Kenya - Kenya Demographic and Health Survey 1998

Kenya National Bureau of Statistics (KNBS)

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Overview

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Overview

ABSTRACT
The 1998 Kenya Demographic and Health Survey (KDHS) is a nationally representative survey of 7,881 wo 881 women age 15-49 and 3,407 men age 15-54. The KDHS was implemented by the National Council for Population and Development (NCPD) and the Central Bureau of Statistics (CBS), with significant technical and logistical support provided by the Ministry of Health and various other governmental and nongovernmental organizations in Kenya. Macro International Inc. of Calverton, Maryland (U.S.A.) provided technical assistance throughout the course of the project in the context of the worldwide Demographic and Health Surveys (DHS) programme, while financial assistance was provided by the U.S. Agency for International Development (USAID/Nairobi) and the Department for International Development (DFID/U.K.). Data collection for the KDHS was conducted from February to July 1998.

Like the previous KDHS surveys conducted in 1989 and 1993, the 1998 KDHS was designed to provide information on levels and trends in fertility, family planning knowledge and use, infant and child mortality, and other maternal and child health indicators. However, the 1998 KDHS went further to collect more in-depth data on knowledge and behaviours related to AIDS and other sexually transmitted diseases (STDs), detailed “calendar” data that allows estimation of contraceptive discontinuation rates, and information related to the practice of female circumcision. Further, unlike earlier surveys, the 1998 KDHS provides a national estimate of the level of maternal mortality (i.e. related to pregnancy and childbearing).The KDHS data are intended for use by programme managers and policymakers to evaluate and improve health and family planning programmes in Kenya.

Fertility. The survey results demonstrate a continuation of the fertility transition in Kenya. At current fertility levels, a Kenyan women will bear 4.7 children in her life, down 30 percent from the 1989 KDHS when the total fertility rate (TFR) was 6.7 children, and 42 percent since the 1977/78 Kenya Fertility Survey (KFS) when the TFR was 8.1 children per woman. A rural woman can expect to have 5.2 children, around two children more than an urban women (3.1 children). Fertility differentials by women's education level are even more remarkable; women with no education will bear an average of 5.8 children, compared to 3.5 children for women with secondary school education.

Marriage. The age at which women and men first marry has risen slowly over the past 20 years. Currently, women marry for the first time at an average age of 20 years, compared with 25 years for men. Women with a secondary education marry five years later (22) than women with no education (17).The KDHS data indicate that the practice of polygyny continues to decline in Kenya. Sixteen percent of currently married women are in a polygynous union (i.e., their husband has at least one other wife), compared with 19 percent of women in the 1993 KDHS, 23 percent in the 1989 KDHS, and 30 percent in the 1977/78 KFS.

While men first marry an average of 5 years later than women, men become sexual active about onehalf of a year earlier than women; in the youngest age cohort for which estimates are available (age 20-24), first sex occurs at age 16.8 for women and 16.2 for men.

Fertility Preferences. Fifty-three percent of women and 46 percent of men in Kenya do not want to have any more children. Another 25 percent of women and 27 percent of men would like to delay their next child for two years or longer. Thus, about three-quarters of women and men either want to limit or to space their births.

The survey results show that, of all births in the last three years, 1 in 10 was unwanted and 1 in 3 was mistimed. If all unwanted births were avoided, the fertility rate in Kenya would fall from 4.7 to 3.5 children per woman.

Family Planning. Knowledge and use of family planning in Kenya has continued to rise over the last several years. The 1998 KDHS shows that virtually all married women (98 percent) and men (99 percent) were able to cite at least one modern method of contraception. The pill, condoms, injectables, and female sterlisation are the most widely known methods.

Overall, 39 percent of currently married women are using a method of contraception. Use of modern methods has increased from 27 in the 1993 KDHS to 32 percent in the 1998 KDHS. Currently, the most widely used methods are contraceptive injectables (12 percent of married women), the pill (9 percent), female sterilisation (6 percent), and periodic abstinence (6 percent). Three percent of married women are using the IUD, while over 1 percent report using the condom and 1 percent use of contraceptive implants (Norplant).

The rapid increase in use of injectables (from 7 to 12 percent between 1993 and 1998) to become the predominant method, plus small rises in the use of implants, condoms and female sterilisation have more than offset small decreases in pill and IUD use. Thus, both new acceptance of contraception and method switching have characterised the 1993-1998 intersurvey period.

Contraceptive use varies widely among geographic and socioeconomic subgroups. More than half of currently married women in Central Province (61 percent) and Nairobi Province (56 percent) are currently using a method, compared with 28 percent in Nyanza Province and 22 percent in Coast Province. Just 23 percent of women with no education use contraception versus 57 percent of women with at least some secondary education.

Government facilities provide contraceptives to 58 percent of users, while 33 percent are supplied by private medical sources, 5 percent through other private sources, and 3 percent through community-based distribution (CBD) agents. This represents a significant shift in sourcing away from public outlets, a decline from 68 percent estimated in the 1993 KDHS. While the government continues to provide about two-thirds of IUD insertions and female sterilisations, the percentage of pills and injectables supplied out of government facilities has dropped from over 70 percent in 1993 to 53 percent for pills and 64 percent for injectables in 1998. Supply of condoms through public sector facilities has also declined: from 37 to 21 percent between 1993 and 1998.

The survey results indicate that 24 percent of married women have an unmet need for family planning (either for spacing or limiting births). This group comprises married women who are not using a method of family planning but either want to wait two year or more for their next birth (14 percent) or do not want any more children (10 percent). While encouraging that unmet need at the national level has declined (from 34 to 24 percent) since 1993, there are parts of the country where the need for contraception remains high. For example, the level of unmet need is higher in Western Province (32 percent) and Coast Province (30 province) than elsewhere in Kenya.

Early Childhood Mortality. One of the main objectives of the KDHS was to document current levels and trends in mortality among children under age 5. Results from the 1998 KDHS data make clear that childhood mortality conditions have worsened in the early-mid 1990s; this after a period of steadily improving child survival prospects through the mid-to-late 1980s. Under-five mortality, the probability of dying before the fifth birthday, stands at 112 deaths per 1000 live births which represents a 24 percent increase over the last decade. Survival chances during age 1-4 years suffered disproportionately: rising 38 percent over the same period.

Survey results show that childhood mortality is especially high when associated with two factors: a short preceding birth interval and a low level of maternal education. The risk of dying in the first year of life is more than doubled when the child is born after an interval of less than 24 months. Children of women with no education experience an under-five mortality rate that is two times higher than children of women who attended secondary school or higher. Provincial differentials in childhood mortality are striking; under-five mortality ranges from a low of 34 deaths per 1000 live births in Central Province to a high of 199 per 1000 in Nyanza Province.

Maternal Health. Utilisation of antenatal services is high in Kenya; in the three years before the survey, mothers received antenatal care for 92 percent of births (Note: These data do not speak to the quality of those antenatal services). The median number of antenatal visits per pregnancy was 3.7. Most antenatal care is provided by nurses and trained midwives (64 percent), but the percentage provided by doctors (28 percent) has risen in recent years. Still, over one-third of women who do receive care, start during the third trimester of pregnancy-too late to receive the optimum benefits of antenatal care. Mothers reported receiving at least one tetanus toxoid injection during pregnancy for 90 percent of births in the three years before the survey. Tetanus toxoid is a powerful weapon in the fight against neonatal tetanus, a deadly disease that attacks young infants.

Forty-two percent of births take place in health facilities; however, this figure varies from around three-quarters of births in Nairobi to around one-quarter of births in Western Province. It is important for the health of both the mother and child that trained medical personnel are available in cases of prolonged labour or obstructed delivery, which are major causes of maternal morbidity and mortality.

The 1998 KDHS collected information that allows estimation of mortality related to pregnancy and childbearing. For the 10-year period before the survey, the maternal mortality ratio was estimated to be 590 deaths per 100,000 live births. Bearing on average 4.7 children, a Kenyan woman has a 1 in 36 chance of dying from maternal causes during her lifetime.

Childhood Immunisation. The KDHS found that 65 percent of children age 12-23 months are fully vaccinated: this includes BCG and measles vaccine, and at least 3 doses of both DPT and polio vaccines.

This finding represents a significant decline in full vaccination coverage from the 79 percent estimated in the 1993 KDHS. More detailed analysis suggests that the worsening picture is due to: (a) a decline in measles vaccine coverage, and (b) an increase in the dropout rate between first and third doses of DPT and polio vaccines. Vaccination coverage fell in all areas of Kenya, but declined most in Nyanza Province, to less than 50 percent of children.

Childhood Illnesses and Treatment. In the two weeks preceding the survey, 20 percent of children under three years of age were reported to have experienced symptoms of acute respiratory infection (ARI)-cough with short, rapid breathing. Children with ARI are more likely to be taken to a health facility or provider for treatment if they live in urban areas (74 percent) than rural areas (54 percent).

Malaria poses an increasing threat to child health and survival in Kenya. As fever is the major manifestation of malaria, the KDHS included a series of questions on prevalence of fever and treatment of febrile children. In the two weeks before the survey, 42 percent of children under age three were reported to have had a fever; with highest prevalence rates in Nyanza and Western provinces (49 percent). Fifty-nine percent of febrile children were taken to a health facility or provider for treatment, and 40 percent were given an antimalarial drug in response to the fever. Coast, Western, and Nyanza provinces had the highest rates of antimalarial use (for treatment).

Seventeen percent of children under age three were reported to have had diarrhoea in the two weeks preceding the survey. The period of peak susceptibility to diarrhoea occurs during age 6-23 months, which is when most children are weaned and increasingly exposed to disease-causing agents. Around 44 percent of children with diarrhoea are taken to a health facility or provider for treatment. Over two-thirds of sick children received oral rehydration therapy using either a solution prepared from ORS packets (i.e., Oralite) or a recommended home fluid. However, 1 in 10 children with diarrhoea received no treatment at all; and the mothers of 1 in 6 children reported that they decreased fluid intake in response to the diarrhoea.

Dehydrating diarrhoeal disease remains a leading cause of under-five mortality in Kenya Infant Feeding. Almost all children (98 percent) are breastfed for some period of time; however, only 58 percent are breastfed within the first hour of life, and 86 percent within the first day after birth. The median duration of breastfeeding in Kenya is 21 months; but the introduction of supplementary liquids and foods occurs much earlier in life. Nearly three-quarters of children under 2 months of age are already given some form of supplementary feeding. Until age 4-6 months, exclusive breastfeeding (i.e., without any other foods or liquids) is recommended because it provides all the necessary nutrients and avoids exposure to disease agents. Yet, only 17 percent of children under 4 months are exclusively breastfed.

Nutritional Status. In the KDHS children under five years of age and their mothers were weighed and measured to obtain data for estimating levels of malnutrition. The results indicate that one-third of children in Kenya are stunted (i.e., too short for their age), a condition reflecting chronic malnutrition; and 1 in 16 children are wasted (i.e., very thin), a problem indicating acute or short-term food deficit. Peak levels of wasting occur during ages 6-23 months. The probability of being nutritionally “at-risk” is especially high for children of women with low levels of education.

Women whose body mass index (BMI)-weight (in kilograms) divided by the squared height (in metres)-falls below 18.5 are considered at nutritional risk. The data show that 1 in 8 mothers of young children have a BMI value below 18.5, indicating that they are very thin. The percentage of mothers with a low BMI varies from around 5 percent in Nairobi and Western provinces to around 15 percent in Rift Valley, Eastern, and Coast provinces. Teenage mothers (less than 20 years of age) are at especially high risk of having a low BMI.

Knowledge, Attitudes and Behaviour regarding HIV/AIDS and Other Sexually Transmitted Infections. As a measure of the increasing toll taken by AIDS on Kenyan society, the percentage of respondents who reported “personally knowing someone who has AIDS or has died from AIDS” has risen from about 40 percent of men and women in the 1993 KDHS to nearly three-quarters of men and women in 1998.

While nearly all survey respondents reported a general knowledge of AIDS, there remain significant numbers of women and men in Kenya who still lack an appreciation for key aspects of the epidemic. For example, about 1 in 10 men and women do not think that AIDS can be prevented. For those who did report that AIDS was preventable, less than one-half cited condom use as an effective means to prevent the spread of the virus. Male respondents tend to be slightly more knowledgeable than women about means of preventing HIV transmission. Men get their AIDS-related information predominantly from mass media sources. Women, on the other hand, rely more than men on community level sources such as friends, relatives, and

health facility staff.

Consistent condom use is a powerful weapon to combat HIV transmission. Almost all men and women reported that they know of condoms, but when asked whether they know where to get them, 39 percent of women and 24 percent of men where not able to cite a single source. In the most recent sexual encounter before the survey, just 21 percent of men and 6 percent of women reported having used a condom.

For both men and women, condom use is much more limited with spouses than with premarital and

extramarital sexual partners. When KDHS respondents were asked about their experience with the test for HIV, the AIDS virus, 14 percent of women and 17 percent of men reported that they had already been tested. Of those not yet tested, over 60 percent of women and men reported a desire to be tested. However, over one-third of respondents desiring to be tested were not able to cite a source to obtain an AIDS test.

Female Circumcision. The 1998 KDHS included a series of questions regarding the experience of women and their eldest daughters with the practice of female circumcision (FC). The results indicate that 38 percent of women age 15-49 in Kenya have been circumcised. The prevalence of FC has however declined significantly over the last 2 decades from about one-half of women in the oldest age cohorts to about one quarter of women in the youngest cohorts (including daughters age 15+). There exists wide variation in the prevalence of FC across Kenya's ethnic groups, from virtually no FC practice amongst the Luo and Luyha, to very widespread or universal practice amongst the Kisii and Masai.

About one-half of circumcisions are performed by circumcision practitioners; about one-third by doctors, trained nurses, or midwives; and most of the remainder by traditional birth attendants. The

instrument most commonly used to perform the circumcision was a razor blade. Three-quarters of respondents reported that they would like to see the practice of FC stopped.

Adolescents. It is increasingly recognized that the concerns of Kenya's youth need to be understood and addressed within the development process. It is thus useful to summarize, for males and females age 1519, some important KDHS findings in the following key areas: education, fertility, family planning, sex activity, and AIDS. Education remains the primary pathway towards economic and social advancement in Kenya. By age 15, most boys and girls should have completed their primary education. However, since the 1993 KDHS the percentage of young persons age 15-19 who have actually achieved this goal has declined sharply from 56 to 40 percent (females) and 52 to 38 percent (males). This pattern represents a disinvestment in Kenya's future.

Despite declines in fertility at all other age groups, teenage fertility remains constant at early-1990s levels. It is still true that one-half of Kenyan women will have started childbearing before the age of 20. Sex begins on average at age 16.2 for boys and 16.8 for girls; yet, contraceptive use is very low in the age group 15-19 and seldom involves effective family planning methods. This is not surprising, since youth are little exposed to family planning information and services. Among females age 15-19 who are not using a family planning method, very few were contacted by community-based distribution agents. Unlike older females, when attending health facilities, female adolescents are seldom given information about pregnancy prevention. This is puzzling since 79 percent of women (age 15-49) interviewed and 88 percent of men (age 15-54) reported that they felt family planning information should be made available to persons under age 18.

In the same vein, the KDHS data also indicate that respondents under age 20 are more likely than older respondents to demonstrate a lack of understanding about key aspects of the AIDS epidemic. For example, adolescents were less likely to know about sexually-transmitted diseases (STDs), more likely to hold misconceptions about modes of HIV transmission, less likely to know of a place where condoms can be obtained, and less likely to report multiple sources for information about HIV/AIDS.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Clusters, Districts, National, Male and Female, Urban, Rural

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Kenya National Bureau of Statistics (KNBS)	

OTHER PRODUCER(S)

Name	Affiliation	Role
Kenya National Bureau of Statistics (KNBS) National AIDS Control Council (NACC) National AIDS/STD Control Programme (NASCOP) Ministry of Public Health and Sanitation Kenya Medical Research Institute (KEMRI) National Coordinating Agency for Population and Development (NCAPD) MEASURE DHS, ICF Macro, Calverton, Maryland, U.S.A. U.S. Agency for International Development (USAID) United Nations Population Fund (UNFPA) United Nations Children's Fund (UNICEF)		

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Name	Abbreviation	Role
Kenya National Bureau of Statistics	KNBS	
National AIDS Control Council	NACC	
National AIDS/STD Control Programme	NASCOP	
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Kenya Medical Research Institute	KEMRI	
National Coordinating Agency for Population and Development	NCAPD	
MEASURE DHS, ICF Macro, Calverton, Maryland, U.S.A.		
U.S. Agency for International Development	USAID	
United Nations Population Fund	UNFPA	
United Nations Children's Fund	UNICEF	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Kenya National Bureau of Statistics	KNBS		
Ministry of Health	MOH		
Kenya Medical Research Institute	KEMRI		
National Coordinating Agency for Population and Development	NCAPD		
MEASURE DHS, ICF Macro, Calverton, Maryland, U.S.A.			
Centers for Disease Control and Prevention	CDC		

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Sampling

Sampling Procedure

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling (measurement) errors are the results of shortcomings in the implemention of data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 1998 Kenya Demographic and Health Survey (KDHS) to minimize this type of error, nonsampling errors are impossible to entirely avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 1998 KDHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the standard error for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 1998 KDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 1998 Kenya Demographic and Health Survey (KDHS) is the ISSA Sampling Error Module. This module uses the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearisation method treats any percentage or average as a ratio estimate, r = y/x, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle

Data Collection Mode

Face-to-face [f2f]

Data Processing

No content available

Data Appraisal

No content available