

Trends in Demographic and Health Indicators in Egypt

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National Population Council



Demographic and Health Surveys Macro International Inc.

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National Population Council Cairo, Egypt

Macro International Inc. Calverton, Maryland USA

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1 Introduction

This report examines trends in key population and health indicators in Egypt during the period 1980-1995. It draws upon the results of a series of national-level household surveys conducted in Egypt during this 15-year period. These surveys include the 1980 Egypt Fertility Survey (EFS), the 1984 Egypt Contraceptive Prevalence Survey (ECPS), the three rounds of the Egypt Demographic and Health Surveys (EDHS), which were conducted in 1988, 1992, and 1995, respectively, and the 1991 Egypt Maternal and Child Health Survey (EMCHS). More information is provided on these surveys in the section on data sources at the end of this report.

As the report documents, considerable changes have occurred in the fertility and family planning situation in Egypt during the period since 1980. Fertility has fallen steadily, in response to increases in the age at which women first marry and the use of family planning. Fertility attitudes have also changed substantially, with women preferring smaller families in 1995 than in 1980.

The report shows further that there has been considerable success in expanding the coverage of child health programs, including substantial recent gains in the proportion of children immunized against the major preventable childhood illnesses. A campaign begun in the late 1980s to increase tetanus toxoid coverage among pregnant women also has been a major success.

Despite the considerable progress which this trends report highlights, significant challenges remain which must be addressed if fertility levels are to continue to decline and the health situation of mothers and children to improve in Egypt. Among the key concerns are the continuing disparities by place of residence in key indicators. For example, mortality levels among rural children are nearly twice the levels for urban children. Upper Egypt also lags behind Lower Egypt and the Urban Governorates in such key indicators as use of family planning and coverage of maternal health care programs.

2 Demographic and Social Indicators

Population Growth

The population of Egypt is growing rapidly. Between 1976 and 1995, the population increased by nearly 60 percent—from 37 million to 59 million people.

The rapid growth in the population is largely a result of the country's high fertility rate. Although fertility levels have been steadily falling, the crude birth rate was estimated to be 28 per thousand population in 1995. At this rate, more than 1.6 million births are occurring in Egypt annually.

Modernization

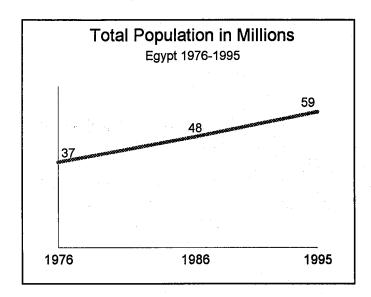
The past several decades have witnessed the increasing spread of modernizing influences in Egypt. A key indicator of this trend is the proportion of rural households that have access to electricity. More than one-third of the households in Egypt were without electricity in 1980. By 1995, only a small proportion of households lacked access to electricity.

One of the most important results of the expansion of electrification is that Egyptian households are increasingly exposed to the influence of broadcast media, especially television. Household ownership of televisions more than doubled between 1980 and 1995.

The increase in household television ownership was especially striking in rural Egypt. In rural areas in Lower Egypt, for example, 74 percent of households had a television in 1995, more than four times the proportion of households owning a television in 1980. The growth in television ownership was even more rapid in rural areas of Upper Egypt, where there was a sixfold increase in the proportion of households having a television between 1980 and 1995.

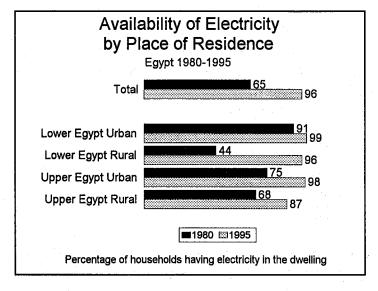
Educational Advances for Women

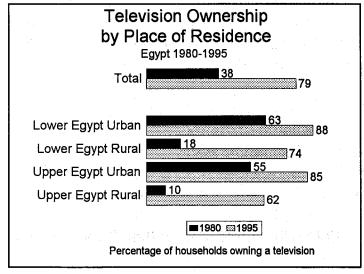
Another important social change has been the increasing proportion of Egyptian women who have at least some education. The trend across age groups in the proportion of women of reproductive age who have ever attended school is striking. Among women in the 45-49 age cohort who were born in the late 1940s, fewer than half had any education. Educational opportunities for women steadily expanded



Egypt has experienced rapid population growth in recent decades.

Households were more likely to live in a dwelling with electricity in 1995 than in 1980, especially in rural areas.



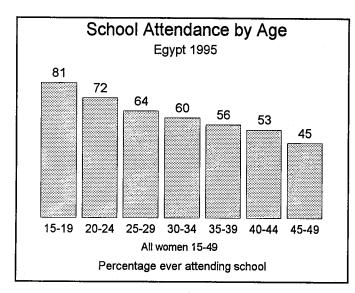


Households were twice as likely to own a television in 1995 as in 1980.

during the next three decades. As a result, more than 80 percent of women age 15-19 who were born in the late 1970s had at least some schooling.

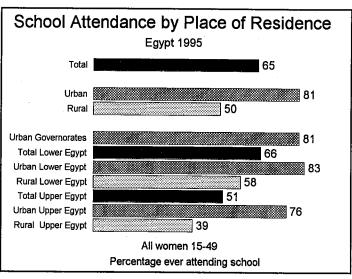
There is considerable variation by residence in the likelihood that women age 15-49 will have attended school. For example, the proportions who have ever attended school are considerably higher in urban than in rural areas. Women living in rural areas in Upper Egypt are the least likely to have gone to school. Around two-fifths of women 15-49 in rural Upper Egypt have ever attended school compared with almost 60 percent of women in rural Lower Egypt.

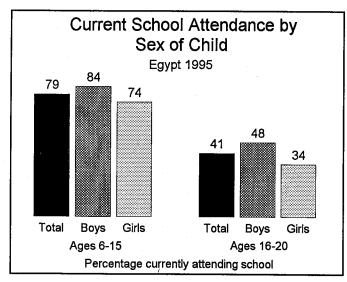
Although educational opportunities for women have expanded rapidly, there continues to be evidence of some gender bias in access to schooling. At the time of the 1995 EDHS, boys 6-15 were somewhat more likely than girls in the same age groups to be currently attending school. Differentials by sex in school attendance levels were even more evident among children 16-20; only around one-third of girls 16-20 were still attending school compared with almost half of the boys in the same age group.



The rise in female educational levels is among the most important social trends.

Despite the gains in female education, rural women remain much less likely than urban women to have ever gone to school.





Gender differentials in education persist, with girls being somewhat less likely than boys to be currently attending school.

3 Fertility

Total Fertility Rates

Fertility declined continuously in Egypt over the period between the 1980 EFS and and the 1995 EDHS. The total fertility rate (TFR) fell by 1.7 births during the period—from a level of 5.3 births to 3.6 births per woman.

Age-specific Fertility Rates

All age groups have shared in the decline in fertility rates. However, the decline has been more rapid among older than younger women. Age-specific fertility rates among women age 30 and over fell by 40 percent or more between the 1980 EFS and the 1995 EDHS. In contrast, fertility rates among women under age 30 declined by only around 20 percent during this period.

As a result of the differences in the pace of fertility change across various age groups, childbearing has become somewhat more concentrated among women under age 30. Currently, a woman will have an average of 2.4 births by her 30th birthday, almost two-thirds of the births she will have during her childbearing years.

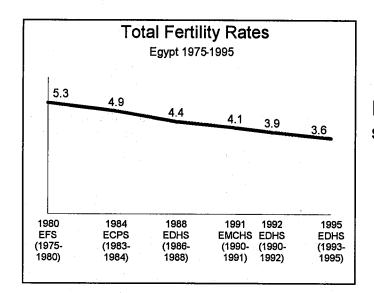
Fertility Rates by Selected Characteristics

Urban-rural residence

Fertility rates declined by around 30 percent between the 1980 EFS and the 1995 EDHS in both urban and rural areas. Although the overall pace of the fertility transition has been similar among urban and rural women, the timing of fertility changes has differed for the two groups. Urban fertility levels fell steadily throughout the 1980s, from a level of 4.3 births per woman at the time of the 1980 EFS to 2.9 births at the time of the 1992 EDHS. The decline in urban fertility leveled off at that point, and a small rise in fertility in urban areas was observed between the 1992 and 1995 EDHS surveys. In rural areas in contrast, fertility levels have declined continuously from 6.3 births per woman at the time of the 1980 EFS to 4.2 births per woman at the time of the 1995 EDHS.

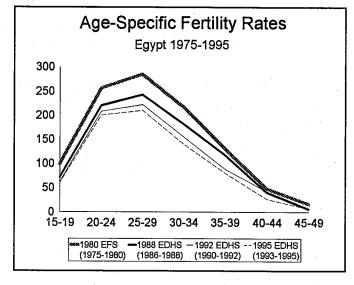
Place of residence

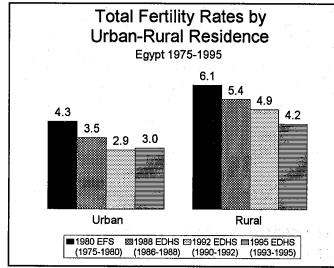
The pattern of fertility decline in Egypt has varied by place of residence. Women in rural Lower Egypt have experienced the greatest recent change in fertility levels.



Fertility has been declining steadily in Egypt.

All age groups have shared in the fertility decline.





Both urban and rural women have experienced marked decreases in fertility.

The TFR for rural Lower Egypt fell by more than 40 percent during the period between the 1980 EFS and the 1995 EDHS, from 6 births to 3.5 births per woman. In contrast, the total fertility rate in rural Upper Egypt declined by only 17 percent in the same period, from 6.3 births to 5.2 births per woman.

Decreases in fertility were observed in the Urban Governorates and in urban areas in both Lower Egypt and Upper Egypt during the period between the 1980 EFS and the 1992 EDHS. Urban Lower Egypt continued to experience small declines in fertility between the 1992 and 1995 EDHS surveys. However, the TFR in the Urban Governorates and urban Upper Egypt rose slightly during the period between the latter surveys.

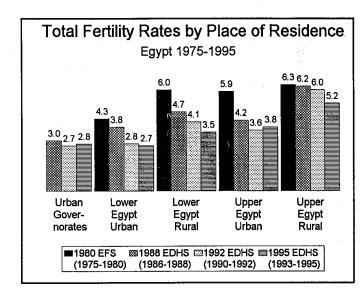
Education

The magnitude of fertility change in Egypt has varied according to level of education. The largest decreases in fertility occurred among women with the least education. Between the 1988 and 1995 EDHS surveys, fertility levels fell by around one birth among both women who had never attended school (from 5.4 births per woman to 4.5 births) and those with only some primary schooling (from 4.8 to 3.7 births per woman). Among women with a primary or higher education, the fertility changes between the three rounds of DHS surveys were much smaller; in fact, the TFR actually rose slightly among these women during the period between the 1992 and 1995 EDHS surveys.

Birth Intervals

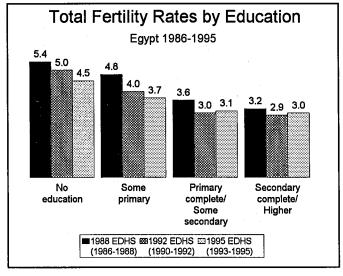
Children born after too short a birth interval (less than 24 months) are at greater risk of illness and death than those born after a long interval. Short birth intervals also may have adverse effects on the health of the mother by limiting the time she has to restore her health before another pregnancy.

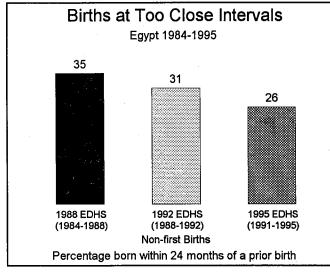
One of the most important outcomes of the changing fertility patterns in Egypt has been the steady decline in the average interval between births. The percentage of non-first births occurring within 24 months of a prior birth declined from 35 percent in the mid-1980s to 26 percent in the first half of the 1990s.



During the past several decades, rural Lower Egypt and urban Upper Egypt have experienced very rapid declines in fertility.

Among women with less than a primary education, fertility has declined by an average of one birth since the mid-1980s.





The fertility decline in Egypt has been accompanied by a marked decrease in the proportion of births occurring at too close intervals.

4 Marriage

The age at which women marry has a strong influence on fertility levels in a society since it is a principal determinant of the length of time that women will be exposed to the risk of pregnancy during their reproductive years. Increases in the age at first marriage are an important factor underlying the trends toward lower fertility in Egypt.

Median Age at First Marriage

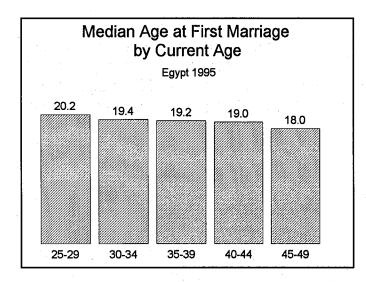
One indicator that is used to explore trends in the timing of marriage is the median age at first marriage, i.e., the age by which 50 percent of women in a group were married for the first time. In Egypt, there has been a steady rise in the age at first marriage among successive cohorts of women. Reflecting this trend, the median age at marriage among women in the 25-29 age group in Egypt was 20.2 years in 1995, more than two years higher than the median for women in the 45-49 age group.

Median Age at First Marriage by Selected Characteristics

The median age at first marriage has been rising over time in both urban and rural areas. However, the increase has been more rapid among urban than rural residents. The median age at first marriage for urban women age 25-29 was 22 years in 1995, three years higher than the median age reported for urban women in the 45-49 age cohort. In contrast, there was a differential of less than two years in the median age at first marriage among rural women in the 25-29 and 45-49 age groups.

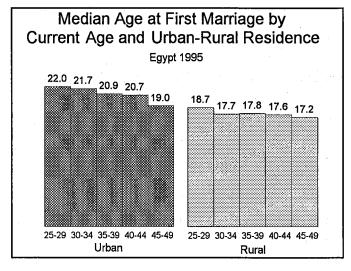
Because the age at which women first marry has increased more slowly among rural than urban women, the urban-rural differential in the age at marriage has widened significantly over time. This is reflected in the fact that the median age at first marriage for rural women in the 25-29 age group was 18.7 years in 1995, more than three years lower than the median age for urban women.

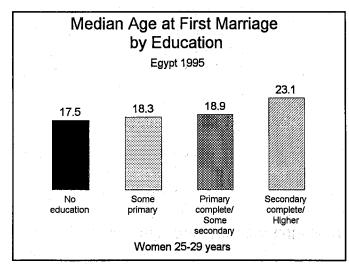
The age at which women first marry is strongly associated with their level of education. The differential between women who complete a secondary education or higher and less educated women is especially notable. In 1995, women in the 25-29 age group with a secondary education married at 23.1 years, more than four years later than women who had completed the primary but not the secondary level (18.9 years) and more than 5 years later than women who had never attended school (17.5 years).



The median age at first marriage has been rising steadily across successive cohorts of women.

The urban-rural differential in the age at first marriage has increased over time.





Women with a secondary or higher education marry an average of more than 5 years later than women who never attended school.

5 Family Planning

Information on the trends in knowledge and use of contraceptive methods is important in assessing the impact of the family planning program in Egypt. Trends in these indicators during the period between the 1980 EFS and the 1995 EDHS show that there has been steady growth in the level and breadth of contraceptive knowledge among Egyptian women and in the extent of the experience women have using contraception.

Knowledge of Contraceptive Methods

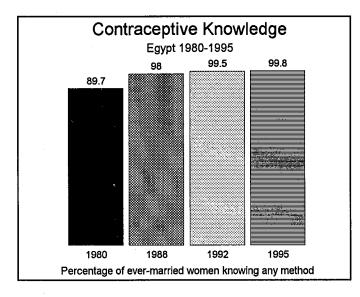
Knowledge of contraceptive methods is a basic prerequisite for the adoption of fertility regulation. Contraceptive knowledge among Egyptian women has been widespread for some time; 9 in 10 ever-married women knew about some method of contraception at the time of the 1980 EFS.

Although the level of contraceptive knowledge was high in 1980, only two contraceptive methods were recognized by a majority of women: 89 percent knew about the pill, and 70 percent the IUD. The methods with which the majority of Egyptian women were familiar increased during the period between 1980 and 1995. Knowledge of the pill and IUD grew to become virtually universal among evermarried women during this period, and the percentage of ever-married women who reported knowing about injectables rose from 16 percent to 96 percent. There also were significant increases in the proportions knowing about female sterilization and the condom.

Use of Contraceptive Methods

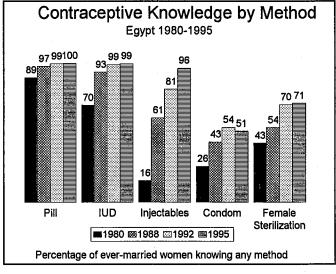
Ever Use

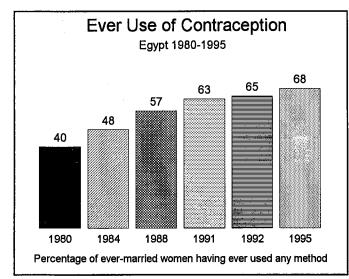
At the time of the 1980 EFS, fewer than half of the ever-married women who knew about family planning—40 percent of all ever-married women—had ever used any family planning method. By the time of the 1995 EDHS, the proportion of ever-married women who reported that they had experience with at least one contraceptive method had grown to 68 percent.



Contraceptive knowledge is almost universal among Egyptian women.

There was a sixfold increase in knowledge of injectables between 1980 and 1995.





By 1995, two out of every three ever-married women age 15-49 had used a family planning method at some time.

Current Use

The level of current use of family planning among currently married women doubled during the period between the 1980 EFS and the 1995 EDHS—from 24 percent to 48 percent. The pace of the increase in use rates varied across the 15-year period between the two surveys. The growth in current use was quite rapid throughout the 1980s. However, the rate of increase in use levels slowed significantly in the 1990s, with virtually no change occurring during the period 1991-1995.

Among the most important trends during the period between the EFS and the 1995 EDHS was the major shift in the method mix among contraceptive users. At the time of the EFS, women were more than four times as likely to be using the pill (17 percent) as the IUD (4 percent). Throughout the 1980s, IUD use expanded rapidly while pill use declined gradually but steadily. As a result, at the time of the 1995 EDHS, women were three times as likely to be using the IUD (30 percent) as the pill (10 percent). Injectables were included as a program method in the early 1990s; this resulted in a small increase (two percentage points) in the use of the method between the 1992 and 1995 DHS surveys.

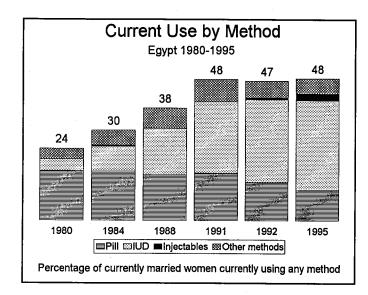
Current Use by Selected Characteristics

<u>Age</u>

Use levels have increased over time in all age groups. Among women age 40-49, the increase in use was especially notable during the period 1980-1984, when use rates quadrupled. In general, except in the period 1992-1995, the increases in use rates among women under age 25 lagged behind or merely kept pace with the gains among older women. As a result, women age 25 and younger continue to be significantly less likely to use contraception than older women. This suggests a need to encourage younger women to adopt contraception to space wanted births.

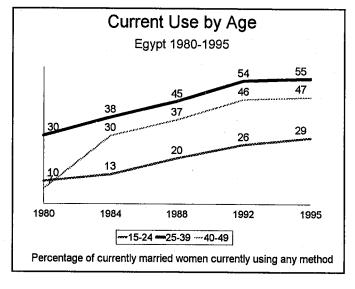
Urban-Rural Residence

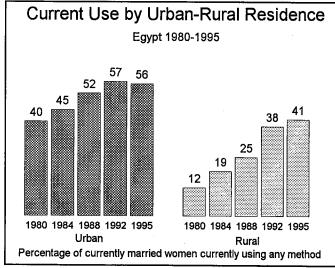
One of the most important trends over the period between the 1980 EFS and the 1995 EDHS was the narrowing in the urban-rural differential in contraceptive use. There was considerable disparity in current use levels between urban and rural areas in 1980: 12 percent of rural women were currently using a method compared with 40 percent of urban women. Current use rates more than tripled in rural areas during the next 15 years, reaching 41 percent in 1995, a level comparable to the rate among urban couples at the time of the EFS.



Current contraceptive use doubled between 1980 and 1995—primarily due to growth in use of the IUD.

Contraceptive use levels have risen more rapidly among women age 25 and older than among younger women.





One of the most important trends has been the narrowing of the urban-rural differential in contraceptive use.

In both urban and rural areas, the most rapid increase in use rates took place during the period between 1980 and 1988. In rural areas, use levels continued to rise at a fairly rapid rate into the early 1990s, reaching 38 percent by 1992. Urban use rates also rose during the period between 1988 and 1992, but at a more moderate pace than in rural areas. After 1992, the upward trend in use rates slowed significantly in rural areas, and there was a slight decline in the use rate in urban areas.

Place of Residence

Considering place of residence, increases in current use rates in the Urban Governorates and urban areas in Lower Egypt and Upper Egypt were substantial during the period between 1980 and 1995. However, the growth in use rates was even more rapid in rural areas, especially in rural Lower Egypt, where the use rate increased from 18 percent in 1980 to 54 percent in 1995. Although rural areas in Upper Egypt also experienced rapid growth in contraceptive use during the period, the gap in use rates between rural women living in Lower Egypt and those from Upper Egypt widened sharply, from 14 percentage points in 1980 to 30 percentage points in 1995.

Governorate

Except for Cairo and Damietta governorates, there were marked increases in use rates between the 1988 and 1992 DHS surveys. In contrast, there was little or no change in the use levels in most governorates during the 1992-1995. Only Kafr El-Sheikh and Ismailia experienced substantial growth in use rates during the period, while a significant decline in use was observed in Assuit.

Education

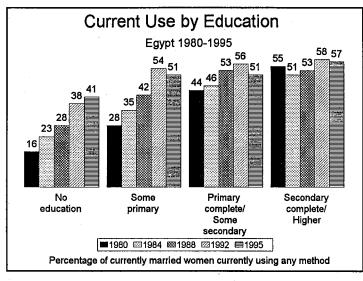
Between 1980 and 1995, use rates increased steadily among women who had never attended school. Gains in use levels also were generally apparent into the 1990s among women who had attended school. However, between the 1992 and 1995 DHS surveys, there were declines in use rates among women who had attended school, regardless of the level of education that they attained.

| | Current Use by Place of Residence Egypt 1980-1995 | | | | | | | | |
|---|---|----------------------------|--------------------|-------------------|---------------------|-------------------|-------------------|---------------------|--------------|
| | | Urban Gover- norates | <u>Lo</u> Total | ower Egy Urban | <u>/pt</u> Rural | <u>U</u> Total | pper Egr Urban | <u>ypt</u> Rural | All Egypt |
| , | 1980 | 44 | 24 | 43 | 18 | 9 | 25 | 4 | 24 |
| | 1984 | 50 | 34 | 48 | 29 | 17 | 37 | 8 | 30 |
| | 1988 | 56 | 41 | 55 | 36 | 22 | 42 | 12 | 38 |
| | 1992 | 59 | 54 | 60 | 51 | 31 | 48 | 24 | 47 |
| | 1995 | 58 | 55 | 59 | 54 | 32 | 50 | 24 | 48 |

The increase in contraceptive use levels between 1980 and 1995 was greatest in rural Lower Egypt.

There were marked increases in contraceptive use in most governorates between 1988 and 1992, but comparatively little change between 1992 and 1995.

| Current Use by Governorate | | | | | | |
|----------------------------|------|------|------|--|--|--|
| Egypt 1988-1995 | | | | | | |
| Governorate | 1988 | 1992 | 1995 | | | |
| Cairo | 59 | 58 | 57 | | | |
| Alexandria | 52 | 62 | 60 | | | |
| Port Said | 48 | 61 | 60 | | | |
| Suez | 50 | 57 | 62 | | | |
| Damietta | 54 | 53 | 57 | | | |
| Dakahlia | 41 | 53 | 55 | | | |
| Sharkia | 35 | 49 | 53 | | | |
| Kalyubia | 42 | 58 | 56 | | | |
| Kafr El-Sheikh | 42 | 47 | 54 | | | |
| Gharbia | 50 | 56 | 56 | | | |
| Menoufia | 44 | 56 | 54 | | | |
| Behera | 33 | 55 | 59 | | | |
| Ismailia | 41 | 50 | 59 | | | |
| Giza | 46 | 50 | 51 | | | |
| Beni Suef | 15 | 29 | 30 | | | |
| Fayoum | 20 | 33 | 34 | | | |
| Menya | 17 | 22 | 24 | | | |
| Assuit | 13 | 28 | 22 | | | |
| Souhag | 16 | 20 | 22 | | | |
| Qena _ | 12 | 25 | 26 | | | |
| Aswan | 19 | 32 | 36 | | | |
| | | | | | | |



Current use levels are higher among women who attended school than those with no education; however, this differential has narrowed over time.

6 Fertility Preferences

In Egypt, the fertility transition has been accompanied by marked changes in women's childbearing preferences, especially in rural areas.

Desire for Children

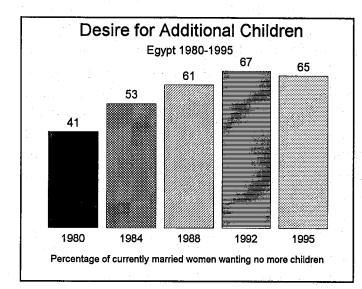
An important indicator of potential demand for family planning is the percentage of women who want no more children. At the time of the 1995 EDHS survey, 65 percent of married women expressed the desire to have no more children. This represents a more than 20 percentage point increase in the percentage of women who wanted to avoid the next birth during the period between the 1980 EFS and the 1995 EDHS.

Ideal Number of Children

Another indicator of fertility preferences is the number of children women would choose to have if they could begin their childbearing years again. Overall, the number of children Egyptian women consider ideal declined from 4.1 children in 1980 to 2.8 children in 1995. The ideal family size dropped very rapidly between 1980 and 1988. Since 1988, however, there has been only a very modest decrease, indicating that many Egyptian women continue to prefer to have at least three children.

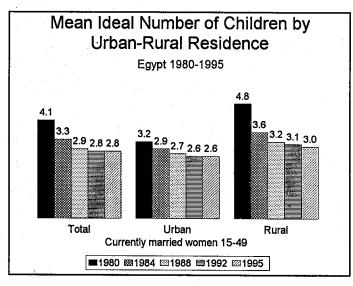
Throughout the period between 1980 and 1995, the ideal family size has been consistently higher in rural than in urban areas. In 1980, for example, the ideal family size among married women in rural Egypt was 4.8 children compared with 3.2 children among urban women. The urban-rural differential narrowed significantly during the next 15 years; by 1995, the rural ideal family size was 3 children, only slightly higher than the ideal among urban women (2.6 children).

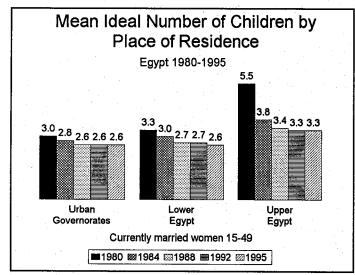
Childbearing aspirations have also been consistently higher in Upper Egypt than in the Urban Governorates and Lower Egypt. In 1980, the ideal family size among married women in Upper Egypt was 5.5 children, more than two children greater than the ideal among women in the other two regions. By 1995, the ideal family size in Upper Egypt had fallen to 3.3 children, only about half a child greater than the ideal reported for the Urban Governorates and Lower Egypt.



In 1980, the majority of married women wanted another child; by 1995, more than 60 percent of married women did not want more children.

The family size that Egyptian women considered ideal declined from more than 4 children in 1980 to 2.8 children in 1995.





Between 1980 and 1995, Upper Egypt experienced a marked change in the average ideal family size among married women.

7 Maternal Health

Both the mother and child benefit when a woman receives proper care during pregnancy and at childbirth. Results from the three rounds of the Demographic and Health Surveys can be used to examine the trends in the coverage of maternity care services in Egypt.

Antenatal Care

Regular checkups by a trained medical provider are important to monitor the progress of a pregnancy and to identify women who may experience complications during delivery. In Egypt, it is recommended that a woman see a trained medical provider at least four times during pregnancy.

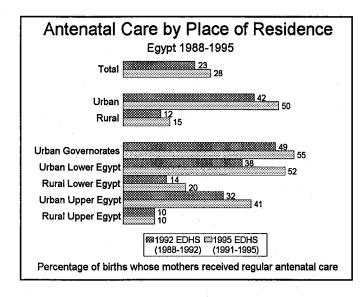
The likelihood that a woman received regular antenatal care increased during the period between the 1992 and 1995 EDHS surveys. However, even at the time of the 1995 survey, women reported receiving such care for fewer than 3 in 10 births. Substantial differentials in the proportion of births for which mothers received regular antenatal care also continue to be evident. In 1995, births to urban mothers were more than three times as likely as rural births to have received regular antenatal care. Rural Upper Egypt had the lowest level of antenatal care; in rural Upper Egypt, women reported they had at least the four recommended antenatal care visits for only 1 in 10 births in the five-year period before the 1995 survey.

Tetanus Toxoid Injections

Tetanus toxoid injections are given to women during pregnancy in order to prevent neonatal tetanus, a common cause of death in young infants when sterile conditions are not observed during delivery. The trends in tetanus toxoid coverage indicate that a recent public education campaign informing Egyptian women about the importance of receiving tetanus toxoid injections has had a major impact. Tetanus toxoid coverage has increased rapidly in Egypt, from 11 percent in 1988 to 70 percent in 1995. The increased tetanus toxoid coverage is evident in all residential areas.

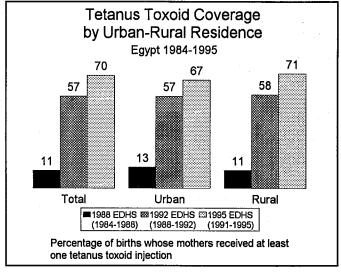
Delivery Assistance

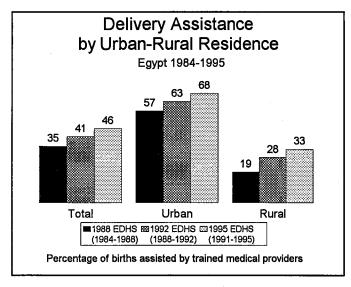
The majority of births in Egypt continue to take place without the assistance of a trained medical provider. However, the proportion of medically assisted births has increased gradually over time, from 35 percent at the time of the 1988 EDHS to 46



Relatively few women in Egypt receive regular care during pregnancy, especially in rural areas.

Tetanus toxoid coverage has increased rapidly—from 11 percent of births in the mid-1980s to 70 percent in the early 1990s.

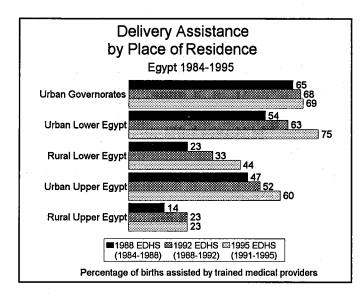




Although women are increasingly being assisted at delivery by trained health workers, more than 1 in 2 births still take place without medical assistance.

percent at the time of the 1995 survey.

The likelihood of receiving medical assistance at delivery has increased in all geographic areas. However, the increase has generally been smaller in rural Upper Egypt than in other areas. As a result, the differential between rural Lower Egypt and rural Upper Egypt in the proportion of medically assisted deliveries has increased over time. At the time of the 1995 DHS, 44 percent of births in rural Lower Egypt were assisted by trained medical providers compared with 23 percent of births in rural Upper Egypt.



Births in rural Upper Egypt are only about half as likely as births in rural Lower Egypt to be assisted by trained medical providers.

8 Child Mortality

Childhood Mortality Rates

At the time of the 1980 Egypt Fertility Survey, mortality levels were moderately high in Egypt. Almost 1 in 5 children died before their fifth birthday. By 1995, mortality levels had declined substantially. The under-five mortality rate at the time of the 1995 EDHS was 81 deaths per 1,000 births, nearly 60 percent lower than the level of 191 deaths recorded in the 1980 survey.

Mortality Rates by Residence

All geographic areas shared in the reductions in mortality. Under-five mortality in urban areas fell from a level of 161 deaths per 1,000 births during the five-year period before the 1980 EFS to 57 deaths per 1,000 births during the five-year period before the 1995 EDHS.

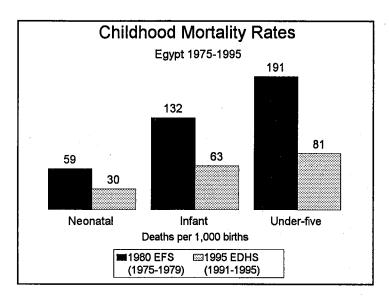
Rural mortality levels also fell steeply during the period between the two surveys. Nevertheless, at the time of the 1995 EDHS, nearly 1 in 10 rural children were dying before their fifth birthday.

Upper Egypt had the highest mortality rates reported for the 1980 and 1995 DHS surveys. At the time of the 1995 survey, for example, the under-five mortality rate in rural Upper Egypt was 123 deaths per 1,000 births, nearly 90 percent higher than the rate in rural Lower Egypt.

High-risk Fertility Behavior

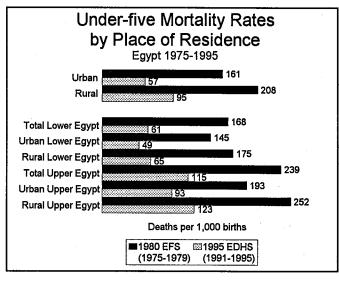
A strong relationship has been shown between maternal fertility patterns and children's survival chances. Typically, children are more likely to die in early childhood if they are born to mothers who are too young (less than 18 years of age) or too old (age 35 and older) at the time of the birth, if they are born after too short a birth interval (less than 24 months after a previous birth), or if they are of high birth order (the mother has previously given birth to at least three children).

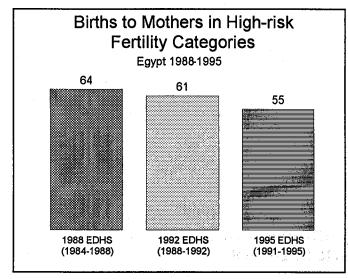
In Egypt, the percentage of births to women in high-risk categories has been steadily declining. Among births in the five-year period before the 1988 EDHS, 64 percent were to mothers in one of the four high-risk fertility categories. By the time of the 1995 EDHS, this percentage had fallen to 55 percent.



Childhood mortality levels have fallen sharply since the late 1970s.

Rural Upper Egypt has the highest level of childhood mortality—one in eight children dies before the fifth birthday.





Births to mothers in highrisk fertility categories have declined from 64 percent in the mid-1980s to 55 percent in the first half of the 1990s.

9 Child Health

Vaccination of Children

One of the more important interventions for improving child survival is increasing the proportion of children vaccinated against common childhood illnesses. The World Health Organization guidelines for childhood immunizations call for all children to receive: a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertussis and tetanus; three doses of polio vaccine; and a measles vaccination. All of the recommended vaccinations should be given before 12 months of age.

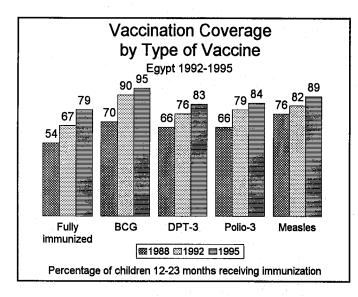
Immunization coverage levels have been rapidly increasing since the late 1980s in Egypt. In 1988, only slightly more than half of all children 12-23 months were fully immunized. By 1995, the proportion of children fully immunized had risen to 79 percent.

Immunization coverage levels have risen in both rural and urban areas. However, urban children continued to be much more likely to be immunized than rural children. The lowest rates of coverage are found in rural Upper Egypt, where only 70 percent of children 12-23 months were fully immunized in 1995. Nevertheless, this represents a significant increase over the level observed in rural Upper Egypt in 1992 when only 52 percent of children had received the recommended vaccinations.

Childhood Illness and Treatment

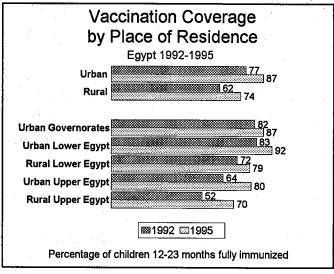
Prompt treatment of childhood illnesses is another important element in improving a child's survival chances. Survey results in Egypt suggest that many parents seek medical advice when a child is ill. The percentage of cases in which medical advice was sought when a child had diarrhea in the two-week period before the survey increased from 45 percent in 1992 to 48 percent in 1995. With regard to the treatment of acute respiratory illnesses, mothers reported obtaining medical advice for 62 percent of all cases in the two-week period before the 1995 EDHS compared with 59 percent reported in the 1992 EDHS.

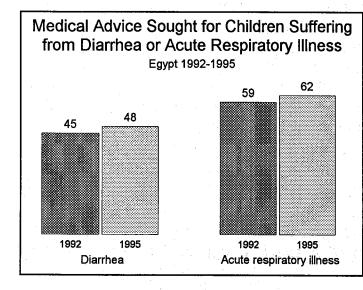
The dehydration caused by severe diarrhea is a major cause of illness and death among young children. A simple and effective response to dehydration is a prompt increase in the child's fluid intake through some form of oral rehydration therapy (ORT). ORT may include the use of a solution prepared from commercially



During the period 1988-1992, the proportion fully immunized against major childhood illnesses increased from 54 to 79 percent.

The lowest rates of immunization coverage continue to be observed in rural Upper Egypt.





Medical advice is increasingly sought when children are ill with diarrhea or acute respiratory illness.

produced packets of oral rehydration salts (ORS).

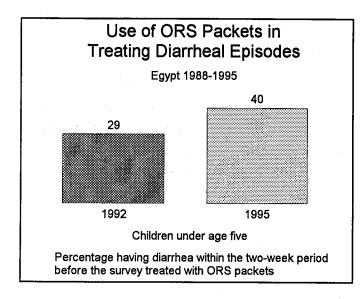
Mothers are increasingly likely to use ORS packets in treating diarrheal illness in their children. The percentage of cases in which an ORS packet was used to treat a child ill with diarrhea was 40 percent in 1995, an increase of 38 percent over the level recorded in 1992.

Nutritional Status of Children

Data on the height and weight of children has been collected in recent surveys in Egypt to monitor the nutritional status of children under age five. One indicator of a child's nutritional status is the proportion who are stunted, i.e., whose height-for-age is significantly below that observed in the international reference population of young children. Stunting of a child's growth may be the result of a failure to receive adequate nutrition over a long period of time or the effects of chronic illness.

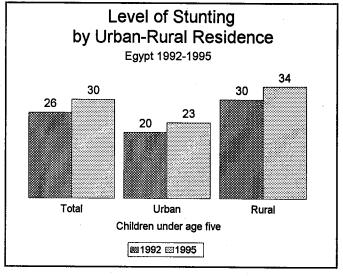
The level of stunting among young children in Egypt increased slightly between the 1992 and 1995 DHS surveys. At the time of the 1995 survey, 3 in 10 Egyptian children under age five were stunted (or too short for their age).

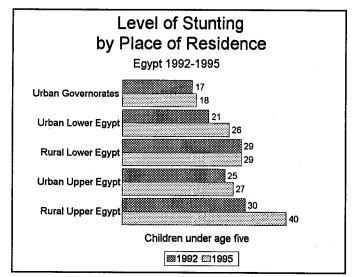
The increase in stunting levels was observed for both urban and rural children. It was particularly evident among children living in rural Upper Egypt, where the percentage stunted among children under age five rose from 30 percent in 1992 to 40 percent in 1995.



Mothers are increasingly using ORS packets to combat the dehydration that accompanies diarrheal illnesses in young children.

The level of stunting among young children increased slightly in the first half of the 1990s.





Children in rural Upper Egypt experienced the largest increases in stunting levels.

Data Sources

1980 Egyptian Fertility Survey (EFS) – The EFS was conducted by the Central Agency for Public Mobilization and Statistics (CAPMAS) under the auspices of the World Fertility Survey program. The survey covered a nationally representative, self-weighting sample of households, and took place in two phases. In the first phase, interviews were completed with 10,596 households and 8,788 ever-married women, and data were collected on community-level indicators. The second phase, which involved a subsample of one-third of the households interviewed in the first phase, obtained data on the economic characteristics of households and on the fertility behavior and attitudes of husbands.

1984 Egypt Contraceptive Prevalence Survey (ECPS) – The ECPS was conducted under the auspices of the National Population Council as part of the international Contraceptive Prevalence Surveys program. The survey covered a nationally representative, self-weighting sample of households. During the ECPS, interviews were completed with 10,474 households and 10,013 ever-married women.

1988 Egypt Demographic and Health (EDHS) – The 1988 EDHS was the first of three surveys conducted under the auspices of the National Population Council as part of the international Demographic and Health Surveys program. During the 1988 EDHS, interviews were completed with 9,805 households and 8,911 ever-married women. To meet the objective of providing governorate-level estimates for key population and health indicators, the number of households selected for the sample from eight governorates was disproportional to the proportion of the national population living in those governorates. As a result, the 1988 EDHS data must be weighted to obtain national-level estimates. Five Frontier governorates were also excluded from coverage in the 1988 EDHS. The net effect on national estimates of excluding these governorates was negligible because of their small size.

1992 Egypt Demographic and Health (EDHS) – The 1992 EDHS was the second of three surveys conducted under the auspices of the National Population Council as part of the international Demographic and Health Surveys program. During the 1992 EDHS, interviews were completed with 10,760 households and 9,864 evermarried women. In addition, in a subsample of one-third of the sampled households, interviews were conducted with husbands of the women who were eligible for the survey. A total of 2,466 husbands were successfully interviewed in the survey. As was the case with the 1988 EDHS, the 1992 EDHS data must be weighted to obtain national-level estimates due to the disproportional allocation of the sample at the governorate level. The five Frontier Governorates were excluded from coverage in the 1992 EDHS.

1995 Egypt Demographic and Health (EDHS) – The 1995 EDHS was the third of three surveys conducted under the auspices of the National Population Council as part of the international Demographic and Health Surveys program. During the 1995 EDHS, interviews were completed with 15,567 households and 14,779 ever-married women. In addition, in a subsample of one-third of the sampled households, a special questionnaire was used to obtain detailed information on women's status. As was the case with the two earlier DHS surveys, the 1995 EDHS data must be weighted to obtain national-level estimates due to the disproportional allocation of the sample at the governorate level. Unlike the 1988 EDHS and the 1992 EDHS, the five Frontier Governorates were included in the survey.

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References

Abdel-Azeem, F., S. Farid, and A.M. Khalifa. 1993. *Egypt Maternal and Child Health Survey*. Cairo: Central Agency for Public Mobilization and Statistics [Arab Republic of Egypt] and the Pan Arab Program for Child Development [Arab League].

Central Agency for Public Mobilization and Statistics (CAPMAS). 1995. Statistical Year Book 1992-1994. Cairo: Central Agency for Public Mobilization and Statistics.

Central Agency for Public Mobilization and Statistics (CAPMAS). 1996. Estimate of Population Size, Arab Republic of Egypt on 1-1-96 [in Arabic]. Cairo: Central Agency for Public Mobilization and Statistics.

El-Zanaty, F., H.A.A. Sayed, H. Zaky, and A. Way. 1993. *Egypt Demographic and Health Survey* 1992. Calverton, Maryland: National Population Council [Arab Republic of Egypt] and Macro International Inc.

El-Zanaty, F. 1995. Contraceptive Use in Egypt. In *Perspectives on Fertility and Family Planning in Egypt: Results of Further Analysis of the 1992 Egypt Demographic and Health Survey*, ed. M. Mahran, F. El-Zanaty and A. Way. Calverton, Maryland: National Population Council [Arab Republic of Egypt] and Macro International Inc.

El-Zanaty, F., E. Hussein, G. Shawky, A. Way, and S. Kishor. 1996. *Egypt Demographic and Health Survey 1995.* Calverton, Maryland: National Population Council [Arab Republic of Egypt] and Macro International Inc.

Hallouda, A.M., S.Z. Amin, and S. Farid, eds. 1983. *The Egyptian Fertility Survey*. 4 vols. Cairo: Central Agency for Public Mobilization and Statistics.

Sayed, H.A.A., M.N. El-Khorazaty, and A.A. Way. 1985. *Fertility and Family Planning in Egypt*. Columbia, Maryland: Egypt National Population Council [Arab Republic of Egypt] and Westinghouse Public Applied Systems.

Sayed, H.A.A., M. Osman, F. El-Zanaty, and A. Way. 1989. *Egypt Demographic and Health Survey 1988*. Columbia, Maryland: National Population Council [Arab Republic of Egypt] and Institute for Resource Development/Macro Systems, Inc.

Sommerfelt, A.E. and M.K. Stewart. 1994. *Children's Nutritional Status*. DHS Comparative Studies No. 12. Calverton, Maryland: Macro International Inc.

Sommerfelt, A.E. and A. Piani. 1997. *Childhood Immunization: 1990-1994*. DHS Comparative Studies No. 22. Calverton, Maryland: Macro International Inc.