2.3	21.1	7.0
Urban health unit	3.8	16.3	15.4	4.7	0.2	13.4
Health office	0.9	6.7	4.6	4.3	0.0	5.2
Rural hospital(complementary)	1.8	4.0	6.9	0.1	1.0	3.8
Rural health unit	8.1	14.1	42.8	2.7	0.7	16.1
MCH centre	1.5	6.7	4.0	1.6	0.0	5.3
Mobile unit	1.5	3.7	5.4	0.9	0.0	3.4
University/teaching hospital	0.0	1.0	0.2	0.0	7.6	1.0
Health Insurance Organization	0.1	0.5	0.5	0.0	2.9	0.5
Curative Care Organization	0.0	0.1	0.1	0.0	0.0	0.1
Other governmental	0.0	1.0	0.6	0.1	5.6	0.9
Private sector	79.6	38.1	12.2	77.4	59.6	42.9
Nongovernmental organization (NGO)	0.3	4.5	1.0	0.6	0.1	3.1
Egypt Family Planning Association	0.0	1.3	0.2	0.5	0.0	0.9
Clinical Services Improvement	0.1	2.4	0.6	0.1	0.0	1.6
Other NGOs	0.1	0.8	0.2	0.0	0.1	0.6
Private medical	79.3	33.7	11.2	76.8	59.5	39.9
Private hospital/clinic	0.8	2.7	0.2	0.3	11.1	2.2
Private doctor	4.0	29.0	4.9	1.3	45.8	21.2
Nurse	0.0	0.0	2.6	0.0	0.0	0.3
Pharmacy	74.1	0.0	3.3	75.2	0.0	14.7
Mosque health unit	0.3	1.7	0.1	0.0	1.9	1.2
Church health unit	0.0	0.3	0.1	0.0	0.7	0.2
Other non-medical	0.8	0.0	1.2	5.1	0.0	0.4
Shop/other vendor	0.1	0.0	0.0	0.0	0.0	0.0
Friends/relative	0.8	0.0	0.9	5.1	0.0	0.3
Other	0.0	0.0	0.4	0.0	0.0	0.0
Don't know	0.2	0.0	0.0	0.8	1.3	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	1,798	6,629	1,281	180	239	10,285

D. Fertility Preferences

In order to obtain an insight into women's childbearing intentions, respondents were asked in the 2005 EDHS whether they wanted to have another child and, if so, how soon. Table 14 summarizes the information on women's reproductive preferences. The majority of all married women express a desire to control future childbearing. Sixty-five percent either report that they do not want another child or are using female sterilization. An additional 16 percent say that they want another child, but indicate that they want to wait at least two years before the birth of their next child.

Table 14 Fertility preferences

Percent distribution of currently married women by desire for children, according to the woman's age, Egypt 2005

Desire for children	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
Have another soon[1]	33.6	23.6	17.6	10.9	8.1	5.4	3.5	13.1
Have another later[2]	57.9	45.6	23.1	8.0	1.9	0.3	0.1	16.2
Have another, undecided when	1.4	1.2	0.9	1.0	0.6	0.2	0.0	0.7
Undecided	1.9	3.9	4.4	3.1	1.7	0.9	0.1	2.5
Want no more	5.1	25.6	53.4	75.9	84.3	86.1	77.4	63.3
Sterilized	0.0	0.0	0.1	0.7	1.8	2.6	3.9	1.3
Declared infecund	0.0	0.1	0.4	0.4	1.5	4.5	14.9	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	792	2,898	3,653	3,077	3,010	2,525	2,233	18,187

[1] Wants next birth within 2 years
[2] Wants to delay next birth for 2 or more years

The desire to delay childbearing is largely concentrated among women under age 30. As expected, the proportion wanting no more children increases rapidly with age, with more than half of married women age 25-29 saying that they do not want another birth.

E. Maternal Health

Proper care during pregnancy and childbirth are important to the health of both a mother and her baby. To obtain data on these issues, the 2005 EDHS included questions on antenatal care, tetanus toxoid vaccinations, and assistance received at delivery for each birth that a woman reported during the five-year period before the survey.

Antenatal care

Antenatal care from a trained provider is important in order to monitor the pregnancy and reduce the risks for the mother and child during pregnancy and at delivery. To be most effective, it is recommended that all mothers see a trained provider at least four times for antenatal checkups during pregnancy.

According to the 2005 EDHS results, antenatal care was received from a trained provider for 70 percent of the births during the five-year period before the survey (Table 15). Women reported having regular antenatal care for 57 percent of the births during the period.

Mothers under age 20 and mothers age 35 and older are less likely than mothers in the prime childbearing ages to get antenatal care. The percentage getting antenatal care declines directly with the child's birth order.

Urban mothers are more likely to receive care than rural mothers. Considering place of residence, antenatal care coverage remains substantially lower in Upper Egypt than in other areas. For example, the percentage of births in which the mother received regular antenatal care ranged from 36 percent in rural Upper Egypt to 80 percent in urban Lower Egypt. Education status is strongly related to the likelihood of receiving antenatal care; for example, women with at least a secondary education are more than twice as likely to have been seen for regular antenatal as women with no education.

Table 15 Maternal health indicators by selected demographic and social characteristics

Percentage of births in the five-year period whose mothers received any antenatal care and regular antenatal care from a trained medical provider and at least one tetanus toxoid vaccination and whose mothers were assisted at delivery by a medical provider, Egypt 2005

Background characteristic	Any antenatal care	Regular antenatal care[1]	Tetanus toxoid injection(s)	Medically-assisted delivery	Number of births
Mother's age at birth					
<20	67.9	52.1	86.3	68.9	1,521
20-34	71.2	58.6	77.5	74.9	10,776
35+	60.9	51.9	63.1	74.5	1,303
Birth order					
1	80.5	69.8	84.9	83.6	4,112
2-3	71.8	57.7	77.4	74.7	6,138
4-5	57.9	45.5	68.6	65.7	2,233
6+	43.2	32.5	64.1	53.2	1,116
Urban-rural residence					
Urban	82.7	73.8	68.0	88.7	4,948
Rural	62.5	47.8	82.4	65.8	8,651
Place of residence					
Urban Governorates	84.2	77.6	63.1	90.8	1,879
Lower Egypt	78.2	65.4	80.5	81.6	5,399
Urban	89.1	80.1	70.8	92.9	1,297
Rural	74.7	60.7	83.5	78.0	4,101
Upper Egypt	58.1	43.9	78.7	62.6	6,153
Urban	76.4	65.1	71.2	83.7	1,669
Rural	51.3	36.0	81.5	54.8	4,484
Frontier Governorates	68.5	58.1	68.5	71.8	169
Education					
No education	49.4	34.8	78.1	54.3	4,280
Some primary	64.8	48.6	75.7	67.1	1,499
Primary complete/some secondary	70.9	57.6	79.3	77.1	1,759
Secondary complete/higher	85.1	75.2	76.2	89.1	6,061
Work status					
Working for cash	80.1	69.3	72.3	85.0	1,614
Not working for cash	68.4	55.7	77.8	72.6	11,986
Total	69.8	57.3	77.1	74.2	13,600

[1]A woman is considered to have had regular antenatal care if she had 4 or more visits during the pregnancy.

Tetanus toxoid coverage

Tetanus toxoid injections are given during pregnancy in order to prevent neonatal tetanus, a frequent cause of infant deaths when sterile procedures are not observed in cutting the umbilical cord following delivery. Table 15 shows that the mother had received at least one tetanus toxoid injection in the case of 77 percent of births in the five-year period before the survey. Births to older mothers (age 35 and over), high order births (birth order 6 and over) and births in the Urban Governorates had the lowest levels of tetanus toxoid injections, while the levels were highest for young mothers (under age 20), first births, and births in rural Lower Egypt.

Assistance at delivery

A doctor or trained nurse/midwife assisted at the delivery of 74 percent of all births in the five-year period before the 2005 EDHS. Most of the remaining births were assisted by *dayas* (traditional birth attendants). Medically assisted deliveries are most common for urban births and births to highly educated mothers. Births of order 6 and higher and births in rural Upper Egypt are least likely to be assisted by a trained health professional.

Trends in maternal health indicators

Table 16 presents the trend in key maternal health indicators by residence for the period between the 1988 and 2005 DHS surveys. Focusing on the last five years (i.e., between the 2000 and 2005 surveys), the increase in antenatal care coverage was particularly notable. The percentage of births in which the mother reported receiving any antenatal care rose from 53 percent in 2000 to 70 percent in 2005, and the percentage of births having regular antenatal care (i.e., at least four visits) rose from 37 percent in 2000 to 57 percent in 2005.

Table 16 Trends in maternal health indicators

Percentage of births in the five years preceding the survey whose mothers had at least one tetanus toxoid injection, antenatal care from a doctor or trained nurse-midwife, and four or more antenatal care visits, and were assisted at delivery by a medical provider, by urban-rural residence and place of residence, Egypt, 1988-2005

Maternal health indicator	Urban	Rural	Urban Gover-norates	Lower Egypt			Upper Egypt			Frontier Gover-norates	Total
				Total	Urban	Rural	Total	Urban	Rural		
Any antenatal care											
1988	U	U	U	U	U	U	U	U	U	U	U
1992	U	U	U	U	U	U	U	U	U	U	U
1995	58.3	27.2	59.2	41.9	65.2	34.5	28.6	51.2	20.8	41.4	39.1
2000	70.4	41.9	74.1	53.5	71.2	47.2	44.3	65.1	36.9	44.6	52.9
2003	82.9	60.4	83.9	75.2	86.3	70.9	57.4	77.8	50.3	U	68.8
2005	82.7	62.5	84.2	78.2	89.1	74.7	58.1	76.4	51.3	68.5	69.8
Regular antenatal care[1]											
1988	U	U	U	U	U	U	U	U	U	U	U
1992	U	U	U	U	U	U	U	U	U	U	U
1995	50.0	14.9	55.1	27.9	52	20.2	17.9	40.6	10.1	U	28.3
2000	53.9	25.9	56.0	38.9	56.2	32.8	27.2	49.8	19.2	28.5	36.7
2003	73.5	44.9	75.4	61.1	76.4	55.2	43.5	68.0	35.0	U	55.6
2005	73.8	47.8	77.6	65.4	80.1	60.7	43.9	65.1	36.0	58.1	57.3
Tetanus toxoid injections											
1988	12.6	10.6	8.8	13.1	14.8	12.5	11.1	17.3	8.6	U	11.4
1992	56.9	57.5	52	64	67.8	62.7	53.3	55.3	52.8	U	57.8
1995	66.7	71.2	64.2	75.6	70.2	77.4	66.3	67.6	65.9	59.8	69.5
2000	70.1	73.9	62.4	79.1	75.3	80.4	70.0	75.4	68.1	64.2	72.4
2003	71.1	82.1	66.2	83.6	75.0	86.9	76.5	73.5	77.5	U	78.0
2005	68.0	82.4	63.1	80.5	70.8	83.5	78.7	71.2	81.5	68.5	77.1
Medically-assisted deliveries											
1988	57.0	19.1	64.9	31.1	54.4	23.3	23.9	46.9	14.4	U	34.6
1992	62.5	27.5	68.3	39.7	62.9	32.5	29.7	51.8	23.0	U	40.7
1995	67.9	32.8	69.2	51.4	75.1	43.9	32.2	59.6	22.9	59.3	46.3
2000	81.4	48.0	83.7	65.1	84.7	58.1	47.8	74.7	38.2	60.4	60.9
2003	86.7	59.0	90.2	76.5	91.0	70.9	55.3	77.4	47.6	U	69.4
2005	88.7	65.8	90.8	81.6	92.9	78.0	62.6	83.7	54.8	71.8	74.2

U = unknown /not available

[1]A woman is considered to have had regular antenatal care if she had 4 or more visits during the pregnancy.

Source: El-Zanaty and Way, 2004, Table 5.14

The percentage of births in which the mother received a TT injection also increased, from 72 percent in 2000 to 77 percent in 2005. Seventy-four percent of deliveries were assisted by medical personnel (almost always a doctor) in 2005 compared to 61 percent in 2000.

All residential categories shared in the improvements in maternal health indicators between the 2000 and 2005 surveys. Rural areas, however, continue to lag substantially behind urban areas in antenatal care coverage and in medically-assisted deliveries. In contrast, beginning in 1995, tetanus toxoid vaccination levels have been markedly higher among rural mothers than urban mothers.

F. Child Mortality and Health

The 2005 EDHS collected data on early childhood mortality in Egypt. Information was also obtained on a number of key child health indicators, including infant feeding practices, immunization of young children and treatment practices when a child has diarrhea.

Child mortality

The birth history section of the 2005 EDHS questionnaire is the source for information used to derive the child mortality estimates that are presented in Table 17 for three successive five-year periods prior to the 2000 EDHS. The rates are estimated directly from the information in the birth history on a child's birth date, survivorship status, and the age at death for children who died.

Table 17 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Egypt 2005

Years preceding the survey	Neonatal mortality (NN)	Post-neonatal mortality (PNN)[1]	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Mid -2000 – mid-2005	20	13	33	8	41
Mid-1995 – mid-2000	26	22	48	12	59
Mid-1990 – mid-1995	32	28	60	22	81

[1] Computed as the difference between the infant and neonatal mortality rates

During the five-year period prior to the survey (centered on 2003),[4] the infant mortality rate was 33 deaths per 1,000 births and the neonatal rate was 20 deaths per 1,000 births. A comparison of these rates with the overall level of under-five mortality (41 deaths per 1,000 births) indicates that 80 percent of early childhood deaths in Egypt take place before a child's first birthday, with just under half occurring during the first month of life.

The 2005 EDHS results document a pattern of steadily falling mortality during the fifteen years prior to the survey. During the period (approximately mid-1990-mid-2005), infant mortality fell by around 40 percent, and under-five mortality was halved (Figure 2).

[4] The rates in Table 17 represent an average of the mortality levels prevailing during the five-year period before the survey. As a result, they are not directly comparable to more current estimates of childhood mortality, e.g., rates based on registered deaths during 2004.

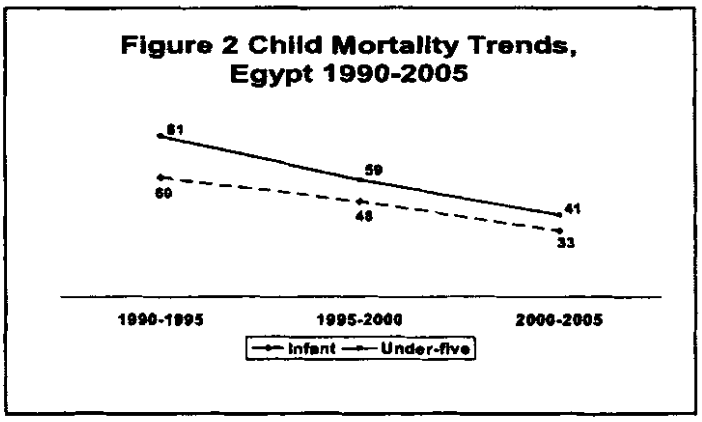

Table 18 presents residential differentials in mortality levels. The estimates are calculated for a ten-year period before the survey so that the rates are based on a sufficient number of cases in each category to ensure statistical significance. During the period, under-five mortality was around 45 percent higher for rural children than urban children. Among urban children, those living in the Urban Governorates had the lowest chance of dying before their fifth birthday, while those living in rural Upper Egypt had the highest likelihood of dying. The differential in mortality between rural Lower Egypt and rural Upper Egypt also was substantial.

Table 18 Early childhood mortality rates by residence

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by urban-rural residence and place of residence, Egypt 2005

Residence	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Urban-rural residence					
Urban	21	10	32	8	39
Rural	24	22	45	11	56
Place of residence					
Urban Governorates	16	10	26	8	34
Lower Egypt	23	10	33	6	38
Urban	24	6	30	5	34
Rural	22	11	34	6	40
Upper Egypt	25	27	52	14	65
Urban	25	15	39	9	48
Rural	25	31	56	16	72
Frontier Governorates	25	9	33	9	42

[1] Computed as the difference between the infant and neonatal mortality rates

Breastfeeding and supplementation

Breast milk is the optimal source of nutrients for infants. Children who are *exclusively* breastfed receive only breast milk. Exclusive breastfeeding is recommended during the first 4-6 months of a child's life because it limits exposure to disease agents and provides all of the nutrients that are required for a baby.

Table 19 describes infant feeding practices of Egyptian mothers. Breastfeeding is virtually universal. Most babies are breastfed during the first three months of life; only 3 percent of babies age 0-3 months at the time of the survey were not receiving breast milk, and only 5 percent of children age 4-6 months were not being breastfed. The proportion breastfed remains high during the first year of life; 88 percent of children age 10-12 months were being breastfed at the time of the survey.

Table 19 Breastfeeding status

Percent distribution of youngest living child age 12 months and under living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months, Egypt 2005

Age in months	Not breast-feeding	Breastfeeding and consuming: Exclusively breastfed	Plain water only	Other liquids	Solid/ mushy food	Missing	Total percent	Number of youngest living children living with mother	Percentage using a bottle with a nipple	Number of living children under three years
0-3 months	2.8	52.9	16.3	20.7	6.9	0.4	100.0	753	15.5	766
4-6 months	5.4	12.5	24.8	16.6	40.7	0.0	100.0	701	17.5	713
7-9 months	9.6	1.3	10.8	6.2	71.9	0.1	100.0	694	22.0	703
10-12 months	11.6	0.6	3.3	2.1	82.2	0.2	100.0	639	15.5	657

Note: Breastfeeding status refers to preceding 24 hours. Children classified as breastfed and plain water only receive no other supplements

Exclusive breastfeeding is common but not universal among children under four months of age. Slightly more than half of children in this age group receive breast milk only. Supplements are introduced rapidly after early infancy; among children age 4-6 months, only 13 percent are exclusively breastfed. Around two in five children in this age group are receiving solid/mushy foods.

The results in Table 19 also show that bottle-feeding is not common in Egypt. Nevertheless, around one in six children 0-6 months of age were fed with a bottle with a nipple during the 24 hours preceding the survey.

Vaccination of children

Information on childhood immunizations was collected for all children born since January 2000. In Egypt, immunizations are recorded on a child's birth record (certificate) or on a special health card.[5] For each child, mothers were asked whether they had the birth record and/or health card for the child and, if so, to show the document(s) to the interviewer. When the mother was able to show the birth record and/or health card, the dates of vaccinations were copied from the document(s) to the questionnaire. If the birth record (or health card) was not available (or a vaccination was not recorded), mothers were asked questions to determine whether the child had received each vaccine.

The estimates of immunization coverage among children 12-23 months derived from EDHS data are based on the information taken from the birth record or health card and, for those whom no document was seen (or a vaccination not recorded), information was provided by the mother. Mothers were able to provide birth records for 73 percent of the children (Table 20).

The World Health Organization guidelines for childhood immunizations call for all children to receive: a BCG vaccination against tuberculosis, three doses of the DPT vaccine to prevent diphtheria, pertussis and tetanus; three doses of polio vaccine; and a measles vaccination. Egypt has added the hepatitis vaccine to its child immunization program. In order to facilitate comparison of the results with prior DHS surveys, hepatitis immunizations are not taken into account in calculating the proportion of children who are fully immunized. Thus, a child is considered to have had the full

[5] Immunizations were typically recorded on the child's birth certificate prior to 1996 when health cards began to be used widely. During DHS surveys occurring after 1996, both the birth certificate and the child's card when available were checked for vaccination information.

schedule of immunizations if they have received a BCG and measles or MMR vaccination and three doses of the DPT and polio vaccines.

Virtually all children 12-23 months have received at least some of the recommended vaccinations. Coverage levels for BCG are nearly universal. Ninety-four percent of the children have received the recommended three doses of the DPT and 97 percent have had at least three doses of polio vaccine. Levels are lower for the Activated DPT vaccination (32 percent) and for the other polio vaccinations (28 percent for Polio 0; 67 percent for Polio 4; and 35 percent for Activated polio). Ninety-seven percent of children have received a measles vaccination, and 23 percent have had been given the MMR vaccine which protects against measles, mumps and rubella. Coverage levels are relatively high for the hepatitis vaccine, with 80 percent of children reported as having received all three doses of the hepatitis vaccine.

Overall, 89 percent of children are considered as immunized against all major preventable childhood diseases, i.e., they have received a BCG, a measles or MMR vaccination, and three DPT and three polio immunizations.

Table 20 presents differentials in vaccination coverage. Looking at the differences in the proportions considered as fully immunized, there is virtually no difference in the proportions of girls and boys fully immunized. By residence, the percentages fully immunized vary from 86 percent in Upper Egypt and the Frontier Governorates to 91 percent in Lower Egypt. Looking at mother's education, the percentage fully immunized ranges from a low of 86 percent for children whose mothers never attended school to 90 percent among children whose mothers completed the secondary level or higher.

Table 20 also shows the trend in the proportion of children fully immunized against the six preventable childhood illnesses between the 1992 and 2005 DHS surveys. Immunization coverage in 2005 (89 percent) was 22 percentage points higher than the level recorded at the time of the 1992 EDHS (67 percent).

Table 20 Vaccinations by background characteristics

Among children 12-23 months, the percentage who had vaccination records seen, percentage who received each vaccine (according to the vaccination cards or the mother's report) and percentage with a vaccination card, by selected background characteristics, Egypt 2005, and trends in percentages receiving various vaccines, Egypt 1992-2005

Background characteristic	Record seen	BCG	DPT 1	DPT 2	DPT 3	ADPT	Polio 0	Polio 1	Polio 2	Polio 3	Polio 4	AP	Hep-atitis 1	Hep-atitis 2	Hep-atitis 3	Measles	MMR	Fully immun-ized	None	Number of children
Sex																				
Male	73.6	97.8	99.1	97.4	93.6	32.1	26.6	99.7	98.8	96.7	65.7	34.1	91.1	85.6	79.2	96.8	23.0	88.9	0.2	1,375
Female	73.0	98.3	99.2	97.6	93.5	32.5	28.9	99.4	98.9	96.4	68.4	36.6	91.2	87.3	80.5	96.3	22.2	88.5	0.3	1,305
Birth order																				
1	71.2	97.9	98.9	96.8	91.9	34.3	27.7	99.7	99.2	96.8	67.7	38.3	92.3	88.0	80.3	97.4	25.4	87.0	0.0	829
2-3	72.1	98.6	99.3	98.2	94.8	31.4	28.1	99.4	98.7	96.8	67.3	33.5	90.9	86.5	81.0	97.1	21.5	91.2	0.3	1,247
4-5	77.2	97.3	99.0	96.9	92.7	32.1	27.4	99.6	99.1	95.8	66.5	36.1	89.7	85.0	77.8	94.1	22.4	85.5	0.4	415
6+	81.6	96.5	99.6	97.7	94.2	29.4	25.8	99.6	97.8	96.4	63.6	32.6	91.4	82.2	74.7	94.7	17.6	86.9	0.4	190
Urban-rural																				
Urban	71.4	98.8	99.1	97.1	93.5	30.9	23.3	99.2	98.7	96.7	64.8	33.3	93.4	89.4	83.6	96.8	24.5	89.1	0.2	972
Rural	74.4	97.6	99.2	97.8	93.5	33.1	30.2	99.8	98.9	96.5	68.3	36.5	89.9	84.8	77.7	96.5	21.5	88.5	0.2	1,708
Place of residence																				
Urban Governorates	72.0	99.0	99.0	97.6	94.6	31.2	17.0	98.9	98.7	96.1	64.8	30.7	95.0	91.4	85.6	97.0	24.0	90.3	0.4	402
Lower Egypt	71.3	98.4	99.3	98.1	94.4	33.7	36.8	99.7	99.4	98.1	70.6	36.0	92.9	88.8	83.0	97.6	25.5	90.9	0.2	1,071
Urban	60.9	100.0	99.2	96.1	92.3	35.1	40.1	99.3	98.6	95.7	69.4	37.7	93.6	88.4	84.3	97.1	33.3	89.5	0.0	235
Rural	74.3	98.0	99.3	98.6	95.0	33.4	35.8	99.8	99.6	98.7	70.9	35.5	92.8	88.9	82.6	97.7	23.3	91.2	0.2	836
Upper Egypt	75.4	97.3	99.1	97.1	92.5	31.4	23.5	99.6	98.4	95.4	64.7	36.4	88.1	82.4	74.7	95.7	19.7	86.3	0.2	1,169
Urban	78.3	97.7	99.1	97.2	93.1	27.4	19.4	99.4	98.7	98.2	62.1	33.7	90.7	87.2	79.9	96.6	19.2	87.5	0.0	312
Rural	74.4	97.1	99.1	97.0	92.2	32.8	25.0	99.7	98.3	94.4	65.6	37.4	87.1	80.7	72.8	95.3	19.9	85.9	0.3	857
Frontier Governorates	77.7	98.9	98.2	95.3	90.9	30.6	13.2	100.0	99.2	95.5	62.3	31.4	96.6	92.4	88.4	92.7	14.4	85.6	0.0	37
Education																				
No education	75.8	97.9	99.4	97.1	92.3	31.6	27.4	99.9	99.0	95.6	63.8	35.4	87.5	81.9	75.8	96.0	20.0	86.2	0.1	801
Some primary	73.1	96.7	98.7	96.8	93.2	30.4	25.9	99.3	98.0	96.9	64.8	35.1	89.6	85.3	77.2	94.8	19.8	88.0	0.1	316
Primary complete/some secondary	73.4	98.2	99.1	98.0	94.1	32.9	27.5	99.6	99.0	97.3	70.2	35.1	92.9	88.6	82.0	96.9	23.1	90.2	0.4	1,283
Secondary complete/ higher	65.8	98.7	99.4	97.3	94.8	33.4	31.6	98.8	98.8	96.0	64.1	36.3	95.4	90.6	84.3	98.6	31.1	89.8	0.0	280
Total EDHS 2005	73.3	98.0	99.1	97.5	93.5	32.3	27.7	99.6	98.8	96.6	67.0	35.3	91.2	86.4	79.8	96.6	22.6	88.7	0.2	2,680
Total EDHS 2000	72.5	99.3	99.2	97.1	94.0	NA	NA	99.6	97.7	94.9	NA	NA	98.7	96.3	93.0	96.9	NA	92.2	0.2	2,170
Total EDHS 1995	50.1	94.7	96.2	92.8	83.0	NA	NA	97.0	93.9	84.2	NA	NA	75.4	71.0	56.9	89.2	NA	79.1	2.5	2,085
Total EDHS 1992	55.2	89.5	92.8	87.8	76.4	NA	NA	94.5	90.1	78.9	NA	NA	81.5	NA	NA	NA	NA	67.4	3.8	1,594

Note: A child is considered to be fully immunized if the child has received BCG, a measles or MMR vaccination, three DPT vaccinations, and three polio vaccinations.
NA = not available
Polio 0 is the polio vaccination given at birth, ADPT = Activated DPT; AP = Activated Polio; and MMR = Measles, mumps, and rubella

Diarrhea among young children

Dehydration as a result of diarrhea is a frequent cause of death in young children. Mothers of children under age five were asked in the 2005 EDHS if their children had had diarrhea in the two-week period before the survey. If the child had had diarrhea, the mother was asked what she had done to treat the diarrhea. Since the prevalence of diarrhea varies seasonally, the results pertain only to the pattern during the period April-June 2005 when the EDHS interviewing took place.

Table 21 presents information on recent episodes of diarrhea among young children and the actions that the mother took to treat the illness. Overall, 18 percent of children under age five were reported to have had diarrhea in the two-week period before the survey. As expected, diarrhea is more prevalent among children age 6-23 months. This pattern is believed to be associated with increased exposure to the illness as a result of both weaning and the greater mobility of the child as well as to the immature immune system of children in this age group.

Medical advice was sought in the case of just under half of the reported cases of diarrhea among young children. Private medical providers were consulted more often than public health providers (29 percent and 19 percent, respectively). A medical provider was somewhat more likely to be consulted if the ill child was male, age 6-11 months old, living in an urban area, or the child's mother had ever attended school.

The administration of oral rehydration therapy (ORT) is a simple means of countering the effects of dehydration. During ORT, the child is given a solution either prepared by mixing water with the salts in a commercially prepared rehydration packet (ORS) or by making a homemade solution using sugar, salt and water. Table 21 shows that slightly more than one-third of the children ill with diarrhea were given a solution prepared using an ORS packet or with a homemade solution made from sugar, salt and water. ORT was most likely to be used if the child was 6 months and older, lived in a rural area or the child's mother had never attended school.

Acute respiratory illness among young children

Along with diarrhea, acute respiratory infection (ARI), particularly pneumonia, is a common cause of death among infants and young children. Early diagnosis and treatment with antibiotics can prevent a large proportion of the deaths due to pneumonia. The 2005 EDHS collected information on the prevalence of symptoms of ARI and on the treatment children with ARI symptoms received.

As in earlier DHS surveys, the prevalence of ARI was estimated in the 2005 EDHS by asking mothers if their children under five years of age had been ill with coughing accompanied by short rapid breathing or difficulty breathing in the two weeks before the survey. Cough and short, rapid breathing are signs and symptoms of pneumonia, and thus, the EDHS results are less appropriate for use in assessing the presence of other ARI-related conditions (coughs and colds, wheezing, ear infection, and streptococcal sore throat). The mother's report is also subjective, reflecting her perception of the symptoms the child had.

Table 21 Prevalence and treatment of diarrhea

Percentage of children under age five ill with diarrhea during the two-week period before the survey and the percentage who received various treatments by selected background characteristics, Egypt 2005

Background characteristic	Had diarrhea	Number of children	Health provider consulted			Oral rehydration therapy[1]			Number of children with diarrhea
			Any	Public	Private	ORS packets	RHS	Either ORS/ RHS	
Age in months									
<6	22.0	1,242	51.4	16.7	36.3	19.8	1.9	21.4	273
6-11	33.6	1,349	58.1	18.9	40.2	35.3	2.0	36.6	454
12-23	28.8	2,680	46.1	19.8	27.2	38.6	2.9	41.0	771
24-35	17.9	2,671	42.0	16.2	26.0	32.8	2.7	35.1	477
36-47	9.1	2,682	40.2	20.1	20.3	36.3	3.1	39.0	245
48-59	7.7	2,497	51.0	27.3	23.7	26.7	4.1	29.8	192
Sex									
Male	18.5	6,688	49.2	19.2	31.1	33.6	3.1	36.0	1,234
Female	18.3	6,432	46.6	19.2	27.7	33.5	2.3	35.3	1,177
Urban-rural residence									
Urban	17.1	4,778	53.7	16.7	37.5	28.3	2.5	30.3	818
Rural	19.1	8,342	44.9	20.5	25.3	36.2	2.8	38.4	1,593
Place of residence									
Urban Governorates	15.3	1,826	55.6	20.6	36.2	21.6	2.2	23.7	280
Lower Egypt	16.6	5,235	48.6	18.2	31.0	33.9	5.0	37.7	869
Urban	15.2	1,248	57.1	17.0	40.2	39.3	5.2	42.6	190
Rural	17.0	3,987	46.2	18.6	28.4	32.3	4.9	36.3	678
Upper Egypt	21.0	5,897	45.9	19.4	27.3	36.2	1.2	37.2	1,239
Urban	20.8	1,604	50.8	12.6	38.3	28.0	1.1	29.0	333
Rural	21.1	4,292	44.1	21.9	23.2	39.2	1.2	40.2	906
Frontier Governorates	14.8	162	38.0	29.2	8.8	21.7	3.7	24.1	24
Education									
No education	19.5	4,087	43.7	21.6	22.6	37.7	2.3	39.7	796
Some primary	19.8	1,418	49.1	22.9	26.7	29.4	3.0	31.8	280
Primary complete/some secondary	20.3	1,704	50.5	18.6	32.4	29.7	2.1	31.8	347
Secondary complete/higher	16.7	5,911	50.1	16.4	34.7	32.7	3.1	34.9	987
Total	18.4	13,120	47.9	19.2	29.4	33.5	2.7	35.7	2,411

[1]Oral rehydration therapy (ORT) includes solutions prepared from ORS packets and recommended home solution (RHS), e.g., sugar-salt solutions

Table 22 shows that nine percent of children were reported to have been ill with ARI symptoms during the two-week period before the 2005 EDHS. As was the case with diarrheal illness, children age 6-35 months were more likely to have been ill with ARI symptoms than younger or older children. A medical provider was consulted for about two-thirds of the children with ARI symptoms, with private providers consulted much more often than public providers. Mothers reported that antibiotics were given to slightly more than half the ill children. Medical providers were consulted and antibiotics were given more often if the child was male rather than female and if the child lived in an urban area than if the child lived in a rural area.

Table 22 Prevalence and treatment of ARI

Percentage of children under age five ill with symptoms of acute respiratory illness (ARI) during the two-week period before the survey and the percentage who received various treatments by selected background characteristics, Egypt 2005

Background characteristic	Had ARI symptoms[1]	Number of children	Health provider consulted			Percentage given antibiotics	Number of children with symptoms of ARI
			Any	Public	Private		
Age in months							
<6	7.2	1,242	65.1	20.1	48.0	26.7	90
6-11	13.4	1,349	72.8	15.4	60.0	49.6	180
12-23	11.6	2,680	70.9	28.8	44.1	56.4	312
24-35	9.9	2,671	62.0	20.4	41.7	52.3	263
36-47	7.1	2,682	70.3	36.7	35.8	60.0	189
48-59	6.1	2,497	62.7	24.2	39.4	50.2	152
Sex							
Male	9.6	6,688	71.1	26.3	45.9	53.8	642
Female	8.5	6,432	63.5	23.3	42.4	49.9	544
Urban-rural residence							
Urban	10.7	4,778	75.1	23.6	53.8	58.9	511
Rural	8.1	8,342	62.0	25.9	37.1	46.8	674
Place of residence							
Urban Governorates	10.3	1,826	74.8	22.2	55.1	56.0	189
Lower Egypt	6.8	5,235	64.4	21.7	43.9	59.1	357
Urban	8.6	1,248	66.5	19.7	48.4	64.8	107
Rural	6.3	3,987	63.5	22.6	42.0	56.7	250
Upper Egypt	10.7	5,897	67.5	27.4	41.7	46.9	632
Urban	13.1	1,604	79.9	26.5	56.1	58.8	211
Rural	9.8	4,292	61.3	27.9	34.5	40.9	421
Frontier Governorates	4.9	162	(49.1)	(34.6)	(14.5)	(44.9)	8
Education							
No education	8.4	4,087	68.6	29.9	40.0	50.1	344
Some primary	11.9	1,418	64.4	30.1	35.6	49.4	169
Primary complete/some secondary	10.3	1,704	67.6	19.8	48.8	38.3	175
Secondary complete/higher	8.4	5,911	68.0	21.5	48.7	59.0	498
Total	9.0	13,120	67.6	24.9	44.3	52.0	1,186

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1]ARI is defined as cough with chest involvement reported

G. Nutritional Status of Children

Measurement of nutritional status

Nutritional status is a primary determinant of a child's health and well-being. To assess nutritional status, the 2005 EDHS obtained measurements of height[6] and weight for all children living in the household who were under age 5. Using these anthropometric measurements as well as information on the ages of the children, three standard indices of physical growth describing the nutritional status of children were constructed: (1) height-for-age; (2) weight-for height; and (3) weight-for-age.

[6] Although the term "height" is used, children younger than 24 months were measured lying on a measuring board, while standing height was measured for older children. Weight data were obtained using a digital scale with an accuracy of 100 grams.

As recommended by the World Health Organization (WHO), evaluation of nutritional status in this report is based on the comparison of the three indices for the population of children in the survey with those reported for a reference population of well-nourished children. One of the most commonly used reference populations, and the one used for this study, is the international reference population defined by the U.S. National Center for Health Statistics (NCHS) and accepted by WHO and the U.S. Centers for Disease Control.

Each of the indices measures somewhat different aspects of nutritional status. The height-for-age index provides an indicator of linear growth retardation. Children whose height-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are considered short for their age, or *stunted*. Children who are below minus three standard deviations (-3 SD) from the reference population are considered *severely stunted*. Stunting of a child's growth may be the result of a failure to receive adequate nutrition over a long period of time or of the effects of recurrent or chronic illness.

The weight-for-height index measures body mass in relation to body length. Children whose weight-for-height measures are below minus two standard deviations (-2 SD) from the median of the reference population are too thin for their height, or *wasted*, while those whose measures are below minus three standard deviations (-3 SD) from the reference population median are *severely wasted*. Wasting represents the failure to receive adequate nutrition during the period immediately before the survey. It may be the result of recent episodes of illness or acute food shortages.

Weight-for-age is a composite index of height-for-age and weight-for-height. Children whose weight-for-age measures are below minus two standard deviations (-2 SD) from the median of the reference population are *underweight* for their age, while those whose measures are below minus three standard deviations (-3 SD) from the reference population median are *severely underweight*. A child can be underweight for his age, because he is stunted, he is wasted, or he is both stunted and wasted.

Levels of child malnutrition

Table 23 shows the proportions of children under age five born to EDHS respondents who are classified as malnourished according to three measures of nutritional status, i.e., height-for-age, weight-for-height, and weight-for-age, by residence.

The data on height-for-age in Table 23 indicate that there is considerable chronic malnutrition among Egyptian children. Eighteen percent of children under age five are stunted, and 6 percent are severely stunted. Rural children are slightly more likely to be stunted than urban children (18 percent and 16 percent, respectively). The percentage stunted varies by place of residence, from 13 percent in rural Lower Egypt to 23 percent in rural Upper Egypt.

The weight-for-height index provides a measure of wasting, or acute malnutrition. Overall, four percent of Egyptian children are wasted. Reflecting the effects of both chronic and short-term malnutrition, six percent of children under age five are underweight for their age.

Table 23 Nutritional status of children by residence

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by urban-rural residence and place of residence, Egypt 2005

	Height-for-age		Weight-for-height		Weight-for-age		
Residence	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Number of children
Urban-rural residence							
Urban	5.6	16.2	1.4	5.2	1.1	6.5	4,430
Rural	6.8	18.4	0.5	3.1	0.9	6.0	7,700
Place of residence							
Urban Governorates	6.1	16.9	2.8	7.7	1.8	8.2	1,668
Lower Egypt	5.4	13.7	0.6	2.9	0.9	4.0	4,837
Urban	5.7	15.1	0.6	2.7	1.1	4.2	1,160
Rural	5.3	13.3	0.6	3.0	0.9	3.9	3,677
Upper Egypt	7.3	21.4	0.5	3.5	0.8	7.5	5,482
Urban	5.0	16.6	0.7	4.2	0.4	6.5	1,514
Rural	8.2	23.2	0.5	3.3	1.0	7.8	3,968
Frontier Governorates	5.8	14.1	0.7	5.2	0.4	4.3	143
Total	6.4	17.6	0.9	3.9	1.0	6.1	12,131

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