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This report summarizes the findings of the Kenya Demographic and Health Survey 1989, conducted by the National Council for Population and Development. The Institute for Resource Development provided funding and technical assistance. The IMPACT project of the Population Reference Bureau provided editorial and production support for this report.

The Kenya survey is part of the worldwide Demographic and Health Surveys (DHS) programme which is designed to collect data on fertility, family planning, and maternal and child health. Additional information on the Kenya Survey may be obtained from: National Council for Population and Development, Ministry of Home Affairs and National Heritage, PO Box 30478, Nairobi, Kenya. Additional information about the DHS programme may be obtained by writing to: DHS, IRD/Macro Systems, Inc., 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045, USA (Telephone: 301-290-2800; Telex: 87775; Fax: 301-290-2999).
The 1989 Kenya Demographic and Health Survey (KDHS) provides the first indication of a substantial decline in fertility in Kenya. The KDHS reported a total fertility rate (TFR) — the number of children women will bear in a lifetime at current fertility rates — of 6.7, down from a rate of 7.7 in 1984. The fertility rate, however, remains among the highest in the world.

The most important reason behind Kenya’s recent fertility decline is an increase in the use of family planning methods. Nine out of ten married women in Kenya know of at least one modern contraceptive method — for example, 88 percent of married women recognize the pill — and virtually all women who know of a method also say they know where to obtain it. The use of contraceptive methods has doubled during the past five years but even so, fewer than one married woman in three currently uses contraception. The pill is the most commonly used modern contraceptive method in Kenya, and periodic abstinence is the most common of all methods.
The median age at first marriage has risen substantially, from 17.3 years for women now at the end of their childbearing years to 19.8 years for women currently age 20 to 24. Still, over half of all women marry and become mothers by the age of 20.

Breastfeeding can have a significant effect on fertility and also provides children with valuable nutritional benefits. The practice of breastfeeding is nearly universal in Kenya. More than eight out of ten Kenyan babies are breastfed for at least one year, and the average duration is 19 months.

Fertility levels in Kenya differ dramatically by women’s place of residence and education. Women with a secondary or higher education, for example, have a TFR of only 4.9, compared to 7.2 for women without any education. Women in rural areas have 50 percent higher fertility than women in urban areas.

KDHS data suggest that fertility is likely to decline further in Kenya. Half of all married women interviewed in the KDHS want to have no more children, and more than one-quarter want to delay having another child for at least two years. Only 12 percent of married women want another child within two years. The KDHS also noted a significant decline in the family size that women find ideal, from an average of 5.8 children in 1984 to 4.4 children in 1989. Actual family size is higher than this at present.

The infant mortality level was reported to be 60 deaths per 1,000 live births in the period 1984-89, while child mortality was estimated at 32 deaths per 1,000 children age one through four. These rates, which the authors of the KDHS report suggest may be somewhat underestimated, are lower than the infant and child mortality levels for the period 1974-78. Infant mortality is higher for infants born within two years of a preceding birth and lower for those born after an interval of four years or more. Also, mortality rates are higher for infants and children whose mothers have little or no education.

The care mothers receive before and during childbirth is important to the health of both mother and child. For three of every four births occurring in the five years before the survey, women received antenatal care from a doctor, trained midwife or nurse, and medical personnel assisted at the delivery of half of all births during this period. Among the remaining births, most were assisted by traditional birth attendants or friends or relatives. In 12 percent of all births, however, no one assisted with the delivery.

The Kenya Government’s health programmes have been relatively effective in immunising children against the six major childhood diseases. The majority of children age 12-23 months have been immunised against tuberculosis, more than half have been immunised against polio, and at least 44 percent have received all of the recommended immunisations. Diarrhoea and fever are still relatively common, but most children receive some treatment.
BACKGROUND

The Kenya Demographic and Health Survey (KDHS) collected information on fertility patterns, reproductive intentions, knowledge and use of contraception and selected indicators of maternal and child health. The survey was conducted between December 1988 and May 1989. Interviews were held with 7,150 women between the ages of 15 and 49 and a sub-sample of 1,116 husbands of these women. Kenya's National Council for Population and Development was responsible for the survey, in cooperation with the Central Bureau of Statistics. Probably the most complete survey of its kind ever undertaken in Kenya, the KDHS provides findings that are valuable to public health and family planning policy-makers.
Kenya’s fertility rates have dropped sharply, from a total fertility rate (TFR) of 7.7 recorded by the Kenya Contraceptive Prevalence Survey in 1984 to a TFR of 6.7 for the five-year period prior to the 1989 survey. If current rates continue, this means women will give birth to an average of one child less than at the childbearing rates prevailing in 1984 (see Figure 1).

Despite this impressive decline in fertility, large families are still common in Kenya, and fertility rates remain among the highest in the world.

The KDHS found striking differences in fertility according to women’s level of education and place of residence. Women who have not attended school have a total fertility rate of 7.2, whereas women with secondary and higher education have a rate of only 4.9. Women in urban areas have a TFR of 4.8, versus 7.1 for women in rural areas. By geographic area, fertility is lowest in Nairobi (4.6), and highest in Western Province (8.1).

Marriage Patterns

Marriage in Kenya is nearly universal, and over half of all women marry before the age of 20. (In the KDHS, the term “married” also includes women living in consensual unions.) Nearly one-quarter of all married women in Kenya are in polygynous unions. The proportion is lower for younger women than for older women, and less common in urban areas than in rural areas.

The age at first marriage has been rising. For example, three-fourths of women currently age 40-44 married before the age of 20, but only about half of
women currently age 20-24 married so young. The median age at first marriage is 17.3 years for women in the 40-44 age group, versus 19.8 years for the younger women. Women in urban areas and those with more

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More than one-third of Kenyan women become mothers before age 18.

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education tend to marry later than women in rural areas and those with less education. The increased enrolment of women in secondary and higher education has probably contributed to the increasing proportion of women delaying marriage.

Age at First Birth

Childbearing begins in the teenage years for many Kenyan women. More than one-third of all Kenyan women become mothers before the age of 18. Fully half are mothers before age 20. Despite the observed increase in age at marriage, the median age at first birth has not changed significantly over time. Early childbearing not only contributes to high fertility but also has adverse effects on health, since very young mothers suffer more health problems than older mothers, and their children have higher mortality rates.
Breastfeeding and Postpartum Abstinence

Breastfeeding and sexual abstinence have important effects on fertility. Breastfeeding can prolong the period of amenorrhoea (absence of menstruation) following childbirth and protect the mother from becoming pregnant. Breastfeeding is nearly universal in Kenya. About 80 percent of babies born in the 35 months before the survey were breastfed until their first birthday, and over half until 18 months of age. More than 40 percent of Kenyan women experience amenorrhoea for at least one year after childbirth (see Figure 2).

About half of women do not resume sexual relations for 2-3 months after childbirth; 17 percent abstain for at least one year. One year after giving birth, 46 percent of mothers remain insusceptible to pregnancy, either because they are amenorrhoeic or abstaining.

Fertility Preferences

The 1989 KDHS indicates that the family size Kenyan women find ideal has declined considerably from the ideal size reported five years earlier. In 1989, women considered 4.4 children to be the ideal number, on average, versus 5.8 children considered the ideal in
Fertility Preferences
(Currently Married Women 15-49)

Want Child Soon 12%
Want Child Later 26%
Want Child Not Sure When 3%
Undecided 6%
Infecund, Missing Data 3%
Want No More Children* 49%

* Includes sterilised women

KDHS 1989

1984. Younger women prefer smaller families than do older women. For example, among all women age 40-44 in 1989, the average ideal number of children was 5.5; among those age 20-24, the ideal was only 3.9.

Family size preferences decline with increased levels of education. Urban women desire fewer children than women living in rural areas.

**Women consider 4.4 children to be the ideal family size, on average.**

Nearly half of all married women want no more children, and over one-quarter want to delay having their next child for at least two years. Only 12 percent of married women in Kenya want another child within two years (see Figure 3). The desire to end childbearing increases sharply with the number of living children a woman already has. Among women with six or more living children, 82 percent do not want any more children.
**Family Planning**

Most Kenyan women have some knowledge of modern contraceptive methods and the sources of these methods. The proportion of women who have ever used a contraceptive method, however, is much lower, and the proportion currently using a method is lower still (see Figure 4).

**Recognition of Family Planning Methods and Sources**

Nine out of ten married women recognize at least one method of family planning. The most widely known method is the pill, recognized by 88 percent of married women. The injection is second, 82 percent, followed by female sterilization, 73 percent, and the IUD, which is recognized by 67 percent. Most women also know a source of a family planning method; 90 percent of married women say they know where to obtain a modern method, for example.

**Use of Family Planning**

Use of family planning methods has increased dramatically since 1984. The 1989 KDHS found that 39 percent of all women have used contraception at some time, versus 29 percent in both the 1984 KCPS and the 1977/78 Kenya Fertility Survey. Among currently married women, 45 percent have ever used a family planning method. Ever-use of modern methods is slightly higher than ever-use of traditional methods.

The 1989 KDHS found that 27 percent of married women in Kenya are currently using contraception, versus only 17 percent reported in the 1984 KCPS and 7 percent in the 1977/78 Kenya Fertility Survey. The

![Figure 4: Knowledge and Use of Family Planning (Currently Married Women 15-49)](image-url)
The modern contraceptive method most widely used by married women is the pill (5.2%), followed by female sterilisation (4.7%), the IUD (3.7%), and the injection (3.3%). About 1 percent of married women use such modern methods as the condom, diaphragm or foam. Nine percent use a traditional method, mostly periodic abstinence (7.5%) (see Figure 6). Contraceptive use varies significantly by women's age. Married women below age 20 have a very low rate of contraceptive use (13%), probably because most intend to start families. Rates of contraceptive use rise with age, peaking at 34 percent for married women age 35-39, then falling among older women.

Current contraceptive use increases with education level; women with secondary and higher education are more than twice as likely to use contraception as women with no education (see Figure 7). Rural women are more likely to use traditional than modern methods, while the reverse is true among urban women. Use of contraception rises steadily according to the number of surviving children in the family, from under 5 percent of married women with no children to over 30 percent of those who have four children or more.
Family Planning Services

About 70 percent of women currently using modern contraceptive methods obtained their methods from government sources. The most widely used sources were government hospitals, supplying 56 percent of all users. Government clinics and health centres supplied 15 percent of the users of modern family planning services. The Family Planning Association of Kenya (FPAK) clinics supplied 10 percent. Nine percent of users obtained their methods from private doctors or pharmacies, while 8 percent depended on non-governmental hospitals or clinics, such as those run by private doctors or church missions.

Reasons for Not Using Family Planning

Among non-pregnant, sexually active women not using contraception, 62 percent said they would be unhappy if they became pregnant in the near future. Of these, 23 percent said they were not using contraception
because of a lack of information. Another 12 percent mentioned factors relating to access or availability of family planning as the reason for not using contraception.

About half of married women not using a contraceptive method say they intend to use one in the future. Thirty-seven percent of these women intend to use the injection, while 24 percent prefer the pill and 13 percent intend to be sterilised.

Potential Demand for Family Planning

To assess the potential demand for family planning, it is possible to calculate the number of women in Kenya who are not presently using contraception and who either want no more children or want to postpone their next birth for two years or more. In all, 60 percent of currently married Kenyan women are potentially in need of family planning by this measure — 32 percent because they do not want any more children, and 28 percent because they wish to space their next birth.

Over half of the births in the year before the survey were either unwanted or mistimed. Over half of the births in the 12 months prior to the survey were either mistimed or unwanted. The KDHS found that 42 percent of recent births were wanted later than they actually occurred, while 11 percent were not wanted at all. These findings suggest that many women could benefit from family planning services, especially for spacing births.

Other evidence of the potential demand is that the family size that women say is ideal (4.4) is considerably smaller than the level of current fertility (6.7). The KDHS shows that about half of all married women and half of the surveyed husbands want no more children.
In 38 percent of couples, neither spouse wants any more children. If more couples could realize their childbearing preferences, fertility would be likely to decline further.

**Communication Between Husbands and Wives**

Communication between husbands and wives is instrumental to successful family planning. Two-thirds of currently married women who know of a contraceptive method said they had talked about family planning with their husbands in the year before the survey, and half of these women had discussed it more than once or twice. Data from the husbands' survey corroborates this finding, with about two-thirds of the husbands who recognized a contraceptive method reporting that they had discussed family planning with their wives during the year.

Husbands reported an average of 4.8 children as the ideal number, exactly the same as currently married women. In only about one-third of couples, however, did husbands and wives agree with each other on the ideal number of children.

Nearly 90 percent of married women who recognized a contraceptive method said they approved of family planning, but only 60 percent believed that their husbands also approved. The husbands' survey indicated, however, that over 90 percent of husbands who recognized a contraceptive method approved of family planning.
Infant and Child Mortality

The KDHS results suggest the infant mortality rate for the period 1984-89 was 60 deaths per 1,000 live births, and the child mortality rate was 32 per 1,000. According to the authors of the report, these rates may be somewhat underestimated due to underreporting of children who have died. Comparisons with rates for the period 1974-78 indicate that infant and child mortality have declined steadily in recent years. The 1984-89 infant mortality rate, which measures deaths of children under age one, is 6 percent lower than the rate for 1974-78. The 1984-89 child mortality rate, which measures deaths of children between ages one and five, is 27 percent lower than the rate for 1974-78 (see Figure 8).

Infant mortality differs substantially according to the length of the interval between births. Children born within two years of a preceding birth are more than twice as likely to die before reaching the age of one as children born after an interval of four or more years (see Figure 9). Infant and child mortality levels are also much higher for children of mothers with little or no education.
Infant and child mortality rates are only slightly higher in rural than in urban areas; this urban-rural difference is greater in many other countries. Within Kenya, however, mortality differs markedly by province. Infant mortality is highest in the Coast Province (107 deaths per 1,000 live births) and lowest in the Rift Valley Province (35 per 1,000). Variation in child mortality rates is even more marked, from a low of 10 deaths per 1,000 children in the Central Province, to well over 50 deaths per 1,000 in the Coast, Nyanza and Western Provinces.

Maternal Health

The health care mothers receive during pregnancy and delivery is important to the survival and well-being of children and mothers alike. According to the KDHS, most women in Kenya made at least one ante-natal care visit to doctors or trained nurses/midwives. For about one birth in five, however, mothers received no care.

Doctors assisted 16 percent of births in the five years preceding the survey, trained nurses/midwives, 34 percent, relatives or friends, 21 percent, and traditional birth attendants, 14 percent. For 12 percent of recent births, mothers received no assistance with delivery (see Figure 10). Births in urban areas were much more likely than those in rural areas to be assisted by a doctor or trained nurse/midwife. In rural areas, more than half of all births were assisted by traditional birth attendants, relatives/friends, or received no assistance.

Neonatal tetanus, a major cause of infant deaths in developing countries like Kenya, can be prevented if
the mother has been immunised against tetanus and if the umbilical cord is cut and treated in a sterile manner. In Kenya, for 89 percent of the births in the five years before the survey, the mothers said they received an injection against tetanus, a percentage which may be

Most women receive some ante-natal care and many have assistance from trained personnel during childbirth.

overstated. Although mothers reported that for 77 percent of recent births they received ante-natal care from a trained medical provider, it seems doubtful that for 12 percent of the births the mother would have received a tetanus injection but no other ante-natal care. The level of tetanus toxoid coverage is highest for women with a secondary education and those living in urban areas.

Breastfeeding and Infant Health

Breastfeeding is important to infant and child health. Breastmilk is the best source of nutrition during the first year of life, and it provides some immunity against several diseases, particularly in the first few
months of life. In Kenya, over 90 percent of babies are breastfed for at least the first six months of life, and half are breastfed for 18 months. Women with a secondary education and urban women breastfeed for slightly shorter periods than average.

Prevention of Childhood Diseases

Kenya’s Expanded Programme of Immunisation recommends that all children receive scheduled immunisations in the first year of life against common childhood diseases. In the KDHS, mothers of 61 percent of the children age 12-23 months were able to provide interviewers with the health card documenting their child’s immunisations. For another 35 percent of children a health card was not available but their mothers reported that they had received at least one immunisation. Children with health cards are much more likely to be vaccinated than those without cards.

Of those children age 12 to 23 months with health cards, 97 percent have been immunised against tuberculosis, and over 90 percent have received all three doses of immunisations against diphtheria, pertussis, tetanus and polio. Seventy-eight percent have been immunised against measles, and 73 percent received all of the recommended immunisations. Immunisation levels rise sharply with the mother’s education, but other differentials, including urban-rural, are relatively small.

Diarrhoea

Diarrhoea is a common infant and childhood illness which can cause severe dehydration and, if left untreated, can lead to death. The KDHS found that 13
percent of all children under the age of five had diarrhoea within the two-week period preceding the survey, and 7 percent within the previous 24 hours. The proportion of children who have recently had diarrhoea drops considerably after the age of two years.

Dehydration caused by diarrhoea can be treated effectively and inexpensively with oral rehydration therapy (ORT). In Kenya, 21 percent of children with diarrhoea were treated with oral rehydration solution packets and 49 percent with a homemade rehydration solution. About half were taken to a medical facility. However, 10 percent of children suffering from diarrhoea received no treatment (see Figure 11).

Fever and Respiratory Illness

Fever is a symptom of many infectious diseases, including malaria. Mothers reported that 42 percent of children under age five had fever in the month before the survey. Of these, 56 percent were taken to a medical facility. Severe coughing or difficulty in breathing are symptoms of lower respiratory tract infections, particularly pneumonia. Of all children under five, 18 percent had a severe cough or had difficulty breathing during the month before the survey. About two-thirds were taken to a medical facility. Children in urban areas were more likely than those in rural areas to be taken to a medical facility for consultation for any of these symptoms.
The KDHS indicates that Kenya is making considerable progress in reducing fertility. Though rates are still high by world standards, the survey suggests that if couples are able to realize their childbearing preferences, fertility may decline further.

Use of family planning methods has increased dramatically since 1984.

The KDHS identifies certain groups of women who may benefit from family planning services. Over half of all births in the year before the survey were either unwanted or mistimed. In all, the KDHS estimates that as many as 60 percent of married women may need family planning services.

The KDHS also shows that some progress has been made in reducing infant and child mortality, although rates remain high, and vary considerably by province. The KDHS provides valuable information for policymakers as they plan future health and family planning programmes in Kenya.

**Fact Sheet**

*World Population Data Sheet, Population Reference Bureau, 1990*

- Population Size (millions) 24.6
- Population Growth Rate (percent) 3.8
- Population Doubling Time (years) 18
- Birth Rate (per 1,000 population) 46
- Death Rate (per 1,000 population) 7

*Kenya, Demographic and Health Survey 1989*

**Sample Population**
- Women 15-49 7,150

**Background Characteristics**
- Percent urban 17.3
- Percent with more than primary education 20.4

**Marriage and Other Fertility Determinants**
- Percent currently married 66.7
- Percent ever-married 74.0
- Median age at first marriage for women 20-49 18.5
- Median age at first birth for women 20-49 18.8
- Mean length of breastfeeding (in months) 19.4
- Mean length of postpartum amenorrhoea (in months) 10.9
- Mean length of postpartum abstinence (in months) 5.9
Fertility
Total fertility rate (projected completed family size) 6.7
Mean number of children ever born to women 45-49 7.6
Percent of women who are pregnant 8.9

Desire for Children
Percent of currently married women:
Wanting no more children (includes sterilized women) 49.4
Wanting to delay next birth at least 2 years 26.4
Mean ideal number of children for women 15-49 4.4
Percent of unwanted births 11.0
Percent of mistimed births 42.1

Knowledge and Use of Family Planning
Percent of currently married women:
Knowing any method 92.4
Knowing source for any method 90.8
Ever using any method 45.0
Currently using any method 26.9
Periodic abstinence 7.5
Pill 5.2
Female sterilisation 4.7
IUD 3.7
Injection 3.3
Condom 0.5
Diaphragm/foam/jelly 0.4
Withdrawal 0.2
Other methods 1.3

Percent of husbands:
Knowing any method 94.7
Ever using any method 65.0
Currently using any method 49.5

Percent of women using modern methods who obtained them from:
Government hospital/clinic/health centre 70.5
Family Planning Association of Kenya (FPAK) clinic 10.1
Other hospital/clinic/mobile clinic 7.8
Private doctor 8.3
Pharmacy 0.8
Other 2.5

Mortality and Health
Infant mortality rate 59.6
Under five mortality rate 89.2
Percent of mothers of recent births:
Received ante-natal care during pregnancy 79.6
Immunised against tetanus during pregnancy 88.7
Assisted at delivery by doctor or trained nurse/midwife 50.0
Percent of children age 0-1 month still breastfed 96.0
Percent of children age 4-5 months still breastfed 91.9
Percent of children age 10-11 months still breastfed 91.0
Percent of children under five years of age with health cards 50.6
Percent of children age 12-23 months with health cards 61.0

Percent of children age 12-23 months with health cards:
Vaccinated against BCG 96.7
Vaccinated against DPT (3 doses) 90.7
Vaccinated against polio (3 doses) 92.4
Vaccinated against measles 78.0
Vaccinated against all six diseases 72.8

Percent of children under age five:
With diarrhoea 12.7
Proportion with diarrhoea treated 89.8
With fever 42.1
Proportion with fever consulting medical facility 55.5
Percent with cough/difficult breathing 18.2
Proportion with cough/difficult breathing consulting medical facility 65.2

1 The number of years of schooling constituting a primary education has changed several times
2 Current status estimate based on births within 36 months of the survey
3 Based on births to women 15-49 years during the period 0-4 years before the survey
4 Percent of births in the 12-month period before the survey which were unwanted
5 Percent of births in the 12-month period before the survey which were wanted later
6 Deaths of infants under age 1 per 1,000 live births; rates are for the five-year period preceding the survey (approximately 1984-1989)
7 Deaths of children under age 5 per 1,000 live births; rates are for the five-year period preceding the survey (approximately 1984-1989)
8 Based on births occurring during the five years before the survey
9 Based on children under age 5 reported by the mothers as having diarrhoea during the two weeks before the survey
10 Based on children under age 5 reported by the mothers as having a fever during the four weeks before the survey
11 Based on children under age 5 reported by the mothers as having a severe cough, or difficult or rapid breathing during the four weeks before the survey