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DHS COMPARATIVE STUDIES

30

**Breastfeeding and
Complementary
Infant Feeding, and
the Postpartum
Effects of
Breastfeeding**

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**Demographic and Health Surveys
Comparative Studies No. 30**

**Breastfeeding and
Complementary Infant
Feeding, and the Postpartum
Effects of Breastfeeding**

PATRICIA A HAGGERTY
SHEA O RUTSTEIN

Macro International Inc
Calverton, Maryland USA

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Preface

One of the most significant contributions of the Demographic and Health Surveys (DHS) program is the creation of an internationally comparable body of data on the demographic and health characteristics of populations in developing countries. The *DHS Comparative Studies* series and the *DHS Analytical Reports* series examine these data across countries in a comparative framework, with a focus on specific topics.

The objectives of DHS comparative research are to describe similarities and differences between countries and regions, to highlight subgroups with specific needs, to provide information for policy formulation at the international level, and to examine individual country results in an international context. Whereas *Comparative Studies* reports are primarily descriptive, the *Analytical Reports* series uses a more analytical approach.

The *Comparative Studies* are based on a variable number of data sets reflecting the number of countries for which data were available at the time the report was prepared. Each report provides detailed tables and graphs for countries in four regions: sub-Saharan Africa, the Near East/North Africa, Asia, and Latin America/Caribbean. Survey-related issues such as questionnaire comparability, survey procedures, data quality, and methodological approaches are addressed in each report, as necessary. Where appropriate, data from previous DHS surveys are used to evaluate trends over time.

Comparative Studies published under the current phase of the DHS program (DHS-III) are, in some cases, updates and expansions of reports published earlier in the series. Other reports, however, cover new topics that reflect the expanded substantive scope of the DHS program.

It is anticipated that the availability of comparable information for a large number of developing countries will have long-term usefulness for analysts and policymakers in international population and health.

Martin Vaessen
Project Director

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Executive Summary

This report is a descriptive comparative analysis of breastfeeding, complementary infant feeding, and the postpartum effects of breastfeeding. The analysis is based on data collected in 37 nationally representative surveys under the Demographic and Health Surveys (DHS) program. The surveys took place in sub-Saharan Africa, Asia, the Near East/North Africa, and Latin America/Caribbean between 1990 and 1996. Data used in the analyses are from more than a quarter of a million children under the age of five years. In addition to the analyses, trends in breastfeeding and its postpartum effects are examined using data from 27 countries where two or more DHS or World Fertility Survey (WFS) studies were conducted between 1975 and 1996.

Breastfeeding has numerous biodemographic, social, and economic effects. It affects the health and nutritional status of both the mother and the child. Breastfeeding for the first two years of life and beyond protects the young child from infection, provides an ideal source of nutrients, is a cost-effective and safe form of feeding, fosters mother-child bonding, and lowers the risks of early childhood deaths. Breastfeeding also benefits the mother by helping the uterus to retract, which can reduce postpartum blood loss, and by delaying the return of the menses, thereby preventing subsequent closely spaced pregnancy. Because of these effects, breastfeeding practices of women in developing countries are critical determinants of child survival, maternal reproductive health, and population growth rates.

This report examines practices related to breastfeeding and infant and young child complementary feeding, including the timing of initial breastfeeding, frequency and duration of breastfeeding, the age at introduction of complementary liquids and foods, the types of complementary liquids and foods, and the use of bottles. The results for each country are expressed in terms of international breast- and complementary feeding recommendations and indicators. For countries in which more than one DHS survey was conducted between 1990 and 1996, data from the most recent survey are used. However, for countries with multiple DHS surveys or an earlier World Fertility Survey, trends in breastfeeding practices are examined using data from all surveys. Also examined are the fertility implications of breastfeeding, postpartum amenorrhea, sexual abstinence, and contraceptive use, including the proportions

of women meeting lactation amenorrhea method (LAM) criteria.

In the developing countries surveyed, nearly all children begin life with breastfeeding. For children who survive at least three days, more than 96 percent are breastfed. Ideally, infants should be put to the breast immediately after birth. However, in four countries each of sub-Saharan Africa and of Asia, fewer than 15 percent of children are put to the breast immediately. In some countries, notably India, Pakistan, Niger, Haiti, and Cameroon, more than 40 percent of children are put to the breast later than the second day after birth, an indication that they are deprived of the beneficial effects of colostrum and probably have received prelacteal liquids, a practice not recommended by the World Health Organization (WHO). There is little variation in initial breastfeeding practice according to sex, biodemographic, or socioeconomic characteristics.

Breastfeeding declines with the child's age. Among children under 6 months of age, nearly all children are breastfed in all regions. In sub-Saharan Africa, the percentage breastfeeding is nearly 100 percent in all countries, and in Asia, Latin America/Caribbean, and the Near East/North Africa about 90 percent of children in that age group are breastfed. The Dominican Republic and Brazil have the lowest rates of breastfeeding of children under 6 months, about 75 percent each.

At 6 to 11 months, in most countries the majority of children are still breastfed, but with larger differences between regions, with sub-Saharan Africa having the highest percentages of breastfeeding and Latin America/Caribbean having the lowest. Indeed, in the Dominican Republic and Brazil, only half the children 6 to 11 months old are breastfed, and in Colombia and Paraguay 60 percent are. Other countries have two-thirds or more of their children breastfed during the second 6 months of life.

The duration of breastfeeding varies by region and socioeconomic status. Regionally, children in Latin America/Caribbean and the Near East/North Africa are breastfed the shortest amount of time, 14 and 15 months respectively. In contrast, children from sub-Saharan Africa and Asia are breastfed the longest, about 21 months in each region. In sub-Saharan Africa and Asia, children living in urban areas are breastfed about 3 months less than children

in rural areas, whereas in Latin America/Caribbean and the Near East/ North Africa urban children are breastfed about 2 months less than rural children. There are also substantial differences in breastfeeding duration according to mother's education, with higher levels of education associated with shorter durations. Between children whose mothers have no education and have secondary education or more, the differences in median duration range from 10 months in Latin America/Caribbean to 3 months in the Near East/ North Africa.

The international recommendation for breastfeeding frequency is that breastfeeding should be on demand, as often as the child expresses need. Breastfeeding frequency decreases somewhat with increasing child age and also varies somewhat between regions for older children. Children under 6 months of age are breastfed between 10 and 11 times per day. Children 12 to 15 months old are breastfed only a little less, 9 to 10 times per day. By the age of two years, for children still breastfeeding, the frequency has dropped to 7 times per day in Latin America/Caribbean and 8 times per day in Asia, but remains about 10 times per day in sub-Saharan Africa and the Near East/North Africa.

UNICEF and WHO recommend that children be exclusively breastfed for about 6 months, that complementary foods should begin around 6 months of age, and that breastfeeding should continue well into the second year of life and beyond. In spite of the recommendations, fewer than half of children under 4 months are exclusively breastfed in any of the regions. In Asia and the Near East/North Africa, just over 40 percent of infants under 4 months are exclusively breastfed. In Latin America/Caribbean and sub-Saharan Africa, only about 20 percent of infants are exclusively breastfed. Full breastfeeding, that is, allowing only plain water in addition to breast milk, is practiced for slightly over half of children under 4 months in all regions except Latin America/Caribbean where only a quarter of children are fully breastfed. Exclusive breastfeeding at 5 months of age is less than 5 percent in half the countries studied, it is less than 10 percent in all but 13 of the countries.

Regions vary in the percentage of children 6 to 9 months of age fed complementary (solid or semisolid) foods in addition to breast milk, as is recommended. About two-thirds of children aged 6 to 9 months in sub-Saharan Africa are fed complementary foods, about 56 percent in Latin America/Caribbean, about half in Asia, and 46 percent in the Near East/North Africa. The median age of introduction of complementary foods varies substantially according to

country. It varies from a low of a few weeks after birth in the Dominican Republic to over 13 months in Pakistan. There is a wide variation among the countries in each of the regions. By gender, there is little difference in the median age at introduction of complementary foods in Latin America/Caribbean and sub-Saharan Africa, but in Asia girls are started almost a month earlier than boys, while in Egypt the boys are started almost a month earlier.

First-year breastfeeding continuation rates, that is, the proportions of children aged 12-15 months still breastfeeding, were relatively high across the regions. Sub-Saharan Africa has the highest rate, with over 90 percent of children still breastfeeding at this age. In Asia 80 percent are still breastfed but in Latin America/Caribbean and the Near East/North Africa region a little less than 60 percent are. By 20 to 23 months of age (the second-year breastfeeding continuation rate) more than half the children in sub-Saharan Africa and Asia are still breastfed, but only about a quarter of children in Latin America/Caribbean and the Near East/North Africa are.

Bottle feeding is not recommended for the vast majority of infants because of the potential adverse effects of contamination from water, utensils, and hands during the preparation of formula, the lack of proper storage of prepared formula, and the potential overdilution of formula with water. For infants, bottle feeding is least prevalent in sub-Saharan Africa, being less than 10 percent in most countries. Namibia has the highest rate of bottle use in this region, about 34 percent. Bottle feeding is most prevalent in Latin America/Caribbean, reaching 85 percent of children in the Dominican Republic. Overall, as countries move up the economic development scale in each region, bottle feeding rates become higher, and closer to rates in developed countries.

Trends in the proportion of children ever breastfed, in current breastfeeding, and in breastfeeding duration were examined from 27 countries where two or more DHS or WFS surveys were conducted between 1975 and 1996. The very high levels of starting breastfeeding were maintained or increased in all countries studied. Increases in the proportions of children ever breastfed were most notable in Latin America/Caribbean, in particular in Brazil, the Dominican Republic, and Peru, where increases of approximately 6 percent were found in each country between the earliest and latest surveys. In those countries the increases were greater in urban than in rural areas, and among higher-educated mothers.

In accordance with the increase in ever-breastfed rates, there has been an overall increase in the proportions of children breastfed at all ages up to two years. At 6 to 11 months, an overall increase in the percentage of children breastfed in almost all countries reflects the general increase in starting breastfeeding. Continued, marked increases in the percentages of children still breastfeeding at 12 to 15 months and at 20 to 23 months (the first-year and second-year breastfeeding continuation rates, respectively) were observed in the majority of countries with multiple surveys. Kenya, Senegal, and Peru doubled the percentages of children still breastfed at 20 to 23 months between the first and last surveys. Increases in first-year and second-year breastfeeding continuation rates of 10 to 50 percent were not uncommon in most other countries, particularly in sub-Saharan Africa and Latin America/Caribbean. In a few countries, declines in second-year breastfeeding rates occurred, notably in Morocco and Turkey. In Colombia, second-year breastfeeding rates increased to 24 percent between the first and third surveys (between 1976 and 1990), but dropped to 17 percent in 1995.

Increases in the proportions of children breastfeeding at all ages (i.e., up to two years) are also reflected in increases in the median duration of breastfeeding in most countries. The increases range from an average of about 1 month (over a 10-year period) in the Near East/North Africa to 2.5 months in sub-Saharan Africa. Rwanda and Peru had the highest rates of increase of breastfeeding duration. When all countries were considered together, breastfeeding duration increased at a rate of 1.7 months per decade. In six countries breastfeeding duration declined over 10 years, but the rates of decline were less than 1 month in all but two countries (the Dominican Republic and Zimbabwe).

In addition to breastfeeding and other complementary feeding patterns within different age groups of children, information on what kinds of foods children are eating, and the frequency of feeding, was studied using seven-day recall data from countries with DHS-III surveys (i.e., surveys from 1992 to 1997). For children more than 6 months of age, water-based liquids, such as teas and sugared water, are given to about a third of the children in the sub-Saharan countries where data exist. In Asia and Latin America/Caribbean, the percentage of children over 6 months who receive water-based liquids was variable, from 10 percent in Indonesia and 16 percent in Colombia to 45 percent in Peru and 53 percent in Kazakhstan. Overall, children receive water-based liquids two to three days out of seven.

Milk-based liquids other than breast milk, such as milk, formula, and yogurt, also are given to children, but this type of feeding is quite variable, from a low of 3 percent in Indonesia to a high of 33 percent in Zimbabwe. As with water-based liquids, the weekly frequency of giving milk-based liquids is about 2 to 3 days per week.

In most countries, half or more of children were given eggs, fish, or poultry in the last week on two to three days. Nepal was exceptional in that only a third of children received such foods, and for those who did, on less than two days in the last week. Half or more children in sub-Saharan Africa ate red meats, about two and a half days per week, on average. Fewer than half of all children in Asia received red meats, with Nepal again having the lowest rate at 27 percent.

When all foods together are considered, over 90 percent of children 6 months of age or older were given some type of complementary food. In Latin America/Caribbean, the frequency of feeding of any type of food was about four days per week, higher than the average number of days in sub-Saharan Africa and in Asia, where foods were given about three days per week.

Beyond its benefits to the child, breastfeeding benefits the mother in several ways, notably a quicker recovery from the pregnancy and prolonging the period of postpartum infecundity. Traditional societies appear to have known always of the fecundity effects of breastfeeding and its beneficial effects on the health of the mother and of her recently born children. Indeed many traditional societies proscribe sexual activity during breastfeeding (postpartum abstinence) to prolong the period of breastfeeding and to add to its infecundity effects. In the last decade, a "new" method of avoiding pregnancy, the lactational amenorrheic method (LAM), was defined, based on the infecundity effects of breastfeeding. It has been found to be as effective as other modern methods in the first 6 months after birth.

The report presents information on the durations of postpartum amenorrhea and abstinence based on current status medians, that is, the number of months after a birth when half of women have resumed menstruation and sexual intercourse, respectively. In the 37 countries studied, the median duration of postpartum amenorrhea ranges from a high of 17 months in Rwanda to a low of 3 months in Brazil. Regionally, the sub-Saharan African countries have the longest durations of amenorrhea with the great majority of countries having medians longer than a year, a situation

that occurs in no other region. The Near East/North Africa region has the shortest durations, from 4 to 6 months, while the largest variation occurs in Latin America/Caribbean, where median durations of postpartum amenorrhea range from 3 and 4 months (Brazil, Colombia, and the Dominican Republic) to 11 months (Bolivia, Guatemala, and Haiti).

Breastfeeding patterns greatly affect the length of postpartum amenorrhea. The median duration for mothers who did not breastfeed their children was 3 months on average, while for those who exclusively or fully breastfed their children it was 14 months. Those who gave their children other forms of milk or a bottle with a nipple while continuing to breastfeed had median durations of postpartum amenorrhea of about 8 months on average.

In spite of traditional norms, the majority of women do not wait long to resume sexual relations after a birth. The median duration of postpartum sexual abstinence is 2 to 3 months in all countries of Asia, Latin America/Caribbean, and the Near East/North Africa. Only in sub-Saharan Africa do median durations of postpartum abstinence exceed 3 months, where seven countries have medians that exceed half a year. The longest durations are 19 months in Burkina Faso and 13 months in Cameroon. The long durations may be associated with the high levels of polygamy in those countries.

Combining the effects of postpartum amenorrhea and abstinence results in postpartum insusceptibility to conceive. Sub-Saharan Africa again has the longest durations of insusceptibility, on average 16 months, with Burkina Faso leading at 23 months. The Near East/North Africa region has the shortest durations, about 5 months on average.

The lactation amenorrhea method depends on adherence to four criteria: exclusive or full breastfeeding, being amenorrheic since the birth, being less than 6 months since the birth, and knowing the necessity of another form of contraception if the preceding criteria are not met. The surveys provide information on the first three criteria. Relatively few breastfeeding women meet the first three lactation amenorrhea method criteria. The highest percent is in Mali (20 percent) and the lowest in Haiti (3 percent). In the majority of countries, the percentage of breastfeeding women who meet lactation amenorrhea method criteria is between 12 and 15 percent. In contrast, in every country except Peru more than half of breastfeeding women say they are currently relying on breastfeeding to avoid another

pregnancy, and in most countries, at least three-quarters of the breastfeeding women say they are. However, most women do not state that they know that breastfeeding decreases their chances of becoming pregnant, many may say they rely on it simply because they are not using another method.

Contraceptive use during postpartum amenorrhea provides overlapping protection at additional cost that may be unnecessary for many women but may also make good programmatic sense. Zimbabwe is the country with the highest number of months of overlap, primarily due to pill use. Regionally, the overlap is greatest in Latin America/Caribbean, where half the countries have more than 20 percent of months of overlap. In this region, postpartum sterilization is widely used.

Changes in postpartum amenorrhea, abstinence, and insusceptibility over time were examined. In spite of the fact that breastfeeding duration has increased, the duration of amenorrhea has decreased very slightly—about half a month per decade, on average. The largest rate of decrease is in the Near East/North Africa and Asia, while amenorrhea increased slightly in Latin America/Caribbean. There were no overall changes in the duration of abstinence or in postpartum insusceptibility to conception, with the exception of a decline of 2.6 months of insusceptibility (10-year rate) in the Near East/North Africa and Asia.

The analyses presented in this report, based on DHS data from 37 countries, indicate that breastfeeding is almost universally practiced in most developing countries, and that first-year and second-year breastfeeding continuation rates have increased markedly over the past 20 years in the majority of countries studied. The trends in increased breastfeeding among countries with multiple DHS (or WFS) surveys suggest that the vigorous international and national efforts of the past two decades—particularly the 1980s—to promote breastfeeding, have been effective in increasing the numbers of children breastfed and prolonging the duration of breastfeeding in the first two years. However, breastfeeding and complementary feeding practices critical to child health and survival are far from optimal. Although almost all children are breastfed from birth, few are put to the breast immediately after birth, and in some countries almost half of children are put to the breast later than the second day after birth. The newborns not only are deprived of the beneficial effects of colostrum, but are at greater risk of being given prelacteal liquids that lead to diarrhea. Fewer than half of all infants under 4 months are exclu-

sively breastfed, and by 5 months of age the prevalence of exclusive breastfeeding is in the single-digit range in all but a handful of countries. By 6 to 9 months of age, only about half the children are fed complementary foods. Among those children, the frequency of giving milk, meat, and other protein-based foods is low, on the order of just two or three days per week. Although breastfeeding through the first year of life is practiced widely in all regions, just over half the children in sub-Saharan Africa and Asia, and about a fourth of the children in Latin America/Caribbean and the Near East/North Africa, are breastfed through the second year. In some of the poorest countries in Asia, breastfeeding is prolonged beyond the third year, suggesting that an adequate quantity of the complementary foods needed by this age is probably lacking. Bottle feeding of infants is not commonly practiced in any of the regions except Latin America/Caribbean, where rates as high as 60 to 85 percent are reported. Bottle feeding appears to increase as countries advance along the economic development scale. National policies to improve child health, nutrition, and survival should focus on the crucial areas of initial breastfeeding immediately after birth, exclusive breastfeeding for about the first 6 months of life, appropriate complementary

feeding from around the age of 6 months onward, and continued breastfeeding until the age of two years.

In terms of postpartum effects, breastfeeding clearly prolongs the period of postpartum amenorrhea, thus prolonging insusceptibility to pregnancy. Sub-Saharan African countries, with long durations of breastfeeding and postpartum sexual abstinence, have the longest durations of insusceptibility. Conversely, the combination of relatively short breastfeeding durations with short durations of postpartum abstinence is reflected in the shortest periods of insusceptibility in the Near East/North Africa region. Few breastfeeding women in any of the regions meet the lactation amenorrhea method criteria, although at least three-quarters of the breastfeeding women in most countries say they are using breastfeeding to avoid pregnancy. Efforts to increase exclusive breastfeeding, to prolong the durations of breastfeeding and postpartum sexual abstinence, and to improve understanding of the lactation amenorrhea method criteria among women and health-care providers are urgently needed in countries where contraceptive use is low.

1 Background

Breastfeeding practices of women in developing countries are critical determinants of child survival, maternal reproductive health, and population growth rates. Breastfeeding for the first two years of life and beyond protects the young child from infection, provides an ideal source of nutrients, is a cost-effective and safe form of feeding, fosters mother-child bonding, and lowers the risks of early childhood deaths. In children not breastfed at all, the risk of early death from diarrhea, respiratory disease, and other common childhood illnesses rises dramatically compared with children who are exclusively breastfed. Breastfeeding also benefits the mother by helping the uterus to retract, which can reduce postpartum blood loss, and delaying the return of menses, thereby preventing a subsequent closely spaced pregnancy. Indeed, the length and nature of breastfeeding directly affect fertility, with the period of amenorrhea being longer the longer a woman breastfeeds her child and the longer she waits before introducing other foods and liquids. Thus, for poor countries where the prevalence of contraceptive use is low, appropriately managed breastfeeding should be a key component of reproductive health programs.

The purpose of the present study is to report and compare breastfeeding and related young child feeding practices in developing countries around the world. The breastfeeding practices examined are those associated with international breastfeeding recommendations and indicators, and encompass the timing of initiation of breastfeeding, the practice of exclusive breastfeeding, the frequency and duration of breastfeeding, the age of introduction and types of complementary foods and liquids, and bottle feeding. Other outcomes examined, related to fertility control, include the duration of postpartum amenorrhea, abstinence from sexual relations, insusceptibility to pregnancy, and the proportion of women meeting the lactational amenorrhea method (LAM) criteria. The data are derived from surveys conducted by the Demographic and Health Surveys (DHS) program in 37 countries in sub-Saharan Africa, the Near East/North Africa, Asia, and Latin America/Caribbean from 1990 to 1996. For countries with two DHS surveys during that period, or with a prior DHS or WFS (World Fertility Survey) survey, trends in breastfeeding practices in those countries are also analyzed. Over a quarter of a million children under the age of five years are included in the analyses.

1.1 OPTIMAL INFANT AND CHILD FEEDING PRACTICES

Among the most important infant feeding practices as defined by WHO and UNICEF are initiation of breastfeeding within about 1 hour of birth, frequent, on-demand feeding (including night feeds), exclusive breastfeeding (defined as breast milk only and no other foods or liquids) for about the first 6 months of life, breastfeeding complemented with locally available and hygienically prepared, appropriate foods from the age of around 6 months, increased breastfeeding during illness and recovery, and continued breastfeeding for up to 2 years of age or beyond while receiving nutritionally adequate and safe complementary foods (WHA, 1994; WHO/UNICEF, 1990).

Early initiation of breastfeeding is important because it fosters mother-infant bonding and takes advantage of the newborn's intense sucking reflex and alertness immediately postpartum, which permits the newborn to benefit within the first hour of life from the nutritional, antibacterial, and antiviral properties of colostrum (Righard and Alade, 1990). Early initiation of breastfeeding also stimulates breast milk production and causes the uterus to retract, which can reduce postpartum blood loss. Delayed initiation of breastfeeding may result in the newborn being provided with other sources of nourishment that can introduce infection and delay lactogenesis (milk arrival) (Perez-Escamilla et al., 1996).

Frequent, on-demand breastfeeding, including night feeds, is important to ensure both that an infant receives sufficient breast milk and that the supply of breast milk is maintained. Frequent feedings also can help to prevent problems of engorgement and sore nipples. On-demand feeding is important to ensure that newborns regain their birth weight (de Carvalho et al., 1983). Infants should be breastfed 8 to 10 times every 24 hours and even more frequently during the first month of life.

Exclusive breastfeeding, defined as breast milk as the only source of infant food or liquid, meets nutritional requirements (Cohen et al., 1994), satisfies fluid needs even in hot and humid climates (Sachdev et al., 1991), and protects against illness (Huffman and Combest, 1990) for about the first 6 months of life. Exclusively breastfed infants are 14 times less likely to die from diarrhea com-

pared with formula-fed infants and 4 times less likely to die compared with partially breastfed infants (Victora et al, 1987) Thus, exclusive breastfeeding is the infant feeding behavior most predictive of infant survival in conditions of poverty or poor sanitation

At about 6 months of age, breast milk alone will no longer satisfy the energy, protein, and micronutrient requirements of most infants (IDECG, 1996) Local foods that are rich in energy, protein, and micronutrients, hygienically prepared, and soft to eat need to be provided During the transitional period when complementary foods are being introduced, on-demand and frequent breastfeeding should continue to ensure that infants receive all the benefits of breastfeeding The increased diarrheal morbidity that is often associated with the introduction of other foods and liquids can be prevented with proper hygiene

The recommended duration of breastfeeding has recently received considerable attention because of several studies that show that children who are breastfed beyond the second year of life are more likely to suffer from malnutrition A review of the studies, however, shows most to have serious methodological flaws (Grummer-Strawn, 1993) Both WHO and UNICEF recommend that because of its many nutritional and immunological benefits breastfeeding should continue into the second year of life and beyond Breastfeeding beyond 6 months of age should be complemented with energy and other nutrient-dense weaning foods

1 2 INTERNATIONAL BREASTFEEDING INDICATORS

The international community has identified a number of breastfeeding indicators that now form the basis for much of the current breastfeeding data collection and research effort The formulation of indicators was in response to a growing need for comparability and coherence of breastfeeding data from around the world Better comparability of data contributes to an assessment of the global breastfeeding situation and provides policy-makers and program managers a common set of measures to monitor and evaluate their progress

The formulation of current breastfeeding indicators has evolved over nearly a decade, marked by a number of key events They include initial efforts, in 1988, by the Interagency Group for Action on Breastfeeding (IGAB) to develop breastfeeding indicators, the Innocenti Declaration

of 1990, which stressed the importance of exclusive breastfeeding for the first 4 to 6 months of life and urged the international community to draw up strategies for promoting breastfeeding and monitoring and evaluating their progress, a WHO informal consultation in 1993 to assess the state of trend monitoring through databases and information resource systems the 1992 International Conference on Nutrition which, in the World Declaration and Plan of Action for Nutrition, called for the collection, analysis, and dissemination of updated and reliable information on infant and young child feeding, especially breastfeeding prevalence and duration, and the Forty-seventh World Health Assembly resolution WHA 47 5, of 1994, that requested WHO to support member states in monitoring infant and child feeding practices and trends in health facilities and households, in keeping with the new standard breastfeeding indicators (WHO, 1996)

In response to the increasing need and desire to monitor breastfeeding practices and trends, WHO now compiles a Global Data Bank on Breastfeeding, which includes indicator-based data collected from households and from health facilities The household-level indicators as defined by WHO are presented in Table 1 1 Full definitions of the terms used in the indicators are presented in Appendix A

1 3 SOURCE OF DATA

One of the most comprehensive sources of national household-level breastfeeding and infant feeding data is the Demographic and Health Surveys (DHS) The DHS program began in 1984 and continues to the present The program has evolved through a series of five-year phases that are referred to in this report as DHS-I, DHS-II, and DHS-III DHS-I includes surveys conducted from 1984 to 1989, DHS-II includes surveys conducted from 1988 to 1993 DHS-III includes surveys conducted from 1992 to 1997 A year of overlap exists between each 5-year phase because some surveys began late in one phase and overlapped into the subsequent phase The current, or fourth, 5-year phase of the DHS program is called MEASURE/DHS+

In this report, data are presented from 37 countries with DHS surveys conducted between 1990 and 1996 (i e, surveys from DHS-II and DHS-III) The data were collected by trained interviewers using household and individual questionnaires Data on socioeconomic and demographic characteristics of respondents' households come

from the household interview. The individual questionnaire, administered to women age 15 to 49 within the household, provides information on the specific characteristics of respondents, fertility, mortality, family planning, and child health and nutrition. Women who have given birth within five years preceding the interview are specifically asked about breastfeeding and complementary feeding practices, ante- and postnatal care, childhood illnesses and treatment patterns, immunization, and postpartum durations of amenorrhea and sexual abstinence. Those women and the children born within five years are weighed and measured for height (or length, for children less than two years old).

Table 1.1 WHO global data bank on breastfeeding: Breastfeeding indicators derived from households

Description	Definition
Ever breastfed rate	Infants less than 12 months old who were ever breastfed
Mean duration of breastfeeding	Average duration of breastfeeding in months
Median duration of breastfeeding	Age in months when 50% of children are no longer breastfed
Exclusive breastfeeding rate at 1 month	Infants 1 month old who are exclusively breastfed
Exclusive breastfeeding rate at 2 months	Infants 2 months old who are exclusively breastfed
Exclusive breastfeeding rate at 3 months	Infants 3 months old who are exclusively breastfed
Exclusive breastfeeding rate at 4 months	Infants 4 months old who are exclusively breastfed
Exclusive breastfeeding rate at 5 months	Infants 5 months old who are exclusively breastfed
Exclusive breastfeeding rate at 6 months	Infants 6 months old who are exclusively breastfed
Exclusive breastfeeding rate < 4 months	Infants less than 4 months old who were exclusively breastfed in the last 24 hours
Predominant breastfeeding rate	Infants less than 4 months old who were predominantly breastfed in the last 24 hours
Timely complementary feeding rate	Infants 6-9 months old who received complementary foods in addition to breast milk in the last 24 hours
Continued breastfeeding rate (1 year)	Children 12-15 months old who were breastfed in the last 24 hours
Continued breastfeeding rate (2 years)	Children 20-23 months old who were breastfed in the last 24 hours
Bottle feeding rate	Infants less than 12 months old who are receiving food or drink from a bottle

Source: WHO 1996

2 Breastfeeding

Data about breastfeeding from Demographic and Health Surveys (DHS) historically reflect aspects of breastfeeding linked to fertility, or the contraceptive effect of breastfeeding while the mother is amenorrheic. These aspects include whether children were ever breastfed, the duration of breastfeeding in months, reasons for stopping breastfeeding, and the frequency of breastfeeds during the daytime and night hours. In the first phase of the DHS (DHS-I) if a mother said that her child was never breastfed, she was asked to give a reason, but because so few children were never breastfed, the question was dropped in subsequent Demographic and Health Surveys phases.

By the early 1990s—that is, by the time of the second phase (DHS-II)—there was growing interest in collecting more information about aspects of breastfeeding other than just data related to its contraceptive effects. In particular, there was interest in the timing of initial breastfeeding just after birth, to assess if children were receiving colostrum and if there were significant delays in the first breastfeeds, which would increase the likelihood of other (prelacteal) liquids being given. Therefore, starting in DHS-II, mothers were asked about the timing of initial breastfeeding. All the breastfeeding questions in DHS-II and DHS-III were asked, along with other questions on pregnancy and health, during individual interviews with mothers who gave birth within the preceding five years.¹

For each child born in the preceding five years, the mother was asked if the child was ever breastfed. If she answered yes, she was asked how long after the birth the child was first put to the breast—within the first hour, within the first 24 hours, or after the first two days. Mothers were then asked if the child was still (currently) being breastfed. In DHS-II surveys, current breastfeeding status was asked only for last-born children, in DHS-III surveys, the question was asked for each child born in the preceding five years. For children no longer being breastfed, mothers were asked how many months the child was breastfed and the reason(s) they stopped breastfeeding.

The following results represent breastfeeding data on more than one-quarter of a million children from DHS-II and DHS-III surveys conducted in 37 countries between 1990 and 1996.

2.1 CHILDREN EVER BREASTFED

Nearly all children born in the five years preceding the surveys were breastfed at some time, as shown in Table 2.1. Regionally, rates are highest in countries in sub-Saharan Africa, where on average 99 percent of all children surviving at least three days are breastfed. In Asia, the Near East/North Africa, and Latin America/Caribbean, 96 percent of children, on average, are breastfed. At 88 percent, the Philippines has the lowest percentage of children ever breastfed. Latin American/Caribbean countries show the widest range in percentage of children ever breastfed.

Socioeconomic Differentials

The percentage of children ever breastfed varies only slightly between urban and rural areas, with children living in rural areas slightly more likely to be breastfed than their urban counterparts. The slightly greater tendency for rural children to be breastfed is observed mainly in countries in the Near East/North Africa, where the average difference between urban and rural areas is just over 2 percentage points. Urban and rural areas are more homogeneous in sub-Saharan Africa. In Asia and Latin America/Caribbean, the average difference between rural and urban areas is 1.8 percentage points.

There are small differences in the percentage of children ever breastfed by mother's level of education (Table 2.1). In sub-Saharan Africa, Asia, and Latin America/Caribbean, there is almost no difference in ever-breastfed rates between children of mothers with no education and those with primary education. In the Near East/North Africa, about 1 percent fewer children of mothers with primary school education are breastfed compared with children of mothers with no education. The differences in rates between children of mothers with primary education and children of mothers with at least secondary education were slightly larger, with the children of mothers with more education being about half a percentage point less likely to be breastfed on average in countries in sub-Saharan Africa and Near East/North Africa, and about 2 percentage points less likely in Asia and Latin America/Caribbean.

¹ In the following nine countries the data were collected for children born in the preceding three years: Central African Republic 1994-95, Côte d'Ivoire 1994, Ghana 1993, Mali 1995, Zimbabwe 1994, Kazakhstan 1995, Nepal 1996, Bangladesh 1993-94, and Bolivia 1994. In Uganda 1995 and India 1992-93, the data pertain to children born in the preceding four years.

Table 2.1 Children ever breastfed, by residence and mother's education

Among children born in the five years preceding the survey the percentage ever breastfed by residence and mother's education
Demographic and Health Surveys 1990-1996

Region country and date	Residence		Mother's education			Total ¹	Total ²	Number of children
	Urban	Rural	No education	Primary	Secondary			
Sub Saharan Africa								
Burkina Faso 1993	98.9	99.5	99.5	99.2	97.3	99.4	98.3	6 263
Cameroon 1991	97.6	99.1	98.4	99.2	97.4	98.5	97.2	3 434
Central African Republic 1994-95	99.7	99.0	99.0	99.7	99.3	99.3	97.9	2 784
Côte d'Ivoire 1994	98.1	99.4	99.3	99.0	96.2	98.9	97.7	3 925
Ghana 1993	99.3	99.5	99.4	99.6	99.2	99.5	97.8	2 157
Kenya 1993	99.0	98.9	98.4	98.9	99.3	98.9	97.6	6 027
Madagascar 1992	97.8	99.1	99.1	99.1	98.4	98.9	97.8	5 591
Malawi 1992	u	u	99.4	98.7	99.4	99.0	97.5	2 738
Mali 1995-96	99.2	99.3	99.2	99.7	99.4	99.3	97.5	5 866
Namibia 1992	94.3	98.3	98.4	97.3	95.6	97.0	95.5	3 777
Niger 1992	99.5	99.1	99.1	99.3	99.3	99.1	97.9	7 104
Nigeria 1990	99.1	98.9	98.9	98.9	99.2	98.9	97.3	8 025
Rwanda 1992	98.4	99.3	99.0	99.4	99.2	99.2	98.2	5 586
Senegal 1992-93	98.8	99.0	99.0	98.8	97.7	98.9	97.8	5 562
Tanzania 1991-92	98.8	99.3	99.1	99.2	99.5	99.2	98.1	7 971
Uganda 1995	98.6	99.2	99.6	98.9	99.1	99.1	98.2	5 941
Zambia 1992	99.1	99.5	99.8	99.3	99.0	99.3	97.8	6 145
Zimbabwe 1994	99.5	99.6	99.8	99.7	99.3	99.6	98.8	2 338
Near East/North Africa								
Egypt 1992	94.2	95.6	95.7	94.7	94.2	95.1	94.1	8 582
Jordan 1990	94.4	95.3	93.7	94.8	95.0	94.7	93.8	8 172
Morocco 1992	93.5	97.6	97.2	92.5	91.2	96.2	95.2	5 137
Turkey 1993	95.8	97.7	96.6	96.6	96.4	96.6	95.2	3 675
Asia								
Bangladesh 1993-94	98.1	98.2	98.4	98.4	97.3	98.2	96.4	3 835
India 1992-93	97.0	97.9	97.9	97.7	96.9	97.7	95.9	48 933
Indonesia 1994	96.8	98.5	98.7	98.1	97.6	98.0	96.7	16 723
Kazakhstan 1995	97.7	96.0	0.0	0.0	96.8	96.7	95.9	803
Nepal 1996	98.9	99.3	99.3	99.3	99.0	99.2	97.7	4 298
Pakistan 1990-91	94.6	96.8	96.7	96.8	91.8	96.1	94.8	6 360
Philippines 1993	83.0	92.7	98.1	93.0	83.7	88.0	87.3	8 767
Latin America/Caribbean								
Bolivia 1993-94	97.1	98.7	98.6	98.1	97.3	97.9	96.5	3 556
Brazil 1996	93.7	92.8	90.1	94.0	93.5	93.5	92.7	4 725
Colombia 1995	95.1	96.3	96.9	95.7	95.2	95.5	94.6	4 993
Dominican Republic 1991	91.8	95.2	94.5	94.0	91.8	93.2	92.0	3 797
Guatemala 1995	96.0	97.8	98.6	96.8	94.4	97.2	95.9	8 991
Haiti 1994-95	94.0	98.6	98.7	97.7	88.5	97.1	96.3	3 590
Paraguay 1990	93.0	94.8	92.9	94.3	93.3	94.0	93.0	3 931
Peru 1996	97.6	98.6	98.0	98.4	97.6	98.0	96.9	15,438

u = unknown (not available)

¹ Includes children surviving at least 3 days

² Includes all children

Biodemographic Differentials

Ever-breastfed rates were examined by several biodemographic variables, including mother's age at the child's birth, birth order, sex, birth multiplicity, and birth interval, as shown in Table 2.2. There were virtually no differences in breastfeeding rates by mother's age or child's sex in any of the regions. By birth order, there were no differences, on average, in sub-Saharan countries. In the other regions, however, there were differences between firstborn children and children of higher birth orders. On average, in the Near East/North Africa, Asia, and Latin America/Caribbean, firstborn children were 2.4, 1.6, and 2.1 percentage points, respectively, less likely to be breastfed. There were no appreciable differences in breastfeeding rates between children of other birth orders in any of the regions. In differences between single and multiple-birth children, singletons were breastfed more often than children from multiple births (Figure 2.1). The difference was least pronounced in sub-Saharan Africa (only 1.8 percentage points, on average), and largest in Near East/North Africa, where children from multiple births were 11.2 percentage points less likely to be breastfed on average. In Asia and Latin America/Caribbean, the average differences were 3.6 and 6.6 percentage points, respectively. The tendency of multiple-birth children to be breastfed less almost certainly reflects the greater physical difficulty of breastfeeding two or more children at the same time.

Only slight differences in breastfeeding rates were apparent based on birth intervals (Table 2.2). The highest rates of breastfeeding occurred among children born with a previous birth interval of 24 to 47 months. In sub-Saharan Africa, virtually no differences exist across countries between children born after intervals of less than 24 months and those born after an interval of 24 to 47 months. Children born after 24 to 47 months are about 1 percentage point more likely to be breastfed than those born after longer intervals. In the other regions, children born after an interval of 24 to 47 months are slightly more likely to be breastfed than children born either after a short birth interval (<24 months) or after a long interval (48 months or more).

2.2 TIMING OF INITIAL BREASTFEEDING

Ideally, infants should be put to the breast immediately after birth, not only to stimulate the suckling reflex but also to begin the process of bonding with the mother, to help the mother's uterus begin to retract and, most impor-

tant, to provide the child with colostrum. This section examines the timing of initial breastfeeding among countries according to whether children were breastfed immediately after birth (within the first hour), during the first day (the first 24 hours), on the second day (between 24 and 48 hours), or later. Overall patterns across countries and regions are examined. The percentage of children breastfed immediately after birth, which represent the optimal practice, is then examined according to sociodemographic and biodemographic differentials. Appendix B contains complete tables of differentials for all the categories of initial breastfeeding, as well as other differentials not discussed in the section.

Table 2.3 shows of initial breastfeeding practices by urban-rural residence for all 37 countries. In sub-Saharan Africa, the countries with the lowest percentage of infants put to the breast immediately are Madagascar, Mali, Senegal, and Cameroon, all with less than 15 percent of children breastfed immediately after birth. The other countries with less than 15 percent of infants put to the breast immediately are in Asia and include Bangladesh, India, Indonesia, Kazakhstan, and Pakistan. In the Near East/North Africa and Latin America/Caribbean, at least 20 percent of infants are put to the breast immediately. The highest rates of immediate breastfeeding are in Kenya, Malawi, Namibia, Morocco, and Guatemala, where between 50 and 60 percent of infants are put to the breast in the first hour after birth. The ordering of countries within regions by percentage of children breastfed immediately after birth is shown in Figure 2.2.

Because many countries have very low rates of immediate initiation of breastfeeding, of second-order interest is the percentage of newborns breastfed at least within the first day of birth. When the category is examined (which is inclusive of the first hour), several countries in sub-Saharan Africa have rates well over 80 percent, including Kenya, Malawi, Namibia, Tanzania, Uganda, Zambia, and Zimbabwe. In the other regions only Morocco and Colombia have comparably high rates of first-day breastfeeding. In contrast, countries in which first-day breastfeeding is still quite low include Cameroon and Niger, with only 30 percent each, and India and Pakistan, with only one-fourth of children each. In Latin America/Caribbean, Haiti has the lowest first-day rate at 43 percent, although that is still higher than the lowest rates of countries in the other regions. Figure 2.3 shows the ordering of countries according to the percentage of children breastfed on the first day.

Table 2.2. Children ever breastfed, by biodemographic variables

Among children born in the five years preceding the survey who survived at least three days the percentage ever breastfed by biodemographic variables Demographic and Health Surveys 1990-1996

Region, country, and date	Mother's age		Birth order				Sex		Multiplicity		Birth interval			
	<25	25+	1st	2nd-3rd	4th	5th	6th	Male	Female	Single	Multiple	<24	24-47	48+
Sub-Saharan Africa														
Burkina Faso 1993	99.3	99.5	98.8	99.5	99.7	99.4	99.4	99.4	99.5	96.9	99.1	99.7	99.1	
Cameroon 1991	98.2	98.8	97.8	98.4	99.1	98.6	98.6	98.4	98.5	97.0	98.1	98.9	98.7	
Central African Republic 1994-95	99.2	99.4	98.8	99.6	99.6	99.1	99.2	99.4	99.4	(94.2)	99.8	99.3	99.6	
Côte d'Ivoire 1994	98.8	99.1	98.5	99.1	99.2	98.9	98.9	99.0	98.9	99.2	99.1	99.1	98.8	
Ghana 1993	99.4	99.5	98.9	99.7	99.6	99.5	99.6	99.3	99.5	98.9	99.5	99.6	99.8	
Kenya 1993	98.9	98.8	99.1	99.0	99.0	98.6	98.9	98.9	99.0	95.1	99.0	98.9	98.1	
Madagascar 1992	98.9	99.0	98.2	98.7	99.6	99.2	98.8	99.1	99.2	89.2	98.7	99.5	98.9	
Malawi 1992	99.0	99.1	99.0	98.8	99.1	99.3	99.0	99.0	99.0	99.0	98.7	99.0	99.5	
Mali 1995-96	99.3	99.3	99.0	99.5	99.7	99.1	99.4	99.2	99.4	97.6	99.2	99.4	99.5	
Namibia 1992	96.1	97.6	96.5	96.7	97.2	98.0	96.7	97.2	96.9	98.9	96.3	98.1	95.9	
Niger 1992	98.9	99.4	98.8	98.7	99.4	99.4	99.2	99.0	99.1	100.0	99.0	99.1	100.0	
Nigeria 1990	98.8	99.0	98.3	99.2	99.2	98.8	99.0	98.9	98.9	99.0	99.6	98.8	99.2	
Rwanda 1992	99.3	99.2	99.1	99.3	99.4	99.0	99.2	99.3	99.3	93.6	98.7	99.5	98.8	
Senegal 1992-93	99.2	98.7	98.9	99.2	98.6	98.9	98.7	99.2	98.9	99.3	99.0	98.9	99.1	
Tanzania 1991-92	99.0	99.3	99.0	99.3	99.2	99.0	99.0	99.3	99.2	99.2	98.9	99.2	99.5	
Uganda 1995	99.0	99.3	98.8	99.1	99.7	98.9	99.0	99.2	99.2	97.2	99.0	99.4	98.9	
Zambia 1992	99.1	99.5	98.8	99.3	99.6	99.5	99.3	99.3	99.4	95.8	99.3	99.6	99.0	
Zimbabwe 1994	99.5	99.6	99.9	99.4	99.3	99.8	99.5	99.7	99.6	100.0	98.3	99.6	99.5	
Near East/North Africa														
Egypt 1992	94.7	95.4	93.6	95.4	96.2	95.0	94.8	95.4	95.3	88.6	94.0	96.5	95.5	
Jordan 1990	95.0	94.6	93.1	95.1	96.8	94.0	94.8	94.6	95.0	95.0	96.0	96.0	91.4	
Morocco 1992	96.3	96.2	93.3	97.3	96.6	96.8	93.0	96.4	96.6	79.6	95.8	97.3	97.4	
Turkey 1993	96.6	96.5	95.6	97.3	97.3	95.9	96.0	97.2	96.7	88.5	96.6	97.2	97.4	
Asia														
Bangladesh 1993-94	98.1	98.4	97.8	98.0	99.3	98.2	98.1	98.4	98.3	(89.1)	98.4	98.5	98.1	
India 1992-93	97.6	97.8	96.7	98.1	98.1	97.8	97.6	97.7	97.8	91.1	97.5	98.3	97.9	
Indonesia 1994	98.5	97.7	97.5	98.4	98.1	97.9	97.9	98.1	98.0	99.1	97.7	98.6	98.0	
Kazakhstan 1995	97.8	95.6	95.6	97.5	98.4	(94.0)	96.6	96.8	96.8	*	97.5	97.7	97.1	
Nepal 1996	99.4	99.0	99.1	99.7	99.0	98.7	99.2	99.3	99.2	100.0	99.6	99.2	99.1	
Pakistan 1990-91	96.3	96.1	94.8	96.8	96.7	95.8	96.2	96.1	96.2	92.3	95.9	97.1	95.5	
Philippines 1993	89.4	87.2	83.9	88.5	90.0	89.4	87.7	88.3	88.1	80.8	87.5	91.8	86.4	

continued

Table 2.2 *continued*

Region, country, and date	Mother's age		Birth order				Sex		Multiplicity		Birth interval				
	<25	25+	1st	2nd	3rd	4th	5th	6th	Male	Female	Single	Multiple	<24	24-47	48+
Latin America/Caribbean															
Bolivia 1993-94	98.5	97.4	97.6	98.7	97.3	97.6		98.0	97.7	97.9	97.8		98.0	98.3	97.0
Brazil 1996	93.3	93.6	92.5	94.2	93.8	92.8		93.1	93.9	93.5	89.4		92.3	94.8	94.5
Colombia 1995	95.7	95.3	94.6	96.2	96.4	94.5		94.9	96.1	95.6	84.5		95.7	97.2	95.2
Dominican Republic 1991	91.7	95.0	90.0	93.8	95.6	97.2		93.0	93.3	93.6	76.8		94.3	95.6	94.0
Guatemala 1995	97.1	97.4	95.1	97.7	98.0	97.7		97.1	97.3	97.3	93.5		97.7	98.3	96.1
Haiti 1994-95	96.8	97.3	95.3	96.8	98.1	98.4		97.2	97.0	97.3	92.5		97.6	98.0	96.9
Paraguay 1990	94.0	93.9	91.7	95.4	94.7	93.6		94.4	93.6	94.2	84.3		95.1	95.4	92.6
Peru 1996	98.3	97.8	97.5	98.3	98.1	97.8		98.0	98.0	98.0	95.9		98.3	98.7	97.2

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table 2.3 Timing of initial breastfeeding, by urban-rural residence

Percentage of children breastfed immediately after birth, the first day, the second day, or later, by urban-rural residence, Demographic and Health Surveys 1990-1996

Region, country, and date	Immediately			First day ¹			Second day			Later		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub-Saharan Africa												
Burkina Faso 1993	29.6	33.6	28.8	49.1	61.7	46.8	17.2	16.9	17.3	33.7	21.4	35.9
Cameroon 1991	12.5	11.5	13.1	30.5	30.8	30.3	25.9	28.6	24.2	43.6	40.6	45.4
Central African Republic 1994-95	33.5	37.2	30.9	63.3	75.8	54.7	22.3	15.1	27.3	14.4	9.0	18.0
Côte d'Ivoire 1994	44.2	48.0	42.2	63.4	68.3	61.0	19.2	18.5	19.5	17.4	13.2	19.5
Ghana 1993	16.0	18.4	15.1	45.1	51.5	42.5	14.6	18.0	13.3	40.2	30.5	44.2
Kenya 1993	55.7	53.1	56.1	85.8	81.6	86.5	5.7	7.2	5.5	8.5	11.2	8.0
Madagascar 1992	6.4	3.7	6.9	45.9	37.6	47.2	33.9	43.4	32.3	20.3	19.0	20.5
Malawi 1992	58.7	u	u	92.4	u	u	3.8	u	u	3.8	u	u
Mali 1995-96	9.8	12.2	9.0	65.2	79.0	60.3	20.0	13.8	22.2	14.8	7.2	17.5
Namibia 1992	55.1	51.0	57.2	84.2	77.9	87.6	8.5	11.3	7.1	7.2	10.7	5.4
Niger 1992	20.8	33.1	18.5	30.2	46.6	27.2	13.5	19.2	12.4	56.4	34.2	60.4
Nigeria 1990	36.3	31.1	37.7	54.9	55.4	54.7	6.6	6.5	6.7	38.5	38.1	38.6
Rwanda 1992	19.6	30.5	19.0	51.4	64.2	50.7	24.0	22.0	24.1	24.7	13.7	25.3
Senegal 1992-93	11.8	12.6	11.4	46.7	53.4	43.2	20.1	19.5	20.4	33.3	27.1	36.4
Tanzania 1991-92	45.0	46.2	44.7	84.4	86.2	83.9	6.9	6.5	7.0	8.7	7.3	9.2
Uganda 1995	48.8	48.0	49.0	86.2	85.7	86.3	5.7	6.2	5.6	8.1	8.1	8.1
Zambia 1992	41.2	38.0	44.0	89.4	86.3	92.1	5.0	6.4	3.8	5.6	7.3	4.1
Zimbabwe 1994	40.0	41.8	39.4	91.3	91.1	91.3	5.2	4.8	5.4	3.5	4.1	3.3
Near East/North Africa												
Egypt 1992	26.0	26.8	25.4	67.0	72.6	63.2	8.3	10.1	7.0	24.7	17.3	29.7
Jordan 1990	43.3	44.3	40.7	69.8	70.3	68.3	16.0	15.8	16.4	14.3	13.8	15.3
Morocco 1992	52.1	47.7	54.8	88.4	81.2	92.7	3.9	6.8	2.1	7.7	12.0	5.1
Turkey 1993	20.8	21.3	20.1	79.2	80.9	76.4	10.7	9.7	12.2	10.1	9.3	11.4
Asia												
Bangladesh 1993-94	8.9	10.8	8.7	49.7	52.6	49.4	11.1	11.7	11.0	39.1	35.6	39.5
India 1992-93	9.9	11.6	9.4	27.3	33.3	25.6	13.4	16.5	12.5	59.3	50.2	62.0
Indonesia 1994	7.9	7.5	8.1	52.7	50.2	53.6	19.6	20.1	19.5	27.7	29.7	27.0
Kazakhstan 1995	10.2	12.2	8.6	40.0	41.8	38.6	34.6	27.7	40.0	25.4	30.5	21.4
Nepal 1996	18.2	17.4	18.2	59.7	67.8	59.2	7.7	6.7	7.8	32.6	25.6	33.0
Pakistan 1990-91	8.5	6.3	9.4	25.9	29.0	24.6	15.5	21.4	13.1	58.6	49.6	62.3
Philippines 1993	41.5	40.8	42.1	71.0	68.0	73.6	13.4	13.9	13.0	15.6	18.1	13.4

continued

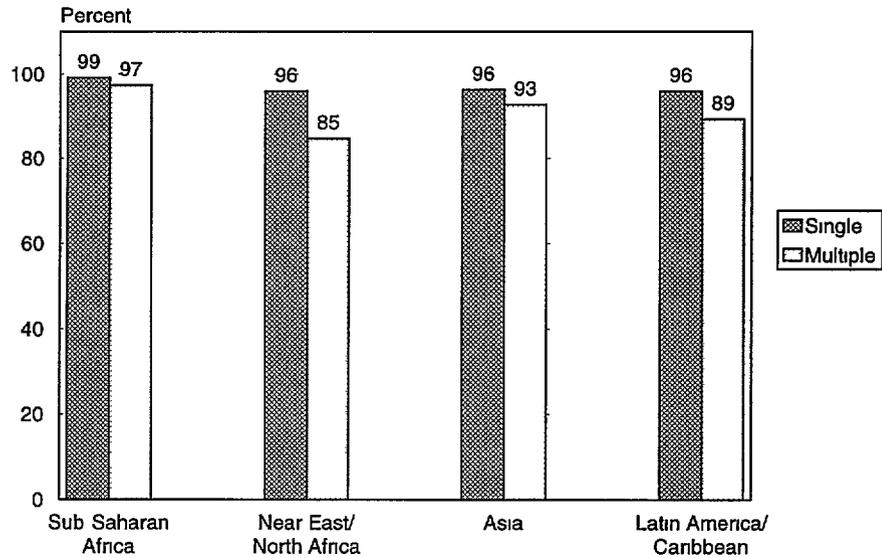
Table 2.3 *continued*

Region, country, and date	Immediately			First day ¹			Second day			Later		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America/Caribbean												
Bolivia 1993-94	23.8	26.8	20.3	65.6	69.7	60.9	17.1	15.5	19.0	17.3	14.8	20.1
Brazil 1996	32.2	31.8	33.6	72.0	73.1	68.1	16.1	15.8	17.3	11.9	11.1	14.7
Colombia 1995	49.1	47.7	52.0	81.3	82.1	79.7	8.7	8.5	8.9	10.0	9.3	11.4
Dominican Republic 1991	35.4	33.4	38.6	63.0	61.1	65.9	16.1	16.9	14.8	20.9	21.9	19.3
Guatemala 1995	53.1	49.9	54.7	75.9	77.0	75.3	9.2	8.7	9.5	14.9	14.3	15.2
Haiti 1994-95	36.1	34.4	37.0	42.9	43.1	42.7	12.2	12.0	12.3	44.9	44.8	45.0
Paraguay 1990	37.3	38.6	36.0	58.0	62.5	3.7	5.6	7.3	4.0	36.3	30.2	42.3
Peru 1996	44.4	46.7	40.4	76.5	79.4	71.6	11.5	10.2	13.8	11.9	10.4	14.5

u = unknown (not available)

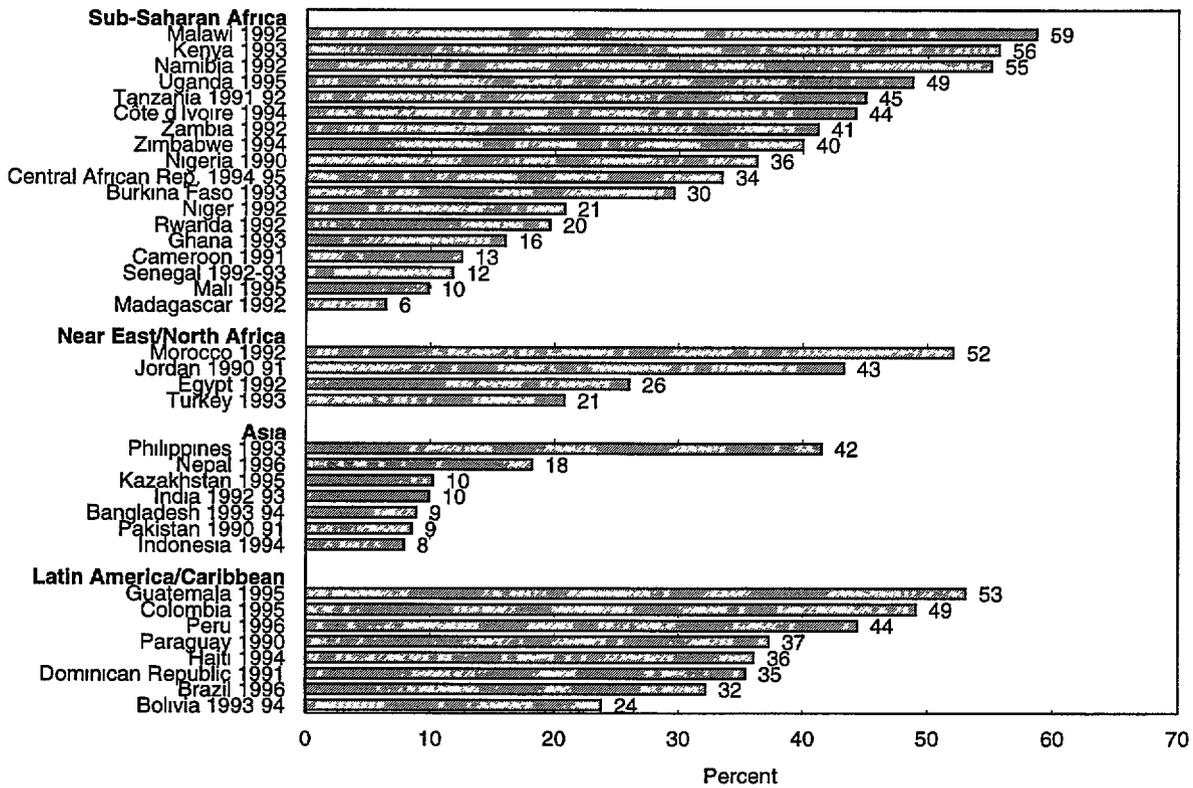
¹ Includes children breastfed immediately after birth

Figure 2 1 Percentage of children ever breastfed, by multiplicity at birth



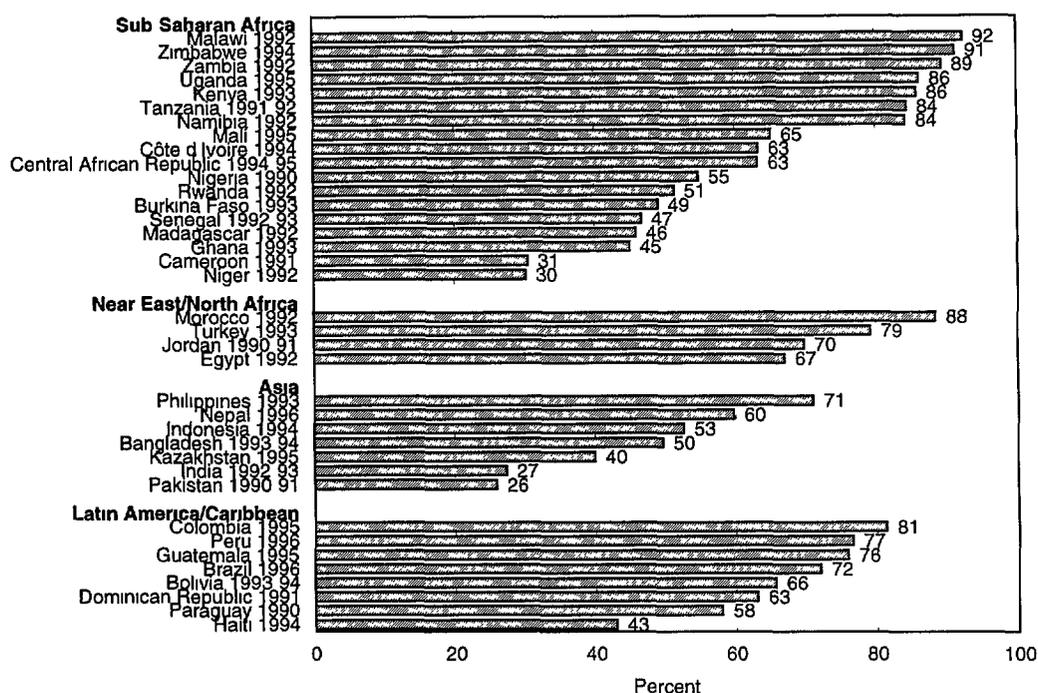
Source DHS Surveys 1990 1996

Figure 2 2 Percentage of infants breastfed immediately after birth



Source DHS Surveys 1990 1996

Figure 2 3 Percentage of infants breastfed within first 24 hours



Source DHS Surveys 1990 1996

Infants put to the breast later than the second day after birth have the least chance of receiving the mother's colostrum and are also the most likely to be given prelacteal fluids. Countries with the highest rates of late initiation of breastfeeding include India (59 percent), Pakistan (59 percent), Niger (56 percent), Haiti (45 percent), and Cameroon (44 percent). Although these countries have the highest rates of late initiation of breastfeeding, it should not be overlooked that large proportions of infants in almost all the countries surveyed did not receive breast milk within the first two days of life. The countries are ordered by rate of late initiation of breastfeeding in Figure 2 4.

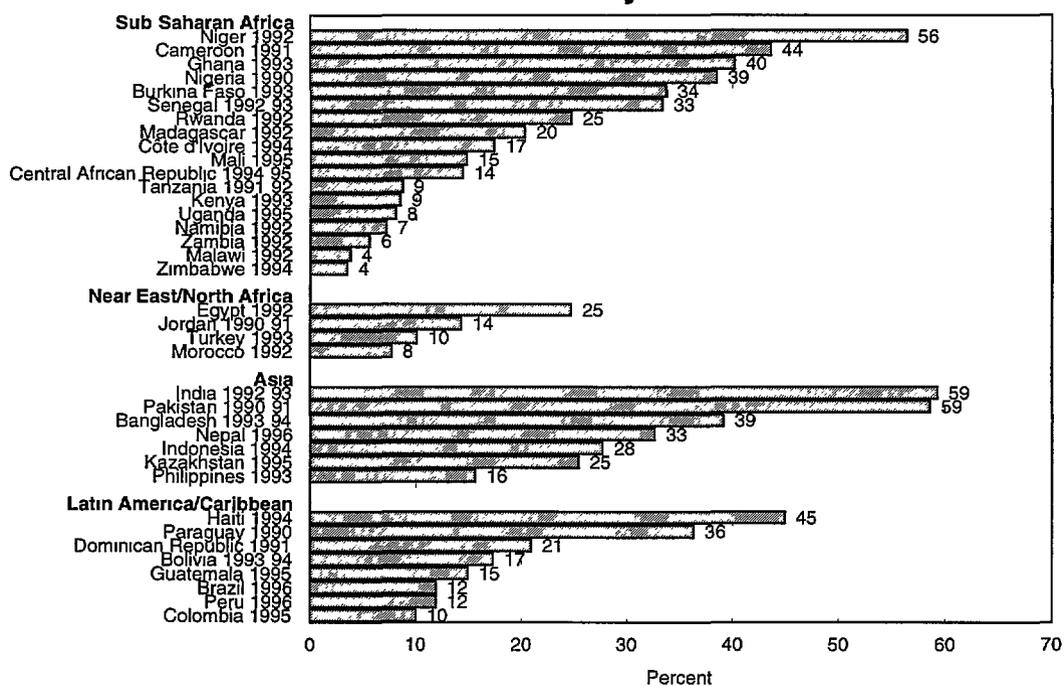
Table 2 4 and Figure 2 5 summarize the data in Table 2 3 according to region. In all regions except Asia, about one-third of infants are put to the breast immediately. In contrast, in Asia an average of only 15 percent of children are put to the breast immediately. By the first day (inclusive of the first hour), about two-thirds of infants have been put to the breast in sub-Saharan Africa and Latin America/Caribbean countries, about three-quarters in Near East/North Africa, and half in Asia. On the second day, about 14 percent more infants are put to the breast in sub-Saharan Africa, about 10 percent more in Near East/North Africa, about 17 percent more in Asia, and about 13 percent more in Latin America/Caribbean, giving cumulative

initiation rates of 79 percent in sub-Saharan Africa and in Latin America/Caribbean, 86 percent in Near East/North Africa, and 63 percent in Asia. In Asia, more than one-third of children are first put to the breast later than 2 days after birth.

Socioeconomic Differentials of Immediate Breastfeeding

Table 2 3 shows the differences in timing of initiation of breastfeeding between urban and rural areas, Table 2 5 shows differences according to the mother's level of education. In immediate initiation, very little difference between urban and rural areas exists in any of the regions, as shown in Figure 2 6. (In late initiation of breastfeeding, rural infants are more likely than their urban counterparts to be put to the breast after two days in all regions especially in sub-Saharan Africa.) In addition, differences by mother's level of education were slight, overall, although there is a pattern of decline in immediate initiation with increasing educational level, as Figure 2 7 illustrates. On average, about 2 percent more children of mothers with no education were breastfed immediately compared with children of mothers with primary education, and about 1 percent more children of mothers with primary education were breastfed immediately compared with children of mothers with secondary education.

Figure 2.4 Percentage of infants breastfed later than the second day after birth



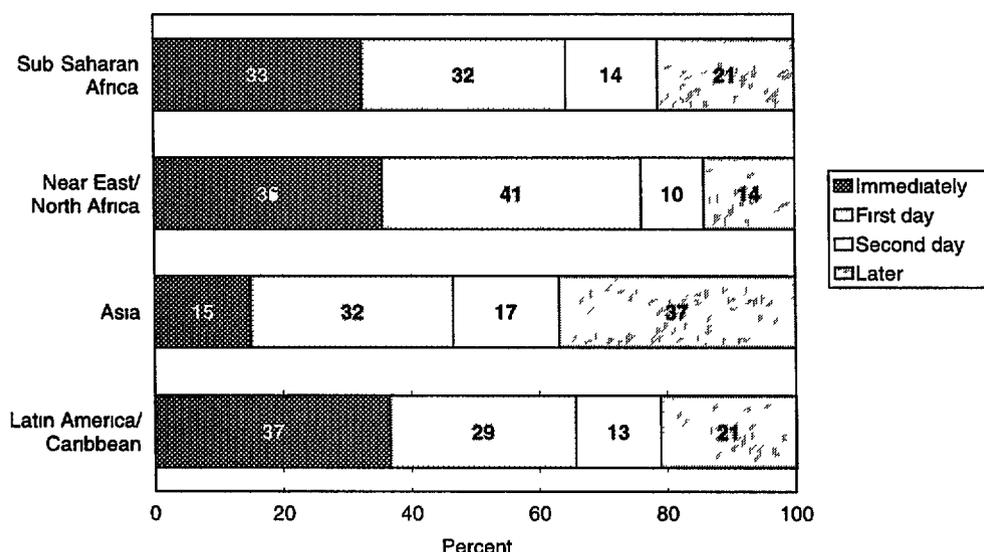
Source DHS Surveys 1990-1996

Table 2.4 Regional summary of timing of initial breastfeeding

Percent distribution of children by timing of initial breastfeeding according to region
Demographic and Health Surveys 1990-1996

Region	Timing of initial breastfeeding after birth				Total
	First hour	1-23 hours	2nd day	After 2 days	
Sub Saharan Africa	32.5	31.9	14.3	21.3	100.0
Near East/North Africa	35.6	40.5	9.7	14.2	100.0
Asia	15.0	31.6	16.5	36.9	100.0
Latin America/Caribbean	36.6	29.1	13.2	21.2	100.0

Figure 2 5 Timing of initial breastfeeding, by region



Source DHS Surveys 1990 1996

Biodemographic Differentials of Immediate Breastfeeding

Several biodemographic characteristics associated with breastfeeding of children immediately after birth were examined and are shown in Table 2 6. There were few differences in the percentage of male or female children breastfed immediately after birth in any of the regions. In terms of mother's age when the child was born, there were few overall differences between children whose mothers were 15 to 24 years and those whose mothers were 25 to 49 years old at the time of birth (Figure 2 8). What small differences did exist were mainly in sub-Saharan Africa and Near East/North Africa, where about 2 percentage points more children of the older mothers were breastfed immediately compared with children of the younger mothers. Figure 2 9 shows the percentage of children breastfed immediately after birth by birth order. In all regions, firstborn children tend to be breastfed immediately after birth less often than non-firstborn children, with the difference being most pronounced in Near East/North Africa. In all regions, children who are second- to fifth-order births are breastfed immediately more often than either firstborn or high-order (i.e., sixth or higher) children. However, very little variation exists in sub-Saharan Africa among non-firstborn children according to birth order. Firstborn children may be breastfed immediately after birth

less often than other children because their mothers are not experienced in breastfeeding. The pattern is seen in Figure 2 8 which shows that younger mothers—who are likely to have more of the firstborn children—breastfeed immediately less often than older mothers.

Health Care Differentials of Immediate Breastfeeding

Breastfeeding immediately after birth was examined according to a number of health care variables including type of antenatal care provided, type of facility for delivery, and type of birth attendant. The variables are shown in Table 2 7 and summarized by region in Figures 2 10 through 2 12 and Table 2 8. Figure 2 10 shows differences according to the type of antenatal care provider. In Asia, children whose mothers had traditional birth attendants or no antenatal care had the highest rates of immediate breastfeeding, followed by those having a doctor and then those having other medical personnel. The pattern was fairly constant in the seven Asian countries examined. In sub-Saharan Africa children whose mothers were cared for by a doctor were less likely to be breastfed immediately than other children, among whom there was no difference by antenatal care provider. In Near East/North African countries the pattern was similar, with little difference in

Table 2.5 Timing of initial breastfeeding by level of mother's education

Percentage of children breastfed immediately after birth, the first day, the second day, or later, by level of mother's education, Demographic and Health Surveys, 1990-1996

Region, country, and date	Immediately			First day ¹			Second day			Later		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub Saharan Africa												
Burkina Faso 1993	29.6	29.2	29.8	48.5	52.0	57.5	17.1	19.4	15.9	34.4	28.5	26.6
Cameroon 1991	14.9	12.0	8.2	27.4	35.8	27.8	18.0	29.6	35.5	54.7	34.5	36.7
Central African Republic 1994-95	31.8	33.6	39.4	57.6	66.6	75.2	24.5	21.7	16.0	17.8	11.8	8.8
Côte d'Ivoire 1994	46.3	38.9	43.0	64.5	60.8	63.1	19.2	20.1	16.7	16.4	19.1	20.3
Ghana 1993	14.5	17.5	13.5	38.0	50.2	46.8	13.0	15.2	20.7	49.0	34.6	32.4
Kenya 1993	55.7	55.4	56.4	83.5	86.2	86.5	6.8	5.6	5.3	9.7	8.2	8.2
Madagascar 1992	11.9	5.7	3.2	55.6	46.2	36.0	28.5	31.9	44.0	15.9	21.9	20.0
Malawi 1992	61.7	56.3	43.9	94.1	91.2	83.4	2.9	4.5	7.8	3.0	4.3	8.8
Mali 1995-96	9.2	11.2	17.9	63.6	69.2	85.5	21.0	15.7	10.9	15.4	15.1	3.7
Namibia 1992	67.4	54.8	49.1	85.0	85.2	82.4	8.8	7.8	9.4	6.2	6.9	8.2
Niger 1992	20.1	25.6	33.6	29.0	40.4	49.6	13.1	17.4	15.5	57.9	42.3	34.9
Nigeria 1990	37.4	36.3	30.4	51.0	62.2	60.2	5.4	8.1	10.1	43.7	29.7	29.7
Rwanda 1992	18.3	20.9	17.9	47.3	53.7	64.6	24.0	24.2	22.1	28.7	22.1	13.3
Senegal 1992-93	12.0	10.5	12.2	45.2	53.3	53.3	20.3	19.2	19.3	34.6	27.5	27.4
Tanzania 1991-92	47.7	43.4	47.2	84.7	84.1	86.1	5.8	7.5	5.3	9.5	8.3	8.5
Uganda 1995	51.1	47.6	48.8	86.6	85.5	89.1	5.2	6.1	5.1	8.2	8.4	5.8
Zambia 1992	44.0	43.6	31.7	91.3	90.3	84.9	3.8	5.1	5.9	4.9	4.6	9.2
Zimbabwe 1994	44.4	39.5	39.2	92.9	91.5	90.3	5.3	5.1	5.3	1.8	3.3	4.4
Near East/North Africa												
Egypt 1992	24.6	28.1	26.5	62.0	71.1	72.4	7.2	8.6	10.0	30.9	20.3	17.6
Jordan 1990	43.9	42.6	43.3	69.1	71.3	69.4	16.0	14.7	16.4	14.8	14.0	14.1
Morocco 1992	53.9	44.7	45.9	90.4	80.7	80.3	3.1	6.1	8.5	6.6	13.1	11.1
Turkey 1993	20.6	20.6	21.7	73.5	80.9	82.5	14.4	9.3	9.2	12.1	9.8	8.3
Asia												
Bangladesh 1993-94	8.0	8.9	12.4	48.1	49.4	56.5	10.7	10.6	13.4	41.2	40.0	30.1
India 1992-93	9.0	10.8	12.4	22.7	32.6	39.5	12.2	14.2	17.1	65.1	53.2	43.5
Indonesia 1994	8.1	8.3	7.1	63.1	52.0	49.7	13.2	19.4	22.8	23.7	28.6	27.4
Kazakhstan 1995	*	*	10.2	*	*	39.9	*	*	34.6	*	*	25.5
Nepal 1996	18.0	18.0	20.2	58.7	61.9	65.6	7.3	10.3	8.5	34.0	27.8	25.9
Pakistan 1990-91	9.2	6.5	5.5	25.7	23.3	29.1	14.2	17.2	22.8	60.0	59.5	48.0
Philippines 1993	56.6	43.8	39.0	82.1	74.5	67.7	4.9	13.2	14.1	13.1	12.3	18.2

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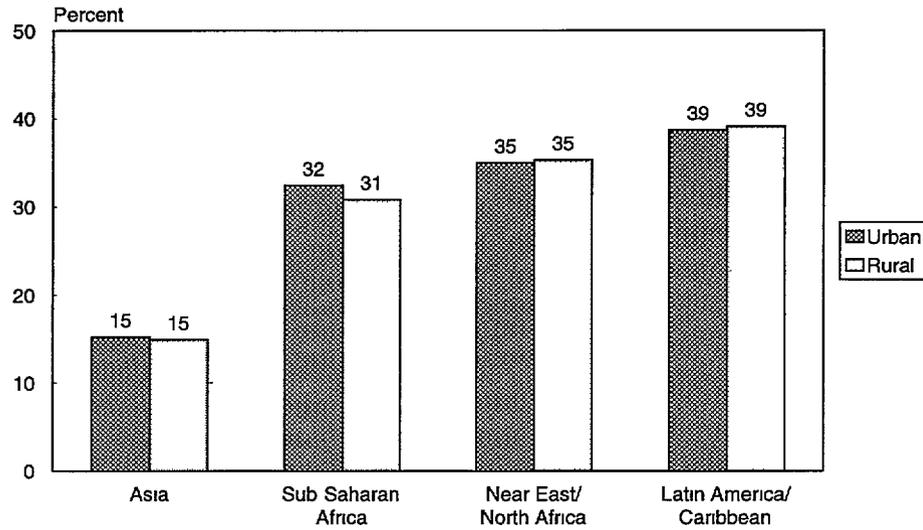
Table 2.5 *continued*

Region, country, and date	Immediately			First day ¹			Second day			Later		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Latin America/Caribbean												
Bolivia 1993-94	22.2	21.9	26.7	60.2	63.6	70.1	20.2	18.0	14.9	19.6	18.3	15.1
Brazil 1996	37.1	34.0	30.5	64.4	71.7	72.8	19.2	17.3	15.0	16.3	10.9	12.2
Colombia 1995	50.4	50.4	48.1	77.0	80.4	82.5	10.3	8.8	8.4	12.8	10.8	9.1
Dominican Republic 1991	41.0	38.6	30.0	61.4	67.3	57.6	10.4	15.2	18.4	28.2	17.5	24.0
Guatemala 1995	52.3	55.0	48.6	71.8	78.0	79.3	10.2	8.6	8.8	18.1	13.4	11.9
Haiti 1994-94	34.8	36.6	39.2	41.2	43.4	47.3	13.3	11.4	10.9	45.5	45.2	41.8
Paraguay 1990	51.0	36.2	38.6	75.7	55.9	61.7	3.6	4.8	8.0	20.7	39.3	30.3
Peru 1996	43.2	42.4	46.0	72.8	72.9	79.6	12.6	12.7	10.5	14.6	14.3	9.8

* = based on too few cases to show (0-24)

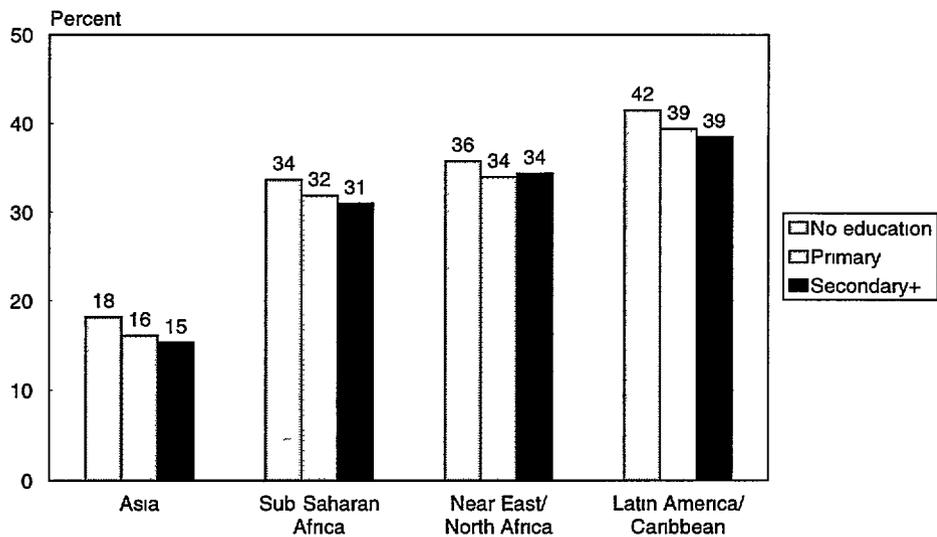
¹ Includes children breastfed immediately after birth

Figure 2 6 Percentage of infants breastfed immediately after birth, by urban-rural residence and region



Source DHS Surveys 1990-1996

Figure 2 7 Percentage of infants breastfed immediately after birth, by mother's education and region



Source DHS Surveys 1990 1996

Table 2.6 Initial breastfeeding immediately after birth by sex, multiplicity of births, mother's age at child's birth, and birth order

Percentage of children breastfed immediately after birth by sex, multiplicity of births, mother's age at child's birth, and birth order Demographic and Health Surveys 1990-1996

Region, country, and date	Sex		Multiplicity of births		Mother's age at birth		Birth order			
	Male	Female	Single	Multiple	15-24	25-49	First	Second or third	Fourth or fifth	Sixth or higher
Sub-Saharan Africa										
Burkina Faso 1993	27.7	31.6	29.7	24.4	30.3	29.1	28.6	29.5	29.3	30.4
Cameroon 1991	12.5	12.4	12.5	(10.0)	11.7	13.1	8.4	12.8	13.1	14.0
Central African Republic 1994-95	33.7	33.2	33.6	*	32.2	34.6	31.0	34.9	34.9	32.3
Côte d'Ivoire 1994	43.0	45.3	44.2	43.4	43.1	45.1	40.0	45.1	44.5	46.1
Ghana 1993	14.5	17.7	16.1	(14.0)	16.0	16.1	16.2	16.3	14.4	17.5
Kenya 1993	56.0	55.4	55.7	52.9	53.0	57.8	46.9	58.0	57.4	57.8
Madagascar 1992	6.6	6.2	6.5	(0.0)	6.7	6.3	6.7	6.2	6.5	6.4
Malawi 1992	57.3	60.2	58.8	52.8	58.1	59.1	55.2	60.8	59.2	58.4
Mali 1995-96	10.1	9.6	9.9	6.5	9.5	10.1	10.3	10.1	11.3	8.5
Namibia 1992	55.4	54.7	55.1	(53.4)	53.3	56.3	51.6	54.3	56.7	59.6
Niger 1992	20.5	21.1	20.8	19.4	18.0	23.1	14.1	20.2	21.6	23.2
Nigeria 1990	36.0	36.6	36.3	34.3	36.9	35.8	30.2	41.1	34.7	36.1
Rwanda 1992	19.8	19.3	19.6	(12.2)	19.4	19.6	18.2	21.1	19.8	18.8
Senegal 1992-93	11.8	11.8	11.9	(4.7)	11.2	12.2	8.8	12.7	10.5	13.3
Tanzania 1991-92	45.1	44.8	44.8	56.3	42.0	47.4	43.3	44.2	43.6	48.4
Uganda 1995	48.0	49.7	49.0	40.8	45.9	51.7	43.3	47.0	50.1	53.7
Zambia 1992	40.9	41.4	41.3	37.7	40.7	41.7	38.7	41.9	42.0	41.9
Zimbabwe 1994	39.1	40.9	40.2	(31.7)	39.8	40.2	35.3	45.2	43.3	34.6
Near East/North Africa										
Egypt 1992	25.3	26.7	26.1	12.9	25.5	26.2	18.4	27.8	29.3	25.2
Jordan 1990	42.8	43.8	43.4	32.3	43.9	43.0	35.3	47.2	45.5	42.3
Morocco 1992	50.4	54.0	52.2	(45.2)	49.9	52.9	46.8	51.5	52.6	55.2
Turkey 1993	21.1	20.5	20.8	(25.2)	20.0	21.5	17.4	22.1	24.6	20.1
Asia										
Bangladesh 1993-94	9.6	8.2	8.9	*	8.4	9.8	7.1	9.9	8.1	10.4
India 1992-93	9.8	9.9	9.9	6.2	10.2	9.4	9.7	11.0	8.9	8.0
Indonesia 1994	8.1	7.7	7.9	7.2	8.5	7.5	7.0	8.7	8.2	7.1
Kazakhstan 1995	11.3	9.2	9.9	*	10.8	9.6	9.7	12.4	5.4	(5.4)
Nepal 1996	17.9	18.5	18.3	(4.4)	17.6	18.8	15.9	20.0	17.1	18.5
Pakistan 1990-91	8.4	8.6	8.5	(6.2)	8.1	8.7	5.8	8.0	8.3	10.6
Philippines 1993	41.1	41.8	41.5	(37.1)	40.3	42.0	36.9	40.9	42.5	45.3

continued

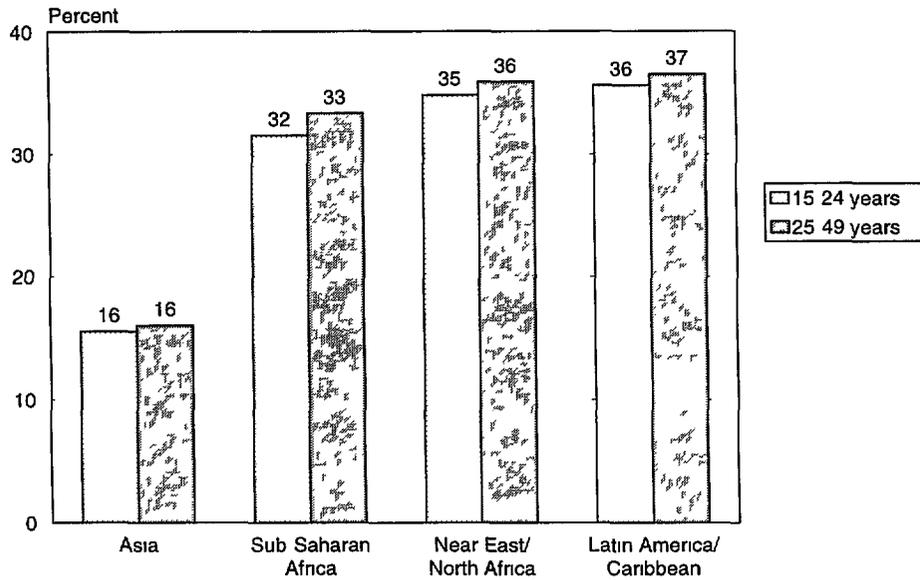
Table 2.6 *continued*

Region country and date	Sex		Multiplicity of births		Mother's age at birth		Birth order			
	Male	Female	Single	Multiple	15-24	25-49	First	Second or third	Fourth or fifth	Sixth or higher
Latin America/Caribbean										
Bolivia 1993-94	24.3	23.2	23.8	(17.3)	25.2	22.8	23.3	26.8	24.7	19.1
Brazil 1996	31.1	33.2	32.2	(23.9)	33.8	30.8	30.2	32.9	34.6	32.4
Colombia 1995	50.0	48.2	49.2	(37.9)	50.5	47.9	44.7	50.7	54.3	50.3
Dominican Republic 1991	34.5	36.4	35.5	(25.2)	36.4	34.4	32.8	35.6	40.5	33.3
Guatemala 1995	51.9	54.3	53.1	(45.7)	51.4	54.3	45.4	54.5	57.6	53.2
Haiti 1994-95	34.6	37.6	36.2	(31.5)	32.1	38.1	32.8	35.6	42.5	33.7
Paraguay 1990	37.0	37.6	37.5	0	38.0	36.9	38.1	37.4	34.2	39.1
Peru 1996	43.8	45.0	44.5	31.8	45.1	43.9	43.8	46.3	42.4	43.1

* = based on too few cases to show (0-24)

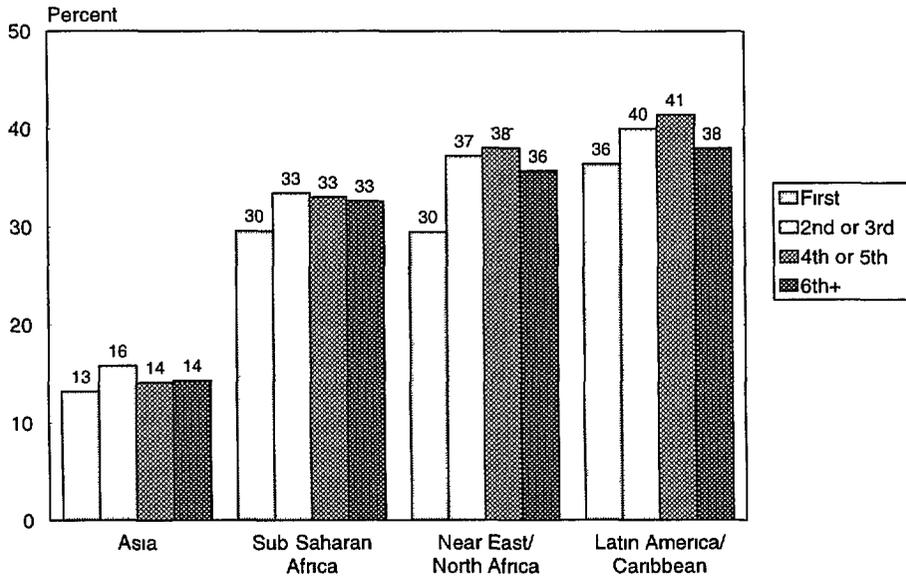
() = based on a small number of cases (25-49)

Figure 2 8 Percentage of infants breastfed immediately after birth, by mother's age and region



Source DHS Surveys 1990 1996

Figure 2 9 Percentage of infants breastfed immediately after birth, by birth order and region



Source DHS Surveys 1990 1996

Table 2.7 Initial breastfeeding immediately after birth by antenatal care provider, type of delivery facility, and type of delivery attendant

Percentage of children breastfed immediately after birth by antenatal care provider type of delivery facility, and type of delivery attendant Demographic and Health Surveys 1990-1996

Region, country, and date	Antenatal care provider			Type of delivery facility			Type of delivery attendant			
	Doctor	Other medical person	TBA other, no one	Public hosp clinic	Private hosp clinic	Non-medical, home	Doctor	Other medical person	Trad birth attend	Other, no one
Sub Saharan Africa										
Burkina Faso 1993	25.6	30.8	28.0	31.9	32.1	27.8	20.9	33.3	19.8	35.2
Cameroon 1991	10.4	12.1	14.9	11.7	10.2	14.4	5.5	12.0	9.8	16.3
Central African Republic 1994-95	26.0	35.5	30.5	37.5	20.2	30.7	(17.3)	38.5	29.4	30.5
Côte d'Ivoire 1994	34.9	44.6	44.2	46.3	(43.1)	42.6	36.7	46.6	46.7	39.8
Ghana 1993	20.4	14.5	14.3	17.7	17.0	15.0	17.9	18.0	12.5	16.9
Kenya 1993	54.7	56.0	55.5	58.2	52.6	55.0	51.2	58.8	52.4	56.3
Madagascar 1992	8.4	4.6	11.6	4.1	(2.9)	8.3	4.8	4.4	6.7	15.3
Malawi 1992	55.0	58.4	64.1	58.8	46.7	62.7	39.6	57.2	59.8	63.4
Mali 1995	15.5	9.1	10.4	10.6	*	9.3	(3.5)	10.6	11.6	8.3
Namibia 1992	46.6	55.1	66.1	50.5	(48.3)	65.0	47.5	51.7	67.3	63.8
Niger 1992	10.5	32.3	16.1	33.9	*	18.1	*	36.9	12.4	24.3
Nigeria 1990	34.3	33.5	39.6	31.6	32.0	38.6	37.5	30.2	38.2	38.0
Rwanda 1992	16.3	19.4	24.3	20.0	*	19.5	8.6	21.0	18.4	19.8
Senegal 1992-93	10.3	12.1	11.3	12.1	12.1	11.6	6.7	12.3	9.7	13.8
Tanzania 1991-92	51.7	43.8	52.1	46.3	38.6	44.8	41.8	45.4	51.3	42.8
Uganda 1995	35.0	50.6	48.6	53.0	47.1	48.1	38.1	52.1	52.9	46.0
Zambia 1992	28.1	42.0	40.8	37.5	33.7	46.0	21.2	38.2	49.4	45.1
Zimbabwe 1994	39.1	41.8	23.6	41.7	34.5	37.0	32.2	43.4	33.9	40.2
Near East/North Africa										
Egypt 1992	25.1	*	27.1	21.6	20.1	27.9	23.2	28.6	28.1	20.7
Jordan 1990	42.1	51.6	45.3	44.3	39.5	44.4	43.0	42.5	45.8	50.2
Morocco 1992	46.0	41.9	56.4	41.2	49.7	56.6	43.3	42.4	57.7	56.0
Turkey 1993	19.8	22.5	21.5	20.1	15.9	22.5	20.1	20.8	21.7	22.5
Asia										
Bangladesh 1993-94	10.8	6.3	8.7	13.1	12.7	8.8	11.5	11.4	9.0	8.1
India 1992-93	11.9	6.9	8.7	12.9	12.5	8.9	12.4	11.8	7.7	9.7
Indonesia 1994	7.7	7.9	8.3	7.9	5.7	8.2	7.4	7.3	8.5	5.9
Kazakhstan 1995	11.6	3.9	(15.8)	10.0	*	*	11.7	4.0	*	*
Nepal 1996	19.6	13.0	20.0	21.1	(21.4)	18.1	18.1	19.7	13.3	19.8
Pakistan 1990-91	7.3	7.2	8.9	8.0	4.3	8.9	5.9	8.8	9.3	6.4
Philippines 1993	36.6	43.7	47.0	41.1	28.8	43.2	36.2	42.2	43.2	60.7

continued

Table 2.7 *continued*

Region, country, and date	Antenatal care provider			Type of delivery facility			Type of delivery attendant			
	Doctor	Other medical person	TBA other no one	Public hosp clinic	Private hosp clinic	Non-medical home	Doctor	Other medical person	Trad birth attend	Other no one
Latin America/Caribbean										
Bolivia 1993-94	26 3	7 9	22 0	31 1	26 2	19 4	28 8	21 5	22 3	19 2
Brazil 1996	31 2	44 2	36 0	32 5	31 4	29 6	31 3	39 0	33 1	32 2
Colombia 1995	47 8	52 8	56 1	50 5	38 5	52 3	48 2	52 4	55 6	48 3
Dominican Republic 1991	39 1	31 5	47 1	40 0	25 1	39 2	35 2	35 3	44 5	23 7
Guatemala 1995	51 6	52 0	54 9	49 9	50 5	55 1	48 7	62 6	56 1	49 2
Haiti 1994	39 1	34 2	33 5	38 6	37 7	35 1	40 5	35 4	36 0	32 2
Paraguay 1990	36 2	36 8	40 9	37 1	32 5	39 4	25 4	37 7	41 2	38 0
Peru 1996	44 7	43 9	44 6	47 0	41 6	41 7	44 3	48 5	42 9	40 3

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

TBA = traditional birth attendant

Table 2.8 Regional summary of timing of initial breastfeeding by antenatal care provider

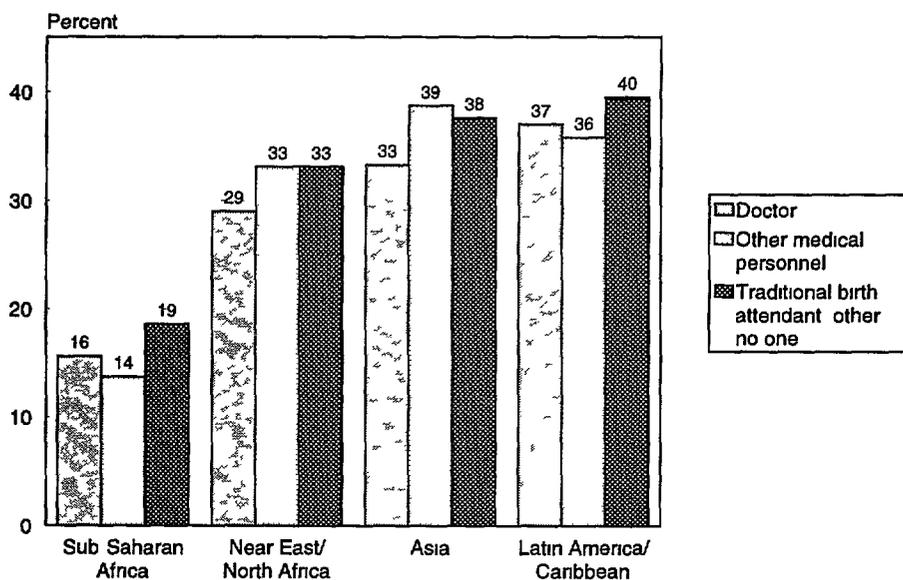
Percentage of children breastfed immediately after birth the first day the second day or later by antenatal care provider and region Demographic and Health Surveys 1990-1996

Region	Immediately			First day ¹			Second day			Later		
	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one
Sub-Saharan Africa	15.6	13.7	18.6	52.0	46.3	53.7	17.3	21.6	12.5	30.7	32.1	33.8
Near East/North Africa	29.0	33.1	33.1	62.8	66.9	61.8	16.2	14.5	13.2	21.0	18.7	25.1
Asia	33.3	38.7	37.6	81.2	74.9	75.7	10.5	8.8	9.8	14.7	10.1	14.5
Latin America/Caribbean	37.0	35.8	39.5	64.5	68.5	64.9	13.6	14.9	13.3	18.0	20.6	21.8

TBA = traditional birth attendant

¹ Includes children breastfed immediately after birth

Figure 2.10 Percentage of infants breastfed immediately after birth, by provider of antenatal care and region



Source: DHS Surveys 1990-1996

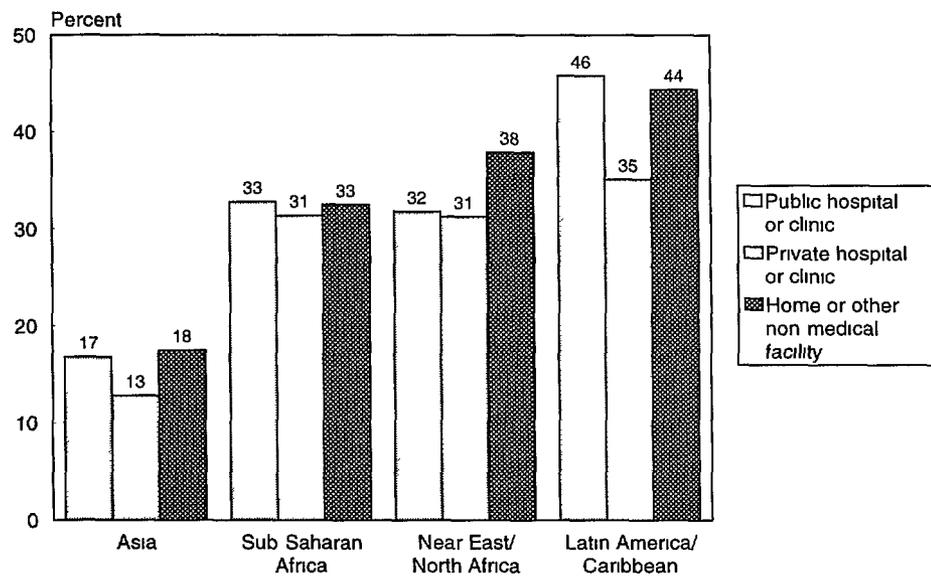
immediate breastfeeding between children whose mothers received care from nonmedical personnel, traditional birth attendants, or no one. On the other hand, children whose mothers received care from doctors were less likely to be breastfed immediately. In Latin America/Caribbean, there was little difference in immediate breastfeeding between those who received care from doctors and other medical personnel, the children were all less likely to be breastfed immediately than children whose mothers received care from traditional birth attendants or no one. The fact that in all regions children whose mothers received care from doctors (and to some extent other medical personnel) were breastfed later may be a reflection of the higher socioeconomic and/or educational status of mothers who receive care from medically trained personnel. Whether it also reflects a propensity for medically trained workers—and doctors particularly—to fail to facilitate immediate breastfeeding is of programmatic interest and warrants closer study. However, most differences are small.

Figure 2 11 shows the distribution of immediate breastfeeding according to the type of facility where the child was delivered. In all regions, there was little difference between rates among children born in public hospitals/clinics and those born in nonmedical facilities or at

home. The lowest rates of immediate breastfeeding are among children born in private hospitals/clinics. Children born in private facilities represent proportionately more of the higher socioeconomic, higher educated, urban groups. They may also be more likely to be assisted by doctors, to be given bottles after birth, and to be delivered by caesarean section.

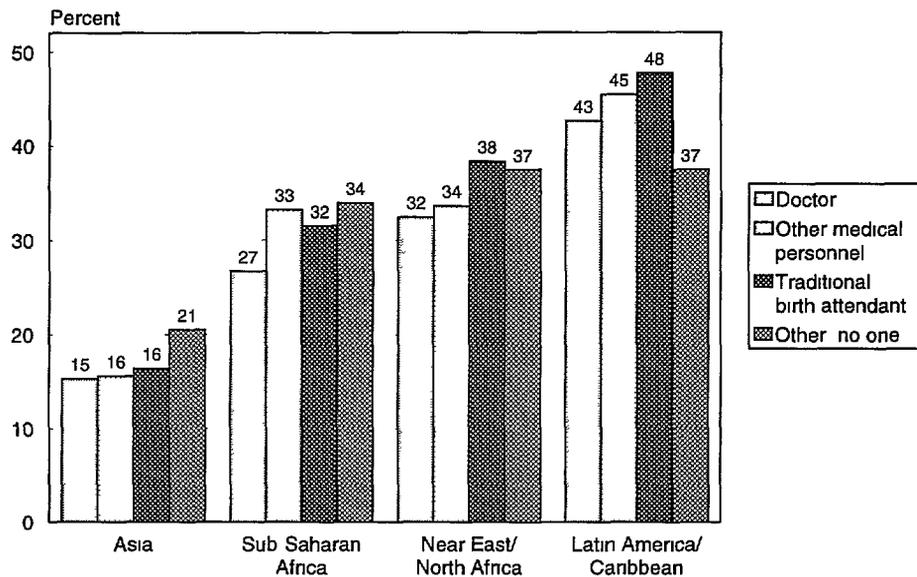
The percentage of children breastfed immediately, by type of delivery attendant is shown in Figure 2 12. As in the previous figures the lowest rates are among children whose deliveries were attended by doctors, followed by other medical personnel (except in sub-Saharan Africa where few overall differences exist between children whose deliveries were attended by people other than doctors). Once again, it is likely that mothers of children delivered with a physician attending are among the higher socioeconomic, higher educated, urban strata, and tend to be influenced by factors that work against immediate breastfeeding, such as those mentioned in the discussion of Figure 2 11. Also, there are some complicated births requiring a physician's attendance that may result in a child not being breastfed right away.

Figure 2 11 Percentage of infants breastfed immediately after birth, by delivery facility and region



Source: DHS Surveys 1990-1996

Figure 2 12 Percentage of infants breastfed immediately after birth, by delivery attendant and region



Source DHS Surveys 1990 1996

2 3 CURRENT BREASTFEEDING STATUS

Table 2 9 shows the percentage of children currently breastfeeding by age. Among children 0 to 5 months, in all regions, nearly all children are breastfed. In sub-Saharan Africa, rates are highest, being close to 100 percent in all countries. In Asia, Latin America/Caribbean, and the Near East/North Africa, about 90 percent of children are breastfed at this age. The countries having the lowest rates of breastfeeding are the Dominican Republic and Brazil, where about 75 percent of the children are breastfed.

At 6 to 11 months the majority of children in most countries are still being breastfed, with sub-Saharan Africa continuing to have the highest rates and least variation between countries. Rates do begin to decline, however, particularly in Latin America/Caribbean, notably in the Dominican Republic and Brazil, where 50 percent or fewer infants are breastfed, and in Colombia and Paraguay, where only 60 percent of the infants are breastfed. Similarly, in Jordan, Turkey, and the Philippines, about two-thirds of infants are breastfed at this age.

As child age increases, breastfeeding declines. In sub-Saharan Africa breastfeeding is still widely practiced until 20 to 23 months of age, when about half the countries have fewer than 50 percent of children breastfed, with the

lowest rates found in Zimbabwe (26 percent) and Namibia (22 percent). Beyond two years, most African children have been weaned, with the marked exception of Rwanda, where 50 percent of children are still breastfeeding. In Latin America/Caribbean and the Near East/North Africa, in contrast to Africa, almost half the children (on average) have been weaned by 12 to 15 months. By two years, fewer than 10 percent of children are still breastfeeding in most of these countries. In most countries in Asia, by 20 to 23 months, more than half of all children are still breastfed. Prolonged breastfeeding, i.e., breastfeeding longer than two years, is evident in that region, up to two-thirds of children in Indonesia, India, Nepal, and Bangladesh are still breastfed, with Nepal having the highest rate, 64 percent. Kazakhstan and the Philippines, in contrast with other Asian countries, exhibit rapid declines in breastfeeding after the first year, in those countries, by two years of age only about one-fifth of children are still breastfed. In Latin America/Caribbean, the range of breastfeeding rates between countries is wider than in the other regions.

Figure 2 13 compares overall age patterns of breastfeeding among the four regions. Clearly, sub-Saharan Africa and Asia have the highest rates of breastfeeding across the age spectrum, although three of the four regions—sub-Saharan Africa, Latin America/Caribbean, and the Near East/North Africa—tend to merge after two

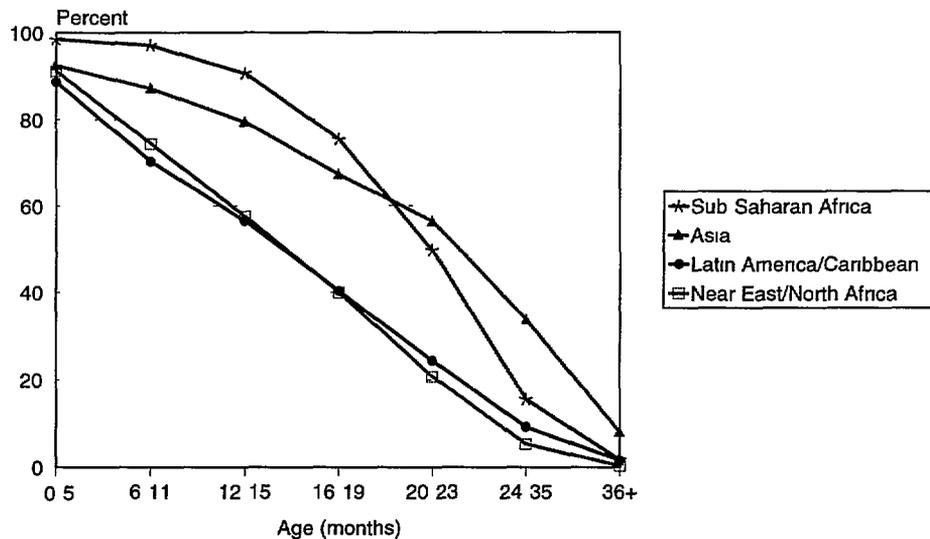
Table 2.9 Children currently breastfeeding, by age in months

Among children born in the five years preceding the survey the percentage currently breastfeeding by age in months
Demographic and Health Surveys 1990-1996

Region, country, and date	Child age (months)						
	0-5	6-11	12-15	16-19	20-23	24-35	36+
Sub-Saharan Africa							
Burkina Faso 1993	99.2	99.5	97.7	94.3	80.8	37.0	2.7
Cameroon 1991	98.3	93.1	80.7	52.9	35.0	9.4	0.5
Central African Republic 1994-95	99.8	99.4	96.5	78.3	51.4	14.9	*
Côte d'Ivoire 1994	97.3	97.3	92.2	77.8	44.7	13.2	*
Ghana 1993	99.0	98.3	94.2	79.7	53.4	17.0	*
Kenya 1993	98.5	98.7	90.4	74.1	53.6	14.7	1.2
Madagascar 1992	98.5	96.7	90.7	68.2	45.3	14.5	1.7
Malawi 1992	99.0	98.8	92.7	86.7	56.2	12.9	0.9
Mali 1995-96	99.6	99.2	93.5	84.8	60.3	20.7	*
Namibia 1992	92.9	84.7	67.9	56.6	22.6	9.0	0.4
Niger 1992	98.6	98.3	95.4	82.1	59.5	14.6	0.6
Nigeria 1990	97.7	96.2	86.4	71.1	42.9	15.2	0.8
Rwanda 1992	99.4	98.9	98.3	91.5	84.5	49.7	12.6
Senegal 1992-93	99.5	97.5	92.7	75.9	48.0	7.6	0.2
Tanzania 1991-92	99.4	98.2	94.3	81.6	56.7	11.3	0.6
Uganda 1995	98.7	96.3	88.2	69.0	39.9	9.4	1.2
Zambia 1992	99.0	98.8	90.5	68.3	34.3	6.1	0.3
Zimbabwe 1994	99.0	97.7	89.2	63.9	25.5	3.6	*
Near East/North Africa							
Egypt 1992	96.6	88.7	75.6	63.6	37.0	8.5	0.2
Jordan 1990	90.2	68.2	44.3	25.9	12.4	2.9	0.4
Morocco 1992	89.7	76.1	63.1	43.4	19.2	3.2	0.1
Turkey 1993	88.3	64.5	47.5	27.0	14.5	6.9	1.0
Asia							
Bangladesh 1993-94	98.4	97.3	95.5	92.2	86.4	64.1	*
India 1992-93	97.5	95.0	87.5	80.4	66.7	41.5	18.1
Indonesia 1994	97.1	93.1	88.2	82.2	63.3	36.7	10.6
Kazakhstan 1995	79.5	73.8	52.9	27.1	20.7	5.7	*
Nepal 1996	99.7	99.5	96.6	94.0	87.7	59.3	*
Pakistan 1990-91	95.4	87.6	78.2	60.7	51.6	22.2	3.0
Philippines 1993	79.7	63.7	56.6	34.0	18.2	7.0	1.0
Latin America/Caribbean							
Bolivia 1993-94	95.1	85.1	73.7	56.3	36.0	10.1	*
Brazil 1996	75.7	46.8	33.4	25.8	16.9	11.2	3.4
Colombia 1995	90.8	60.6	42.3	31.6	16.5	9.4	1.7
Dominican Republic 1991	75.2	37.2	29.0	12.7	7.2	2.5	0.9
Guatemala 1995	96.5	90.8	74.9	64.1	43.1	16.3	2.9
Haiti 1994-95	96.2	90.6	81.2	54.0	24.7	5.8	0.0
Paraguay 1990	82.9	61.3	39.8	15.1	8.3	2.6	0.2
Peru 1996	97.4	90.0	77.6	62.4	42.5	16.1	2.6

* = based on too few cases to show (0-24)

Figure 2 13 Percentage of children currently breastfeeding, by age in months and region



Source DHS Surveys 1990 1996

years of age. In Asia, as noted, prolonged breastfeeding is common. Asian countries have the highest rates, and a substantial percentage of children are breastfed well into the third year. In Latin America/Caribbean and Near East/North Africa, average rates of breastfeeding by age are nearly identical and linear. In sub-Saharan Africa, the decline by age becomes more rapid after about 19 months of age.

Figures 2 14 and 2 15 show first and second-year breastfeeding continuation rates, respectively, for each of the four regions. Sub-Saharan Africa countries, as noted, have the highest rates of breastfeeding at 12 to 15 months, followed by Asia. Latin America/Caribbean has the widest range of rates, and some of the lowest first-year breastfeeding continuation rates, specifically in the Dominican Republic, Brazil, Paraguay, and Colombia. By about two years of age, a third or more of children in all but two sub-Saharan Africa countries are still breastfed, with Burkina Faso and Rwanda having 80 percent or more of children still breastfed. In 5 of the 7 Asian countries 50 percent or more of children are still breastfed. In contrast, at 20 to 23 months relatively few children are still breastfed in most Near East/ North Africa and Latin American/Caribbean countries. Nevertheless, in Bolivia, Peru, and Guatemala around 4 of 10 children are still breastfed.

Socioeconomic Differentials

Table 2 10 shows the proportion of children currently breastfeeding by age and urban-rural residence. Among children 0 to 5 months, virtually all are currently breastfeeding, especially in sub-Saharan Africa. Likewise, in sub-Saharan Africa, few countries show sizeable differences in breastfeeding by urban-rural residence. In Latin America/Caribbean and the Near East/North Africa, rates of breastfeeding are higher in rural than in urban areas in all countries. In Asia, the only marked urban-rural difference is in the Philippines, where two-thirds of the infants 0 to 5 months in urban areas are breastfed compared with 92 percent of infants in rural areas.

At 6 to 9 months, the vast majority of children in all countries (except the Dominican Republic and Brazil) are still being breastfed, with sub-Saharan Africa having the highest rates. Latin American/Caribbean countries show rates beginning to decline, with the Dominican Republic and Brazil having 50 percent or fewer infants breastfed, and Colombia and Paraguay having only two-thirds of the infants breastfed. Similarly, in Jordan, Turkey, Kazakhstan, and the Philippines, about two-thirds of infants are still breastfed at this age. Urban-rural differences are more apparent in all regions, with rural areas having consistently higher rates of breastfeeding, and with differences being of greatest magnitude in Latin America/Caribbean countries.

Figure 2 14 Percentage of children breastfed at 12-15 months

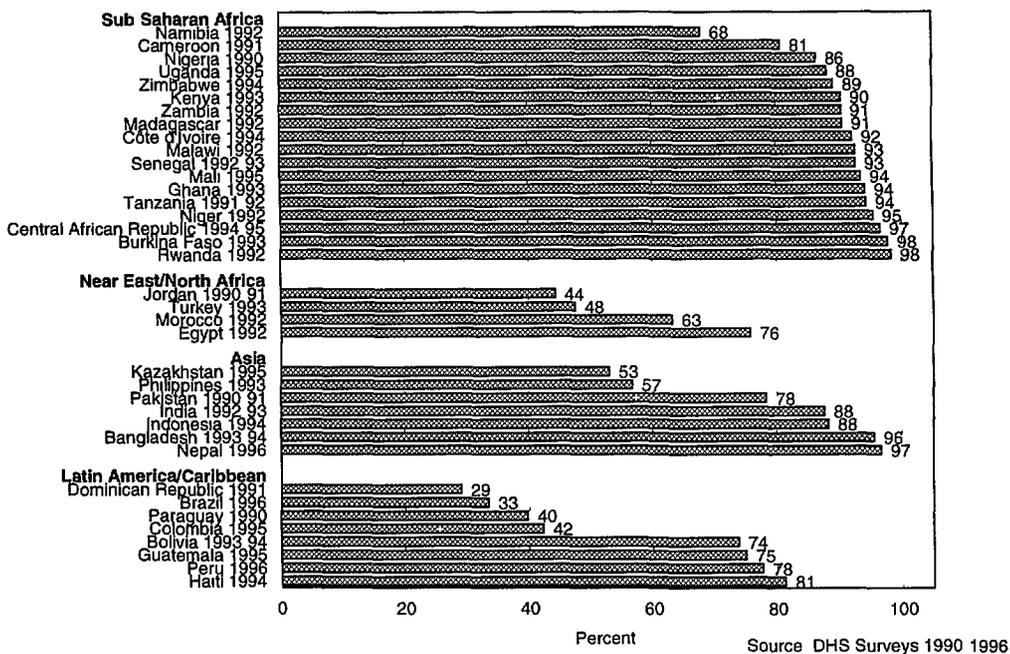


Figure 2 15 Percentage of children breastfed at 20-23 months

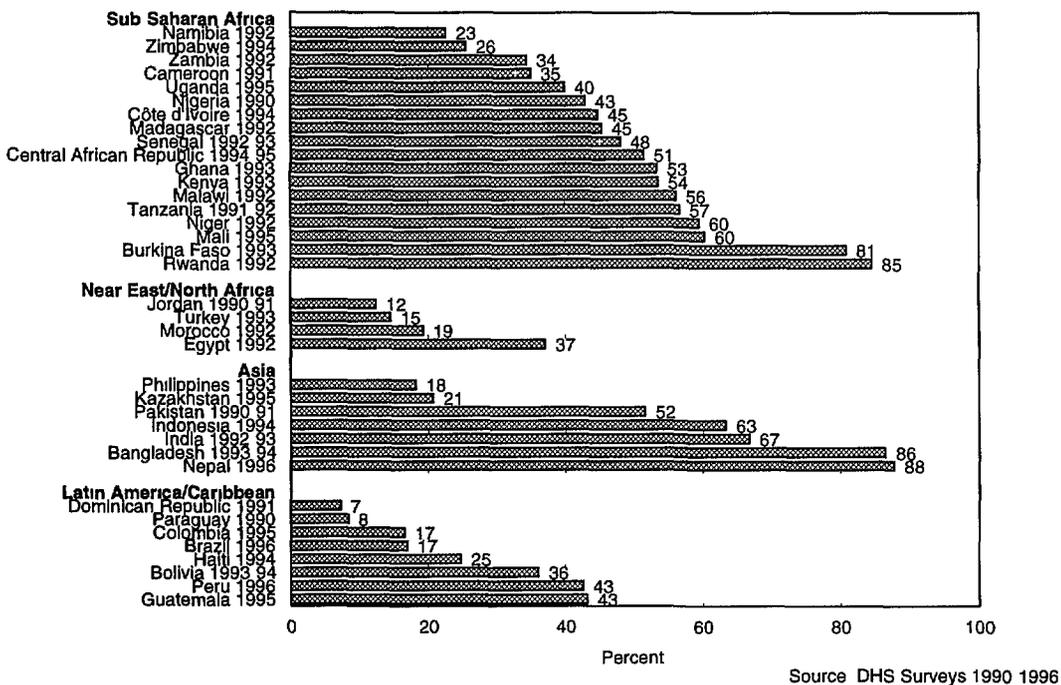


Table 2.10 Children currently breastfeeding, by age and urban rural residence

Among children born in the two years preceding the survey, the percentage currently breastfeeding by age in months and urban-rural residence Demographic and Health Surveys, 1990-1996

Region, country, and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub-Saharan Africa												
Burkina Faso 1993	99.2	99.0	99.3	99.6	100.0	99.6	97.7	96.6	97.9	80.8	61.6	84.4
Cameroon 1991	98.3	95.7	100.0	93.2	88.4	96.0	80.7	66.7	90.2	35.0	18.7	46.7
Central African Republic 1994-95	99.8	100.0	99.7	99.3	98.3	100.0	96.5	95.1	97.5	51.4	38.4	61.3
Côte d'Ivoire 1994	97.3	97.1	97.4	97.4	96.7	97.6	92.2	87.5	95.1	44.7	26.7	57.5
Ghana 1993	99.0	97.1	99.6	98.8	98.4	99.0	94.2	83.6	98.0	53.4	28.8	63.3
Kenya 1993	98.5	99.2	98.4	98.8	(95.9)	99.1	90.4	90.5	90.4	53.6	(39.2)	56.3
Madagascar 1992	98.5	95.1	99.0	98.6	94.8	99.2	90.7	80.2	92.2	45.3	29.0	47.3
Malawi 1995-96	99.0	u	u	98.8	u	u	92.7	u	u	56.2	u	u
Mali 1995-96	99.6	99.5	99.7	99.6	99.1	99.8	93.5	93.9	93.4	60.3	46.8	65.1
Namibia 1992	92.9	81.9	97.8	86.0	61.4	95.1	67.9	49.7	77.4	22.6	20.0	23.9
Niger 1992	98.6	98.7	98.6	98.9	99.0	98.9	95.4	92.7	95.9	59.5	33.9	65.1
Nigeria 1990	97.7	99.2	97.3	97.2	94.3	98.0	86.4	72.0	89.9	42.9	22.5	50.3
Rwanda 1992	99.4	100.0	99.3	99.1	(95.6)	99.3	98.3	(87.2)	98.7	84.5	58.8	86.2
Senegal 1992-93	99.5	99.5	99.5	97.7	97.4	97.8	92.7	91.0	93.6	48.0	24.7	58.9
Tanzania 1991-92	99.4	100.0	99.3	98.1	97.3	98.4	94.3	89.3	95.5	56.7	47.1	59.1
Uganda 1995	98.7	98.3	98.7	97.5	89.2	98.5	88.2	75.1	90.0	39.9	19.4	42.3
Zambia 1992	99.0	98.3	99.7	99.1	98.0	100.0	90.5	84.9	95.8	34.3	25.9	41.6
Zimbabwe 1994	99.0	97.3	99.5	98.9	100.0	98.6	89.2	74.6	94.0	25.5	16.0	29.9
Near East/North Africa												
Egypt 1992	96.6	95.9	97.0	90.0	85.3	92.9	75.6	74.7	76.1	37.0	25.2	43.2
Jordan 1990	90.2	88.7	94.1	69.2	68.7	70.2	44.3	42.6	48.4	12.4	10.0	17.7
Morocco 1992	89.7	76.2	95.0	78.7	58.3	89.7	63.1	35.6	75.3	19.2	12.0	23.6
Turkey 1993	88.3	87.2	90.0	65.9	63.4	69.5	47.5	40.7	56.1	14.5	8.6	23.2
Asia												
Bangladesh 1993-94	98.4	98.3	98.4	98.1	96.2	98.4	95.5	86.5	96.6	86.4	(67.9)	88.6
India 1992-93	97.5	94.9	98.2	95.4	91.1	96.8	87.5	76.6	90.5	66.7	52.5	71.2
Indonesia 1994	97.1	94.4	98.2	94.5	90.5	96.3	88.2	82.5	91.0	63.3	54.7	66.0
Kazakhstan 1995	79.5	(87.4)	73.9	68.4	(55.8)	(78.8)	52.9	(45.6)	58.7	20.7	(21.0)	20.6
Nepal 1996	99.7	100.0	99.7	99.2	(100.0)	99.1	96.6	(96.7)	96.5	87.7	(75.5)	88.5
Pakistan 1990-91	95.4	95.5	95.4	89.8	78.8	94.2	78.2	59.6	85.5	51.6	43.1	55.0
Philippines 1993	79.7	67.0	91.5	65.3	52.1	78.2	56.6	43.4	66.8	18.2	14.6	22.5

continued

Table 2 10 *continued*

Region, country, and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America/Caribbean												
Bolivia 1993-94	95 1	93 2	97 0	88 2	81 6	96 7	73 7	65 4	81 3	36 0	32 9	40 0
Brazil 1996	75 7	75 3	77 3	50 3	47 6	58 5	33 4	33 0	34 6	16 9	15 3	23 3
Colombia 1995	90 8	89 0	93 8	66 4	59 3	77 7	42 3	37 8	52 5	16 5	13 8	21 2
Dominican Republic 1991	75 2	71 5	81 2	41 7	31 9	58 9	29 0	14 1	47 3	7 2	4 8	10 0
Guatemala 1995	96 5	93 8	97 7	92 4	85 8	95 8	74 9	55 8	85 2	43 1	33 5	48 3
Haiti 1994-95	96 2	88 5	99 1	91 9	79 7	96 4	81 2	66 8	87 4	24 7	16 0	29 8
Paraguay 1990	82 9	75 4	89 1	68 3	55 0	79 8	39 8	25 8	51 7	8 3	8 1	8 5
Peru 1996	97 4	96 1	99 3	91 4	87 2	96 6	77 6	71 6	87 1	42 5	38 9	47 3

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

u = unknown (not available)

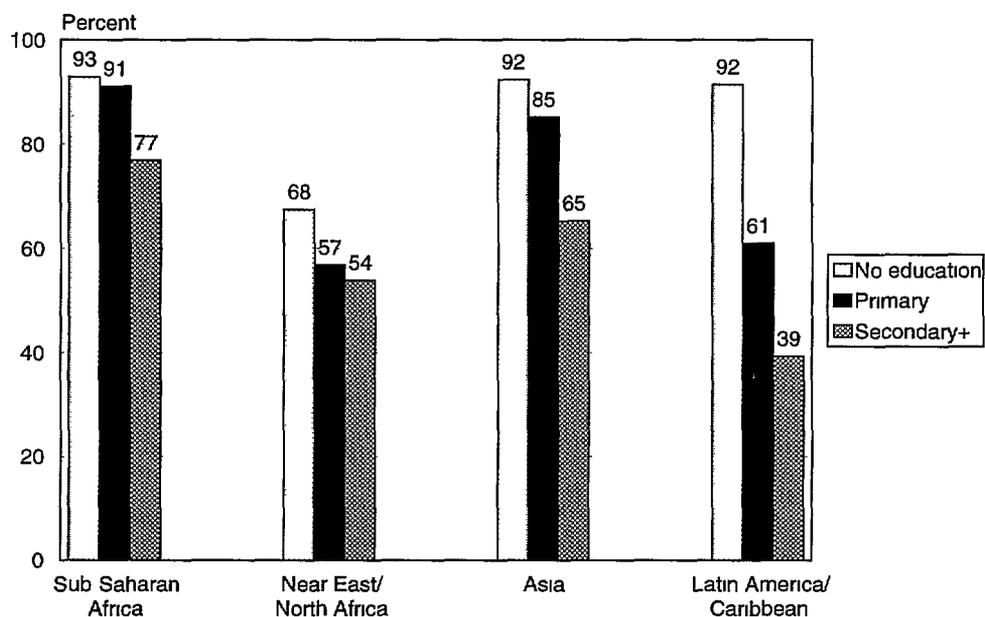
By the time children are 12 to 15 months old, overall breastfeeding rates are lower in all the regions, and urban-rural differences are correspondingly larger in magnitude. In sub-Saharan Africa, rates remain high, with almost all rural children in all countries still breastfed, and on average 82 percent of urban children still breastfed. In Latin America/Caribbean, 4 of the 8 countries have fewer than 50 percent of children still breastfed, with the lowest rates in urban areas in the Dominican Republic (14 percent), Paraguay (26 percent), Brazil (33 percent), and Colombia (38 percent). Similarly, in Morocco, only 36 percent of urban children are still breastfed, half the rate in rural areas.

At 20 to 23 months, urban-rural differences are larger again in all regions, with considerably more rural children being breastfed than their urban counterparts.

Table 2.11 shows the percentage of children currently breastfeeding by age and mother's education. At 0 to 5 months and 6 to 9 months, the differences in breastfeeding rates by mother's education are relatively small; however, as the level of mother's education increases,

breastfeeding rates become slightly lower. In Latin America/Caribbean the differences between levels of education are more pronounced than in other regions. However, with increasing child age, as breastfeeding rates begin to decline in general, the differences between educational levels become proportionally larger. At 12 to 15 months, Latin America/Caribbean shows the greatest differences by level of education, with an average of less than 40 percent of children of mothers with secondary or higher education being breastfed, compared with an average of more than 90 percent of children of mothers with no education (Figure 2.16). In Asia, an average of 20 percentage points differentiate the first-year breastfeeding continuation rates of women with primary education from those of women with secondary education or higher. By the time children are 20 to 23 months old, breastfeeding rates have declined in all countries, but the proportional differences between educational levels are increasingly pronounced. In sub-Saharan Africa, among children of mothers with secondary education a dramatic drop in breastfeeding occurs from age 12 to 15 months to age 20 to 23 months—56 percentage points, (Figure 2.17).

Figure 2.16 Percentage of children 12 to 15 months currently breastfed, by mother's education



Source: DHS Surveys 1990-1999

Table 2.11 Children currently breastfeeding, by age and mother's level of education

Among children born in the preceding two years: the percentage currently breastfeeding by age in months and mother's level of education Demographic and Health Surveys 1990-1996

Region, country, and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub-Saharan Africa												
Burkina Faso 1993	99.5	97.2	(97.5)	99.6	100.0	*	97.7	(98.5)	*	84.4	(63.5)	*
Cameroon 1991	98.1	99.5	96.6	98.3	97.1	76.0	(93.4)	85.2	62.5	62.2	22.1	0.0
Central African Republic 1994-95	99.6	100.0	(100.0)	99.4	99.0	(100.0)	97.9	97.8	90.4	66.9	39.5	(27.7)
Côte d'Ivoire 1994	97.5	98.6	92.4	98.2	95.7	(94.6)	95.5	89.1	(74.1)	54.0	31.2	(6.7)
Ghana 1993	100.0	98.5	(96.0)	99.0	98.6	*	97.7	94.6	*	68.8	45.1	*
Kenya 1993	99.1	98.7	97.4	97.4	98.9	99.8	87.9	91.0	91.0	68.0	51.8	50.1
Madagascar 1992	99.5	98.5	97.6	100.0	98.2	98.6	92.6	93.1	82.5	(65.8)	44.2	29.8
Malawi 1992	98.3	99.8	*	98.3	99.7	*	96.9	89.4	*	66.6	45.5	*
Mali 1995-96	99.7	100.0	96.9	99.6	100.0	(99.3)	93.0	98.2	(92.1)	61.6	63.6	*
Namibia 1992	98.3	96.8	86.2	(86.5)	92.2	76.3	73.3	76.6	48.0	(41.3)	27.1	9.5
Niger 1992	98.5	100.0	(95.6)	98.9	97.7	*	96.4	(87.8)	*	60.9	(55.2)	*
Nigeria 1990	98.1	98.7	93.3	97.5	97.3	95.7	89.4	88.4	67.6	60.5	30.7	14.9
Rwanda 1992	99.5	99.2	(100.0)	99.3	99.3	(95.9)	99.3	97.8	*	88.3	82.0	*
Senegal 1992-93	100.0	96.7	(100.0)	98.5	98.1	*	94.4	88.7	*	53.5	(20.0)	*
Tanzania 1991-92	100.0	99.1	(100.0)	97.0	98.8	(95.2)	94.2	94.4	*	57.4	57.4	*
Uganda 1995	99.3	98.6	97.1	99.9	97.8	89.1	91.3	88.1	79.3	59.9	32.3	20.4
Zambia 1992	99.1	98.7	100.0	100.0	99.6	96.8	89.1	92.6	84.8	44.1	40.5	8.6
Zimbabwe 1994	(100.0)	99.7	97.9	(100.0)	100.0	97.1	(87.3)	91.9	86.0	(50.7)	26.0	13.0
Near East/North Africa												
Egypt 1992	96.9	96.1	96.4	96.2	83.8	84.8	80.2	77.1	67.1	44.0	42.5	20.5
Jordan 1990	94.4	93.4	88.7	73.8	71.3	67.2	56.2	45.5	40.7	23.7	14.0	7.8
Morocco 1992	93.7	(69.0)	(62.9)	87.4	(61.8)	(25.0)	73.6	(37.9)	(12.2)	22.4	(8.1)	(6.9)
Turkey 1993	91.8	87.5	85.5	79.1	62.8	(50.5)	59.8	47.7	(23.7)	28.5	10.3	(2.6)
Asia												
Bangladesh 1993-94	98.9	97.9	97.9	100.0	98.0	92.8	98.2	94.0	88.2	91.0	87.1	68.2
India 1992-93	98.3	96.7	95.5	97.0	96.5	89.1	92.0	86.5	71.1	74.6	62.0	45.3
Indonesia 1994	99.4	97.6	95.5	97.0	96.5	90.7	92.7	90.9	81.6	69.5	66.5	54.3
Kazakhstan 1995	*	*	79.5	*	*	68.0	*	*	52.9	*	*	21.0
Nepal 1996	99.6	100.0	100.0	99.2	100.0	98.0	96.6	97.0	(95.3)	89.1	(87.8)	(72.4)
Pakistan 1990-91	95.7	96.6	92.7	93.1	(85.6)	68.8	82.7	74.3	51.8	56.5	(42.8)	(26.5)
Philippines 1993	(96.3)	88.9	72.7	*	82.4	51.9	*	68.9	46.2	*	24.1	14.0

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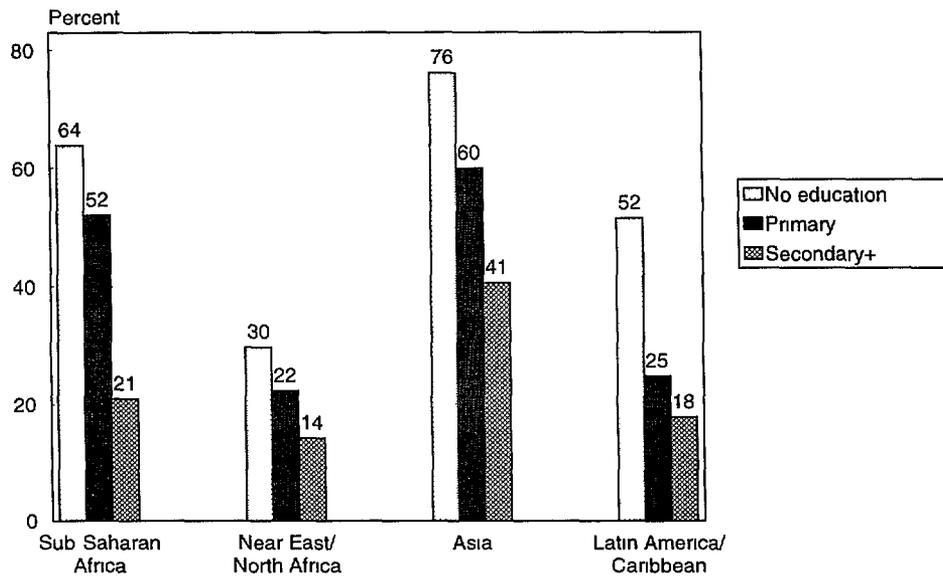
Table 2.11 continued

Region, country, and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Latin America/Caribbean												
Bolivia 1993-94	95.3	97.6	91.8	100.0	93.1	79.1	93.4	76.8	62.3	(47.6)	39.5	29.5
Brazil 1996	(74.0)	72.9	77.8	*	50.0	49.4	(56.3)	35.7	28.2	(18.1)	20.4	14.3
Colombia 1995	(94.6)	90.5	90.6	*	70.0	61.9	*	48.4	37.5	*	19.9	14.3
Dominican Republic 1991	(88.6)	75.9	72.3	*	49.7	24.3	(62.2)	32.2	15.4	*	9.6	5.0
Guatemala 1995	99.1	96.9	87.0	98.0	92.7	76.6	89.9	73.9	40.5	56.9	40.3	15.3
Haiti 1994-95	99.3	96.5	(84.8)	96.0	95.6	*	89.2	89.5	(30.3)	32.6	18.2	(19.0)
Paraguay 1990	*	85.6	75.3	*	74.2	50.5	*	45.2	22.4	*	9.0	7.1
Peru 1996	99.2	99.6	95.5	100.0	95.8	86.4	93.3	86.5	68.5	65.1	41.7	39.2

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Figure 2 17 Percentage of children 20 to 23 months currently breastfed, by mother's education



Source DHS Surveys 1990 1996

Biodemographic Differentials

Breastfeeding rates were also examined according to the child's sex, within the same four age groups (Table 2 12) In early infancy there were virtually no differences between boys and girls in most of the countries studied In Namibia, Kazakhstan, and the Dominican Republic boys were breastfed slightly more often (i.e., more than 5 percentage points) than girls, but it is difficult to know if the results represent real cultural preferences for boys, because the sex differences were not consistent across age groups It may be that in some countries boys are breastfed somewhat more in the early months, but not in later life In Jordan girls are more likely to be breastfed than boys during infancy, but not in the second year Figure 2 18 shows the regional averages for boys and girls at 12 to 15 months, and the absence of noteworthy sex differences at that age By 20 to 23 months, larger differences between boys and girls are apparent in some of the Asian and Near East/North Africa countries In Kenya, Rwanda, Zimbabwe, Guatemala, and Paraguay boys are more likely to be breastfed than girls by about 5 to 10 percentage points In Turkey boys are 5 times more likely to be breastfed than girls In Pakistan and the Philippines girls tend to be breastfed somewhat more often than boys Regionally, at 20 to 23 months, boys tend to be breastfed more often than girls in

the Near East/North Africa and Asia, while sex differences are not apparent in the other regions (Figure 2 19)

Table 2 13 shows breastfeeding rates within selected age groups according to the mother's age at the child's birth In sub-Saharan Africa there are no appreciable differences according to mother's age up to about 15 months The largest differences are seen in the Near East/North Africa and Latin America/Caribbean countries, where younger mothers are less likely to breastfeed than older mothers In Asia, the tendency is similar, but to a lesser degree At 12 to 15 months, in all regions except sub-Saharan Africa, fewer younger mothers are breastfeeding than their older counterparts (Figure 2 20) By 20 to 23 months, the difference in breastfeeding rates between younger and older mothers is even more pronounced, particularly in the Near East/North Africa and Asia (Figure 2 21) The tendency for younger mothers to breastfeed less may reflect their inexperience in breastfeeding relative to older mothers, as their children are more likely to be the firstborn children and may have more difficulty managing lactation problems However, it is also possible that younger mothers may be more educated, employed in the workplace away from the home, or both, or have become pregnant again

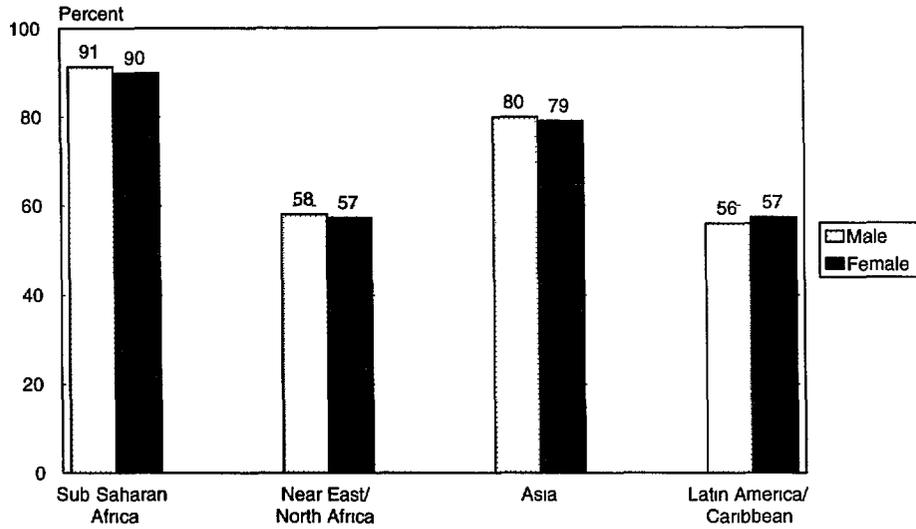
Table 2 12 Children currently breastfeeding, by age and sex

Among children born in the preceding two years, the percentage currently breastfeeding by age in months and sex Demographic and Health Surveys, 1990-1996

Region, country, and date	0 to 5 months		6 to 9 months		12 to 15 months		20 to 23 months	
	Male	Female	Male	Female	Male	Female	Male	Female
Sub-Saharan Africa								
Burkina Faso 1993	98.7	99.9	100.0	99.3	97.9	97.5	80.4	81.1
Cameroon 1991	99.4	97.2	96.4	90.4	81.6	79.8	35.9	34.1
Central African Republic 1994-95	99.6	100.0	100.0	98.7	98.0	95.1	49.1	54.1
Côte d'Ivoire 1994	96.8	97.9	96.1	98.5	94.0	90.6	45.5	43.8
Ghana 1993	98.9	99.0	99.3	98.3	93.8	94.7	46.7	60.4
Kenya 1993	98.1	98.8	99.3	98.3	88.7	92.3	61.5	46.2
Madagascar 1992	98.7	98.3	98.7	98.5	91.6	89.8	47.4	43.2
Malawi 1992	99.5	98.4	100.0	97.7	95.7	89.3	50.7	62.3
Mali 1995-96	99.3	100.0	100.0	99.3	95.8	91.3	55.9	64.6
Namibia 1992	95.6	89.9	86.1	86.0	70.6	65.6	24.8	19.6
Niger 1992	98.5	98.7	99.4	98.4	95.8	95.0	58.6	60.5
Nigeria 1990	96.9	98.5	97.8	96.6	86.2	86.6	40.2	45.2
Rwanda 1992	98.8	100.0	99.8	98.6	98.8	97.7	87.7	80.7
Senegal 1992-93	99.4	99.7	96.9	98.4	92.2	93.2	55.8	40.2
Tanzania 1991-92	99.6	99.3	97.0	99.2	96.4	92.2	59.9	53.5
Uganda 1995	98.9	98.5	97.5	97.5	87.7	88.8	39.7	40.1
Zambia 1992	98.7	99.3	98.7	99.5	89.9	91.1	36.3	32.3
Zimbabwe 1994	98.7	99.1	98.9	98.9	90.3	88.4	27.8	23.3
Near East/North Africa								
Egypt 1992	97.0	96.2	90.5	89.5	74.7	76.6	36.1	38.1
Jordan 1990	87.6	92.9	66.7	71.4	46.0	42.6	13.4	11.3
Morocco 1992	87.7	91.7	81.9	75.2	61.4	65.0	20.6	17.8
Turkey 1993	86.0	90.7	63.9	68.1	49.9	44.6	23.9	4.5
Asia								
Bangladesh 1993-94	98.8	98.0	98.3	97.9	96.0	95.1	87.4	85.4
India 1992-93	97.5	97.6	95.4	95.4	89.3	85.7	69.0	64.1
Indonesia 1994	96.2	98.2	94.3	94.8	88.4	88.1	66.0	60.5
Kazakhstan 1995	82.8	76.7	(67.2)	(69.3)	54.5	51.3	(22.5)	19.1
Nepal 1996	99.4	100.0	99.5	98.7	97.5	95.6	88.9	86.4
Pakistan 1990-91	95.7	95.2	90.8	88.7	77.3	79.0	47.3	55.9
Philippines 1993	79.0	80.6	66.9	63.5	55.3	57.8	15.5	21.3
Latin America/Caribbean								
Bolivia 1993-94	95.2	95.0	87.4	89.4	72.3	74.8	35.8	36.2
Brazil 1996	77.3	74.5	53.3	47.3	30.2	37.5	17.3	16.5
Colombia 1995	92.1	89.2	69.4	63.2	40.3	44.8	14.4	18.8
Dominican Republic 1991	81.0	70.6	38.5	44.9	30.3	27.5	8.0	6.4
Guatemala 1995	96.0	97.1	93.2	91.6	75.2	74.7	47.9	39.0
Haiti 1994-95	96.2	96.2	93.3	90.2	82.0	80.3	24.3	25.2
Paraguay 1990	84.7	81.1	68.7	67.9	38.9	40.9	11.5	4.2
Peru 1996	97.4	97.5	91.3	91.5	78.3	77.0	40.8	44.4

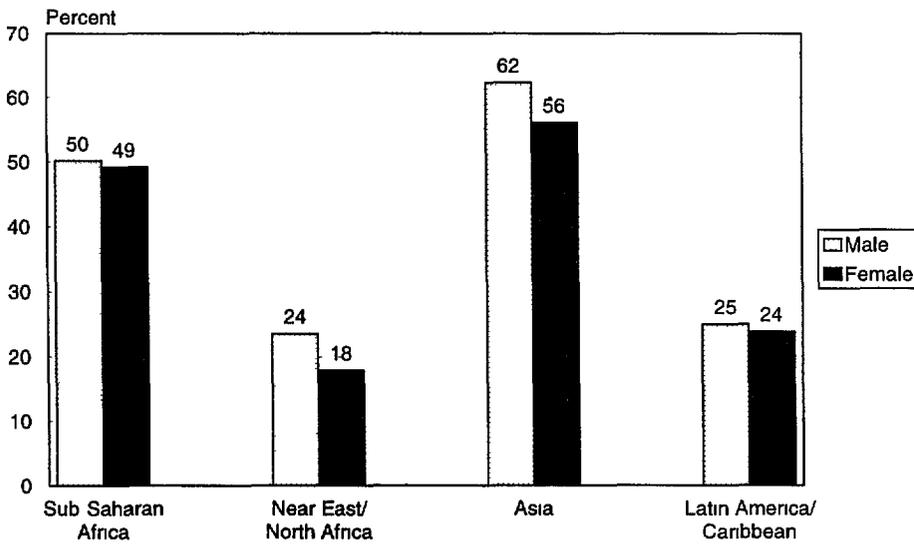
() = based on a small number of cases (25-49)

Figure 2 18 Percentage of children 12 to 15 months currently breastfed, by sex



Source DHS Surveys 1990 1996

Figure 2 19 Percentage of children 20 to 23 months currently breastfed, by sex



Source DHS Surveys 1990 1996

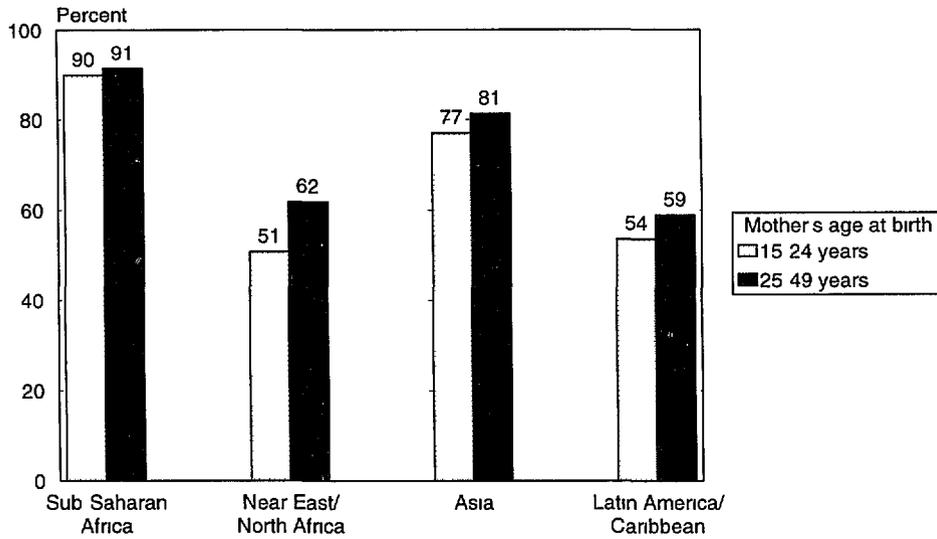
Table 2 13 Children currently breastfeeding, by age of child and mother's age at birth of child

Among children born in the preceding two years, the percentage currently breastfeeding, by age of child and mother's age at birth of child, Demographic and Health Surveys, 1990-1996

Region, country, and date	0 to 5 months		6 to 9 months		12 to 15 months		20 to 23 months	
	15-24	25-49	15-24	25-49	15-24	25-49	15-24	25-49
Sub-Saharan Africa								
Burkina Faso 1993	100 0	98 7	99 1	100 0	96 3	98 7	77 6	83 0
Cameroon 1991	99 4	97 1	90 5	96 1	78 3	83 3	41 7	29 4
Central African Republic 1994-95	100 0	99 7	99 3	99 4	96 8	96 2	38 6	62 9
Côte d'Ivoire 1994	98 5	96 4	97 2	97 5	92 8	91 6	34 3	54 3
Ghana 1993	98 4	99 2	99 1	98 6	95 0	93 8	44 2	60 0
Kenya 1993	99 0	98 0	99 4	98 4	90 9	90 0	48 4	58 7
Madagascar 1992	98 6	98 4	97 9	99 0	88 8	92 3	34 3	52 6
Malawi 1992	99 3	98 7	98 6	99 0	92 0	93 4	53 6	58 1
Mali 1995	99 8	99 5	99 2	99 9	90 9	95 3	55 5	63 9
Namibia 1992	91 9	93 6	86 9	85 4	67 9	67 9	26 1	20 3
Niger 1992	98 3	98 8	99 3	98 5	95 4	95 5	54 5	63 6
Nigeria 1990	95 8	98 9	97 7	96 8	87 8	85 2	37 9	46 2
Rwanda 1992	100 0	99 1	98 6	99 4	95 8	99 2	75 2	88 6
Senegal 1992-93	99 2	99 7	98 5	97 1	88 0	96 0	39 1	53 0
Tanzania 1991-92	99 6	99 3	99 7	96 6	93 9	94 6	46 3	65 9
Uganda 1995	97 8	99 6	98 3	96 7	86 5	90 2	37 7	42 0
Zambia 1992	99 0	99 0	99 1	99 0	91 2	89 9	27 1	41 0
Zimbabwe 1994	98 5	99 4	97 7	100 0	87 3	91 2	17 6	31 8
Near East/North Africa								
Egypt 1992	98 2	95 6	88 1	91 0	75 4	75 8	31 8	40 7
Jordan 1990	87 4	92 1	71 0	68 0	33 2	50 3	4 3	16 6
Morocco 1992	88 0	90 3	70 3	83 3	53 4	66 5	7 2	24 7
Turkey 1993	87 3	89 3	64 2	68 2	41 2	54 4	12 9	16 0
Asia								
Bangladesh 1993-94	99 3	97 2	97 6	99 1	94 4	97 2	85 2	88 5
India 1992-93	97 9	97 1	95 3	95 5	86 9	88 4	63 6	72 2
Indonesia 1994	98 1	96 5	93 4	95 2	90 8	86 6	61 7	64 6
Kazakhstan 1995	71 2	89 4	(72 0)	65 7	36 5	65 5	4 8	37 1
Nepal 1996	100 0	99 4	98 9	99 4	97 2	95 9	83 9	92 5
Pakistan 1990-91	96 7	94 7	88 4	90 7	76 0	79 7	49 1	53 6
Philippines 1993	84 5	77 3	67 2	64 2	57 5	56 1	13 3	20 8
Latin America/Caribbean								
Bolivia 1993-94	96 2	94 4	89 5	87 3	72 2	74 7	26 3	42 5
Brazil 1996	69 8	82 0	45 2	55 7	32 5	34 4	11 4	21 6
Colombia 1995	90 1	91 5	64 9	67 9	43 0	41 7	11 3	22 1
Dominican Republic 1991	74 1	76 6	39 0	45 3	25 7	32 6	7 5	7 0
Guatemala 1995	96 3	96 7	91 5	93 2	69 7	80 4	33 9	51 7
Haiti 1994-95	94 5	97 2	88 7	93 4	72 4	86 2	13 2	31 5
Paraguay 1990	80 5	84 6	62 7	72 7	33 8	44 2	5 2	9 8
Peru 1996	97 4	97 5	91 9	90 9	79 1	76 6	37 2	46 2

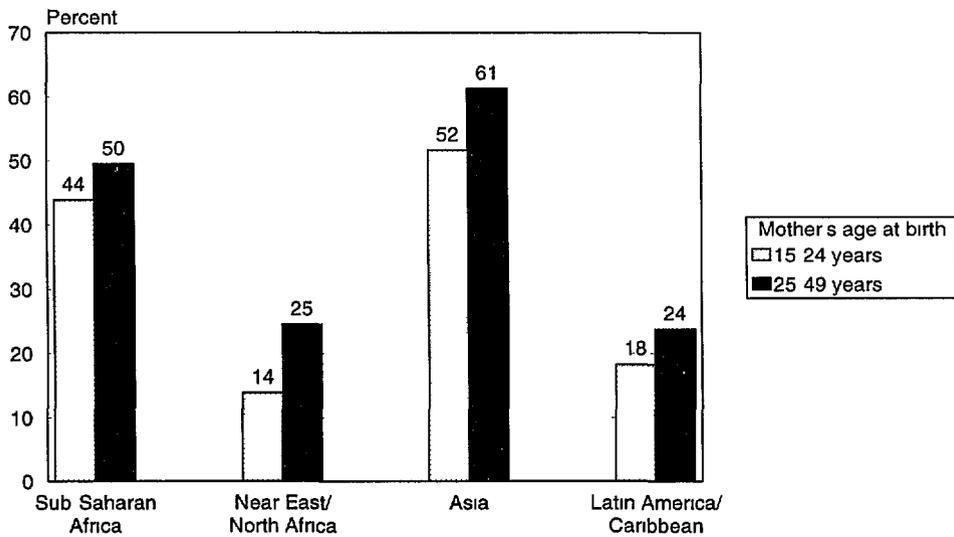
() = based on a small number of cases (25-49)

Figure 2 20 Percentage of children 12 to 15 months currently breastfed, by mother's age at birth of child



Source DHS Surveys 1990 1996

Figure 2 21 Percentage of children 20 to 23 months currently breastfed, by mother's age at birth of child



Source DHS Surveys 1990 1996

Appendix C contains additional tables of percentages of children currently breastfeeding by age according to other differentials, including mother's access to mass media, household assets, father's occupation, birth order, length of preceding birth interval, antenatal care provider, type of delivery facility, and delivery attendant

2.4 DURATION OF BREASTFEEDING

The median duration of breastfeeding in Demographic and Health Surveys is calculated from current breastfeeding status data. First, for each month of age, the percentage of children breastfeeding is derived by dividing the number of children breastfeeding by the total number of children born the same number of months ago. From this, an exact median is derived (usually by interpolating) by identifying the age at which 50 percent of the sample children are no longer breastfeeding. This method of calculating the median duration of breastfeeding is preferred over mothers' reporting of breastfeeding duration among fully weaned children because of inaccuracies in mothers' recall, which worsen with increasing length of breastfeeding (see Appendix D for discussion of reporting error associated with postpartum durations)

Table 2.14 shows durations of breastfeeding by percentiles of age in months by which a given percentage of children had stopped breastfeeding. The 50th percentile point represents the median duration. The symbol >36 in the table means that the given percentile could not be determined because that percent of children was not attained by the time the children reached the upper age limit of the survey or tabulation, usually three years of age. In sub-Saharan Africa the median duration of breastfeeding is, overall, 21 months. The age by which one-fourth of African children have stopped breastfeeding is about 15 months, and the age by which three-quarters have stopped breastfeeding is about 25 months. In some countries (i.e., Burkina Faso, Mali, Rwanda), the 90th percentile could not be determined because more than 10 percent of children were breastfed beyond the upper age limit of the survey sample. Among the Asian countries the average median duration of breastfeeding is 23 months. Bangladesh is noteworthy because a median duration could not be determined, meaning that more than half the study sample was still breastfeeding beyond three years of age. One-fourth of children in Asia stopped breastfeeding at about 15 months,

and three-quarters stopped by the age of 25 months. In several Asian countries, 75th and 90th percentiles could not be determined, reflecting the long durations of breastfeeding in those countries. In Latin America/Caribbean, the median duration of breastfeeding is about 19 months, with about an even spread of children on either side of this. Brazil and the Dominican Republic have the shortest median durations of all the Demographic and Health Surveys countries studied, about 8 months and 6 months, respectively. One-fourth of Latin America/Caribbean children are weaned by approximately 3 months, three-fourths by about 24 months. Among the Near East/North African countries, the median duration of breastfeeding is about 15 months.

Figure 2.22 shows the distribution of breastfeeding durations by region. In this figure the horizontal lines represent the median ages of stopping breastfeeding (i.e., the 50th percentile), the upper and lower ends of the rectangles the 75th and 25th percentiles, respectively, and the upper and lower "tails" of the distributions, the 90th and 10th percentiles, respectively. The longer durations common among Asian countries are evident, with the upper tail, in fact, possibly being longer than shown. (In the Asian region, the open circle at the upper tail indicates a median could not be determined within the age range of survey children, i.e., 0 to 35 months.)

Socioeconomic Differentials

Table 2.15 shows the median duration of breastfeeding overall and by urban-rural residence and mother's education. A summary by region of breastfeeding durations overall and by urban-rural residence is presented in Table 2.16. In sub-Saharan Africa, rural children are breastfed 3.2 months longer than their urban counterparts. In Asia, rural children are breastfed 3.1 months longer than urban children. (In sub-Saharan Africa and Asia, the closeness of rural medians to total medians reflects the fact that the majority of sampled children in most countries reside in rural areas.) In Near East/North Africa and Latin America/Caribbean, rural children are breastfed just over 2 months longer than their urban counterparts, on average, and urban medians are closer to the total medians, reflecting the larger proportion of urban children in the total samples.

Table 2 14 Age children stop breastfeeding, and mean duration of breastfeeding

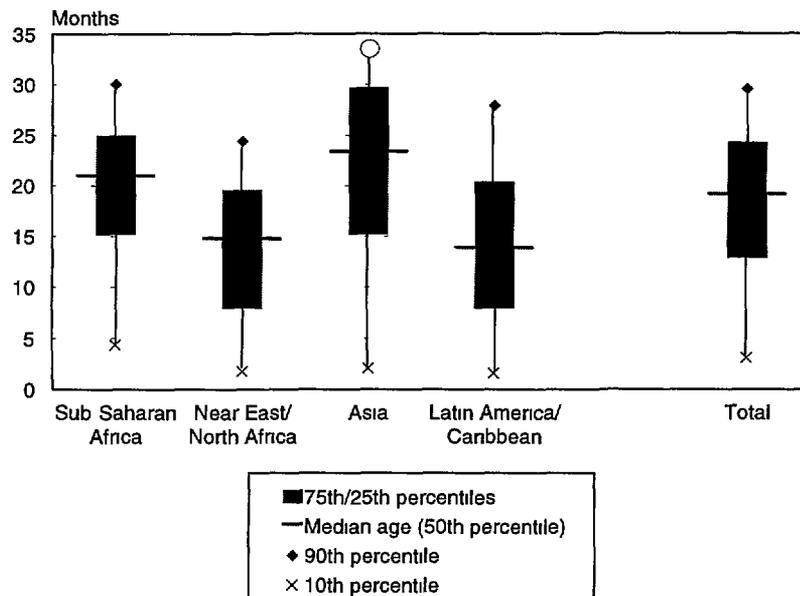
Age by which specific percentages of children have stopped breastfeeding, and life-table and prevalence-incidence mean durations of breastfeeding, Demographic and Health Surveys, 1990-1996

Region, country, and date	No months by which specific percentages of children have stopped breastfeeding					Life-table mean ¹	Prevalence-incidence mean ¹
	10%	25%	50% (median)	75%	90%		
Sub-Saharan Africa							
Burkina Faso 1993	12.5	21.5	25.4	31.3	>36	25.4	26.0
Cameroon 1991	1.7	14.1	18.2	23.3	26.2	18.9	20.4
Central African Republic 1994-95	1.6	17.1	21.4	24.4	31.9	21.5	22.0
Côte d'Ivoire 1994	12.6	16.1	20.7	23.8	31.2	20.8	22.0
Ghana 1993	2.3	16.7	21.6	25.3	33.8	22.2	23.4
Kenya 1993	7.2	16.9	21.6	25.5	30.0	21.5	21.2
Madagascar 1992	3.7	15.4	19.5	24.0	30.2	20.7	20.9
Malawi 1992	3.7	8.1	21.4	24.2	29.0	21.0	21.7
Mali 1995-96	1.8	12.3	22.5	25.6	>36	22.0	22.5
Namibia 1992	2.9	11.0	17.9	21.4	27.4	17.6	19.6
Niger 1992	2.4	12.2	21.7	24.0	29.4	21.2	21.0
Nigeria 1990	5.3	11.7	19.8	23.7	28.0	20.5	21.9
Rwanda 1992	1.9	21.3	28.0	34.5	>36	26.7	26.4
Senegal 1992-93	2.0	16.7	20.2	23.5	25.7	20.5	21.9
Tanzania 1991-92	3.6	17.0	21.7	24.9	28.0	21.4	21.5
Uganda 1995	4.2	15.4	19.3	23.8	27.9	19.7	20.4
Zambia 1992	1.8	13.7	18.5	22.6	26.1	18.5	19.4
Zimbabwe 1994	7.4	16.8	18.1	22.0	24.6	19.1	19.3
Near East/North Africa							
Egypt 1992	1.6	13.0	19.8	23.1	26.5	19.2	20.3
Jordan 1990-91	2.3	6.7	12.1	16.5	22.7	13.7	13.3
Morocco 1992	2.0	7.4	15.5	20.5	24.0	15.5	18.0
Turkey 1993	1.4	5.0	11.7	17.9	24.2	13.6	18.7
Asia							
Bangladesh 1993-94	1.3	23.1	>36	>36	>36	>36	>36
India 1992-93	1.9	17.5	24.1	>36	>36	25.1	26.4
Indonesia 1994	5.5	18.8	23.7	33.4	>36	24.8	24.6
Kazakhstan 1995	0.6	4.7	14.6	19.4	25.0	14.2	15.1
Nepal 1996	2.0	23.6	31.3	>36	>36	28.9	28.6
Pakistan 1990-91	1.8	11.6	18.5	25.6	>36	21.2	23.2
Philippines 1993	1.4	6.9	15.4	20.5	27.7	15.4	17.3
Latin America/Caribbean							
Bolivia 1993-94	2.0	11.3	17.5	23.2	28.8	18.1	19.8
Brazil 1996	1.4	2.6	7.8	17.4	31.0	12.4	13.3
Colombia 1995	1.5	5.3	10.3	18.8	29.5	14.2	16.2
Dominican Republic 1991	1.2	2.1	5.9	14.8	19.6	9.6	12.7
Guatemala 1995	2.0	12.1	20.2	25.8	32.5	20.5	22.1
Haiti 1994-95	1.6	13.6	17.7	21.6	25.7	17.8	19.0
Paraguay 1990	1.1	2.1	11.7	16.3	19.9	12.1	14.3
Peru 1996	1.9	14.6	20.2	24.8	>36	20.3	20.8

Note > 36 indicates the figure cannot be calculated because less than the indicated percentage was reached by 36 months the data cutoff age

¹ See Appendix D

Figure 2 22 Distribution of breastfeeding durations (in months), by region



Note Open circle above Asia indicates that within 36 months 90th percentile could not be calculated because less than 90 percent have stopped breastfeeding

Source DHS Surveys 1990 1996

Table 2 17 shows the median duration of breastfeeding by mother's education and region. In all regions, breastfeeding duration declines with increasing level of maternal education. However, regions differ with respect to difference between no education and primary education, and primary education compared with secondary or higher. In sub-Saharan Africa, mothers with no education breastfeed about 2 months longer overall than mothers with primary education, but primary-school-educated mothers breastfeed almost 4 months longer than those with the highest level of education. In the other regions, the differences between primary education and no education are larger than differences between primary and secondary education or higher. This pattern probably reflects the fact that fewer women in sub-Saharan Africa have secondary education or higher compared with the other regions, it also points to the large socioeconomic differences between the most highly educated African women and their less-educated counterparts. In Near East/North Africa, differences in duration by level of education are modest, about 2 months greater for uneducated women versus primary-educated women, and about 1 month greater for primary-educated women than secondary-educated women. In Asia, the difference between primary-educated women and those with no education is more than 4 months on average, and that between primary- and secondary-educated women is

about 2 5 months. In Latin America/Caribbean, the difference between primary-educated women and those with no education is almost 7 months on average, and that between primary- and secondary-educated women is about 3 5 months.

Biodemographic Differentials

Table 2 18 shows the median duration of breastfeeding by sex of child. Regionally, median breastfeeding durations for boys and girls are similar in countries in sub-Saharan Africa, the Near East/North Africa, and Asia (see summary in Table 2 19) (This assumes the median to be 36 months in the Asian countries where more than 50 percent continue to breastfeed longer than 36 months²). In Asia, median breastfeeding duration is about 0 4 months longer for boys. In Latin America/Caribbean, the average median duration is about half a month shorter for boys.

Table 2 18 also shows median durations according to the length of the preceding birth interval (months). In all regions, breastfeeding duration increases with the length

² If Bangladesh and Nepal are not considered, girls breastfeed 1 2 months longer than boys.

Table 2.15 Median duration of breastfeeding, by urban-rural residence and mother's education

Median duration of breastfeeding (months) by urban-rural residence and mother's education Demographic and Health Surveys 1990-1996

Region, country, and date	Total	Residence		Mother's education		
		Urban	Rural	No education	Primary	Secondary +
Sub Saharan Africa						
Burkina Faso 1993	25.4	22.6	26.4	25.9	22.8	(15.8)
Cameroon 1991	18.2	15.8	19.8	19.8	16.1	15.0
Central African Republic 1994-95	21.4	19.9	21.9	22.3	20.8	17.6
Côte d'Ivoire 1994	20.7	19.0	21.7	21.7	19.6	16.0
Ghana 1993	21.6	18.6	23.1	23.7	20.2	(15.9)
Kenya 1993	21.6	19.6	22.1	23.7	21.3	20.6
Madagascar 1992	19.5	16.4	19.7	22.6	19.6	17.6
Malawi 1992	21.4	u	u	22.4	20.5	*
Mali 1995-96	22.5	21.0	22.9	22.8	21.8	(18.2)
Namibia 1992	17.9	11.6	19.1	19.4	19.4	11.9
Niger 1992	21.7	18.2	22.7	22.3	20.7	(17.7)
Nigeria 1990	19.8	15.4	20.5	22.9	19.0	14.3
Rwanda 1992	28.0	22.3	28.0	29.1	27.8	(21.6)
Senegal 1992-93	20.2	18.5	21.1	20.7	(19.2)	(13.2)
Tanzania 1991-92	21.7	21.5	21.8	21.9	21.7	*
Uganda 1995	19.3	17.3	19.7	22.9	18.4	17.6
Zambia 1992	18.5	18.3	18.7	18.1	18.9	17.8
Zimbabwe 1994	18.1	17.5	18.4	19.7	18.3	17.7
Near East/North Africa						
Egypt 1992	19.8	19.0	20.2	20.0	20.9	18.4
Jordan 1990	12.1	11.9	12.5	12.4	13.5	11.5
Morocco 1992	15.5	9.8	16.8	16.6	8.6	(4.7)
Turkey 1993	11.7	11.6	11.5	12.1	11.5	7.9
Asia						
Bangladesh 1993-94	>36	26.7	>36	>36	26.4	25.6
India 1992-93	24.1	22.1	24.3	26.6	23.8	19.7
Indonesia 1994	23.7	23.0	23.8	29.1	23.9	21.8
Kazakhstan 1995	14.6	6.4	14.0	*	*	14.6
Nepal 1996	31.3	23.9	31.5	31.3	30.2	23.9
Pakistan 1990-91	18.5	16.5	22.1	21.9	16.6	12.3
Philippines 1993	15.4	13.5	16.3	(19.0)	16.6	13.7
Latin America/Caribbean						
Bolivia 1993-94	17.5	15.9	17.8	20.3	17.2	15.6
Brazil 1996	7.8	7.7	9.0	(2.4)	8.0	7.4
Colombia 1995	10.3	9.5	12.0	*	12.2	9.7
Dominican Republic 1991	5.9	5.5	8.2	(5.0)	7.4	5.0
Guatemala 1995	20.2	19.4	20.6	22.3	19.6	11.1
Haiti 1994-95	17.7	15.7	18.1	18.6	17.1	(10.5)
Paraguay 1990	11.7	8.9	13.5	*	12.5	8.5
Peru 1996	20.2	19.3	20.8	22.8	20.7	18.9

Note > 36 indicates the median cannot be calculated because less than 50 percent have stopped breastfeeding

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

u = unknown (not available)

Table 2 16 Regional summary of median duration of breastfeeding, by urban rural residence

Median duration of breastfeeding (months) by urban rural residence and region Demographic and Health Surveys 1990 1996

Region	Total	Residence	
		Urban	Rural
Sub Saharan Africa	21 0	18 4	21 6
Near East/North Africa	14 8	13 1	15 3
Asia	21 3	18 9	22 0
Latin America/Caribbean	13 9	12 7	15 0

Table 2 17 Regional summary of median duration of breastfeeding, by mother's level of education

Median duration of breastfeeding (months) by mother s level of education and region Demographic and Health Surveys 1990 1996

Region	Mother s education			Difference	
	No education	Primary	Secondary+	N-P	P S
Sub-Saharan Africa	22 4	20 5	16 7	1 9	3 8
Near East/North Africa	15 3	13 6	12 6	1 7	1 0
Asia	27 2	22 9	20 5	4 3	2 5
Latin America/Caribbean	21 0	14 3	10 9	6 7	3 5

of the birth interval through 47 months, as shown in summary Table 2 20 In sub-Saharan Africa, there is little difference in duration between firstborn children and those born after an interval of less than 2 years, but children born after an interval of two or more years are breastfed nearly 2 months longer than other children In Near East/North Africa, firstborn children are breastfed for 4 months less than children born within two years, and 7 months less than those born after an interval of two to four years In Asian countries, firstborn children have the shortest durations of breastfeeding, and among non-firstborn children there is a steady increase in breastfeeding duration with increasing birth interval In Latin America/Caribbean, firstborn children are breastfed about 2 months less than those born within two years, and 3 months less than those born after intervals of two to four years Mothers of firstborn children are younger than other mothers and may lack the experience needed to continue breastfeeding for longer periods, or they may have been pregnant at the time of the survey and stopped breastfeeding because of that, or they may be more educated, or they may be physiologically less capable of breastfeeding for longer periods than multiparous women

Appendix E contains additional tables of median breastfeeding durations by mother's work status and father's occupation, household asset level, child's birth order, birth size and prematurity, type of antenatal care the mother received, place of delivery, and delivery attendant

2 5 BREASTFEEDING FREQUENCY

One of the factors indicative of the likely success and adequacy of breastfeeding, as well as the effectiveness of lactational amenorrhea as birth control in early life, is the frequency of breastfeeding The international recommendation is breastfeeding on demand, or as often as the child expresses need In the tables and graphs that follow, frequency of breastfeeding is examined in the number of daytime breastfeeds, the number of nighttime breastfeeds, and the number of total feeds in 24 hours, stratified according to child age

Table 2 21 shows the frequency of daytime breastfeeds for children by age The highest frequency of feeds at ages up to three years occurs in sub-Saharan Africa,

Table 2 18 Median duration of breastfeeding, by sex and length of preceding birth interval

Median duration of breastfeeding (months) by sex and length of preceding birth interval Demographic and Health Surveys 1990 1996

Region, country, and date	Sex		Preceding birth interval (months)			
	Male	Female	1st	<24	24-47	48+
Sub Saharan Africa						
Burkina Faso 1993	25.2	25.7	22.6	25.5	26.6	27.2
Cameroon 1991	18.9	16.3	17.5	15.7	18.5	19.6
Central African Republic 1994-95	21.2	21.5	19.3	21.1	21.9	21.4
Côte d'Ivoire 1994	20.2	21.1	19.3	20.8	21.8	19.8
Ghana 1993	21.5	22.4	19.5	(17.4)	22.4	23.3
Kenya 1993	22.6	20.5	19.7	20.8	21.0	24.7
Madagascar 1992	19.6	19.5	17.9	18.8	20.1	20.3
Malawi 1992	20.9	21.6	20.5	(20.9)	21.6	22.7
Mali 1995-96	21.8	22.7	18.8	21.6	23.0	21.9
Namibia 1992	15.9	17.7	18.9	14.9	18.6	12.2
Niger 1992	22.0	21.4	20.9	20.0	22.7	23.0
Nigeria 1990	21.0	19.5	19.3	18.1	19.5	21.3
Rwanda 1992	26.5	28.6	23.7	22.3	29.6	28.2
Senegal 1992-93	21.2	19.5	19.5	18.0	21.4	19.3
Tanzania 1991-92	21.7	21.6	21.0	20.9	22.0	21.9
Uganda 1995	19.2	19.4	17.5	18.8	20.6	20.3
Zambia 1992	18.9	18.2	17.4	18.5	18.7	20.3
Zimbabwe 1994	18.0	18.1	17.6	(15.8)	19.1	17.9
Near East/North Africa						
Egypt 1992	19.8	19.8	19.1	17.9	20.0	21.4
Jordan 1990	12.4	11.9	9.7	12.3	12.1	14.7
Morocco 1992	15.0	16.4	10.5	14.6	17.5	16.1
Turkey 1993	12.0	11.5	10.6	(11.3)	14.3	15.0
Asia						
Bangladesh 1993-94	>36	>36	26.4	29.9	>36	>36
India 1992-93	24.3	23.9	23.2	24.2	24.2	30.6
Indonesia 1994	23.7	23.6	23.3	23.1	23.3	24.3
Kazakhstan 1995	11.7	14.7	(8.8)	(14.9)	(15.2)	*
Nepal 1996	>36	31.0	27.4	26.2	33.7	>36
Pakistan 1990-91	18.1	21.1	16.9	17.6	22.9	23.1
Philippines 1993	15.1	15.6	12.1	14.6	17.1	15.0
Latin America/Caribbean						
Bolivia 1993-94	16.1	19.0	15.8	15.8	21.0	17.9
Brazil 1996	7.6	8.0	7.1	10.7	7.4	9.3
Colombia 1995	10.3	10.4	9.3	12.7	11.8	10.2
Dominican Republic 1991	5.9	6.4	5.1	5.6	7.7	6.0
Guatemala 1995	20.3	20.2	17.6	19.8	23.0	21.0
Haiti 1994-95	17.6	17.7	17.0	15.7	17.8	(18.6)
Paraguay 1990	11.5	11.5	7.9	11.7	13.3	12.5
Peru 1996	20.2	20.1	17.3	20.8	21.0	20.2

Note > 36 indicates the median cannot be calculated because less than 50 percent have stopped breastfeeding

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table 2 19 Regional summary of median duration of breastfeeding, by sex

Median duration of breastfeeding (months) by sex and region Demographic and Health Surveys 1990 1996

Region	Sex of child		Difference
	Male	Female	F M
Sub-Saharan Africa	20.9	20.9	0.0
Near East/North Africa	14.8	14.9	0.1
Asia	23.6	23.7	0.1
Latin America/Caribbean	13.7	14.2	0.5

Table 2 20 Regional summary of median duration of breastfeeding, by preceding birth interval

Median duration of breastfeeding (months) by length of the preceding birth interval (months) and region Demographic and Health Survey 1990 1996

Region	Preceding birth interval (months)			
	First birth	< 24	24 27	48+
Sub Saharan Africa	19.5	19.7	21.6	21.4
Near East/North Africa	10.5	14.6	17.5	16.1
Asia	22.5	23.6	26.9	28.4
Latin America/Caribbean	12.1	14.1	15.4	13.9

followed by Asia, then Near East/North Africa and Latin America/Caribbean. Latin America/Caribbean countries, after about 20 months, have the lowest number of feeds. In all regions, the number of feeds declines, in general, with age, although the rates of decline vary by region. Nevertheless, while the number of feeds declines with age, within regions the variation in number of feeds within age groups increases with age. At 0 to 5 months children are fed almost 7 times during the day in sub-Saharan Africa, about 6 times in Asia, and about 5 times in Latin America/Caribbean and Near East/North Africa, varying only about 1 to 2.5 feeds within regions. Between 0 to 5 months and 6 to 11 months there is no change in frequency of feeds in sub-Saharan Africa and Near East/North Africa countries, but in Latin America/Caribbean and Asia there is a slight decline. In sub-Saharan Africa, Asia, and Latin America/Caribbean, the decline in number of feeds with age is quite slow through one and a half years of age, it is followed in sub-Saharan Africa by an abrupt decline. In sub-Saharan Africa, between ages two and three years of age, the number of feeds varies from a low of 3.5 per day in Kenya to a high of 8.3 per day in Côte d'Ivoire. In Near East/North Africa, the decline in number of feeds through

about 18 months is as slow as in the other regions, but after that, frequency of feeds declines more rapidly. The long duration of breastfeeding is again in evidence in Asian countries where, even at ages beyond 3 years, children are still fed an average of 4 times during the day. Table 2 22 shows the average number of daytime feeds by age and region.

Table 2 23 shows the number of breastfeeds during the night by age. In contrast to the daytime feeds, the number of nighttime feeds is more constant across the regions through about 15 months, at between 4 and 5 feeds. Near East/North Africa countries have the highest number of nighttime feeds through the first year and a half of life, close to 5 feeds, followed by sub-Saharan Africa, then Asia, then Latin America/Caribbean. In sub-Saharan Africa, the number of nighttime feeds stays about constant through two years, then declines by about one feed in the third year. In Asian countries, the number of nighttime feeds declines slowly with increasing age. In Latin America/Caribbean, the decline in number of nighttime feeds occurs earlier than in the other regions, declining abruptly after about 15 months. In the Near East/North Africa, the number of

Table 2.21 Number of daytime breastfeeds, by child's age

Number of daytime breastfeeds by child's age in months Demographic and Health Surveys 1990-1996

Region country and date	Child's age (months)						
	0-5	6-11	12-15	16-19	20-23	24-35	36+
Sub-Saharan Africa							
Burkina Faso 1993	7.4	8.3	7.4	7.5	8.1	6.5	(6.1)
Cameroon 1991	6.4	6.5	5.9	5.9	6.7	(6.5)	*
Central African Republic 1994-95	8.1	8.6	8.5	8.2	8.0	8.3	*
Côte d'Ivoire 1994	7.7	7.9	7.7	7.0	6.9	6.4	*
Ghana 1993	7.2	7.4	7.1	6.9	6.6	6.5	*
Kenya 1993	6.2	5.3	4.9	4.2	3.8	3.5	(2.7)
Madagascar 1992	6.9	6.5	5.6	4.9	4.7	3.6	(2.8)
Malawi 1992	5.9	5.8	5.5	5.1	5.1	4.5	*
Mali 1995	7.2	7.2	6.9	6.6	6.0	6.4	*
Namibia 1992	6.2	6.3	5.2	5.8	4.6	4.7	*
Niger 1992	7.5	7.3	7.0	7.0	6.2	6.3	*
Nigeria 1990	6.8	7.2	6.0	6.2	6.1	5.7	*
Rwanda 1992	5.9	6.2	5.5	4.9	4.3	3.9	2.5
Senegal 1992-93	6.9	7.4	7.1	6.4	6.6	6.3	*
Tanzania 1991-92	6.5	5.7	5.6	4.9	4.9	4.6	*
Uganda 1995	6.1	5.7	5.6	5.3	4.8	5.1	*
Zambia 1992	6.9	6.6	6.5	6.0	5.5	6.6	*
Zimbabwe 1994	6.2	5.8	4.8	4.5	3.8	(4.7)	*
Near East/North Africa							
Egypt 1992	6.1	6.4	6.2	6.1	5.9	6.0	*
Jordan 1990	3.3	3.7	3.7	3.9	3.3	3.4	*
Morocco 1992	5.6	5.9	5.6	5.5	4.6	(4.6)	*
Turkey 1993	6.7	6.5	5.3	5.4	(5.7)	(5.0)	*
Asia							
Bangladesh 1993-94	8.8	7.9	7.4	7.2	6.5	5.5	*
India 1992-93	5.6	5.2	4.9	4.8	4.7	4.3	4.0
Indonesia 1994	6.6	6.0	6.0	5.9	5.3	4.4	2.9
Kazakhstan 1995	5.0	4.5	4.1	*	*	*	*
Nepal 1996	6.3	5.8	5.4	5.2	4.8	4.4	*
Pakistan 1990-91	5.1	5.0	4.9	4.7	4.3	4.2	4.3
Philippines 1993	5.7	5.5	5.0	4.5	3.9	3.3	(2.9)
Latin America/Caribbean							
Bolivia 1993-1994	5.3	5.0	4.6	4.2	3.8	3.6	*
Brazil 1996	6.5	5.8	5.4	4.8	5.0	3.6	2.9
Colombia 1995	4.7	4.0	3.1	3.2	3.0	2.3	(1.8)
Dominican Republic 1991	5.0	5.1	5.4	(4.3)	(4.1)	*	*
Guatemala 1995	5.4	5.0	4.7	4.3	3.9	3.3	2.4
Haiti 1994-95	5.4	5.0	5.1	4.8	4.5	(5.3)	*
Paraguay 1990	4.2	4.2	3.6	(2.9)	(3.4)	(3.0)	*
Peru 1996	6.1	5.5	4.8	4.6	4.2	3.3	1.6

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table 2.22 Regional summary of average number of daytime breastfeeds, by child's age

Average number of daytime breastfeeds by child's age and region Demographic and Health Surveys 1990-1996

Region	Child's age (months)					
	0-5	6-11	12-15	16-19	20-23	24-35
Sub-Saharan Africa	6.8	6.8	6.3	6.0	5.7	4.9
Near East/North Africa	5.4	5.6	5.2	5.2	3.5	2.4
Asia	6.2	5.7	5.4	5.4	4.9	4.4
Latin America/Caribbean	5.3	5.0	4.6	4.3	4.1	3.2

nighttime feeds stays about the same through 16 to 19 months, then declines swiftly. At two years of age, the number of nighttime feeds ranges from about 3.3 in Latin American/Caribbean countries to about 4.2 in sub-Saharan Africa, this is in contrast to a nearly uniform 4.5 feeds per night at 0 to 5 months across the regions. Table 2.24 shows the average number of nighttime feeds by age and region.

Table 2.25 shows the total number of breastfeeds in preceding 24 hours according to age and region. Overall, the highest number of feeds per day occurs in sub-Saharan countries, followed by Near East/North African, then Asian, then Latin American/Caribbean countries. Table 2.26 shows the average number of feeds per day by age and region.

Appendix F contains tables of the number of nighttime breastfeeds by selected socioeconomic characteristics.

Summary

This chapter has reviewed the data about breastfeeding including the distribution of children ever breastfed, the timing of initial breastfeeding, the distribution of current breastfeeding status by age of child, and the duration of breastfeeding.

In general, almost all children in the countries surveyed were breastfed, at least for some period of time. On average, only about a third of infants are put to the breast immediately after birth, in all regions except Asia, where breastfeeding initiation is delayed for over a third of infants until later than the second day after birth. Breastfeeding declines gradually with increasing age in all regions with the declines being slower in sub-Saharan Africa and Asia than in Latin America/Caribbean and Near East/North Africa. The larger age-related declines in sub-Saharan Africa and Asia are reflected in higher first- and second-year breastfeeding continuation rates in these regions. Median durations of breastfeeding are thus higher in sub-Saharan Africa and Asia, (being about 21 months on average in each of these regions) than in Near East/North Africa and Latin America/Caribbean (15 months and 14 months, respectively). In several Asian countries, breastfeeding is prolonged well beyond two years.

Delaying the initiation of breastfeeding increases the likelihood that the child will not receive colostrum and instead detrimental, prelacteal fluids. The data from the surveys analyzed imply that in many countries breastfeeding promotion programs need to place special emphasis on immediate breastfeeding initiation after birth and continuation of breastfeeding through the second year of life.

Table 2.23 Number of nighttime breastfeeds, by child's age

Number of nighttime breastfeeds by child's age in months Demographic and Health Surveys 1990-1996

Region country and date	Child's age (months)						
	0-5	6-11	12-15	16-19	20-23	24-35	36+
Sub Saharan Africa							
Burkina Faso 1993	4.1	4.7	4.4	4.8	4.6	4.4	(4.2)
Cameroon 1991	4.1	4.0	4.3	4.6	4.7	(4.9)	*
Central African Republic 1994-95	4.7	5.5	5.1	5.7	5.4	5.0	*
Cote d'Ivoire 1994	4.4	4.5	4.7	4.4	4.3	4.1	*
Ghana 1993	4.6	4.6	4.7	4.6	4.6	4.1	*
Kenya 1993	4.6	4.5	4.6	3.8	3.8	3.2	(4.0)
Madagascar 1992	3.8	3.8	4.0	3.7	3.4	3.0	(2.5)
Malawi 1992	4.2	4.2	4.0	3.9	3.5	3.5	*
Mali 1995	4.1	4.1	4.1	4.3	4.1	4.4	*
Namibia 1992	5.5	5.8	5.1	6.0	5.1	5.4	*
Niger 1992	3.9	3.7	3.7	3.7	3.4	3.2	*
Nigeria 1990	4.7	5.1	4.4	4.4	5.7	4.7	*
Rwanda 1992	3.5	4.0	3.6	3.7	3.4	3.1	2.6
Senegal 1992-93	4.0	4.2	4.0	4.5	3.9	4.1	*
Tanzania 1991-92	4.6	4.5	4.4	4.1	4.4	4.2	*
Uganda 1995	4.2	4.3	4.0	3.8	3.8	3.7	*
Zambia 1992	4.5	4.5	4.7	4.5	4.1	5.0	*
Zimbabwe 1994	5.2	5.6	5.0	4.5	4.1	(6.0)	*
Near East/North Africa							
Egypt 1992	5.0	5.1	5.2	5.2	4.9	4.8	*
Jordan 1990	5.8	5.9	5.8	5.8	5.3	4.8	*
Morocco 1992	3.9	4.2	4.1	3.8	4.0	(3.1)	*
Turkey 1993	4.2	4.2	3.6	3.8	(4.1)	(3.1)	*
Asia							
Bangladesh 1993-94	6.0	5.3	5.0	5.0	4.6	4.1	*
India 1992-93	4.8	4.6	4.4	4.3	4.1	3.9	3.6
Indonesia 1994	4.9	4.4	4.4	4.4	3.9	3.3	2.5
Kazakhstan 1995	2.6	2.4	2.2	*	*	*	*
Nepal 1996	4.7	4.4	4.3	4.2	3.9	3.6	*
Pakistan 1990-91	4.3	4.4	4.3	4.0	3.8	4.0	4.1
Philippines 1993	4.4	4.3	4.1	4.0	3.4	3.2	(2.3)
Latin America/Caribbean							
Bolivia 1993-94	3.7	3.4	3.6	3.2	3.0	3.0	*
Brazil 1996	5.0	4.5	4.6	4.3	4.0	3.6	3.6
Colombia 1995	3.1	3.1	2.5	2.9	2.5	2.0	(4.4)
Dominican Republic 1991	4.6	4.3	4.4	(3.8)	(3.7)	*	*
Guatemala 1995	4.7	4.5	4.3	3.9	3.5	3.4	2.4
Haiti 1994	4.7	4.6	4.7	4.4	4.2	(4.5)	*
Paraguay 1990	3.8	3.7	3.6	(2.8)	(3.9)	(3.0)	*
Peru 1996	5.4	5.0	4.8	4.4	4.0	3.6	2.3

* = based on too few cases (25-49)

() = based on a small number of cases (25-49)

Table 2.24 Regional summary of average number of nighttime breastfeeds, by child's age

Average number of nighttime breastfeeds by child's age in months and region Demographic and Health Surveys 1990-1996

Region	Child's age (months)					
	0-5	6-11	12-15	16-19	20-23	24-35
Sub-Saharan Africa	4.4	4.5	4.4	4.4	4.2	4.2
Near East/North Africa	4.7	4.9	4.7	4.7	4.6	4.0
Asia	4.5	4.3	4.1	4.3	4.0	3.7
Latin America/Caribbean	4.4	4.1	4.1	3.7	3.6	3.3

Table 2.25 Number of breastfeeds in the preceding 24 hours, by child's age

Number of breastfeeds in the preceding 24 hours by child's age in months Demographic and Health Surveys 1990-1996

Region, country and date	Child's age (months)						
	0-5	6-11	12-15	16-19	20-23	24-35	36+
Sub-Saharan Africa							
Burkina Faso 1993	11.5	12.9	11.8	12.2	12.7	10.8	(10.2)
Cameroon 1991	10.4	10.3	10.2	10.6	11.4	(11.4)	*
Central African Republic 1994-95	12.7	14.1	13.6	13.9	13.4	13.3	*
Côte d'Ivoire 1994	12.1	12.3	12.4	11.4	11.1	10.5	*
Ghana 1993	11.7	12.0	11.8	11.5	11.1	10.6	*
Kenya 1993	10.8	9.8	9.5	8.1	7.6	6.6	(6.7)
Madagascar 1992	10.7	10.3	9.5	8.6	8.0	6.5	(5.3)
Malawi 1992	10.2	10.0	9.5	9.1	8.6	8.0	*
Mali 1995	11.2	11.3	11.0	10.8	10.1	10.8	*
Namibia 1992	11.5	12.1	10.3	11.7	9.3	10.0	*
Niger 1992	11.4	11.0	10.7	10.6	9.5	9.5	*
Nigeria 1990	11.4	12.3	10.4	10.5	11.8	10.3	*
Rwanda 1992	9.4	10.2	9.1	8.6	7.7	7.0	5.0
Senegal 1992-93	11.0	11.6	11.1	10.8	10.5	10.4	*
Tanzania 1991-92	11.1	10.2	9.9	9.0	9.3	8.8	*
Uganda 1995	10.2	9.9	9.6	9.1	8.5	8.8	*
Zambia 1992	11.4	11.1	11.1	10.4	9.6	11.6	*
Zimbabwe 1994	11.5	11.4	9.8	9.1	7.9	(10.7)	*
Near East/North Africa							
Egypt 1992	11.1	11.5	11.5	11.3	10.8	10.8	*
Jordan 1990	9.2	9.6	9.5	9.7	8.7	8.3	*
Morocco 1992	9.4	10.1	9.7	9.4	8.5	(7.7)	*
Turkey 1993	10.9	10.7	8.9	9.2	(9.8)	(8.1)	*
Asia							
Bangladesh 1993-94	14.7	13.2	12.4	12.2	11.0	9.6	*
India 1992-93	10.3	9.7	9.2	9.0	8.7	8.1	7.5
Indonesia 1994	11.4	10.4	10.4	10.3	9.2	7.7	5.4
Kazakhstan 1995	7.6	6.9	6.2	*	*	*	*
Nepal 1996	11.0	10.2	9.7	9.4	8.7	8.0	*
Pakistan 1990-91	9.4	9.3	9.1	8.7	8.1	8.2	8.4
Philippines 1993	10.1	9.8	9.1	8.6	7.3	6.5	(5.2)
Latin America/Caribbean							
Bolivia 1993-94	9.0	8.4	8.1	7.4	6.8	6.6	*
Brazil 1996	11.4	10.3	10.0	9.2	8.9	7.3	6.5
Colombia 1995	7.8	7.1	5.5	6.0	5.6	4.3	(6.3)
Dominican Republic 1991	9.6	9.4	9.8	(8.1)	(7.8)	*	*
Guatemala 1995	10.1	9.5	9.1	8.2	7.4	6.6	4.7
Haiti 1994	10.2	9.6	9.8	9.2	8.7	(9.8)	*
Paraguay 1990	7.9	7.9	7.1	(5.7)	(7.3)	(6.0)	*
Peru 1996	11.5	10.5	9.6	8.9	8.2	7.0	3.9

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table 2.26 Regional summary of average number of breastfeeds in 24 hours, by child's age

Average number of breastfeeds in the preceding 24 hours by child's age in months and region Demographic and Health Surveys 1990-1996

Region	Child's age (months)					
	0-5	6-11	12-15	16-19	20-23	24-35
Sub-Saharan Africa	11.1	11.3	10.6	10.3	9.9	9.6
Near East/North Africa	10.2	10.5	9.9	9.9	9.3	9.6
Asia	10.6	10.0	9.4	9.7	8.9	8.1
Latin America/Caribbean	9.7	8.6	9.0	8.5	8.0	6.8

3 Feeding Patterns

In developing countries, efforts to promote sound infant and young child nutrition are based on the World Health Assembly's recommendation that infants should be breastfed exclusively for the first 6 months of life and fed appropriate complementary foods from about the age of 6 months, with continued breastfeeding and frequent feeding with safe and adequate amounts of local foods. Breastfeeding with complementary foods should be continued from 6 months to two years (WHA, 1994). The World Health Organization defines "complementary foods" as any foods—whether manufactured or locally prepared—that are suitable as a complement to breast milk when it becomes insufficient to meet the nutritional needs of the infant. In other words, complementary foods are those that are required when breast milk alone no longer sustains the normal infant's nutrition requirements. Complementary foods are enriched and softened and, in most of the poorest countries, come from the local family diet.

In this chapter, infant feeding patterns are examined in the context of the WHO feeding recommendations. Current feeding practices are reported by age, median age at introduction of complementary foods, and type of foods eaten by children.

3.1 CURRENT STATUS FEEDING CATEGORIES

For the purposes of this report, children were classified into one of several feeding categories based on current feeding practices as reported by their mothers, according to age groupings that correspond to World Health Organization (WHO) infant feeding indicators (see Appendix A for complete WHO definitions of infant feeding categories). The groupings are shown in Tables 3.1 through 3.4, where children are classified according to whether they are exclusively breastfed (breast milk only, no other liquids), given breast milk plus plain water, fully breastfed (either exclusively breastfed or given breast milk plus plain water only⁴), predominantly breastfed (given breast milk as predominant source of nourishment, plus other non-milk liquids), predominantly or fully breastfed, given milk-based liquids, given complementary foods (breast milk and solid

or semisolid foods), not breastfed, or (for both breastfed and non-breastfed children) given a bottle. Tables 3.1 through 3.4 show the percentage of children less than 4 months of age, 6 to 9 months, 12 to 15 months, and 20 to 23 months, respectively, in each of these feeding categories.

Rates of exclusive breastfeeding among children less than 4 months of age are shown in Figure 3.1. The range of exclusive breastfeeding is greatest in sub-Saharan Africa, from 1 percent in Niger to 90 percent in Rwanda. The average rate for the sub-Saharan region is 20 percent. In Asia, the range is also wide, from 12 percent in Kazakhstan to 82 percent in Nepal, with an average rate for the region of 44 percent. In Near East/North Africa, exclusive breastfeeding ranges from 14 percent in Turkey to 63 percent in Morocco, with the regional average similar to that of Asia at 41 percent. In Latin America/Caribbean, Haiti has the lowest rate of exclusive breastfeeding, at 3 percent, and Peru has the highest, at 61 percent. The average for the region is 30 percent.

Exclusive breastfeeding rates among the aggregate of children 0 to 4 months of age indicate that the practice is far from ideal, yet they actually mask the true picture of exclusive breastfeeding relative to the international recommendation. The true picture is that represented by the rates at individual months up to age 6 months (Appendix G). Exclusive breastfeeding is widely practiced in many countries in the first month of life, but declines with each additional month. By the time infants are 5 months of age, exclusive breastfeeding is prevalent in only a few countries, in the single digits in some countries, and virtually nonexistent in most countries.

Because exclusive breastfeeding among infants is rare in most countries, superceded usually by predominant breastfeeding, rates of predominant breastfeeding are presented in Figure 3.2. In all countries, more than half of infants under 4 months of age are predominantly or fully breastfed, except in the Dominican Republic, Colombia, and Haiti. Sub-Saharan Africa has the highest rates of predominant plus full breastfeeding.

Table 3.5 presents a summary of feeding practices among children under 4 months of age, by region.

⁴ Full breastfeeding is not included in the WHO list of infant feeding categories. Predominantly breastfed does not include full breastfeeding.

Table 3 1 Feeding practices for last born children less than 4 months of age

Percentage of last-born children less than 4 months of age in specific categories Demographic and Health Surveys 1990 1996

Region country and date	Breastfeeding							Not breastfeeding			
	Exclusive breast-feeding ¹	Breast milk and plain water	Fully breast fed ²	Predom inantly breastfed ³	Predom inantly or fully breastfed ⁴	Received milk ⁵	Received comple mentary foods ⁶	Used bottle	Total	Used bottle	Number of children
Sub Saharan Africa											
Burkina Faso 1993	3 1	29 8	32 9	60 3	93 3	2 7	2 9	1 4	1 2	0 2	436
Cameroon 1991	7 3	44 2	51 5	10 4	61 9	9 3	28 5	17 6	0 2	0 2	219
Central African Republic 1994 95	4 4	54 4	58 8	8 9	67 7	0 3	31 7	2 3	0 3	0 0	309
Côte d'Ivoire 1994	3 4	67 3	70 7	13 2	83 9	3 3	11 5	4 1	1 2	0 4	423
Ghana 1993	8 3	50 9	59 1	31 7	90 9	6 5	2 6	23 9	0 0	0 0	230
Kenya 1993	17 0	11 1	28 2	22 5	50 6	18 9	28 4	15 8	2 0	0 6	316
Madagascar 1992	48 4	8 1	56 6	29 9	86 5	4 8	7 0	2 4	1 7	1 3	352
Malawi 1992	3 3	40 0	43 3	11 8	55 1	2 3	42 1	3 8	0 4	0 0	327
Mali 1995	12 2	66 5	78 7	13 5	92 1	5 7	2 0	2 9	0 1	0 0	661
Namibia 1992	21 6	35 3	56 9	16 1	72 9	19 3	4 8	29 4	2 9	1 7	255
Niger 1992	1 3	39 2	40 5	26 1	66 6	15 7	15 7	2 0	2 0	0 1	524
Nigeria 1990	1 4	49 9	51 3	10 8	62 0	28 6	7 7	33 5	1 7	0 1	524
Rwanda 1992	90 2	1 9	92 2	1 4	93 5	2 3	3 2	0 7	1 0	0 0	356
Senegal 1992 93	6 5	68 8	75 3	0 2	75 6	15 0	8 7	6 2	0 7	0 0	401
Tanzania 1991 92	32 5	32 0	64 4	14 9	79 4	14 6	5 3	3 9	0 8	0 2	500
Uganda 1995	70 4	4 1	74 5	4 0	78 5	16 6	4 3	5 3	0 6	0 3	411
Zambia 1992	13 3	52 3	65 7	6 1	71 8	4 4	23 0	3 2	0 8	0 0	423
Zimbabwe 1994	16 3	24 1	40 4	19 1	59 5	3 5	36 2	5 1	0 9	0 7	258
Near East/North Africa											
Egypt 1992	54 0	1 3	55 4	23 9	79 2	15 3	2 3	17 7	3 1	2 2	497
Jordan 1990	32 0	6 9	38 9	31 5	70 4	16 6	6 6	24 3	6 4	5 5	469
Morocco 1992	62 9	6 1	69 0	8 8	77 9	17 0	1 0	19 4	4 1	3 7	294
Turkey 1993	13 9	23 6	37 4	29 3	66 7	13 4	13 4	23 4	6 5	6 0	232
Asia											
Bangladesh 1993 94	53 5	8 0	61 5	11 2	72 7	23 9	1 9	0 0	1 5	0 0	411
India 1992 93	51 2	22 1	73 2	7 8	81 0	15 6	1 4	8 3	1 9	0 9	3952
Indonesia 1994	47 6	1 4	49 0	11 0	60 0	6 6	30 9	8 5	2 5	2 1	1020
Kazakhstan 1995	12 3	24 3	36 6	22 0	58 6	24 4	5 2	57 2	11 8	11 8	74
Nepal 1996	82 0	2 0	84 0	0 6	84 6	8 5	6 4	2 0	0 5	0 3	428
Pakistan 1990 91	25 1	10 0	35 1	31 6	66 8	26 5	3 1	23 7	3 6	2 5	502
Philippines 1993	33 1	10 5	43 7	10 9	54 6	26 5	1 3	26 7	17 6	16 3	484
Latin America/Caribbean											
Bolivia 1993 94	54 0	3 5	57 4	9 6	67 0	25 6	3 6	31 5	3 8	3 2	336
Brazil 1996	40 8	3 9	44 7	11 8	56 5	22 5	7 1	38 8	13 9	12 1	267
Colombia 1995	15 7	4 9	20 7	10 6	31 3	48 9	15 4	67 6	4 4	4 4	265
Dominican Republic 1991	9 6	13 2	22 8	17 2	39 9	39 2	2 2	64 7	18 7	16 1	226
Guatemala 1995	50 7	7 1	57 8	22 3	80 1	15 1	3 1	24 9	1 6	1 5	604
Haiti 1994	3 3	8 7	12 0	10 4	22 4	8 5	66 0	33 8	3 1	2 6	221
Paraguay 1990	7 0	19 0	26 0	26 8	52 8	20 0	13 5	43 6	13 7	12 5	260
Peru 1996	61 4	1 2	62 6	12 2	74 8	21 1	3 0	27 7	1 0	0 9	860

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

³ Breast milk predominantly with other non milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

Table 3 2 Feeding practices for last born children 6 9 months of age

Percentage of last born children 6 9 months of age in specific feeding categories Demographic and Health Surveys 1990 1996

Region country and date	Breastfeeding							Not breastfeeding			
	Exclusive breast-feeding ¹	Breast milk and plain water	Fully breast fed ²	Predom inantly breastfed ³	Predom inantly or fully breastfed ⁴	Received milk ⁵	Received comple-mentary foods ⁶	Used bottle	Total	Used bottle	Number of children
Sub-Saharan Africa											
Burkina Faso 1993	0 9	22 9	23 8	31 2	55 0	0 7	43 9	0 4	1 4	0 0	383
Cameroon 1991	1 4	12 7	14 1	1 1	15 1	0 9	77 1	6 9	8 5	4 1	254
Central African Republic 1994-95	0 0	5 1	5 1	0 8	5 9	0 3	93 1	0 7	0 0	0 0	291
Côte d'Ivoire 1994	0 6	25 7	26 4	5 6	32 0	1 3	66 2	0 6	0 8	0 5	425
Ghana 1993	2 8	18 1	20 9	37 8	58 6	5 2	35 7	0 4	18 5	0 0	249
Kenya 1993	0 9	1 7	2 6	0 9	3 4	5 9	90 1	0 6	11 2	0 0	404
Madagascar 1992	7 5	2 0	9 5	7 9	17 4	1 2	80 0	1 4	2 4	0 6	374
Malawi 1992	0 9	4 3	5 2	5 9	11 2	0 4	87 2	1 2	4 9	0 1	325
Mali 1995	3 1	46 3	49 4	9 2	58 6	8 1	32 9	0 4	2 4	0 0	660
Namibia 1992	0 9	11 4	12 3	6 0	18 2	3 1	64 7	14 0	28 9	8 3	265
Niger 1992	0 3	17 6	17 9	5 8	23 7	2 0	73 2	1 1	4 0	0 1	446
Nigeria 1990	0 8	26 5	27 4	7 8	35 2	10 5	51 7	2 6	22 8	0 8	618
Rwanda 1992	23 2	2 4	25 6	4 6	30 3	1 4	67 8	0 5	1 9	0 2	343
Senegal 1992 93	3 5	28 6	32 1	0 9	32 9	5 8	58 9	2 3	2 9	0 9	343
Tanzania 1991 92	3 6	6 0	9 6	13 9	23 4	16 6	58 7	1 4	6 2	0 3	525
Uganda 1995	13 5	4 4	17 9	6 7	24 6	9 2	63 6	2 5	7 9	0 3	487
Zambia 1992	0 4	6 8	7 2	3 3	10 4	1 0	87 6	1 0	6 6	0 5	449
Zimbabwe 1994	0 4	2 8	3 2	1 6	4 8	1 0	93 0	1 1	6 7	0 2	274
Near East/North Africa											
Egypt 1992	9 8	8 1	17 9	6 8	24 6	13 7	52 3	9 3	12 1	7 6	500
Jordan 1990	4 9	4 9	9 8	6 1	15 9	6 0	48 1	30 1	22 7	27 1	535
Morocco 1992	9 2	12 0	21 2	10 8	32 0	11 4	35 1	21 5	14 5	15 4	325
Turkey 1993	0 9	3 8	4 7	10 8	15 5	3 6	47 1	33 8	16 9	27 2	278
Asia											
Bangladesh 1993 94	15 2	11 7	26 9	11 0	37 9	31 4	29 4	1 3	0 0	0 0	399
India 1992 93	12 4	19 7	32 1	7 2	39 3	24 8	31 5	4 4	13 3	3 1	4 244
Indonesia 1994	4 5	1 8	6 3	2 2	8 5	0 5	85 8	5 3	11 7	4 8	1 070
Kazakhstan 1995	1 9	1 3	3 2	1 2	4 4	3 1	62 7	29 8	25 0	26 3	86
Nepal 1996	21 4	7 1	28 5	0 6	29 1	7 5	62 5	0 8	5 2	0 3	437
Pakistan 1990 91	14 1	16 5	30 6	11 0	41 5	19 6	29 2	9 6	23 4	8 7	438
Philippines 1993	1 5	3 1	4 6	3 5	8 1	5 0	52 1	34 7	19 8	32 3	630
Latin America/Caribbean											
Bolivia 1993 94	4 0	0 6	4 6	3 5	8 1	2 2	78 0	11 8	28 6	10 8	391
Brazil 1996	9 7	4 0	13 7	7 5	21 2	17 8	11 6	49 5	28 9	41 5	291
Colombia 1995	0 2	0 0	0 2	2 0	2 2	2 9	61 5	33 4	44 0	32 9	327
Dominican Republic 1991	0 1	1 2	1 4	7 0	8 4	10 5	22 8	58 3	27 5	54 4	288
Guatemala 1995	13 8	2 2	16 0	15 5	31 5	5 2	55 7	7 6	27 4	6 9	611
Haiti 1994	0 0	2 2	2 2	2 5	4 7	4 3	84 1	6 9	11 1	3 6	247
Paraguay 1990	0 9	2 0	2 9	2 8	5 7	1 8	61 2	31 4	33 0	29 2	264
Peru 1996	8 1	0 7	8 8	5 5	14 3	5 1	72 2	8 4	33 4	7 6	935

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

³ Breast milk predominantly with other non milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

Table 3 3 Feeding practices for last born children 12-15 months of age

Percentage of last born children 12-15 months of age in specific feeding categories Demographic and Health Surveys 1990-1996

Region country and date	Breastfeeding								Not breastfeeding		
	Exclusive breast feeding ¹	Breast milk and plain water	Fully breast fed ²	Predom inantly breastfed ³	Predom inantly or fully breastfed ⁴	Received milk ⁵	Received comple mentary foods ⁶	Used bottle	Total	Used bottle	Number of children
Sub Saharan Africa											
Burkina Faso 1993	0.4	7.8	8.2	7.1	15.3	0.3	82.5	0.7	2.0	0.2	381
Cameroon 1991	1.3	6.2	7.5	2.1	9.6	1.2	69.9	6.0	19.3	5.1	196
Central African Republic 1994-95	0.3	1.9	2.2	0.5	2.7	0.0	93.8	1.4	3.5	0.3	304
Côte d'Ivoire 1994	1.5	8.1	9.6	3.3	12.9	1.0	81.0	1.5	5.1	0.9	366
Ghana 1993	0.0	9.3	9.3	15.6	24.9	4.4	65.4	4.4	5.4	2.0	205
Kenya 1993	0.4	0.6	1.0	0.5	1.5	0.7	89.1	9.2	8.7	1.0	392
Madagascar 1992	0.3	1.0	1.3	1.8	3.1	0.5	87.5	0.6	8.9	1.2	387
Malawi 1992	0.4	4.1	4.5	2.8	7.2	0.0	87.3	2.7	5.5	2.1	266
Mali 1995	0.7	8.6	9.4	3.2	12.6	1.6	80.2	1.5	5.7	0.2	618
Namibia 1992	1.7	1.2	2.9	4.0	6.9	0.9	61.3	9.5	30.9	13.4	292
Niger 1992	0.3	3.5	3.8	1.2	5.0	0.7	90.6	2.0	3.7	0.2	478
Nigeria 1990	0.7	15.7	16.4	2.9	19.3	6.1	61.5	13.4	13.1	2.8	555
Rwanda 1992	2.6	1.6	4.2	1.0	5.3	1.4	91.9	3.4	1.4	0.3	360
Senegal 1992-93	0.8	12.0	12.8	1.3	14.1	2.1	77.9	2.1	5.9	0.3	376
Tanzania 1991-92	0.8	3.5	4.2	2.7	6.9	3.1	84.6	4.4	5.3	0.3	554
Uganda 1995	2.2	0.9	3.2	0.8	4.0	2.8	81.7	7.4	11.5	1.3	528
Zambia 1992	0.0	3.7	3.7	2.3	6.0	0.6	84.5	1.5	8.9	1.1	390
Zimbabwe 1994	0.9	0.0	0.9	0.0	0.9	0.5	88.4	2.9	10.2	3.3	217
Near East/North Africa											
Egypt 1992	3.2	4.2	7.4	3.5	10.9	5.4	61.7	3.9	22.1	8.7	534
Jordan 1990	2.4	2.1	4.4	4.5	9.0	2.4	37.0	15.4	51.7	35.3	465
Morocco 1992	3.0	7.3	10.4	6.1	16.5	5.8	42.4	5.8	35.4	15.2	328
Turkey 1993	0.8	0.0	0.8	4.5	5.3	0.7	41.5	9.9	52.5	28.5	259
Asia											
Bangladesh 1993-94	6.8	6.8	13.7	4.3	18.0	16.3	61.8	0.0	3.9	0.0	509
India 1992-93	2.2	5.6	7.7	4.4	12.1	11.3	65.6	7.5	11.0	4.6	4 266
Indonesia 1994	0.8	1.6	2.4	0.8	3.3	0.0	85.5	7.8	11.2	8.7	1 123
Kazakhstan 1995	0.0	0.0	0.0	0.5	0.5	0.5	51.4	10.7	47.7	21.1	96
Nepal 1996	1.9	2.2	4.2	0.2	4.3	0.3	92.0	1.5	3.3	0.4	499
Pakistan 1990-91	4.0	8.8	12.7	4.4	17.1	12.2	50.4	15.2	20.3	12.4	532
Philippines 1993	0.8	0.8	1.6	2.7	4.3	2.4	51.4	10.4	41.8	29.5	541
Latin America/Caribbean											
Bolivia 1993-94	1.5	0.0	1.5	0.6	2.1	0.9	71.7	22.2	25.3	22.0	336
Brazil 1996	1.7	2.2	3.9	5.5	9.4	16.2	9.2	11.7	65.2	53.8	313
Colombia 1995	0.4	0.4	0.9	0.0	0.9	0.0	42.0	26.0	57.2	52.2	325
Dominican Republic 1991	0.0	0.7	0.7	4.9	5.6	4.8	19.0	12.9	70.5	65.3	254
Guatemala 1995	2.4	0.1	2.6	1.9	4.5	0.4	73.1	19.2	22.0	19.4	636
Haiti 1994	0.0	0.9	0.9	0.5	1.4	0.0	80.9	8.3	17.6	8.0	221
Paraguay 1990	0.7	0.7	1.5	1.2	2.7	1.0	36.6	16.3	59.7	50.3	256
Peru 1996	0.6	0.2	0.7	1.0	1.8	1.3	76.1	32.5	20.8	18.4	1 029

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

³ Breast milk predominantly with other non milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

Table 3 4 Feeding practices for last-born children 20-23 months of age

Percentage of last born children 20-23 months of age in specific feeding categories Demographic and Health Surveys 1990 1996

Region country and date	Breastfeeding							Not breastfeeding			
	Exclusive breast-feeding ¹	Breast milk and plain water	Fully breast-fed ²	Predom- inantly breastfed ³	Predom- inantly or fully breastfed ⁴	Received milk ⁵	Received comple- mentary foods ⁶	Used bottle	Total	Used bottle	Number of children
Sub Saharan Africa											
Burkina Faso 1993	1 0	7 3	8 3	5 3	13 5	0 0	68 2	0 8	18 3	0 3	294
Cameroon 1991	0 0	2 3	2 3	0 6	2 9	0 0	34 9	2 6	62 2	1 6	208
Central African Republic	0 0	1 2	1 2	0 0	1 2	0 0	53 7	0 0	45 2	0 4	233
Côte d'Ivoire 1994	0 3	4 3	4 6	0 3	4 9	0 0	42 6	0 0	52 5	0 0	337
Ghana 1993	1 0	3 6	4 7	6 7	11 4	0 5	43 5	0 5	44 6	3 1	193
Kenya 1993	0 7	0 0	0 7	0 4	1 1	0 0	56 5	1 8	42 4	3 1	312
Madagascar 1992	0 2	0 0	0 2	0 5	0 7	0 0	51 0	0 5	48 3	0 9	270
Malawi 1992	0 0	2 7	2 7	0 9	3 5	0 2	56 2	0 9	40 1	1 8	241
Mali 1995	0 8	2 8	3 7	1 2	4 9	1 2	56 7	0 3	37 2	1 9	421
Namibia 1992	0 0	0 5	0 5	0 5	1 0	0 0	23 8	4 8	75 2	10 4	230
Niger 1992	0 0	4 2	4 2	0 5	4 7	0 5	58 4	0 1	36 3	1 0	275
Nigeria 1990	0 1	7 6	7 7	1 3	8 9	4 1	33 3	1 1	53 7	6 0	313
Rwanda 1992	1 7	0 4	2 1	1 2	3 3	0 4	85 2	1 8	11 0	0 3	276
Senegal 1992 93	2 1	7 2	9 4	0 0	9 4	1 7	39 6	0 0	49 4	0 0	235
Tanzania 1991-92	0 3	1 4	1 7	1 3	3 0	1 4	55 1	4 4	40 5	1 7	479
Uganda 1995	0 7	0 0	0 7	0 8	1 5	0 7	42 9	3 4	55 0	1 2	459
Zambia 1992	0 0	0 8	0 8	1 1	1 8	0 0	34 0	0 5	64 1	2 2	343
Zimbabwe 1994	0 0	0 2	0 2	0 0	0 2	0 0	26 5	1 0	73 3	4 9	216
Near East/North Africa											
Egypt 1992	0 0	1 0	1 0	1 7	2 6	1 3	38 5	2 2	57 6	4 0	448
Jordan 1990	0 6	0 7	1 2	0 8	2 1	0 8	15 4	4 2	81 8	29 6	374
Morocco 1992	1 1	2 2	3 3	2 5	5 8	1 1	14 9	1 1	78 3	5 8	276
Turkey 1993	0 0	0 7	0 7	2 4	3 1	0 0	15 1	1 7	81 8	27 4	176
Asia											
Bangladesh 1993 94	2 3	3 9	6 2	4 7	10 9	13 7	66 5	0 0	8 8	0 0	306
India 1992 93	0 8	2 8	3 6	2 5	6 1	5 7	61 2	3 9	27 0	5 3	2 955
Indonesia 1994	0 1	0 6	0 7	0 4	1 1	0 0	66 5	3 2	32 4	9 9	871
Kazakhstan 1995	0 0	0 0	0 0	0 0	0 0	0 0	24 1	2 0	75 9	22 6	85
Nepal 1996	0 7	0 0	0 7	0 6	1 3	0 0	91 5	1 2	7 3	0 0	402
Pakistan 1990 91	3 0	3 8	6 8	4 1	10 9	3 0	45 5	6 4	40 6	13 4	251
Philippines 1993	0 2	0 2	0 4	0 7	1 1	0 9	22 2	3 7	75 8	35 1	417
Latin America/Caribbean											
Bolivia 1993-94	0 0	0 0	0 0	0 4	0 4	0 4	40 9	11 2	58 3	24 0	319
Brazil 1996	1 1	1 0	2 1	1 8	3 9	11 5	3 4	4 6	81 2	57 3	259
Colombia 1995	0 0	0 0	0 0	0 0	0 0	0 0	18 8	9 2	81 2	57 5	302
Dominican Republic 1991	0 0	0 0	0 0	2 1	2 1	1 4	5 6	3 6	90 9	60 3	233
Guatemala 1995	0 2	0 1	0 3	1 1	1 4	0 0	52 6	13 8	46 0	28 5	441
Haiti 1994	0 5	0 5	1 1	0 5	1 6	0 4	24 7	1 9	73 3	5 4	199
Paraguay 1990	0 5	0 0	0 5	0 0	0 5	0 2	10 4	3 9	88 9	44 1	202
Peru 1996	0 4	0 0	0 4	0 2	0 6	0 0	46 3	15 7	53 2	32 1	856

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

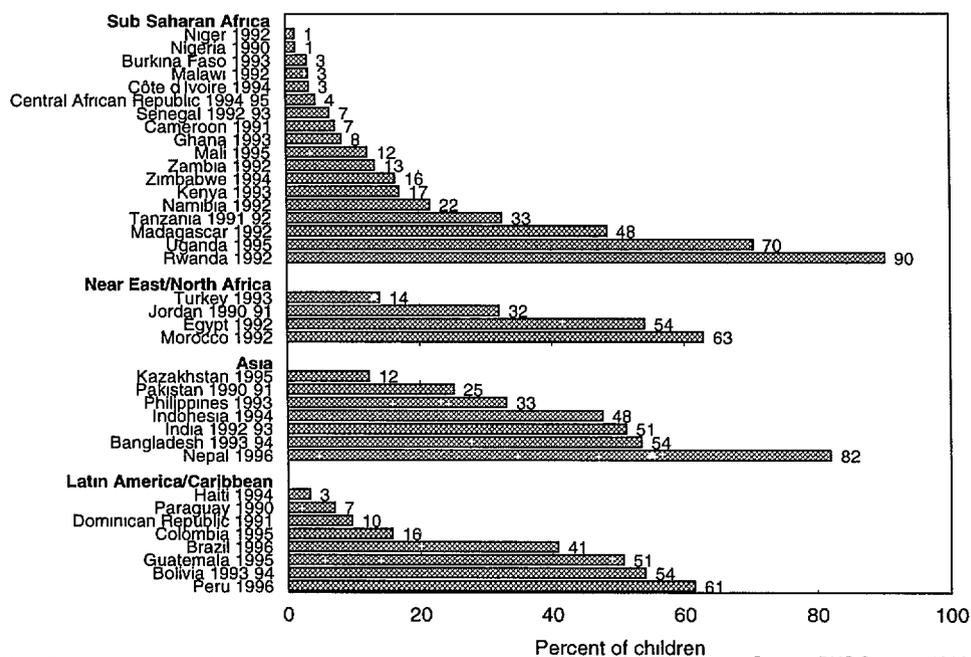
³ Breast milk predominantly with other non milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

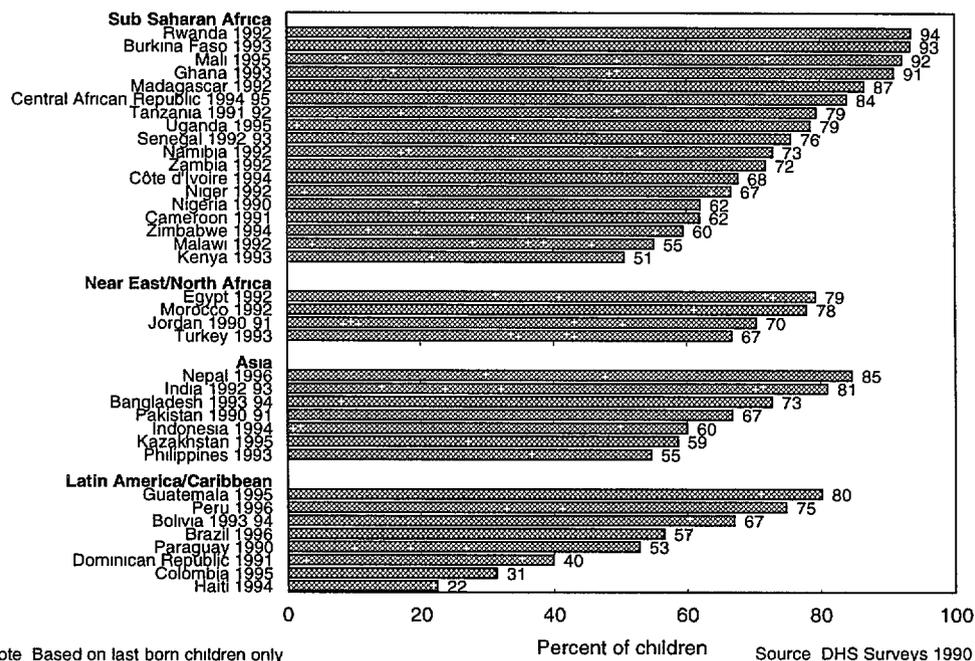
Figure 3 1 Percentage of children less than 4 months of age exclusively breastfed



Note Based on last born children only

Source DHS Surveys 1990 1996

Figure 3 2 Percentage of children less than 4 months of age predominantly breastfed



Note Based on last born children only

Source DHS Surveys 1990 1996

Table 3 5 Regional summary of current status feeding practices for last born children less than 4 months of age

Percentage of last-born children less than 4 months of age in specific feeding categories by region Demographic and Health Surveys 1990 1996

Region	Breastfeeding								Not breastfeeding	
	Exclusive breast feeding ¹	Breast milk and plain water	Fully breastfed ²	Predom inantly breastfed ³	Predom inantly or fully breastfed ⁴	Received milk ⁵	Received comple mentary foods ⁶	Used bottle	Total	Used bottle
Sub Saharan Africa	20 1	37 8	57 8	16 7	74 5	9 7	14 8	9 1	1 0	0 3
Near East/North Africa	40 7	9 5	50 2	23 4	73 6	15 6	5 8	21 2	5 0	4 4
Asia	43 5	11 2	54 7	13 6	68 3	18 9	7 2	18 1	5 6	4 8
Latin America/Caribbean	30 3	7 7	38 0	15 1	53 1	23 1	14 2	41 6	7 5	6 7

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

³ Breast milk predominantly with other non milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

Feeding practices for infants 6 to 9 months of age are shown in Table 3 2. Among infants that age, the most relevant feeding indicator is the proportion given complementary foods in addition to breast milk, as is recommended from the age of 6 months onward. The prevalence of this indicator is shown in Figure 3 3. In sub-Saharan Africa, fewer than half of all infants 6 to 9 months are given complementary foods in Mali, Ghana, and Burkina Faso. In Asia, the same is true of infants in India, Bangladesh, and Pakistan, where only a third of infants are fed with complementary foods. In Near East/North Africa, fewer than half the infants in Jordan, Turkey, and Morocco are fed complementary foods. In Latin America/Caribbean, only 23 percent and 12 percent of infants in the Dominican Republic and Brazil, respectively, are fed complementary foods.

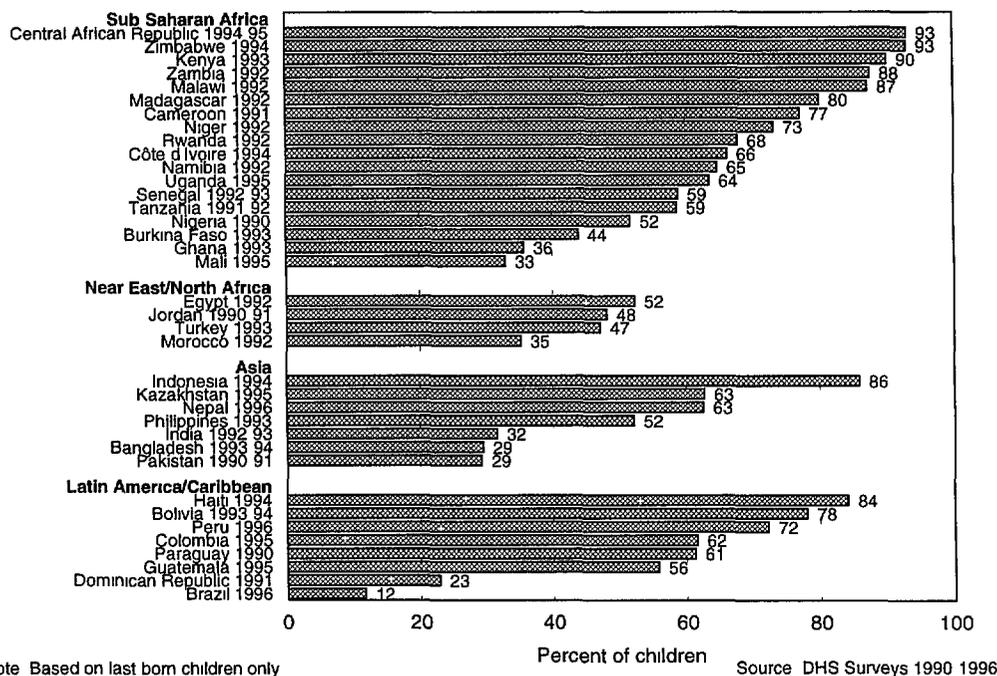
A summary of feeding practices for children 6 to 9 months of age, by region, including the proportion receiving complementary foods, is presented in Table 3 6.

For children 12 to 15 months of age, the indicator of main interest is the proportion of children still breastfeeding, also known as the first-year breastfeeding continuation rate. The percentage of children 12 to 15 months of age in specific feeding categories is shown in Table 3 3, and the proportion of children this age still breastfeeding is shown in Figure 2 14 (page 28). In sub-Saharan Africa, breastfeeding through the first year is quite common in all

countries, with the exception of Namibia, which has a relatively low rate (for sub-Saharan Africa), at 68 percent. The sub-Saharan countries have the highest first-year continuation rates compared with countries in other regions. In Asia, Bangladesh and Nepal have the highest first-year rates, at 96 and 97 percent, respectively. Latin America/Caribbean, in general, has some of the lowest rates, including 29 percent in the Dominican Republic and 33 percent in Brazil. A regional summary of feeding practices for children 12 to 15 months of age, including the percentage of children still breastfeeding, is shown in Table 3 7.

Among children 20 to 23 months old, the proportion still breastfeeding provides the second-year breastfeeding continuation rate. The percentage of children 20 to 23 months of age in specific feeding categories is shown in Table 3 4, and the proportion of children this age still breastfeeding is shown in Figure 2 15 (page 28). Sub-Saharan Africa and Asia have the highest second-year continuation rates, specifically in Burkina Faso, Rwanda, Bangladesh, and Nepal, where 80 percent or more of children 20 to 23 months of age are still breastfeeding. Fewer than half the children this age in Latin America/Caribbean and Near East/North Africa are still breastfeeding, and in the Dominican Republic and Paraguay, only 7 and 8 percent, respectively, continue to breastfeed. The regional summary of feeding practices, including the second-year continuation rates, is shown in Table 3 8.

Figure 3 3 Percentage of children age 6 to 9 months receiving complementary foods



Note Based on last born children only

Source DHS Surveys 1990 1996

Table 3 6 Regional summary of current status feeding practices for last born children 6 9 months of age

Percentages of last born children 6 9 months of age in specific feeding categories by region Demographic and Health Surveys 1990 1996

Region	Breastfeeding							Not breastfeeding		
	Exclusive breast feeding ¹	Breast milk and plain water	Fully breastfed ²	Predom inantly breastfed ³	Predom inantly or fully breastfed ⁴	Received milk ⁵	Received comple mentary foods ⁶	Used bottle	Total	Used bottle
Sub Saharan Africa	3.6	13.6	17.2	8.4	25.6	4.1	68.1	7.7	2.2	0.9
Near East/North Africa	6.2	7.2	13.4	8.6	22.0	8.7	45.7	16.6	23.7	19.3
Asia	10.1	8.7	18.9	5.2	24.1	13.1	50.5	14.1	12.3	10.8
Latin America/Caribbean	4.6	1.6	6.2	5.8	12.0	6.2	55.9	29.2	25.9	23.4

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

³ Breast milk predominantly with other non milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

Table 3.7 Regional summary of current status feeding practices for last-born children 12-15 months of age

Percentages of last born children 12-15 months of age in specific feeding categories by region Demographic and Health Surveys 1990-1996

Region	Breastfeeding								Not breastfeeding	
	Exclusive breast-feeding ¹	Breast milk and plain water	Fully breastfed ²	Predominantly breastfed ³	Predominantly or fully breastfed ⁴	Received milk ⁵	Received complementary foods ⁶	Used bottle	Total	Used bottle
Sub-Saharan Africa	0.9	5.0	5.8	3.0	8.8	1.6	81.1	4.1	91.4	20
Near East/North Africa	2.4	3.4	5.8	4.7	10.4	3.6	45.7	8.8	59.6	21.9
Asia	2.4	3.7	6.0	2.5	8.5	6.1	65.4	7.6	80.1	11.0
Latin America/Caribbean	0.9	0.7	1.6	2.0	3.6	3.1	51.1	18.6	57.7	36.2

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

³ Breast milk predominantly with other non-milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

Table 3.8 Regional summary of current status feeding practices for last born children 20-23 months of age

Region	Breastfeeding									Not breastfeeding	
	Still breast feeding	Exclusive breast feeding ¹	Breast milk and plain water	Fully breastfed ²	Predominantly breastfed ³	Predominantly or fully breastfed ⁴	Received milk ⁵	Received complementary foods ⁶	Used bottle	Total	Used bottle
Sub-Saharan Africa	52.8	0.5	2.6	3.1	1.3	4.3	0.6	47.9	1.4	47.2	2.3
Near East/North Africa	25.1	0.4	1.2	1.6	1.9	3.4	0.8	21.0	2.3	74.9	16.7
Asia	61.7	1.0	1.6	2.6	1.9	4.5	3.3	53.9	2.9	38.3	12.3
Latin America/Caribbean	28.4	0.3	0.2	0.6	0.8	1.3	1.7	25.3	8.0	71.6	38.7

¹ Breast milk only

² Exclusive breastfeeding or breast milk and plain water

³ Breast milk predominantly with other non-milk liquids

⁴ Combines full and predominant breastfeeding

⁵ Receive breast milk plus other milks or formula

⁶ Breast milk plus solid or semisolid foods

Socioeconomic Differentials

The findings on current feeding practices among children less than three years of age by urban-rural residence, mother's education, and sex are shown in Tables 3.9 through 3.16. As above, each of the tables is age specific

and shows feeding categories according to socioeconomic differentials. For children less than 4 months of age, full breastfeeding is represented rather than exclusive breastfeeding, because exclusive breastfeeding is relatively rare in the vast majority of countries.

Table 3.9 Percentage of last born children less than 4 months of age receiving liquids and complementary foods, by urban rural residence.

Percentage of last born children less than 4 months of age receiving liquids and complementary foods by urban rural residence Demographic and Health Surveys 1990-1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk-based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub-Saharan Africa																		
Burkina Faso 1993	32.9	34.1	32.7	64.7	60.7	65.4	2.7	5.2	2.3	2.9	2.2	3.0	1.2	1.5	1.1	436	63	373
Cameroon 1991	51.5	45.4	55.4	29.1	37.3	23.7	15.8	26.9	8.5	28.5	24.3	31.3	0.2	0.6	0.0	219	86	133
Central African Republic 1994-95	58.8	52.5	63.4	20.4	23.5	18.2	2.6	4.8	1.0	31.7	37.2	27.7	0.3	0.0	0.5	309	130	179
Côte d'Ivoire 1994	70.7	58.1	76.7	16.7	29.2	10.7	6.4	15.1	2.3	11.5	12.5	11.1	1.2	1.4	1.2	423	137	286
Ghana 1993	59.1	59.6	59.0	39.6	38.6	39.9	7.0	12.3	5.2	2.6	1.8	2.9	0.0	0.0	0.0	230	57	173
Kenya 1993	28.2	(13.9)	30.3	47.8	(76.0)	43.7	32.6	(28.5)	33.2	28.4	(24.6)	29.0	2.0	(1.2)	2.2	316	40	276
Madagascar 1992	56.6	42.6	59.0	36.5	48.9	34.3	6.0	13.8	4.6	7.0	6.4	7.1	1.7	4.3	1.3	352	52	301
Malawi 1992	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
Mali 1995	78.7	73.4	80.6	16.3	19.0	15.3	7.1	11.4	5.6	2.0	1.5	2.2	0.1	0.0	0.2	661	179	481
Namibia 1992	56.9	42.5	63.0	26.5	32.8	23.9	21.4	37.2	14.7	4.8	6.3	4.2	2.9	5.5	1.8	255	76	179
Niger 1992	40.5	40.2	40.6	35.8	49.4	33.7	21.4	23.6	21.1	15.7	7.0	17.0	2.0	0.8	2.2	524	68	456
Nigeria 1990	51.3	28.0	57.7	21.2	44.2	14.8	30.0	47.4	25.2	7.7	8.4	7.5	1.7	0.3	2.1	524	114	411
Rwanda 1992	92.2	(83.0)	92.6	2.3	(8.5)	2.0	3.0	(8.5)	2.7	3.2	(0.0)	3.4	1.0	(0.0)	1.0	356	17	339
Senegal 1992-93	75.3	71.9	77.3	1.0	2.1	0.4	17.2	15.8	18.0	8.7	13.0	6.3	0.7	0.7	0.8	401	146	255
Tanzania 1991-92	64.4	45.5	68.0	21.5	46.7	16.7	15.1	24.7	13.3	5.3	1.4	6.0	0.8	0.0	0.9	500	80	420
Uganda 1995	74.5	60.2	76.5	7.2	8.2	7.1	17.8	35.0	15.4	4.3	0.6	4.8	0.6	0.5	0.6	411	50	361
Zambia 1992	65.7	57.1	73.9	10.3	12.6	8.1	6.0	10.5	1.7	23.0	28.8	17.5	0.8	1.6	0.0	423	207	216
Zimbabwe 1994	40.4	46.3	38.7	34.2	32.1	34.8	8.3	19.6	5.1	36.2	32.5	37.2	0.9	3.0	0.3	258	57	201
Near East/North Africa																		
Egypt 1992	55.4	41.5	62.3	32.3	40.3	28.3	16.5	23.4	13.0	2.3	1.9	2.6	3.1	5.0	2.2	497	165	332
Jordan 1990	38.9	36.3	44.9	42.9	43.2	42.4	19.9	22.7	13.4	6.6	7.2	5.1	6.4	6.9	5.3	469	328	141
Morocco 1992	69.0	45.1	76.7	13.9	21.1	11.7	17.3	33.8	12.1	1.0	2.8	0.4	4.1	7.0	3.1	294	71	223
Turkey 1993	37.4	31.3	45.9	47.6	52.2	41.3	17.0	22.7	9.3	13.4	14.0	12.6	6.5	6.2	6.9	232	134	98
Asia																		
Bangladesh 1993-94	61.5	54.8	62.3	19.8	27.4	19.0	24.6	27.7	24.3	1.9	0.0	2.1	1.5	3.0	1.3	411	42	369
India 1992-93	73.2	63.7	75.7	13.0	18.0	11.6	16.3	22.4	14.8	1.4	1.8	1.3	1.9	3.7	1.4	3 952	809	3 14
Indonesia 1994	49.0	46.3	50.1	28.7	30.4	28.0	11.3	17.9	8.4	30.9	26.2	32.9	2.5	3.9	1.9	1 020	301	718
Kazakhstan 1995	36.6	(43.8)	(31.0)	38.8	(42.9)	(35.6)	28.8	(38.1)	(21.7)	5.2	(10.5)	(1.0)	11.8	(1.4)	(19.9)	74	32	41
Nepal 1996	84.0	(75.8)	84.6	1.6	(0.0)	1.7	11.0	(21.3)	10.3	6.4	(8.8)	6.2	0.5	(0.0)	0.5	428	25	403
Pakistan 1990-91	35.1	16.2	42.1	49.9	71.6	42.0	27.4	38.3	23.4	3.1	3.7	2.9	3.6	3.3	3.8	502	134	367
Philippines 1993	43.7	31.4	54.8	19.8	19.0	20.6	26.7	29.7	24.0	1.3	0.3	2.1	17.6	29.5	6.8	484	230	253

continued

Table 3 9 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America/Caribbean																		
Bolivia 1993-94	57.4	48.2	67.3	19.7	19.4	20.1	27.7	36.3	18.5	3.6	6.2	0.7	3.8	5.4	2.1	336	173	163
Brazil 1996	4.7	44.9	43.9	29.5	28.5	33.0	28.4	27.0	33.1	7.1	6.8	7.9	13.9	14.8	10.9	267	209	58
Colombia 1995	20.7	22.5	17.4	44.9	41.8	50.7	58.5	62.8	50.7	15.4	14.9	16.3	4.4	4.8	3.7	265	172	93
Dominican Republic 1991	2.8	19.7	27.7	43.4	36.0	55.1	40.4	44.7	33.5	2.2	1.9	2.7	18.7	22.9	11.9	226	138	87
Guatemala 1995	57.8	39.4	64.7	32.5	47.4	26.9	16.2	29.3	11.3	3.1	3.9	2.9	1.6	1.1	1.8	604	165	439
Haiti 1994	12.0	6.6	13.7	48.3	42.0	50.3	32.0	48.0	26.8	66.0	58.0	68.6	3.1	10.7	0.7	221	54	167
Paraguay 1990	26.0	19.5	30.9	51.2	48.7	53.2	24.1	39.7	12.3	13.5	16.6	11.2	13.7	18.4	10.1	260	112	148
Peru 1996	62.6	53.1	74.6	27.6	35.1	18.0	21.9	29.8	12.0	3.0	2.8	3.3	1.0	1.5	0.4	860	480	379

() = based on a small number of cases (25-49)

u = unknown (not available)

Table 3.10 Percentage of last-born children 6-9 months of age receiving liquids and complementary foods, by urban rural residence

Percentage of last born children 6-9 months of age receiving liquids and complementary foods by urban rural residence Demographic and Health Surveys 1990-1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa																		
Burkina Faso 1993	23.8	13.8	25.3	54.5	57.6	54.0	3.8	9.1	3.0	43.9	68.7	40.1	0.4	0.0	0.4	383	51	332
Cameroon 1991	14.1	13.0	14.7	26.1	34.9	21.0	11.2	16.3	8.2	77.1	71.3	80.4	6.9	11.9	4.1	254	93	161
Central African Republic 1994-95	5.1	6.1	4.4	38.5	45.2	34.3	5.2	8.7	3.1	93.1	92.1	93.7	0.7	1.7	0.0	291	111	180
Côte d'Ivoire 1994	26.4	18.9	29.2	27.5	38.0	23.4	7.3	14.4	4.5	66.2	65.6	66.4	0.6	2.3	0.0	425	118	307
Ghana 1993	20.9	16.4	22.3	70.7	70.5	70.7	10.8	19.7	8.0	35.7	37.7	35.1	0.4	0.0	0.5	249	61	188
Kenya 1993	2.6	(4.3)	2.4	43.8	(57.7)	42.6	67.6	(69.2)	67.4	90.1	(85.5)	90.5	0.6	(4.3)	0.2	404	32	373
Madagascar 1992	9.5	3.2	10.5	61.3	70.5	59.8	10.1	26.3	7.4	80.0	89.5	78.5	1.4	5.3	0.8	374	52	322
Malawi 1992	5.2	u	u	33.4	u	u	9.2	u	u	87.2	u	u	1.2	u	u	325	u	u
Mali 1995	49.4	34.2	54.4	30.7	43.4	26.5	17.3	22.2	15.7	32.9	45.0	28.9	0.4	0.9	0.2	660	165	495
Namibia 1992	12.3	4.2	15.2	55.6	40.6	61.0	18.4	28.3	14.8	64.7	49.4	70.2	14.0	39.2	4.9	265	70	195
Niger 1992	17.9	6.3	20.5	30.8	44.6	27.8	16.3	25.5	14.3	73.2	86.4	70.3	1.1	1.0	1.2	446	80	366
Nigeria 1990	27.4	16.7	30.4	21.0	35.3	16.9	25.2	30.2	23.8	51.7	58.0	49.9	2.6	5.3	1.9	618	137	482
Rwanda 1992	25.6	(15.6)	26.1	24.9	(35.6)	24.4	9.9	(20.0)	9.4	67.8	(71.1)	67.6	0.5	(4.4)	0.3	343	16	327
Senegal 1992-93	32.1	17.5	39.3	7.9	13.2	5.2	16.6	14.9	17.5	58.9	75.4	50.7	2.3	2.6	2.2	343	114	229
Tanzania 1991-92	9.6	4.4	11.2	54.7	74.7	48.5	38.2	55.4	32.7	58.7	61.3	57.8	1.4	2.7	1.0	525	126	399
Uganda 1995	17.9	5.1	19.5	42.7	53.1	41.5	35.0	55.2	32.5	63.6	62.9	63.7	2.5	11.0	1.5	487	54	434
Zambia 1992	7.2	4.1	9.8	40.4	46.4	35.2	15.7	23.2	9.2	87.6	90.7	84.9	1.0	2.1	0.0	449	210	239
Zimbabwe 1994	3.2	1.1	3.8	40.7	65.5	33.8	18.1	24.6	16.3	93.0	94.9	92.5	1.1	0.0	1.4	274	60	214
Near East/North Africa																		
Egypt 1992	17.9	12.9	21.0	41.2	48.1	37.0	40.7	51.6	34.1	52.3	53.2	51.7	9.3	13.3	6.9	500	190	311
Jordan 1990	9.8	9.6	10.2	38.7	37.7	41.2	26.0	25.2	28.1	48.1	48.3	47.4	30.1	30.7	28.6	535	380	155
Morocco 1992	21.2	7.0	28.9	31.4	33.3	30.3	25.2	30.7	22.3	35.1	28.9	38.4	21.5	42.1	10.4	325	114	211
Turkey 1993	4.7	6.3	2.3	56.1	53.2	60.3	10.9	14.6	5.7	47.1	45.4	49.7	33.8	36.2	30.5	278	163	115
Asia																		
Bangladesh 1993-94	26.9	19.2	27.9	33.4	42.6	32.2	45.3	58.7	43.6	29.4	26.0	29.8	1.3	3.8	1.0	399	45	353
India 1992-93	32.1	23.4	35.0	38.4	46.6	35.7	42.4	52.1	39.1	31.5	34.9	30.4	4.4	8.4	3.1	4 244	1 055	3 190
Indonesia 1994	6.3	4.0	7.3	61.2	69.0	57.7	18.0	30.5	12.4	85.8	85.2	86.0	5.3	8.7	3.7	1 070	330	739
Kazakhstan 1995	3.2	(0.0)	(5.7)	63.3	(59.2)	(66.6)	45.6	(33.7)	(55.0)	62.7	(54.8)	(68.9)	29.8	(40.8)	(21.2)	86	38	48
Nepal 1996	28.5	(23.4)	28.9	39.0	(37.5)	39.1	39.8	(51.2)	39.0	62.5	(65.7)	62.3	0.8	(0.0)	0.9	437	31	406
Pakistan 1990-91	30.6	22.5	33.8	38.5	41.0	37.5	32.2	29.1	33.4	29.2	33.3	27.6	9.6	21.0	5.1	438	125	313
Philippines 1993	4.6	2.1	7.0	45.0	39.3	50.5	25.4	25.6	25.2	52.1	42.6	61.3	34.7	48.2	21.7	630	310	320

continued

Table 3 10 *continued*

Region, country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America/Caribbean																		
Bolivia 1993-94	4 6	1 5	8 6	73 9	71 2	77 4	34 0	42 8	22 6	78 0	74 2	82 9	11 8	18 3	3 3	391	220	171
Brazil 1996	14 8	14 1	17 0	28 2	26 8	32 3	24 4	21 8	32 4	11 6	11 4	12 0	49 5	52 1	41 5	291	218	73
Colombia 1995	0 2	0 4	0 0	60 0	56 2	66 1	43 4	41 2	46 9	61 5	54 9	71 9	33 4	40 7	21 8	327	200	127
Dominican Republic 1991	1 4	0 6	2 8	34 3	30 1	41 7	24 7	23 0	27 8	22 8	20 3	27 3	58 3	68 1	41 1	288	184	104
Guatemala 1995	16 0	9 8	19 1	70 4	66 4	72 5	22 1	33 1	16 4	55 7	60 3	53 3	7 6	14 3	4 1	611	208	403
Haiti 1994	2 2	1 5	2 4	56 0	61 5	53 9	37 6	41 1	36 4	84 1	75 6	87 3	6 9	19 2	2 4	247	67	180
Paraguay 1990	2 9	2 0	3 7	53 5	41 1	64 3	32 0	30 4	33 4	61 2	48 5	72 2	31 4	45 0	19 6	264	123	141
Peru 1996	8 8	5 5	13 0	71 8	73 1	70 2	42 3	47 7	35 6	72 2	74 0	70 1	8 4	12 5	3 4	935	519	417

() = based on a small number of cases (25 49)

u = unknown (not available)

Table 3 11 Percentage of last born children 12 15 months of age receiving liquids and complementary foods, by urban rural residence

Percentage of last-born children 12 15 months of age receiving liquids and complementary foods by urban rural residence Demographic and Health Surveys 1990 1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa																		
Burkina Faso 1993	8 2	3 5	9 0	46 2	55 5	44 6	5 2	13 0	3 9	82 5	88 0	81 5	2 0	3 5	1 7	381	55	326
Cameroon 1991	7 5	3 7	10 2	26 5	28 7	25 0	11 9	14 4	10 2	69 9	60 9	76 1	19 3	32 4	10 2	196	81	116
Central African																		
Republic 1994 95	2 2	1 6	2 6	39 2	44 1	35 7	9 9	18 8	3 4	93 8	93 5	94 0	3 5	4 9	2 5	304	128	176
Côte d'Ivoire 1994	9 6	9 1	9 9	31 7	35 7	29 2	7 8	15 1	3 2	81 0	77 8	83 1	5 1	9 2	2 5	366	140	226
Ghana 1993	9 3	3 6	11 3	65 4	67 3	64 7	12 7	23 6	8 7	65 4	67 3	64 7	5 4	16 4	1 3	205	55	150
Kenya 1993	1 0	0 0	1 2	47 4	59 1	44 9	62 8	71 6	61 0	89 1	90 5	88 8	8 7	9 5	8 6	392	69	323
Madagascar 1992	1 3	0 0	1 5	54 3	63 3	53 0	9 2	23 3	7 1	87 5	78 9	88 8	8 9	18 9	7 5	387	490	337
Malawi 1992	4 5	u	u	40 6	u	u	11 1	u	u	87 3	u	u	5 5	u	u	266	u	u
Mali 1995	9 4	3 6	11 2	42 3	52 3	39 1	21 6	25 2	20 4	80 2	85 2	78 6	5 7	5 2	5 8	618	147	471
Namibia 1992	2 9	2 3	3 2	48 2	33 4	56 1	14 3	14 1	14 4	61 3	44 6	70 3	30 9	50 5	20 4	292	102	190
Niger 1992	3 8	1 9	4 2	30 3	34 3	29 6	15 2	18 5	14 6	90 6	90 4	90 6	3 7	7 1	3 1	478	73	405
Nigeria 1990	16 4	7 7	18 5	19 7	28 7	17 5	17 4	25 1	15 5	61 5	55 2	63 0	13 1	27 0	9 7	555	107	448
Rwanda 1992	4 2	(2 6)	4 3	37 5	(46 2)	37 2	14 4	(20 5)	14 1	91 9	(79 5)	92 4	1 4	(12 8)	1 0	360	14	346
Senegal 1992 93	12 8	6 9	15 9	18 4	31 5	11 4	20 5	17 7	22 0	77 9	83 8	74 8	5 9	6 9	5 3	376	130	246
Tanzania 1991 92	4 2	1 3	5 0	54 9	75 3	50 0	35 1	38 4	34 3	84 6	87 5	84 0	5 3	9 7	4 2	554	108	446
Uganda 1995	3 2	3 0	3 2	46 0	50 1	45 5	28 0	46 2	25 6	81 7	65 8	83 9	11 5	23 8	9 9	528	63	465
Zambia 1992	3 7	2 3	5 1	47 9	57 1	39 0	14 1	18 6	9 6	84 5	78 5	90 2	8 9	14 7	3 4	390	192	198
Zimbabwe 1994	0 9	0 0	1 3	40 5	42 6	39 8	24 1	29 4	22 4	88 4	75 5	92 6	10 2	24 5	5 5	217	54	163
Near East/North Africa																		
Egypt 1992	7 4	3 7	9 6	38 9	39 5	38 6	35 9	43 8	31 2	61 7	62 7	61 0	22 1	24 2	20 7	534	200	333
Jordan 1990	4 4	3 3	7 0	29 9	29 8	30 2	18 6	20 1	15 3	37 0	36 6	37 7	51 7	52 7	49 4	465	321	143
Morocco 1992	10 4	3 8	13 4	30 2	14 4	37 5	22 9	18 3	25 0	42 4	25 0	50 4	35 4	64 4	21 9	328	104	224
Turkey 1993	0 8	0 0	1 8	45 9	40 0	53 3	5 8	7 2	4 1	41 5	37 0	47 3	52 5	59 2	44 0	259	145	114
Asia																		
Bangladesh 1993 94	13 7	11 0	14 0	29 6	46 5	27 6	41 5	40 6	41 6	61 8	48 0	63 4	3 9	12 4	2 9	509	54	455
India 1992 93	7 7	6 5	8 1	59 2	53 9	60 6	45 7	45 0	45 9	65 6	59 3	67 3	11 0	21 5	8 1	4 266	920	3 346
Indonesia 1994	2 4	1 3	3 0	70 4	70 8	70 2	20 2	28 3	16 3	85 5	81 7	87 3	11 2	16 8	8 6	1 123	362	762
Kazakhstan 1995	0 0	(0 0)	0 0	52 3	(45 6)	57 8	34 7	(34 7)	34 6	51 4	(45 6)	56 2	47 7	(54 4)	42 2	96	43	53
Nepal 1996	4 2	(0 0)	4 4	73 6	(76 0)	73 4	42 0	(45 5)	41 8	92 0	(96 7)	91 7	3 3	(3 3)	3 3	499	31	468
Pakistan 1990 91	12 7	6 3	15 3	28 3	31 3	27 2	35 5	31 0	37 3	50 4	43 2	53 2	20 3	38 7	13 1	532	150	383
Philippines 1993	1 6	1 4	1 7	41 7	34 0	47 7	22 3	18 8	25 0	51 4	39 2	60 9	41 8	55 5	31 2	541	236	304

continued

Table 3 11 *continued*

Region country, and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America/Caribbean																		
Bolivia 1993 94	1 5	0 7	2 2	70 4	63 4	76 8	34 0	33 2	34 7	71 7	64 7	78 2	25 3	33 6	17 6	336	163	174
Brazil 1996	3 9	4 0	3 7	25 1	25 4	24 3	19 7	17 0	28 2	9 2	9 3	9 1	65 2	66 1	62 5	313	238	75
Colombia 1995	0 9	0 6	1 4	39 0	36 3	44 9	29 6	30 0	28 6	42 0	37 8	51 2	57 2	61 6	47 5	325	224	101
Dominican Republic 1991	0 7	0 0	1 6	26 4	14 4	40 9	15 1	7 6	24 2	19 0	10 3	29 6	70 5	85 6	52 3	254	139	115
Guatemala 1995	2 6	3 0	2 3	72 0	51 3	82 8	16 5	18 1	15 7	73 1	55 1	82 5	22 0	40 5	12 4	636	218	418
Haiti 1994	0 9	1 5	0 7	49 1	47 1	50 0	26 8	21 2	29 3	80 9	65 3	87 9	17 6	33 2	10 7	221	68	153
Paraguay 1990	1 5	1 9	1 0	32 0	17 2	44 8	28 4	16 9	38 4	36 6	23 4	48 1	59 7	73 7	47 5	256	119	137
Peru 1996	0 7	0 4	1 3	73 3	69 2	79 9	46 6	50 4	40 6	76 1	69 9	85 8	20 8	27 2	10 9	1 029	629	400

() = based on a small number of cases (25 49)

u = unknown (not available)

Table 3.12 Percentage of last born children 20-23 months of age receiving liquids and complementary foods, by urban rural residence

Percentage of last born children 20-23 months of age receiving liquids and complementary foods by urban rural residence Demographic and Health Surveys 1990-1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa																		
Burkina Faso 1993	8.3	1.0	9.6	27.2	36.9	25.4	5.2	12.2	4.0	68.2	58.0	70.1	18.3	37.8	14.7	294	46	248
Cameroon 1991	2.3	2.5	2.2	8.5	5.7	10.4	5.0	4.8	5.2	34.9	18.0	46.8	62.2	79.4	50.0	208	86	122
Central African																		
Republic 1994 95	1.2	1.0	1.3	21.1	15.8	24.8	2.7	5.8	0.6	53.7	41.7	61.8	45.2	57.3	36.9	233	95	139
Côte d'Ivoire 1994	4.6	3.8	5.1	15.8	9.2	20.5	2.4	2.9	2.1	42.6	24.7	55.2	52.5	71.5	39.1	337	139	198
Ghana 1993	4.7	1.9	5.8	37.8	18.5	45.3	4.7	3.7	5.0	43.5	24.1	51.1	44.6	72.2	33.8	193	54	139
Kenya 1993	0.7	(0.0)	0.9	28.5	(31.5)	28.0	35.5	(34.5)	35.7	56.5	(42.2)	59.0	42.4	(57.8)	39.7	312	47	266
Madagascar 1992	0.2	(2.0)	0.0	25.5	(26.5)	25.4	5.1	(4.1)	5.2	51.0	(34.7)	52.8	48.3	(63.3)	46.6	270	27	243
Malawi 1992	2.7	u	u	21.0	u	u	7.4	u	u	56.2	u	u	40.1	u	u	241	u	u
Mali 1995	3.7	0.2	4.9	29.3	30.1	29.0	16.6	11.5	18.3	56.7	45.5	60.6	37.2	51.4	32.2	421	110	311
Namibia 1992	0.5	1.6	0.0	17.4	17.6	17.3	5.7	5.9	5.6	23.8	20.7	25.3	75.2	77.7	74.0	230	76	154
Niger 1992	4.2	0.6	5.0	13.0	17.8	11.9	9.6	7.3	10.1	58.4	35.6	63.5	36.3	63.7	30.2	275	50	225
Nigeria 1990	7.7	3.0	9.3	8.0	6.9	8.4	5.8	1.4	7.4	33.3	21.6	37.5	53.7	75.4	45.9	313	82	230
Rwanda 1992	2.1	(0.0)	2.2	38.0	(45.2)	37.6	7.7	(11.9)	7.4	85.2	(71.4)	86.0	11.0	(28.6)	10.0	276	15	261
Senegal 1992 93	9.4	4.4	11.4	5.1	8.8	3.6	11.1	2.9	14.4	39.6	22.1	46.7	49.4	73.5	39.5	235	68	167
Tanzania 1991 92	1.7	1.6	1.7	35.9	41.6	34.5	20.0	16.3	20.9	55.1	43.4	58.0	40.5	52.4	37.5	479	97	383
Uganda 1995	0.7	1.0	0.7	22.4	15.7	23.1	8.1	10.5	7.9	42.9	21.1	45.3	55.0	76.7	52.6	459	46	414
Zambia 1992	0.8	0.7	0.8	19.3	19.9	18.9	3.5	4.1	3.0	34.0	24.7	42.0	64.1	72.6	56.9	343	158	185
Zimbabwe 1994	0.2	0.0	0.4	15.7	14.7	16.2	7.4	6.9	7.6	26.5	16.6	31.1	73.3	83.4	68.6	216	69	147
Near East/North Africa																		
Egypt 1992	1.0	0.2	1.4	25.4	18.1	29.6	23.0	19.9	24.8	38.5	25.2	46.1	57.6	72.8	48.9	448	163	285
Jordan 1990	1.2	0.6	2.7	9.0	8.5	10.1	8.0	7.6	8.9	15.4	13.2	19.9	81.8	85.1	74.8	374	254	120
Morocco 1992	3.3	1.8	4.2	10.1	7.3	12.0	6.5	5.5	7.2	14.9	7.3	19.9	78.3	87.3	72.3	276	110	166
Turkey 1993	0.7	1.1	0.0	16.8	8.3	30.1	1.6	0.0	4.2	15.1	8.4	25.6	81.8	89.4	69.9	176	107	68
Asia																		
Bangladesh 1993 94	6.2	(0.0)	6.9	29.9	(48.7)	27.8	41.3	(41.0)	41.3	66.5	(58.4)	67.4	8.8	(26.8)	6.8	306	31	275
India 1992 93	3.6	1.6	4.2	53.7	46.4	56.0	37.5	36.7	37.7	61.2	51.5	64.2	27.0	41.8	22.4	2 955	708	2 247
Indonesia 1994	0.7	0.0	0.9	56.0	49.4	58.2	17.1	24.6	14.7	66.5	57.7	69.4	32.4	42.3	29.2	871	214	656
Kazakhstan 1995	0.0	(0.0)	0.0	24.1	(21.6)	26.3	22.8	(21.6)	23.9	24.1	(21.6)	26.3	75.9	(78.4)	73.7	85	39	46
Nepal 1996	0.7	(0.0)	0.7	78.2	(84.2)	77.8	39.8	(45.8)	39.4	91.5	(84.2)	91.9	7.3	(15.8)	6.7	402	24	378
Pakistan 1990 91	6.8	2.5	8.3	26.3	26.3	26.2	18.3	22.7	16.7	45.5	46.7	45.0	40.6	47.9	37.9	251	67	184
Philippines 1993	0.4	0.4	0.4	19.5	16.6	22.7	11.3	10.5	12.2	22.2	18.5	26.4	75.8	79.7	71.3	417	219	198

continued

Table 3 12 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America/Caribbean																		
Bolivia 1993 94	0 0	0 0	0 0	37 5	37 1	38 1	18 8	21 0	16 0	40 9	37 8	44 7	58 3	61 4	54 4	319	176	142
Brazil 1996	2 3	2 5	1 6	13 4	12 4	17 9	12 2	10 3	20 3	3 4	3 4	3 5	81 2	82 5	75 5	259	211	49
Colombia 1995	0 0	0 0	0 0	18 6	15 5	24 2	13 8	11 6	17 7	18 8	15 5	25 0	81 2	84 5	75 0	302	195	107
Dominican Republic 1991	0 0	0 0	0 0	8 9	6 1	12 0	5 1	4 7	5 5	5 6	5 5	5 6	90 9	93 9	87 6	233	122	111
Guatemala 1995	0 3	0 0	0 5	51 5	41 3	56 7	14 1	19 4	11 4	52 6	44 5	56 7	46 0	55 5	41 2	441	148	293
Haiti 1994	1 1	0 0	1 8	17 2	15 0	18 6	5 3	5 3	5 3	24 7	16 0	30 1	73 3	83 0	67 3	199	76	123
Paraguay 1990	0 5	0 0	0 8	7 9	7 2	8 4	6 0	7 7	4 7	10 4	9 8	10 9	88 9	89 7	88 3	202	86	115
Peru 1996	0 4	0 2	0 6	44 6	40 8	49 7	27 7	31 0	23 3	46 3	41 4	52 9	53 2	58 3	46 1	856	495	361

() = based on a small number of cases (25-49)

u = unknown (not available)

Table 3 13 Percentage of last born children less than 4 months of age receiving liquids and complementary foods, by mother's education

Percentage of last born children less than 4 months of age receiving liquids and complementary foods by mother's education Demographic and Health Surveys 1990 1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	No edu	Secondary	or higher	No edu	Secondary	or higher	No edu	Secondary	or higher	No edu	Secondary	or higher	No edu	Secondary	or higher	No edu	Secondary	or higher
Sub Saharan Africa																		
Burkina Faso 1993	31.9	37.5	*	66.3	58.1	*	2.3	3.3	*	3.3	0.0	*	0.7	4.4	*	381	43	13
Cameroon 1991	76.9	40.2	17.5	9.5	30.0	67.1	2.7	11.7	48.3	15.0	40.7	37.4	0.0	0.0	1.1	98	73	49
Central African																		
Republic 1994 95	63.1	55.1	(53.3)	17.7	22.1	(27.2)	1.2	2.4	(11.3)	29.0	33.1	(39.5)	0.5	0.0	(0.0)	150	131	28
Cote d'Ivoire 1994	65.0	55.6	*	34.0	43.6	*	4.0	6.0	*	3.0	2.6	*	0.0	0.0	*	100	117	13
Ghana 1993	73.1	73.0	(47.3)	15.5	14.6	(30.2)	3.7	8.4	(20.8)	10.2	11.6	(20.7)	1.6	0.0	(1.7)	284	98	40
Kenya 1993	36.2	29.9	18.1	30.6	47.8	61.0	39.5	34.0	23.9	21.0	29.5	31.7	1.4	1.3	4.2	60	178	78
Madagascar 1992	52.8	61.1	48.7	40.8	31.5	45.1	1.9	5.3	11.0	7.5	7.7	4.8	0.8	1.9	2.0	67	202	83
Malawi 1992	44.9	42.8	*	13.5	26.6	*	2.6	10.4	*	43.8	39.6	*	0.8	0.0	*	178	141	8
Mali 1995	79.4	79.9	(59.5)	16.6	14.6	(15.2)	5.9	8.2	(30.3)	2.4	0.3	(0.0)	0.2	0.0	(0.0)	550	86	25
Namibia 1992	(63.5)	66.8	40.5	(27.1)	25.7	27.5	(11.2)	14.5	35.0	(9.7)	2.6	6.2	(0.0)	0.4	7.5	35	129	92
Niger 1992	42.6	(16.9)	*	34.1	(54.0)	*	20.6	(24.3)	*	15.4	(19.1)	*	2.1	(0.0)	*	482	38	5
Nigeria 1990	57.6	50.3	21.7	16.7	19.9	47.1	20.6	35.3	65.2	10.1	5.1	2.0	1.9	1.6	0.6	312	151	62
Rwanda 1992	91.1	94.2	(83.0)	3.0	2.0	(0.0)	3.0	1.3	(17.0)	5.2	1.9	(0.0)	0.7	1.3	(0.0)	154	181	22
Senegal 1992 93	78.9	64.5	*	0.6	3.2	*	16.7	11.3	*	6.3	19.4	*	0.0	4.8	*	318	62	21
Tanzania 1991 92	70.8	61.1	*	13.7	25.4	*	14.3	14.7	*	2.5	7.0	*	0.0	1.2	*	167	320	13
Uganda 1995	83.1	72.1	60.7	3.6	8.4	12.0	9.1	20.1	32.5	6.6	3.8	0.0	0.0	1.0	0.0	131	239	40
Zambia 1992	70.4	66.4	58.4	1.0	10.7	17.1	2.7	4.4	15.2	25.9	22.0	24.4	0.0	1.1	0.0	66	286	71
Zimbabwe 1994	(48.2)	35.2	43.3	(33.5)	33.7	34.9	(2.1)	9.2	9.2	(34.6)	40.4	32.5	(0.0)	0.5	1.5	32	113	114
Near East/North Africa																		
Egypt 1992	59.6	55.5	45.5	29.3	32.0	39.4	13.8	19.5	20.1	2.5	0.3	3.6	2.6	4.4	3.2	277	99	122
Jordan 1990	45.3	34.9	38.8	40.0	49.2	41.9	20.4	21.4	19.5	4.8	6.5	6.8	1.3	5.1	7.4	51	77	342
Morocco 1992	74.6	*	*	11.9	*	*	15.0	*	*	0.8	*	*	2.7	*	*	260	17	17
Turkey 1993	43.5	37.6	(27.8)	53.8	41.1	(58.8)	9.5	15.9	(31.9)	12.1	14.0	(13.7)	2.7	7.6	(8.5)	61	130	41
Asia																		
Bangladesh 1993 94	68.6	53.1	53.9	13.3	26.7	28.6	20.9	27.2	32.5	2.0	2.5	0.0	1.7	1.2	1.5	220	130	67
India 1992 93	78.8	66.2	57.3	9.4	18.0	22.5	12.9	20.2	26.5	1.2	1.1	2.8	1.5	3.0	2.5	2 657	638	657
Indonesia 1994	41.0	50.3	49.3	38.5	29.1	24.6	7.6	6.4	21.6	39.0	33.2	23.9	1.0	3.1	1.8	107	595	318
Kazakhstan 1995	*	*	36.6	*	*	38.8	*	*	28.8	*	*	5.2	*	*	11.8	0	0	74
Nepal 1996	85.1	83.9	(77.0)	1.5	3.2	(0.0)	9.6	10.6	(21.4)	5.4	6.7	(12.3)	0.7	0.0	(0.0)	315	67	46
Pakistan 1990 91	40.8	(22.9)	12.4	42.3	(69.6)	77.9	24.8	(26.7)	42.8	2.4	(3.2)	6.9	4.0	(2.0)	2.7	382	54	66
Philippines 1993	*	61.3	30.6	*	17.8	21.2	*	16.2	34.5	*	1.1	1.2	*	9.0	24.2	13	191	280

continued

Table 3 13 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher
Latin America/Caribbean																		
Bolivia 1993 94	(79 0)	61 8	43 6	(14 3)	19 9	21 5	(8 0)	21 7	43 0	(0 0)	2 5	6 4	4 9	2 4	5 3	45	168	123
Brazil 1996	(20 6)	43 4	48 4	(40 1)	31 6	26 8	(54 8)	30 4	23 8	(15 2)	5 0	7 5	(12 6)	14 2	13 9	18	101	148
Colombia 1995	*	17 4	24 3	*	46 4	40 4	*	57 5	58 3	*	17 6	11 9	*	6 9	3 3	18	101	145
Dominican Republic 1991	*	24 1	19 6	*	45 4	39 5	*	34 6	47 6	*	0 4	4 6	*	16 9	22 6	16	112	98
Guatemala 1995	70 4	55 7	30 2	21 8	36 1	48 9	10 9	14 6	37 0	4 3	1 1	7 6	0 7	1 6	4 3	222	302	79
Haiti 1994	15 9	9 3	(6 0)	46 6	55 3	(30 2)	21 2	34 3	(67 2)	69 3	68 0	(45 6)	1 1	1 9	(15 6)	103	92	26
Paraguay 1990	*	28 9	16 0	*	51 1	52 1	*	17 5	43 6	*	12 6	15 5	*	11 7	19 9	6	184	70
Peru 1996	77 0	76 8	49 0	19 4	17 8	36 5	8 7	11 8	32 1	4 7	3 6	2 3	0 6	0 3	1 7	81	337	441

* = based on too few cases to show (0 24)

() = based on a small number of cases (25-49)

Table 3 14 Percentage of last born children 6 9 months of age receiving liquids and complementary foods, by mother's education

Percentage of last born children 6 9 months of age receiving liquids and complementary foods by mother's education Demographic and Health Surveys 1990 1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfeeding			Number of children		
	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher
Sub Saharan Africa																		
Burkina Faso 1993	24 0	30 9	*	55 3	46 8	*	3 0	5 0	*	41 8	49 2	*	0 4	0 0	*	331	38	14
Cameroon 1991	18 1	15 7	3 4	16 8	27 7	42 3	7 4	9 3	21 8	79 1	79 5	69 1	1 7	3 0	24 0	110	89	54
Central African																		
Republic 1994 95	4 8	7 7	(0 0)	31 1	47 4	(48 8)	3 5	4 1	(15 7)	93 1	90 4	(100 0)	0 6	1 0	(0 0)	162	92	37
Cote d'Ivoire 1994	29 4	19 9	(15 3)	22 3	37 6	(49 1)	6 4	8 9	(11 4)	63 9	73 3	(64 9)	0 0	1 3	(5 4)	301	98	26
Ghana 1993	26 5	17 5	*	67 3	71 5	*	2 0	13 1	*	29 6	39 4	*	1 0	0 0	*	98	137	14
Kenya 1993	2 3	3 2	1 1	34 5	40 4	60 5	56 7	64 4	85 1	86 1	89 4	95 3	0 0	0 9	0 2	74	241	89
Madagascar 1992	16 1	9 6	3 9	53 0	60 3	71 0	9 5	5 9	22 5	74 3	78 5	89 3	0 0	1 8	1 4	66	229	79
Malawi 1992	5 3	5 6	*	28 3	37 1	*	3 4	13 0	*	84 1	90 6	*	1 7	0 3	*	167	145	12
Mali 1995	50 1	51 3	(29 6)	31 2	28 5	(26 9)	16 6	17 0	(34 1)	32 2	31 4	(51 4)	0 4	0 0	(0 7)	567	65	28
Namibia 1992	(17 4)	16 1	3 8	(46 8)	59 2	54 3	(17 0)	14 5	25 0	(57 9)	70 5	58 9	(13 5)	7 9	23 7	43	135	87
Niger 1992	18 5	16 6	*	29 9	33 7	*	14 6	22 7	*	71 9	78 9	*	1 1	2 3	*	397	37	12
Nigeria 1990	37 5	11 0	9 2	12 6	26 0	49 7	14 4	38 9	50 4	46 9	61 8	56 2	2 2	2 8	4 3	388	141	89
Rwanda 1992	30 6	22 4	(10 8)	18 3	30 7	(30 4)	6 4	10 0	(41 2)	64 1	70 4	(76 3)	0 0	0 7	(4 1)	160	166	17
Senegal 1992 93	35 9	20 8	*	5 6	17 0	*	15 9	17 0	*	55 6	71 7	*	1 5	1 9	*	270	53	20
Tanzania 1991 92	11 7	9 4	(0 0)	40 2	59 1	(78 1)	31 6	37 9	(76 6)	50 8	62 1	(57 5)	3 0	0 4	(5 1)	150	347	28
Uganda 1995	25 4	15 5	7 6	36 3	46 0	45 4	20 4	39 0	58 7	59 4	65 8	65 2	0 1	2 3	11 1	160	276	52
Zambia 1992	11 6	6 5	6 1	28 5	40 9	47 0	7 6	10 8	34 8	84 7	87 5	89 7	0 0	0 4	3 2	67	280	102
Zimbabwe 1994	(8 8)	2 7	1 6	(36 3)	35 2	49 3	(7 2)	19 4	21 0	(83 5)	96 9	92 1	(0 0)	0 0	2 9	42	128	104
Near East/North Africa																		
Egypt 1992	26 8	16 5	6 3	35 3	37 9	51 1	32 0	38 9	53 8	47 4	43 3	64 0	3 4	14 6	14 6	236	93	171
Jordan 1990	13 9	6 8	9 7	34 7	45 8	37 5	26 0	31 6	24 2	53 5	43 7	48 0	25 0	28 0	32 2	93	110	333
Morocco 1992	25 5	(2 9)	(6 3)	34 0	(29 4)	(12 5)	25 5	(29 4)	(18 8)	37 1	(41 2)	(12 5)	12 7	(38 2)	(75 0)	259	34	32
Turkey 1993	6 6	4 1	(2 6)	59 9	56 5	(47 9)	11 9	9 5	(13 4)	51 9	48 4	(34 4)	20 9	36 6	(49 5)	88	142	47
Asia																		
Bangladesh 1993 94	32 5	25 3	12 9	30 5	29 2	47 8	39 3	45 1	63 3	26 0	31 7	36 2	0 0	1 1	5 5	221	103	75
India 1992 93	40 4	20 3	14 5	32 1	47 8	51 7	32 6	54 7	64 4	26 3	39 3	42 2	2 8	3 5	10 2	2 730	693	821
Indonesia 1994	8 2	7 8	3 3	46 5	60 3	66 2	12 2	12 2	29 0	86 7	85 3	86 2	3 0	3 5	8 6	92	609	370
Kazakhstan 1995	*	*	1 9	*	*	64 2	*	*	46 3	*	*	63 5	*	*	30 2	0	1	85
Nepal 1996	31 0	24 5	17 5	38 7	34 0	44 9	34 5	43 9	67 1	61 6	63 2	67 2	0 8	0 0	2 0	330	50	57
Pakistan 1990 91	34 2	(15 4)	15 5	37 4	(42 7)	43 6	31 2	(42 3)	31 8	27 0	(44 0)	34 4	6 1	(14 4)	31 2	352	37	49
Philippines 1993	*	6 5	3 0	*	52 6	38 2	*	28 2	23 5	*	64 2	42 9	*	17 8	47 8	15	252	365

continued

Table 3 14 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfeeding			Number of children		
	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher
Latin America/Caribbean																		
Bolivia 1993 94	9 5	5 8	1 7	84 3	76 1	68 2	18 6	34 6	38 0	84 5	80 0	73 6	0 0	6 7	21 2	49	182	159
Brazil 1996	*	15 8	14 4	*	27 1	29 1	*	25 5	21 9	*	8 2	13 3	*	48 9	50 9	14	116	161
Colombia 1995	*	0 5	0 0	*	62 9	57 7	*	44 9	39 9	*	62 4	59 5	*	29 6	38 1	12	149	166
Dominican Republic 1991	*	1 8	0 0	*	37 7	24 1	*	29 4	20 4	*	28 0	17 1	*	50 3	75 7	17	161	109
Guatemala 1995	18 9	16 2	7 6	73 5	70 8	60 9	11 9	24 3	40 6	52 6	56 6	60 9	1 8	7 3	23 4	227	295	89
Haiti 1994	1 6	3 5	*	51 0	69 5	*	35 2	40 0	*	88 6	87 5	*	2 5	3 3	*	129	94	24
Paraguay 1990	*	3 2	2 0	*	58 3	38 2	*	31 6	31 8	*	65 8	46 8	*	25 3	49 5	10	187	68
Peru 1996	20 1	11 1	5 0	68 7	70 3	73 5	37 9	39 2	45 4	66 3	70 9	74 3	0 0	3 9	13 4	91	363	482

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table 3.15 Percentage of last born children 12-15 months of age receiving liquids and complementary foods, by mother's education

Percentage of last born children 12-15 months of age receiving liquids and complementary foods by mother's education Demographic and Health Surveys 1990-1996

Region, country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub-Saharan Africa																		
Burkina Faso 1993	8.7	(5.8)	*	46.1	(42.9)	*	3.5	(14.5)	*	81.7	(87.0)	*	1.9	(1.5)	*	339	33	9
Cameroon 1991	(7.8)	12.2	0.9	(15.6)	30.6	31.5	(11.5)	10.2	14.6	(83.0)	67.9	59.8	(6.9)	15.2	37.0	57	80	59
Central African																		
Republic 1994-95	2.9	0.8	3.4	34.6	38.6	51.6	8.1	6.5	21.5	94.4	97.0	85.5	2.1	2.2	9.6	130	119	55
Cote d'Ivoire 1994	7.6	17.0	(0.0)	30.6	30.9	(43.8)	5.9	9.9	(15.6)	87.4	70.1	(66.3)	1.9	7.1	(25.9)	238	102	26
Ghana 1993	7.1	10.9	*	70.6	62.7	*	4.7	17.3	*	65.9	66.4	*	2.4	4.5	*	85	110	10
Kenya 1993	2.3	0.9	0.0	43.0	42.4	63.1	55.6	58.8	78.5	85.0	90.1	90.0	12.1	7.4	9.0	77	223	92
Madagascar 1992	0.0	2.2	0.0	40.5	55.5	63.5	3.3	6.2	22.4	90.9	89.1	80.2	7.4	6.4	17.0	76	227	85
Malawi 1992	5.4	3.4	*	37.8	41.5	*	4.0	15.1	*	89.1	86.6	*	2.1	7.7	*	139	116	11
Mali 1995	10.4	5.3	(0.0)	39.9	50.9	(66.8)	19.2	29.6	(47.1)	78.8	88.1	(89.3)	6.2	0.0	(7.3)	529	58	30
Namibia 1992	(4.5)	2.7	2.3	(39.8)	55.9	38.8	(13.3)	14.2	15.1	(67.6)	69.7	41.9	(23.4)	22.0	52.0	50	157	85
Niger 1992	4.2	(0.0)	*	29.7	(32.5)	*	14.0	(22.4)	*	91.0	(87.8)	*	2.7	(12.2)	*	434	37	7
Nigeria 1990	19.1	16.8	2.5	15.4	25.3	30.4	15.5	20.1	21.4	59.0	67.9	61.9	10.0	10.8	32.8	351	134	70
Rwanda 1992	5.9	3.1	*	29.7	45.5	*	13.0	12.9	*	92.0	91.8	*	0.0	2.2	*	160	185	15
Senegal 1992-93	13.4	10.0	*	14.4	40.0	*	20.4	18.3	*	77.9	78.3	*	5.0	8.3	*	299	60	17
Tanzania 1991-92	4.7	4.2	*	43.2	58.5	*	25.0	38.0	*	77.7	87.5	*	5.8	4.9	*	166	371	17
Uganda 1995	4.5	3.0	0.4	43.5	44.8	61.2	14.2	32.1	45.8	83.8	82.0	74.1	8.8	11.7	18.5	159	317	52
Zambia 1992	6.9	3.6	1.4	21.5	50.6	61.1	8.6	14.7	16.6	82.9	87.0	77.7	8.5	7.0	15.3	65	248	77
Zimbabwe 1994	(0.0)	0.9	1.4	(30.3)	39.5	46.6	(5.5)	24.1	32.6	(87.1)	90.9	84.8	(9.7)	8.2	13.7	32	113	72
Near East/North Africa																		
Egypt 1992	14.3	1.5	0.8	33.1	39.8	47.6	30.1	41.5	41.2	58.9	71.1	58.9	17.7	19.8	30.8	255	121	158
Jordan 1990	7.8	6.9	2.6	33.8	26.9	29.8	15.3	13.9	21.1	42.5	37.4	35.2	41.7	49.0	55.5	84	93	288
Morocco 1992	12.8	(3.4)	(0.0)	35.3	(20.7)	(4.9)	25.6	(20.7)	(7.3)	48.1	(34.5)	(12.2)	24.0	(62.1)	(87.8)	258	29	41
Turkey 1993	1.3	0.8	(0.0)	58.1	46.8	(20.8)	11.4	3.1	(4.1)	48.2	44.2	(21.3)	40.6	51.7	(76.3)	79	136	44
Asia																		
Bangladesh 1993-94	16.9	10.4	6.9	22.4	34.9	47.3	34.7	46.5	58.1	67.0	56.4	50.9	1.2	6.0	10.4	302	119	88
India 1992-93	9.7	5.4	2.5	60.6	59.1	53.5	41.5	51.5	56.9	67.1	67.5	58.0	6.7	11.7	27.3	2 847	695	724
Indonesia 1994	3.4	3.5	0.1	55.3	72.3	71.5	6.1	16.7	31.6	83.4	87.5	82.2	7.2	8.7	17.4	113	671	339
Kazakhstan 1995	*	*	0.0	*	*	52.3	*	*	34.7	*	*	51.4	*	*	47.7	0	0	96
Nepal 1996	4.5	2.1	(3.2)	72.1	79.1	(80.2)	37.1	55.9	(68.4)	91.6	94.9	(92.1)	3.2	3.0	(4.7)	400	53	46
Pakistan 1990-91	13.7	12.8	5.9	27.9	38.4	21.6	36.4	47.7	17.4	52.4	51.3	35.9	15.9	23.2	47.0	411	60	61
Philippines 1993	*	1.7	1.7	*	47.0	36.4	*	22.9	21.9	*	61.9	42.1	*	28.9	52.6	15	222	304

continued

Table 3 15 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher
Latin America/Caribbean																		
Bolivia 1993 94	0 0	1 3	2 4	87 2	74 8	58 1	23 9	33 1	39 2	90 1	75 4	59 6	6 6	22 2	36 7	52	156	128
Brazil 1996	(4 3)	3 5	4 1	(41 9)	28 2	20 5	(36 0)	24 0	14 3	(10 4)	8 3	9 7	(44 0)	61 4	71 0	26	116	171
Colombia 1995	*	1 1	0 8	*	43 2	35 3	*	31 7	28 9	*	48 1	37 1	*	50 8	62 1	16	129	180
Dominican Republic 1991	(1 8)	1 0	0 0	(50 3)	30 2	14 8	(15 9)	22 3	5 8	(28 3)	21 2	13 7	(37 1)	66 9	84 6	28	125	101
Guatemala 1995	1 9	3 7	0 0	85 2	68 9	45 5	7 4	19 3	31 7	83 7	71 9	46 8	9 5	23 4	53 2	232	325	79
Haiti 1994	0 0	2 4	(0 0)	47 2	60 4	(24 6)	24 5	34 2	(14 1)	90 2	89 3	(26 8)	9 8	8 2	(69 7)	104	86	31
Paraguay 1990	*	1 0	2 2	*	36 5	16 5	*	32 2	15 7	*	41 3	21 0	*	54 7	76 8	5	190	61
Peru 1996	2 9	1 0	0 1	87 7	78 3	67 1	35 1	43 9	50 6	90 1	84 2	67 6	4 8	13 1	29 5	92	402	535

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table 3.16 Percentage of last born children 20-23 months of age receiving liquids and complementary foods, by mother's education

Percentage of last born children 20-23 months of age receiving liquids and complementary foods by mother's education Demographic and Health Surveys 1990-1996

Region, country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	No edu cator	Secondary Primary	or higher	No edu cator	Secondary Primary	or higher	No edu cator	Secondary Primary	or higher	No edu cator	Secondary Primary	or higher	No edu cator	Secondary Primary	or higher	No edu cator	Secondary Primary	or higher
Sub Saharan Africa																		
Burkina Faso 1993	9.4	(0.0)	*	27.2	(29.6)	*	4.0	(12.8)	*	71.0	(53.6)	*	14.7	(35.3)	*	260	25	9
Cameroon 1991	4.4	0.8	(0.0)	9.8	11.4	(0.0)	7.8	4.0	(0.0)	59.9	20.2	(0.0)	35.7	77.2	(100.0)	97	71	40
Central African																		
Republic 1994-95	1.5	1.2	(0.0)	23.2	21.2	(13.1)	1.6	4.0	(3.3)	68.0	43.2	(28.6)	30.5	55.7	(71.4)	117	84	32
Côte d'Ivoire 1994	6.6	0.0	(0.0)	18.0	13.8	(5.2)	3.1	1.4	(0.0)	50.6	33.1	(6.9)	42.4	66.9	(93.1)	234	70	33
Ghana 1993	5.3	4.7	*	49.3	32.1	*	6.7	2.8	*	58.7	34.0	*	28.0	53.8	*	75	106	12
Kenya 1993	(3.0)	0.5	0.0	(22.2)	24.8	40.6	(48.3)	31.6	37.2	(69.2)	54.7	53.6	(27.8)	44.8	45.0	45	186	82
Madagascar 1992	(0.0)	0.0	1.0	(34.0)	23.6	23.1	(6.0)	3.8	8.3	(73.0)	50.5	31.3	(27.0)	49.5	65.2	51	166	52
Malawi 1992	4.1	1.3	*	20.4	21.1	*	4.5	10.4	*	67.4	45.0	8	28.5	51.5	*	122	113	5
Mali 1995	4.1	2.0	*	30.8	24.4	*	18.1	6.3	*	57.5	61.6	*	35.5	36.4	*	357	46	18
Namibia 1992	(0.0)	1.1	0.0	(33.0)	18.6	10.1	(8.6)	7.2	2.6	(37.9)	30.2	10.1	(58.7)	68.8	89.9	31	114	85
Niger 1992	4.6	*	*	13.0	*	*	9.9	*	*	59.2	*	*	35.1	*	*	252	16	7
Nigeria 1990	11.9	3.7	2.0	8.3	6.4	9.6	9.2	2.2	1.8	43.7	26.1	15.5	35.4	68.1	82.5	165	86	62
Rwanda 1992	2.6	1.8	*	34.0	41.5	*	8.7	4.9	*	88.8	82.3	*	6.9	14.2	*	132	130	14
Senegal 1992-93	10.9	(0.0)	*	4.0	(11.5)	*	12.4	(0.0)	*	42.6	(23.1)	*	44.6	(76.9)	*	202	26	7
Tanzania 1991-92	2.6	1.3	*	28.0	40.1	*	21.4	19.2	*	55.1	55.7	*	40.5	39.7	*	164	304	11
Uganda 1995	2.2	0.0	0.0	30.7	18.2	17.9	7.2	7.2	17.6	59.4	35.7	26.6	36.2	63.1	73.4	155	263	42
Zambia 1992	0.0	1.2	0.0	13.1	25.2	4.7	0.0	3.9	4.7	46.1	39.0	9.4	53.9	58.2	90.6	49	225	69
Zimbabwe 1994	(1.4)	0.0	0.0	(32.4)	14.1	9.6	(6.9)	7.1	8.0	(49.3)	27.0	14.0	(49.3)	73.0	86.0	37	105	74
Near East/North Africa																		
Egypt 1992	1.6	0.0	0.7	30.5	23.3	17.9	21.9	32.7	15.8	44.5	43.4	22.4	50.5	53.6	74.7	219	112	117
Jordan 1990	3.8	1.7	0.0	12.1	11.8	6.6	10.4	9.7	6.4	25.7	14.4	11.5	68.9	79.5	88.0	84	83	207
Morocco 1992	4.3	(0.0)	(0.0)	11.8	(5.6)	(3.4)	6.6	(5.6)	(6.9)	17.5	(8.3)	(3.4)	73.9	(91.7)	(93.1)	211	36	29
Turkey 1993	(0.0)	1.2	(0.0)	(37.8)	10.0	(3.3)	(5.6)	0.0	(0.0)	(31.7)	10.1	(3.3)	(62.2)	87.4	(96.7)	51	93	32
Asia																		
Bangladesh 1993-94	8.2	3.1	(4.7)	22.1	34.0	(53.2)	37.7	42.4	(53.5)	66.3	72.5	(54.6)	6.8	6.5	(22.3)	175	90	42
India 1992-93	5.1	1.7	0.3	57.2	55.5	40.8	35.3	46.0	37.4	66.5	58.5	45.9	19.5	29.1	49.7	1 889	484	582
Indonesia 1994	0.9	1.0	0.0	59.1	57.7	51.2	11.4	11.9	30.9	72.5	68.1	60.7	26.5	30.3	39.3	99	530	242
Kazakhstan 1995	*	*	0.0	*	*	24.1	*	*	22.8	*	*	24.1	*	*	75.9	0	0	85
Nepal 1996	0.8	(0.0)	(0.0)	77.1	(84.2)	(81.7)	35.6	(58.8)	(59.2)	92.0	(94.0)	(81.7)	6.5	(6.0)	(18.3)	331	43	28
Pakistan 1990-91	6.6	*	(11.3)	26.6	*	(10.1)	19.4	*	(9.2)	50.0	*	(19.5)	36.2	*	(67.3)	204	16	31
Philippines 1993	*	0.5	0.3	*	26.4	15.2	*	13.2	10.5	*	30.2	16.8	*	66.7	81.8	8	157	252

continued

Table 3 16 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher	No edu cation	Primary	Secondary or higher
Latin America/Caribbean																		
Bolivia 1993 94	(0 0)	0 0	0 0	(42 6)	41 2	32 7	(13 6)	18 5	20 5	(52 8)	46 1	32 7	(47 2)	53 0	66 4	41	134	144
Brazil 1996	*	2 0	1 5	*	17 0	11 5	*	13 7	11 5	*	1 3	5 1	*	76 3	84 7	15	96	148
Colombia 1995	*	0 0	0 0	*	21 4	16 3	*	15 5	12 9	*	22 0	16 3	*	78 0	83 7	9	145	149
Dominican Republic 1991	*	0 0	0 0	*	12 1	5 9	*	5 6	5 0	*	6 7	4 5	*	87 6	94 1	12	120	101
Guatemala 1995	0 7	0 2	(0 0)	66 6	47 8	(20 9)	12 7	16 2	(8 9)	64 9	51 1	(20 9)	31 6	48 7	(79 1)	161	228	52
Haiti 1994	2 5	0 0	(0 0)	19 9	13 7	(19 8)	5 4	4 6	(7 6)	32 1	18 7	(19 8)	64 2	80 4	(80 2)	87	87	25
Paraguay 1990	*	0 6	(0 0)	*	9 4	(3 6)	*	6 1	(6 3)	*	11 0	(8 9)	*	88 1	(91 1)	5	146	50
Peru 1996	1 4	0 4	0 3	63 8	43 7	41 9	25 9	20 9	33 4	70 2	45 9	42 4	27 4	53 6	57 3	76	342	438

* = based on too few cases to show (0 24)
 () = based on a small number of cases (25 49)

Among children under 4 months of age, full breastfeeding is more common in rural areas than in urban areas across countries in all regions (Table 3 9) In sub-Saharan Africa, the highest rate of full breastfeeding is in rural Rwanda, at 93 percent, and the lowest rate is in rural Burkina Faso, at 33 percent In Burkina Faso, Ghana, and Niger, there are no differences between urban and rural areas, but in the other sub-Saharan countries, full breastfeeding is more frequently practiced in the rural areas In Near East/North Africa, the highest prevalence of full breastfeeding is rural areas of Morocco (77 percent), the lowest is in urban areas of Turkey (31 percent) In Asia, the highest rate of full breastfeeding is in rural Nepal, at 85 percent, the lowest in urban Pakistan, at 16 percent In Latin America/Caribbean full breastfeeding is, in general, less common than in the other regions, but the highest rate is in rural Peru, at 75 percent, and the lowest in urban Haiti, at 7 percent The higher rates of full breastfeeding in rural areas reflect a combination of the need for urban mothers to return to the workplace more often than rural mothers and therefore begin weaning earlier, the greater availability and marketing of infant foods and milk products, greater urban

purchasing power, and the increased tendency of urban women to emulate Western-style infant feeding practices Table 3 17 presents a regional summary of current feeding practices for infants less than 4 months of age by urban-rural residence, and Figure 3 4 shows urban-rural differentials for full breastfeeding for this age group by region

Table 3 10 presents current status feeding practices among children 6 to 9 months, by urban-rural residence By that age, children should be receiving complementary foods in addition to breast milk Overall, urban-rural differences in the percentage of children 6 to 9 months of age receiving complementary foods areas are small in most countries Figure 3 5 shows those differences by region In Latin America/Caribbean, Near East/North Africa, and Asia, the percentages of children receiving breast milk and complementary foods are higher in rural than in urban areas This pattern reflects the greater likelihood that urban infants are weaned somewhat earlier than rural infants, which is evidenced by the higher percentage of children in urban areas not breastfeeding, particularly in Near East/North Africa and Latin America/Caribbean (see Table 3 18)

Table 3 17 Regional summary of current status feeding practices for last born children less than 4 months of age, by urban rural residence

Percentage of last born children less than 4 months of age in specific feeding categories by urban rural residence Demographic and Health Surveys 1990 1996

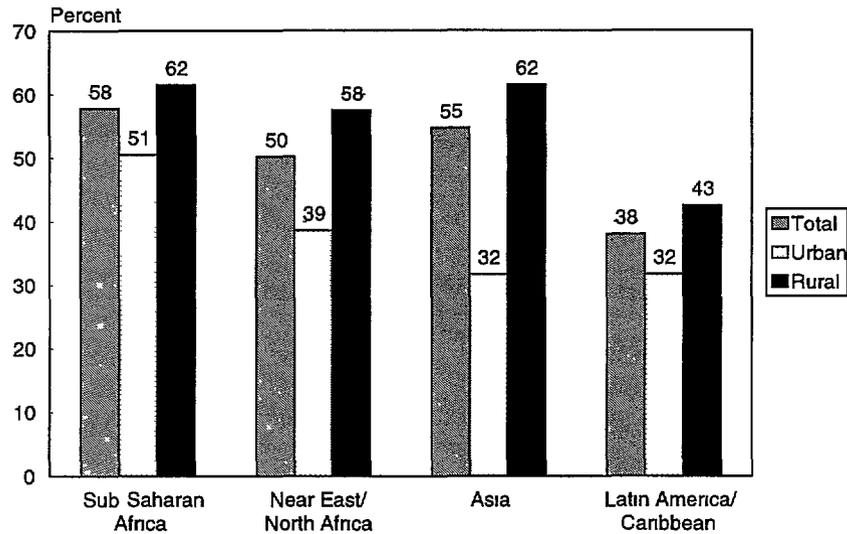
Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa	57.8	50.5	61.5	25.1	32.4	23.1	12.6	20.2	10.6	14.8	11.5	12.8	1.0	1.3	1.0
Near East/North Africa	50.2	38.6	57.5	34.2	39.2	30.9	17.7	25.7	12.0	5.8	6.5	5.2	5.0	6.3	4.4
Asia	54.7	42.5	61.6	24.5	27.7	20.5	20.9	27.2	17.5	7.2	6.4	7.9	5.6	7.2	17.2
Latin America/Caribbean	38.0	31.7	42.5	37.1	37.4	38.4	31.2	39.7	24.8	14.2	13.9	14.2	7.5	10.0	13.4

Table 3 18 Regional summary of current status feeding practices for last born children 6 9 months of age, by urban rural residence

Percentage of last born children 6 9 months of age in specific feeding categories by urban rural residence Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa	17.2	11.0	19.9	39.2	48.9	36.9	18.7	24.9	16.9	68.1	69.9	66.0	2.2	5.7	1.2
Near East/North Africa	13.4	9.0	15.6	41.9	43.1	42.2	25.7	30.5	22.6	45.7	44.0	46.8	23.7	30.6	19.1
Asia	18.9	11.9	23.3	45.5	47.4	42.1	35.5	39.2	32.1	50.5	44.4	49.6	12.3	15.0	5.9
Latin America/Caribbean	6.4	4.4	8.3	56.0	53.3	59.8	32.6	35.1	31.4	55.9	52.4	59.6	25.9	33.8	17.2

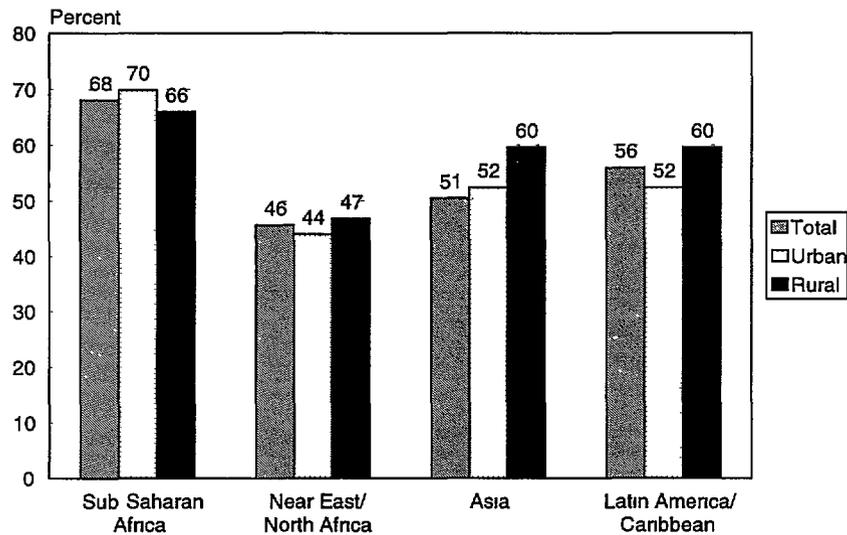
Figure 3 4 Percentage of children less than 4 months of age fully breastfed, by urban-rural residence and region



Note Based on last born children only

Source DHS Surveys 1990 1996

Figure 3 5 Percentage of children 6 to 9 months of age receiving breast milk and complementary foods, by urban-rural residence and region



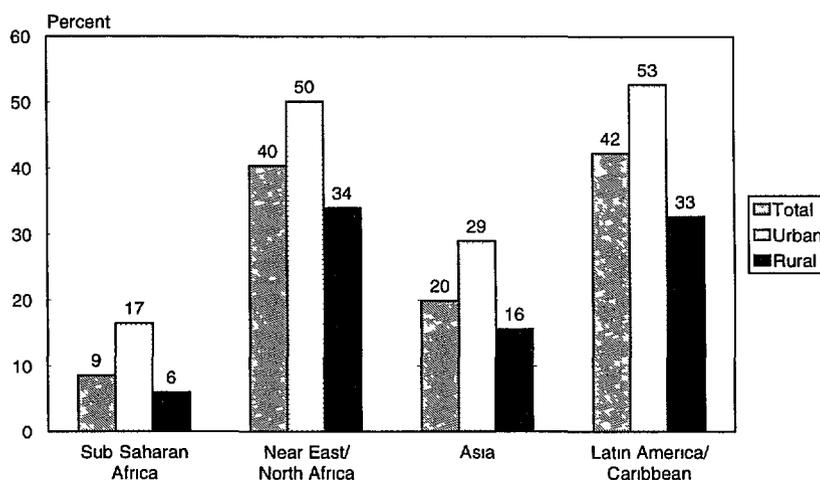
Note Based on last born children only

Source DHS Surveys 1990 1996

Among children 12 to 15 months of age, there are substantial differences between urban and rural areas in first-year breastfeeding continuation rates, with rural areas breastfeeding significantly longer, as shown in Table 3 11 (Table 3 11 shows the percentage of children not breastfeeding, the inverse of the first-year continuation rates) In sub-Saharan Africa, urban Namibia, at 51 percent, has the highest rate of non-breastfeeding at 12 to 15 months (i e , the lowest first-year continuation rate), followed by urban Cameroon at 32 percent In Near East/North Africa, Morocco has the highest urban non-breastfeeding rate (64 percent), in Asia, the Philippines (56 percent), and in Latin America/Caribbean, the Dominican Republic (86 percent) Figure 3 6 shows the overall urban-rural differences in non-breastfeeding rates at 12 to 15 months of age by region In Latin America/Caribbean and Near East/North Africa, rural children are breastfed about 30 percent more often than urban children, in sub-Saharan Africa about two-thirds more often, and in Asia about twice as often Table 3 19 presents a regional summary of current status feeding practices for children 12 to 15 months of age, by urban-rural residence

Table 3 12 presents current status feeding practices for children 20 to 23 months of age, by urban-rural residence The proportion of children not breastfeeding at this age is important because it represents the inverse of the second-year breastfeeding continuation rate As with children 12 to 15 months of age, urban children 20 to 23 months are more likely to not be breastfeeding than their rural counterparts, reflecting the fact that they are weaned earlier The lowest second-year continuation rates are found in urban areas of the Dominican Republic, Paraguay, Turkey, and Morocco, the highest second-year continuation rates are in the rural areas of Bangladesh, Nepal, Rwanda, and Burkina Faso It is evident from Figure 3 7, depicting overall urban-rural differences in the second-year breastfeeding rate by region, that the longest breastfeeding occurs in Asia, followed by sub-Saharan Africa This pattern was seen with the median breastfeeding duration data (see section 2 4) Latin America/Caribbean and Near East/North Africa have similar second-year continuation rates overall and in rural areas in urban areas the second-year continuation rates are higher in urban Latin America/Caribbean than in urban Near East/North Africa Table 3 20 is a regional summary of current status feeding categories for children 20 to 23 months of age, by urban-rural residence

Figure 3 6 Percentage of children 12 to 15 months of age not breastfeeding, by urban-rural residence and region



Note Based on last born children only

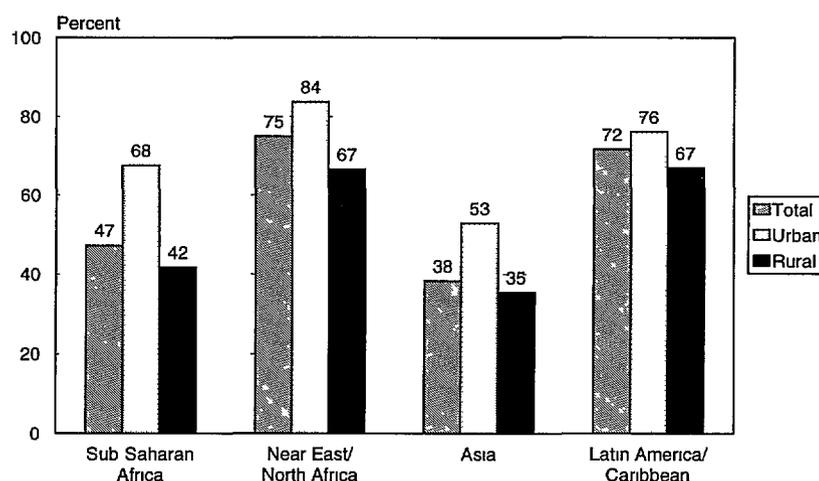
Source DHS Surveys 1990 1996

Table 3 19 Regional summary of current status feeding practices for last born children 12 15 months of age, by urban rural residence

Percentage of last born children 12 15 months of age in specific feeding categories by urban rural residence Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa	5.8	3.2	6.9	40.9	47.4	39.0	18.6	25.8	17.1	81.1	76.5	82.2	8.6	16.5	6.0
Near East/North Africa	5.8	2.7	8.0	36.2	30.9	39.9	20.8	22.4	18.9	45.7	40.3	49.1	40.4	50.1	34.0
Asia	6.0	5.3	6.6	50.7	47.3	52.1	34.6	32.7	34.6	65.4	54.3	68.6	19.9	29.0	15.6
Latin America/Caribbean	1.6	1.5	1.8	48.4	40.5	55.6	27.1	24.3	30.0	51.1	42.0	59.1	42.3	52.7	32.7

Figure 3 7 Percentage of children 20 to 23 months of age not breastfeeding, by urban-rural residence and region



Note Based on last born children only

Source DHS Surveys 1990 1996

Table 3 20 Regional summary of current status feeding practices for last born children 20 23 months of age, by urban rural residence

Percentage of last born children 20 23 months of age in specific feeding categories by urban rural residence Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa	3.1	1.5	3.6	21.6	18.5	22.4	9.1	6.9	9.4	47.9	29.8	52.5	47.2	67.5	41.7
Near East/North Africa	1.6	0.9	2.1	15.3	10.6	20.5	9.8	8.3	11.3	21.0	13.5	27.9	74.9	83.7	66.5
Asia	2.6	0.6	3.1	41.1	34.7	42.1	26.9	23.6	26.6	53.9	43.6	55.8	38.3	52.9	35.4
Latin America/Caribbean	0.6	0.3	0.7	25.0	21.9	28.2	12.9	13.9	13.0	25.3	21.7	28.7	71.6	76.1	66.9

Current status feeding practices for children less than 4 months of age by mother's education are shown in Table 3 13 Full breastfeeding is most common among children of mothers with no education across all regions In Asia, however, there is no overall difference in prevalence of full breastfeeding between children of mothers with no education and those with mothers having primary school education In general, full breastfeeding declines with increasing level of education The largest differences are in sub-Saharan Africa and Asia, where children of women with primary education are more than 20 percent more likely to be fully breastfed than children of women with higher education Children of more educated women receive more water- and milk-based liquids A regional summary of current status feeding practices for children less than 4 months of age, by mother's education is presented in Table 3 21 Figure 3 8 shows the regional prevalence rates for full breastfeeding by mother's education

Current status feeding practices for children 6 to 9 months of age by mother's education are shown in Table 3 14 As noted, the indicator of interest at this age is the percentage of children receiving complementary foods In Latin America/Caribbean, the proportion of infants breastfeeding and receiving complementary foods declines with increasing level of education (see Figure 3 9), whereas the opposite is true in Near East/North Africa and sub-Saharan Africa This may reflect the tendency among more educated women in Latin America/Caribbean to wean infants earlier thus lowering the overall prevalence of breastfeeding in this group In Asia, the percentage of infants receiving complementary foods is lowest among uneducated mothers, followed by those with secondary education or more, and highest among the group with primary education A regional summary of current status feeding practices for

infants 6 to 9 months of age by mother's education is presented in Table 3 22

At 12 to 15 months, mother's level of education affects first-year breastfeeding continuation rates, as shown in Table 3 15 and Figure 3 10 There is a strong positive relationship between the proportion of children not breastfed at this age and mother's level of education, particularly in Latin America/Caribbean, where the first-year breastfeeding rates are lowest among the most educated women Clearly, with increasing education women discontinue breastfeeding earlier This pattern is due to a variety of factors including the return to the workplace, increasing demands on women's time, and exposure to Western infant feeding practices Regionally (Figure 3 10), Latin America/Caribbean countries have the widest variation in the proportion not breastfeeding according to mother's education, and Near East/North Africa countries the least A regional summary of current status feeding practices for children 12 to 15 months of age by mother's education is shown in Table 3 23

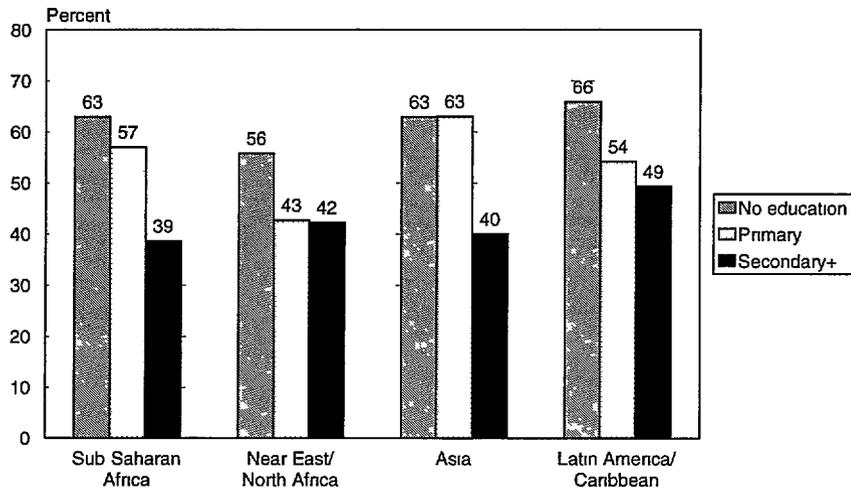
At 20 to 23 months of age (see Table 3 16), the relationship between mother's education and the proportion of children not breastfeeding is similar to the pattern seen at 12 to 15 months As expected at this age, many more children are not breastfed across all countries and levels of education, i e , the second-year breastfeeding continuation rates are lower than the first year's As Figure 3 11 shows, the second-year continuation rates are highest in the Asian countries, again reflecting the tradition of long breastfeeding duration in this region, and lowest in Near East/North Africa A regional summary of current status feeding practices for children 20 to 23 months of age by mother's level of education is shown in Table 3 24

Table 3 21 Regional summary of current status feeding practices for last born children less than 4 months of age, by mother's education

Percentage of last born children less than 4 months of age in specific feeding categories by mother's education Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub Saharan Africa	62.9	57.0	38.6	20.1	25.2	34.6	9.8	12.0	30.0	13.1	16.0	13.9	0.5	1.1	1.5
Near East/North Africa	55.8	42.7	42.2	33.8	40.8	40.7	14.7	18.9	19.8	5.1	6.9	5.2	2.3	5.7	5.3
Asia	62.9	63.0	40.0	21.0	19.0	35.6	15.2	16.1	31.1	10.0	8.9	6.7	1.8	3.3	7.4
Latin America/Caribbean	65.8	54.2	49.3	17.5	26.6	29.1	12.1	14.9	19.3	8.5	13.3	13.5	0.7	2.2	2.4

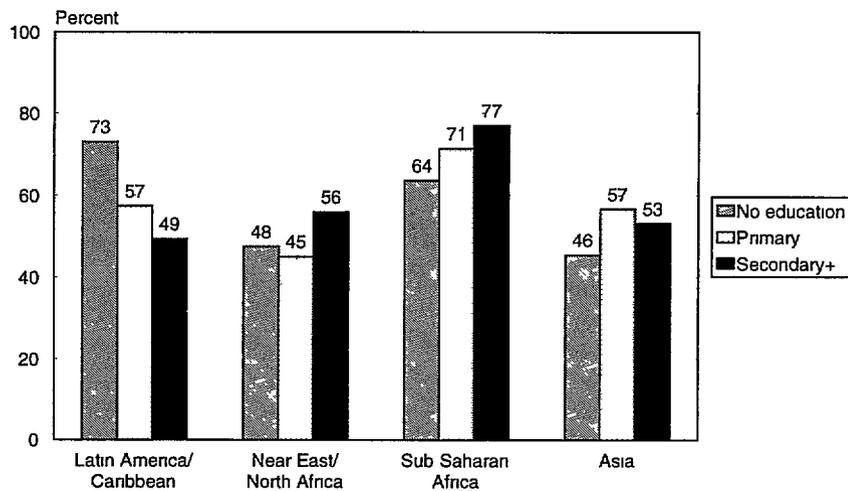
Figure 3 8 Percentage of children less than 4 months of age fully breastfed, by mother's level of education and region



Note Based on last born children only

Source DHS Surveys 1990 1996

Figure 3 9 Percentage of children 6 to 9 months of age receiving complementary foods, by mother's level of education and region



Note Based on last born children only

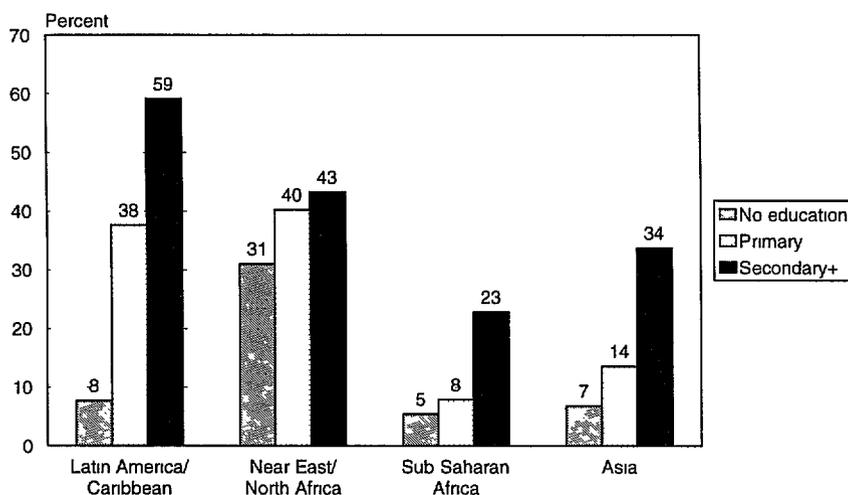
Source DHS Surveys 1990 1996

Table 3 22 Regional summary of current status feeding practices for last born children 6 9 months of age, by mother s education

Percentage of last born children 6 9 months of age in specific feeding categories by mother s education Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	No edu	Second	No	No	Second	No	Second	No	Second	No	Second	No	Second		
	cation	ary or	edu	cation	ary or	cation	ary or	cation	ary or	cation	ary or	cation	ary or		
	Primary	higher	Primary	Primary	higher	Primary	Primary	higher	Primary	Primary	higher	Primary	Primary	higher	
Sub Saharan Africa	21.2	15.4	3.7	32.6	41.6	52.4	14.2	20.1	39.9	63.6	71.4	77.0	0.9	1.5	7.9
Near East/North Africa	18.2	9.1	8.0	41.0	46.7	44.3	23.9	26.7	39.0	47.5	45.1	56.0	15.5	26.4	23.4
Asia	29.3	16.9	9.8	37.0	44.8	50.9	30.0	36.8	46.5	45.5	56.7	53.2	2.5	5.2	19.4
Latin America/Caribbean	12.5	7.2	4.4	69.4	59.1	50.2	25.9	33.7	34.0	73.0	57.4	49.4	1.1	21.9	38.9

Figure 3 10 Percentage of children 12 to 15 months of age not breastfeeding, by mother's level of education and region



Note: Based on last born children only

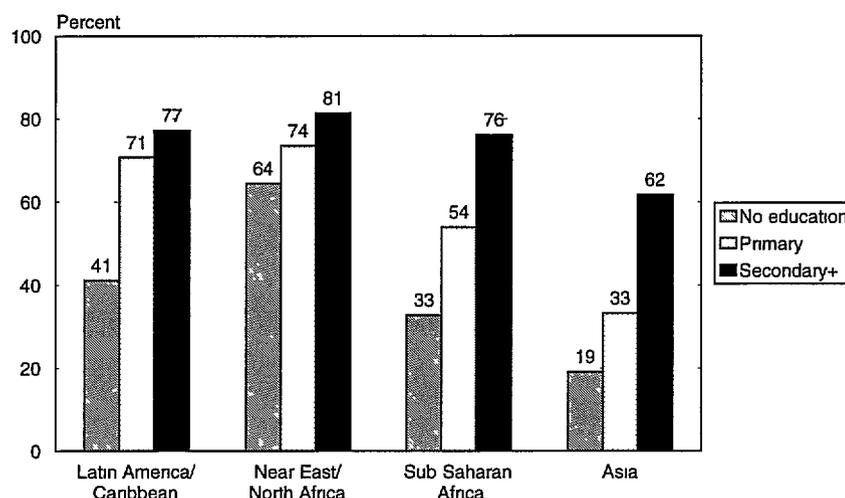
Source: DHS Surveys 1990 1996

Table 3 23 Regional summary of current status feeding practices for last born children 12 15 months of age, by mother s education

Percentage of last born children 12 15 months of age in specific feeding categories by mother s education Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	No edu	Second	No	No	Second	No	Second	No	Second	No	Second	No	Second		
	cation	ary or	edu	cation	ary or	cation	ary or	cation	ary or	cation	ary or	cation	ary or		
	Primary	higher	Primary	Primary	higher	Primary	Primary	higher	Primary	Primary	higher	Primary	Primary	higher	
Sub Saharan Africa	6.4	5.0	1.2	36.4	45.5	49.8	14.9	21.2	29.8	82.2	82.7	72.9	5.4	7.9	22.8
Near East/North Africa	9.1	3.1	0.9	40.1	37.8	38.7	20.6	19.5	31.2	49.4	50.9	47.1	31.0	40.2	43.2
Asia	9.6	6.0	2.9	47.7	55.1	47.1	31.2	40.2	36.8	72.3	69.9	53.4	6.8	13.6	33.7
Latin America/Caribbean	1.2	1.9	1.2	76.8	52.6	36.8	22.7	30.1	26.6	88.5	55.0	36.5	7.7	37.6	59.1

Figure 3 11 Percentage of children 20 to 23 months of age not breastfeeding, by mother's level of education and region



Note Based on last born children only

Source DHS Surveys 1990 1996

Table 3 24 Regional summary of current status feeding practices for last born children 20 23 months of age, by mother's education

Percentage of last born children 20 23 months of age in specific feeding categories by mother's education, Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub Saharan Africa	4.2	1.2	0.3	22.4	23.1	14.5	8.6	7.6	10.0	59.8	43.2	20.1	32.7	53.9	76.1
Near East/North Africa	2.4	0.7	0.2	18.1	15.0	12.3	13.0	14.1	7.4	29.2	22.6	17.0	64.4	73.5	81.3
Asia	4.3	1.3	0.1	48.4	43.4	32.8	27.9	28.4	25.4	69.5	57.3	36.9	19.1	33.2	61.7
Latin America/Caribbean	1.2	0.4	0.2	50.1	25.8	21.7	14.7	12.6	16.7	55.7	25.4	20.2	41.1	70.7	77.2

Sex Differentials

Feeding practices were examined by sex of child as well as by socioeconomic characteristics (see Tables 3 25 through 3 28). In this section as in the previous, full breastfeeding is presented in the tables rather than exclusive breastfeeding because of the small number of cases of exclusive breastfeeding in most countries. The results indicate that feeding practices do not vary substantially by sex, at any age, in any of the countries studied. Among infants under 4 months, however, in all regions there was a slightly greater proportion of female infants fully breastfed overall (Figure 3 12), probably indicative of an earlier introduction of complementary foods to

males overall. Among infants 6 to 9 months, only in Asia was there a slightly greater overall tendency for females to be given complementary foods (Figure 3 13), a difference not observed in the other regions. At 12 to 15 months, no differences by sex in the first-year breastfeeding continuation rates were observed (Figure 3 14). At 20 to 23 months, the lack of overall sex differences in second-year continuation rates is similarly seen (Figure 3 15), although in Near East/North Africa countries females were 8 percentage points more likely than males not to be breastfed, that is, boys were breastfed more often in the second year than girls. The regional summary of feeding practices by sex of child is shown in Table 3 29.

Table 3.25 Percentage of last born children less than 4 months of age receiving complementary foods, by sex

Percentage of last born children less than 4 months of age receiving complementary foods by sex, Demographic and Health Surveys 1990-1996

Region, country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Sub-Saharan Africa																		
Burkina Faso 1993	32.9	29.5	36.5	64.7	67.6	61.7	2.7	2.1	3.3	2.9	2.9	2.9	1.2	2.1	0.2	436	225	211
Cameroon 1991	51.5	49.0	53.8	29.1	28.7	29.3	15.8	18.3	13.3	28.5	33.9	23.4	0.2	0.0	0.5	219	107	112
Central African Republic 1994-95	58.8	55.0	62.5	20.4	22.4	18.5	2.6	3.3	2.0	31.7	33.5	30.0	0.3	0.5	0.0	309	150	160
Côte d'Ivoire 1994	70.7	71.6	69.8	16.7	15.7	17.7	6.4	5.7	7.1	11.5	10.7	12.4	1.2	1.1	1.4	423	210	213
Ghana 1993	59.1	55.3	62.9	39.6	43.9	35.3	7.0	7.9	6.0	2.6	3.5	1.7	0.0	0.0	0.0	230	114	116
Kenya 1993	28.2	27.7	28.5	47.8	51.6	44.9	32.6	39.2	27.4	28.4	28.5	28.4	2.0	2.2	2.0	316	139	178
Madagascar 1992	56.6	60.5	52.5	36.5	34.1	38.9	6.0	4.3	7.7	7.0	6.3	7.8	1.7	1.3	2.1	352	181	171
Malawi 1992	43.3	44.6	41.7	20.6	17.7	24.3	6.7	4.7	9.3	42.1	43.5	40.4	0.4	0.8	0.0	327	186	142
Mali 1995	78.7	79.1	78.3	16.3	16.9	15.7	7.1	5.5	8.6	2.0	1.5	2.5	0.1	0.3	0.0	661	312	349
Namibia 1992	56.9	57.3	56.3	26.5	25.7	27.6	21.4	24.0	18.1	4.8	6.3	2.9	2.9	2.1	4.0	255	143	112
Niger 1992	40.5	40.2	40.9	35.8	35.7	35.8	21.4	23.0	19.6	15.7	16.8	14.5	2.0	2.3	1.7	524	272	252
Nigeria 1990	51.3	50.0	52.8	21.2	19.5	23.3	30.0	30.5	29.4	7.7	6.9	8.7	1.7	1.2	2.3	524	295	230
Rwanda 1992	92.2	90.8	93.5	2.3	1.3	3.3	3.0	4.6	1.4	3.2	2.0	4.3	1.0	2.0	0.0	356	171	185
Senegal 1992-93	75.3	76.2	74.4	1.0	2.0	0.0	17.2	16.3	18.1	8.7	7.4	10.1	0.7	1.0	0.5	401	202	199
Tanzania 1991-92	64.4	66.1	62.5	21.5	20.6	22.5	15.1	16.8	13.1	5.3	3.2	7.7	0.8	0.4	1.2	500	270	230
Uganda 1995	74.5	71.9	77.1	7.2	6.0	8.4	17.8	20.1	15.5	4.3	4.5	4.1	0.6	0.0	1.2	411	204	207
Zambia 1992	65.7	64.5	66.8	10.3	14.2	6.3	6.0	7.0	4.9	23.0	22.6	23.4	0.8	0.5	1.0	423	211	212
Zimbabwe 1994	40.4	37.2	43.4	34.2	34.3	34.1	8.3	6.4	10.1	36.2	36.8	35.6	0.9	1.8	0.0	258	126	132
Near East/North Africa																		
Egypt 1992	55.4	52.9	58.2	32.3	35.0	29.2	16.5	18.3	14.4	2.3	1.5	3.3	3.1	2.7	3.5	497	267	231
Jordan 1990	38.9	35.9	41.9	42.9	43.2	42.6	19.9	19.4	20.4	6.6	5.3	7.8	6.4	8.9	3.8	469	237	233
Morocco 1992	69.0	66.5	71.9	13.9	13.5	14.4	17.3	19.4	15.1	1.0	1.3	0.7	4.1	7.1	0.7	294	155	139
Turkey 1993	37.4	38.4	36.5	47.6	46.0	49.2	17.0	16.2	17.9	13.4	13.6	13.3	6.5	8.7	4.1	232	118	115
Asia																		
Bangladesh 1993-94	61.5	62.6	60.3	19.8	17.0	23.0	24.6	25.5	23.7	1.9	2.6	1.1	1.5	1.8	1.2	411	217	194
India 1992-93	73.2	71.1	75.4	13.0	13.6	12.3	16.3	18.7	13.8	1.4	1.6	1.3	1.9	1.9	1.9	3 952	2 025	1 927
Indonesia 1994	49.0	44.8	54.1	28.7	27.3	30.3	11.3	11.7	10.7	30.9	36.2	24.4	2.5	3.4	1.3	1 020	562	458
Kazakhstan 1995	36.6	(37.3)	(36.1)	38.8	(33.3)	(43.3)	28.8	(43.5)	(16.6)	5.2	(8.1)	(2.8)	11.8	(5.8)	(16.8)	74	33	40
Nepal 1996	84.0	83.4	84.7	1.6	2.4	0.9	11.0	10.7	11.3	6.4	6.8	5.9	0.5	1.0	0.0	428	215	213
Pakistan 1990-91	35.1	32.8	37.8	49.9	51.7	47.8	27.4	29.4	25.0	3.1	3.2	3.0	3.6	3.5	3.8	502	269	232
Philippines 1993	43.7	41.0	46.6	19.8	20.3	19.3	26.7	29.2	24.0	1.3	2.2	0.2	17.6	18.1	17.0	484	254	230

continued

Table 3 25 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Latin America/Caribbean																		
Bolivia 1993 94	57.4	61.2	53.1	19.7	20.4	18.9	27.7	26.4	29.2	3.6	4.7	2.2	3.8	2.5	5.3	336	181	155
Brazil 1996	44.7	44.2	45.0	29.5	27.4	31.1	28.4	27.6	29.0	7.1	8.5	6.0	13.9	15.4	12.9	267	115	151
Colombia 1995	20.7	18.8	23.1	44.9	45.3	44.4	58.5	57.1	60.2	15.4	17.5	12.8	4.4	5.0	3.7	265	147	117
Dominican Republic 1991	22.8	25.9	20.2	43.4	44.2	42.8	40.4	41.3	39.6	2.2	1.0	3.2	18.7	13.8	22.5	226	100	126
Guatemala 1995	57.8	57.6	58.0	32.5	31.7	33.4	16.2	18.2	14.0	3.1	3.4	2.9	1.6	1.6	1.7	604	312	291
Haiti 1994	12.0	10.2	14.0	48.3	45.6	51.3	32.0	38.8	24.3	66.0	70.5	61.0	3.1	3.2	3.0	221	117	104
Paraguay 1990	26.0	20.3	32.1	51.2	56.2	45.9	24.1	28.3	19.6	13.5	16.4	10.4	13.7	13.0	14.4	260	134	125
Peru 1996	62.6	61.6	63.6	27.6	29.6	25.3	21.9	24.1	19.6	3.0	3.5	2.5	1.0	0.4	1.8	860	452	407

() = based on a small number of cases (25-49)

Table 3.26 Percentage of last born children 6-9 months of age receiving complementary foods, by sex

Percentage of last born children 6-9 months of age receiving complementary foods by sex, Demographic and Health Surveys 1990-1996

Region, country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Sub-Saharan Africa																		
Burkina Faso 1993	23.8	18.3	29.0	54.5	56.6	52.5	3.8	3.7	3.8	43.9	50.4	37.8	0.4	0.0	0.7	383	187	197
Cameroon 1991	14.1	16.1	12.4	26.1	26.2	26.0	11.2	10.8	11.4	77.1	79.1	75.4	6.9	3.6	9.7	254	115	138
Central African Republic 1994-95	5.1	4.6	5.6	38.5	39.5	37.5	5.2	5.7	4.8	93.1	94.2	92.0	0.7	0.0	1.3	291	146	145
Cote d'Ivoire 1994	26.4	27.4	25.4	27.5	27.7	27.3	7.3	7.6	7.0	66.2	66.8	65.6	0.6	1.3	0.0	425	203	222
Ghana 1993	20.9	21.5	20.2	70.7	72.3	68.9	10.8	12.3	9.2	35.7	32.3	39.5	0.4	0.0	0.8	249	130	119
Kenya 1993	2.6	2.5	2.6	43.8	43.8	43.8	67.6	67.0	68.2	90.1	90.3	89.9	0.6	0.7	0.4	404	199	205
Madagascar 1992	9.5	9.8	9.3	61.3	62.3	60.3	10.1	11.1	9.1	80.0	79.0	81.0	1.4	1.3	1.5	374	179	196
Malawi 1992	5.2	3.6	6.8	33.4	37.5	29.5	9.2	7.5	10.7	87.2	88.0	86.6	1.2	0.0	2.3	325	157	168
Mali 1995	49.4	47.0	51.6	30.7	32.8	28.8	17.3	19.6	15.1	32.9	38.0	28.0	0.4	0.0	0.8	660	325	335
Namibia 1992	12.3	15.2	9.2	55.6	57.7	53.4	18.4	16.0	20.9	64.7	61.8	67.7	14.0	14.0	14.0	265	136	129
Niger 1992	17.9	20.4	15.6	30.8	33.0	28.8	16.3	13.4	19.0	73.2	70.9	75.3	1.1	0.6	1.6	446	218	228
Nigeria 1990	27.4	27.5	27.3	21.0	20.3	21.6	25.2	25.1	25.3	51.7	52.3	51.1	2.6	2.0	3.2	618	290	328
Rwanda 1992	25.6	28.7	22.9	24.9	23.9	25.8	9.9	10.7	9.2	67.8	65.1	70.2	0.5	0.2	0.8	343	163	180
Senegal 1992-93	32.1	35.8	28.8	7.9	7.5	8.2	16.6	13.2	19.6	58.9	55.3	62.0	2.3	3.1	1.6	343	159	184
Tanzania 1991-92	9.6	7.9	11.2	54.7	56.9	52.6	38.2	39.0	37.4	58.7	59.1	58.2	1.4	2.0	0.8	525	261	263
Uganda 1995	17.9	20.5	15.5	42.7	41.5	43.9	35.0	35.7	34.4	63.6	64.5	62.8	2.5	2.5	2.6	487	236	251
Zambia 1992	7.2	6.7	7.7	40.4	44.3	36.0	15.7	12.8	19.1	87.6	86.6	88.7	1.0	1.3	0.5	449	241	208
Zimbabwe 1994	3.2	3.5	2.9	40.7	39.1	42.4	18.1	22.3	13.6	93.0	93.4	92.6	1.1	1.1	1.1	274	142	131
Near East/North Africa																		
Egypt 1992	17.9	16.1	19.9	41.2	44.4	37.8	40.7	43.6	37.6	52.3	53.8	50.6	9.3	9.1	9.6	500	260	240
Jordan 1990	9.8	8.5	11.0	38.7	41.1	36.6	26.0	24.7	27.3	48.1	48.0	48.1	30.1	32.3	28.2	535	252	284
Morocco 1992	21.2	24.1	18.1	31.4	28.8	34.2	25.2	27.1	23.2	35.1	34.7	35.5	21.5	18.2	25.2	325	170	155
Turkey 1993	4.7	4.2	5.2	56.1	53.3	59.3	10.9	10.6	11.3	47.1	45.7	48.8	33.8	36.1	31.2	278	146	131
Asia																		
Bangladesh 1993-94	26.9	21.1	32.6	33.4	38.4	28.6	45.3	51.6	39.3	29.4	31.6	27.3	1.3	1.2	1.4	399	196	203
India 1992-93	32.1	31.0	33.2	38.4	38.7	38.1	42.4	44.3	40.3	31.5	30.2	32.8	4.4	4.3	4.5	4 244	2 162	2 082
Indonesia 1994	6.3	7.5	4.8	61.2	61.8	60.4	18.0	18.6	17.3	85.8	85.1	86.5	5.3	5.2	5.3	1 070	582	487
Kazakhstan 1995	3.2	(4.2)	(2.4)	63.3	(59.1)	(66.8)	45.6	(47.7)	(44.0)	62.7	(56.7)	(67.6)	29.8	(32.8)	(27.4)	86	39	47
Nepal 1996	28.5	32.5	23.9	39.0	33.2	45.7	39.8	38.1	41.8	62.5	56.8	69.1	0.8	0.5	1.3	437	234	203
Pakistan 1990-91	30.6	29.3	32.1	38.5	42.4	34.0	32.2	32.3	32.0	29.2	29.2	29.3	9.6	9.2	10.1	438	237	201
Philippines 1993	4.6	5.3	3.7	45.0	43.3	46.7	25.4	28.3	22.1	52.1	52.2	52.1	34.7	33.2	36.4	630	332	298

continued

Table 3 26 *continued*

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Latin America/Caribbean																		
Bolivia 1993 94	4 6	4 9	4 2	73 9	73 0	75 0	34 0	34 1	33 8	78 0	76 5	79 9	11 8	12 5	10 7	391	220	171
Brazil 1996	14 8	18 1	11 7	28 2	30 4	26 0	24 4	22 5	26 4	11 6	12 3	10 9	49 5	47 0	51 9	291	143	148
Colombia 1995	0 2	0 0	0 5	60 0	62 4	57 4	43 4	46 1	40 6	61 5	65 7	57 0	33 4	30 3	36 8	327	169	158
Dominican Republic 1991	1 4	1 8	0 9	34 3	32 4	36 3	24 7	24 8	24 7	22 8	20 8	25 0	58 3	61 5	55 1	288	147	141
Guatemala 1995	16 0	16 0	16 0	70 4	68 5	72 2	22 1	22 8	21 3	55 7	53 7	57 7	7 6	6 8	8 3	611	300	311
Haiti 1994	2 2	1 6	2 9	56 0	59 7	51 6	37 6	40 7	34 0	84 1	84 8	83 3	6 9	6 0	8 1	247	134	113
Paraguay 1990	2 9	4 8	1 2	53 5	51 3	55 5	32 0	28 3	35 4	61 2	59 2	63 0	31 4	31 3	31 5	264	126	139
Peru 1996	8 8	9 0	8 6	71 8	71 7	72 0	42 3	41 7	42 9	72 2	71 3	73 1	8 4	8 5	8 3	935	460	475

() = based on a small number of cases (25-49)

Table 3.27 Percentage of last born children 12-15 months of age receiving complementary foods, by sex

Percentage of last born children 12-15 months of age receiving complementary foods by sex, Demographic and Health Surveys 1990-1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Sub-Saharan Africa																		
Burkina Faso 1993	82	71	94	462	467	456	52	38	66	825	848	800	20	21	18	381	197	185
Cameroon 1991	75	56	96	265	247	285	119	85	157	699	713	683	193	186	202	196	103	93
Central African																		
Republic 1994-95	22	14	29	392	432	356	99	128	72	938	966	911	35	20	49	304	147	157
Côte d'Ivoire 1994	96	79	111	317	304	328	78	77	78	810	838	786	51	39	61	366	172	194
Ghana 1993	93	126	53	654	604	713	127	108	149	654	622	691	54	54	53	205	111	94
Kenya 1993	10	14	05	474	502	443	628	640	615	891	882	901	87	96	77	392	207	185
Madagascar 1992	13	07	19	543	534	552	92	77	106	875	908	845	89	76	102	387	188	198
Malawi 1992	45	38	53	406	429	378	111	140	76	873	906	834	55	43	69	266	145	121
Mali 1995	94	111	77	423	438	409	216	196	235	802	803	801	57	35	78	618	302	315
Namibia 1992	29	30	28	482	524	445	143	171	119	613	625	603	309	278	335	292	134	158
Niger 1992	38	31	48	303	286	325	152	175	123	906	919	889	37	33	43	478	265	213
Nigeria 1990	164	203	128	197	194	200	174	158	189	615	588	640	131	135	127	555	271	284
Rwanda 1992	42	25	59	375	391	360	144	151	136	919	942	897	14	12	17	360	180	180
Senegal 1992-93	128	132	123	184	148	219	205	175	235	779	788	770	59	69	48	376	189	187
Tanzania 1991-92	42	53	32	549	558	540	351	307	395	846	835	858	53	36	70	554	275	279
Uganda 1995	32	21	43	460	487	432	280	295	264	817	830	804	115	124	106	528	269	258
Zambia 1992	37	22	52	479	503	454	141	144	138	845	848	842	89	94	84	390	196	194
Zimbabwe 1994	09	11	08	405	392	414	241	208	267	884	895	874	102	83	117	217	95	122
Near East/North Africa																		
Egypt 1992	74	77	71	389	396	382	359	390	327	617	605	629	221	231	209	534	279	255
Jordan 1990	44	64	26	299	289	309	186	189	183	370	367	372	517	493	540	465	227	238
Morocco 1992	104	87	122	302	337	263	229	244	212	424	424	423	354	378	327	328	172	156
Turkey 1993	08	00	18	459	501	406	58	51	67	415	434	393	525	499	556	259	144	115
Asia																		
Bangladesh 1993-94	137	157	118	296	322	272	415	412	418	618	600	634	39	38	41	509	245	264
India 1992-93	77	79	76	592	589	595	457	488	426	656	659	653	110	94	127	4266	2145	2121
Indonesia 1994	24	29	20	704	679	728	202	179	224	855	847	862	112	115	110	112	557	566
Kazakhstan 1995	00	00	00	523	534	513	347	310	383	514	525	504	477	466	487	96	48	48
Nepal 1996	42	28	55	736	767	704	420	448	391	920	940	900	33	25	42	499	251	248
Pakistan 1990-91	127	96	157	283	266	300	355	367	343	504	509	499	203	209	198	532	261	271
Philippines 1993	16	13	19	417	401	433	223	201	246	514	515	513	418	432	404	541	273	267

continued

Table 3 27 *continued*

Region, country, and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Latin America/Caribbean																		
Bolivia 1993-94	1 5	2 2	1 0	70 4	68 8	71 6	34 0	31 1	36 2	71 7	69 6	73 3	25 3	27 2	23 9	336	149	188
Brazil 1996	3 9	4 8	2 8	25 1	21 6	29 3	19 7	17 0	23 0	9 2	7 6	11 2	65 2	67 6	62 3	313	172	142
Colombia 1995	0 9	1 6	0 0	39 0	36 8	41 6	29 6	31 7	26 9	42 0	38 9	45 6	57 2	59 5	54 4	325	177	148
Dominican Republic 1991	0 7	1 0	0 4	26 4	27 3	25 3	15 1	14 8	15 4	19 0	18 1	20 0	70 5	69 0	72 2	254	133	121
Guatemala 1995	2 6	3 3	1 8	72 0	70 5	73 5	16 5	16 4	16 7	73 1	72 7	73 5	22 0	22 1	21 9	636	325	311
Haiti 1994	0 9	0 9	1 0	49 1	53 5	44 8	26 8	25 3	28 3	80 9	81 9	79 9	17 6	17 2	18 1	221	110	111
Paraguay 1990	1 5	0 0	3 1	32 0	34 0	29 7	28 4	29 6	27 1	36 6	36 1	37 3	59 7	60 4	58 8	256	136	119
Peru 1996	0 7	0 8	0 6	73 3	72 4	74 2	46 6	50 3	43 1	76 1	76 3	75 9	20 8	20 3	21 3	1 029	501	527

Table 3.28 Percentage of last born children 20-23 months of age receiving complementary foods, by sex

Percentage of last born children 20-23 months of age receiving complementary foods by sex, Demographic and Health Surveys 1990-1996

Region country and date	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Sub-Saharan Africa																		
Burkina Faso 1993	8.3	6.1	10.3	27.2	30.7	23.8	5.2	5.8	4.7	68.2	71.3	65.1	18.3	17.8	18.9	294	145	149
Cameroon 1991	2.3	2.6	2.0	8.5	9.9	7.1	5.0	3.6	6.3	34.9	33.5	36.2	62.2	62.6	61.8	208	102	106
Central African Republic 1994-95	1.2	0.6	1.8	21.1	20.7	21.6	2.7	4.3	0.9	53.7	52.0	55.5	45.2	47.4	42.7	233	123	111
Côte d'Ivoire 1994	4.6	3.1	6.2	15.8	17.1	14.4	2.4	3.5	1.2	42.6	44.8	40.2	52.5	52.1	52.9	337	179	158
Ghana 1993	4.7	5.0	4.3	37.8	4.0	41.9	4.7	5.0	4.3	43.5	35.0	52.7	44.6	53.0	35.5	193	100	93
Kenya 1993	0.7	0.9	0.6	28.5	31.6	25.6	35.5	37.1	34.0	56.5	65.2	48.2	42.4	33.9	50.5	312	152	160
Madagascar 1992	0.2	0.4	0.0	25.5	25.7	25.3	5.1	3.6	6.6	51.0	50.9	51.2	48.3	47.8	48.8	270	140	130
Malawi 1992	2.7	1.3	4.1	21.0	18.6	23.5	7.4	7.6	7.1	56.2	54.0	58.4	40.1	44.3	35.8	241	122	118
Mali 1995	3.7	1.6	5.6	29.3	28.8	29.7	16.6	16.1	17.0	56.7	54.2	59.1	37.2	42.0	32.6	421	207	214
Namibia 1992	0.5	0.9	0.0	17.4	19.0	15.2	5.7	4.7	7.0	23.8	25.8	21.2	75.2	72.5	78.8	230	130	100
Niger 1992	4.2	4.0	4.5	13.0	16.9	8.6	9.6	10.6	8.4	58.4	55.3	62.1	36.3	38.7	33.5	275	148	127
Nigeria 1990	7.7	11.7	4.1	8.0	8.9	7.3	5.8	8.4	3.6	33.3	22.7	42.7	53.7	56.5	51.2	313	147	166
Rwanda 1992	2.1	3.0	0.9	38.0	40.1	35.4	7.7	6.5	9.1	85.2	86.1	84.2	11.0	8.7	13.9	276	152	124
Senegal 1992 93	9.4	10.7	7.9	5.1	5.0	5.3	11.1	12.4	9.6	39.6	44.6	34.2	49.4	42.1	57.0	235	121	114
Tanzania 1991 92	1.7	1.6	1.8	35.9	39.1	32.6	20.0	18.5	21.6	55.1	57.1	53.0	40.5	37.9	43.3	479	244	235
Uganda 1995	0.7	0.9	0.6	22.4	23.5	21.3	8.1	9.1	7.2	42.9	39.5	46.1	55.0	56.9	53.2	459	226	234
Zambia 1992	0.8	0.0	1.5	19.3	22.3	16.3	3.5	3.7	3.3	34.0	37.7	30.2	64.1	62.0	66.4	343	175	169
Zimbabwe 1994	0.2	0.5	0.0	15.7	15.4	16.0	7.4	6.7	8.0	26.5	28.5	24.4	73.3	71.0	75.6	216	107	109
Near East/North Africa																		
Egypt 1992	1.0	0.7	1.2	25.4	27.6	23.0	23.0	23.6	22.3	38.5	39.0	37.9	57.6	57.5	57.8	448	232	216
Jordan 1990	1.2	1.7	0.8	9.0	9.6	8.3	8.0	8.5	7.5	15.4	15.4	15.4	81.8	80.6	83.1	374	196	178
Morocco 1992	3.3	2.9	3.6	10.1	10.8	9.5	6.5	5.8	7.3	14.9	17.3	12.4	78.3	77.0	79.6	276	139	137
Turkey 1993	0.7	0.0	1.4	16.8	29.4	2.9	1.6	3.1	0.0	15.1	24.8	4.4	81.8	70.6	94.2	176	92	83
Asia																		
Bangladesh 1993 94	6.2	7.3	5.0	29.9	33.4	26.1	41.3	41.9	40.6	66.5	64.4	68.8	8.8	8.6	9.1	306	159	147
India 1992 93	3.6	3.8	3.4	53.7	55.0	52.1	37.5	38.2	36.6	61.2	62.7	59.4	27.0	25.4	29.0	2 955	1 575	1 380
Indonesia 1994	0.7	0.4	1.0	56.0	57.5	54.6	17.1	14.3	19.9	66.5	69.3	63.8	32.4	29.6	35.2	871	436	435
Kazakhstan 1995	0.0	(0.0)	(0.0)	24.1	(25.5)	(22.8)	22.8	(22.8)	(22.8)	24.1	(25.5)	(22.8)	75.9	(74.5)	(77.2)	85	41	44
Nepal 1996	0.7	1.0	0.3	78.2	77.7	78.8	39.8	42.3	36.7	91.5	92.9	89.7	7.3	6.2	8.6	402	221	182
Pakistan 1990 91	6.8	3.6	10.0	26.3	26.6	25.9	18.3	20.1	16.5	45.5	37.5	53.7	40.6	46.8	34.3	251	127	124
Philippines 1993	0.4	0.8	0.0	19.5	18.0	21.0	11.3	10.6	12.0	22.2	19.4	25.1	75.8	78.2	73.3	417	209	208

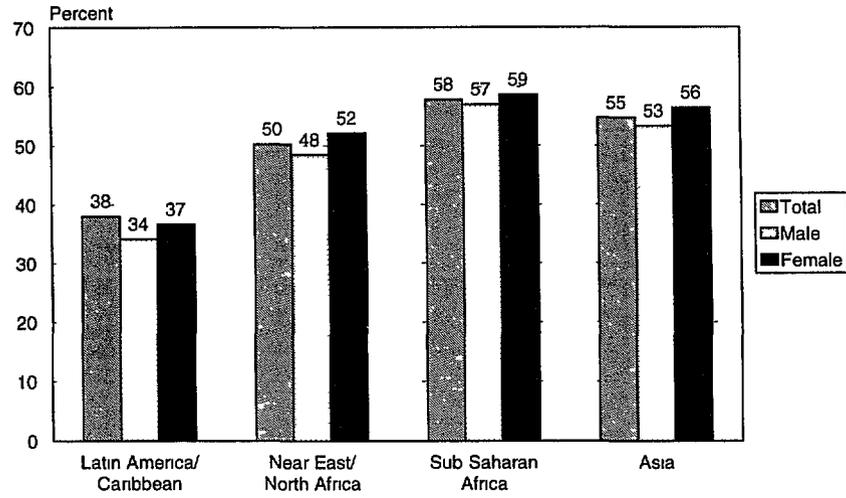
continued

Table 3 28 *continued*

Region, country, and date	Fully breastfed			Predominantly breastfed			Milk-based liquids			Complementary foods			Not breastfed			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Latin America/Caribbean																		
Bolivia 1993-94	00	00	00	375	376	375	188	195	180	409	393	426	583	591	574	319	161	158
Brazil 1996	23	15	31	134	133	136	122	139	103	34	33	35	812	809	815	259	136	124
Colombia 1995	00	00	00	186	157	219	138	102	178	188	157	225	812	843	775	302	162	140
Dominican Republic 1991	00	00	00	89	97	81	51	51	50	56	46	66	909	899	919	233	120	114
Guatemala 1995	03	02	05	515	533	499	141	150	132	526	547	507	460	443	476	441	214	227
Haiti 1994	11	10	12	172	157	190	53	42	66	247	249	245	733	734	731	199	107	92
Paraguay 1990	05	08	00	79	105	42	60	89	20	104	141	53	889	851	942	202	118	84
Peru 1996	04	04	04	446	424	469	277	243	315	463	441	487	532	555	506	856	446	410

() = based on a small number of cases (25-49)

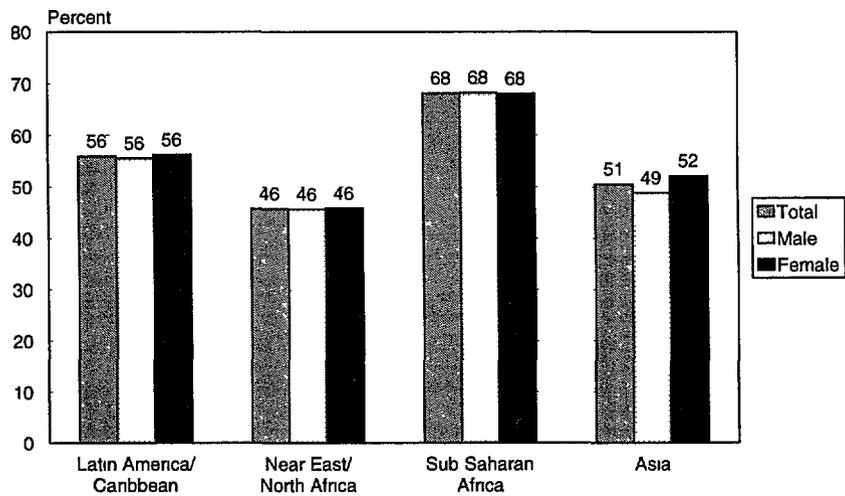
Figure 3 12 Percentage of children less than 4 months of age fully breastfed, by sex and region



Note Based on last born children only

Source DHS Surveys 1990 1996

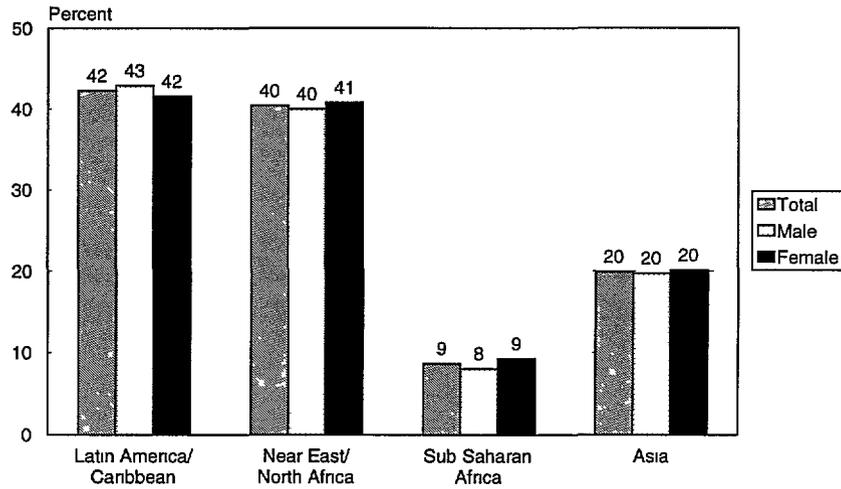
Figure 3 13 Percentage of children 6 to 9 months of age receiving breast milk and complementary foods, by sex and region



Note Based on last born children only

Source DHS Surveys 1990 1996

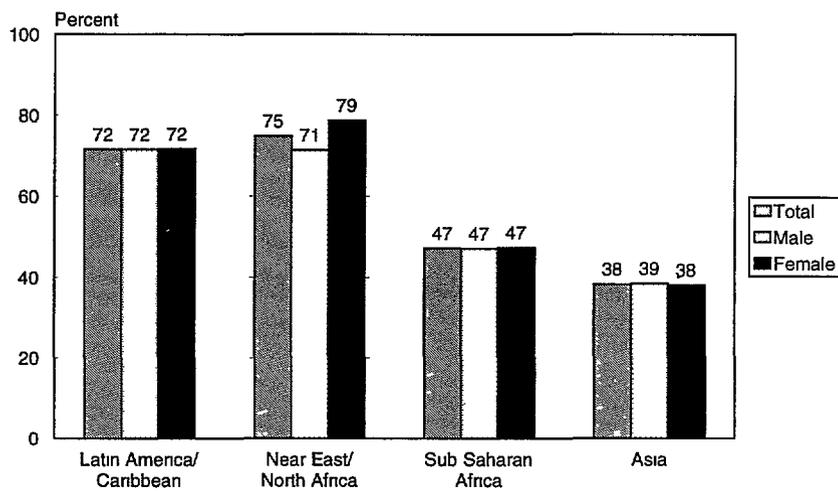
Figure 3 14 Percentage of children 12 to 15 months of age not breastfeeding, by sex and region



Note Based on last born children only

Source DHS Surveys 1990 1996

Figure 3 15 Percentage of children 20 to 23 months of age not breastfeeding, by sex and region



Note Based on last born children only

Source DHS Surveys 1990 1996

Table 3 29 Regional summary of current status feeding practices for last born children 20 23 months of age, by sex

Percentage of last born children 20 23 months of age in specific feeding categories by sex of child and region Demographic and Health Surveys 1990 1996

Region	Fully breastfed			Predominantly breastfed			Milk based liquids			Complementary foods			Not breastfed		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Sub Saharan Africa	3 1	3 1	3 1	21 6	22 6	20 6	9 1	9 3	8 9	47 9	47 7	48 3	47 2	47 1	47 4
Near East/North Africa	1 6	1 3	1 8	15 3	19 4	10 9	9 8	10 3	9 3	21 0	24 1	17 5	74 9	71 4	78 7
Asia	2 6	2 4	2 8	41 1	38 3	36 9	26 9	23 9	23 2	53 9	49 5	51 5	38 3	38 5	38 1
Latin America/Caribbean	0 6	0 5	0 7	25 0	24 8	25 1	12 9	12 6	13 1	25 3	25 1	25 6	71 7	71 6	71 7

3 2 MEDIAN AGE AT INTRODUCTION OF COMPLEMENTARY FOODS

Table 3 30 and Figure 3 16 show the median age of introduction of complementary foods among last-born children less than 3 years old currently breastfeeding. Median age ranges vary widely across countries and regions. In sub-Saharan Africa, the median age of introduction varies from a low of 2 1 months in Malawi to a high of 9 8 months in Ghana, with an overall median of 5 6 months for the region. In general, children in West African countries are introduced to foods later in life than children in East and Central African countries. In Asia, the median age ranges from a low of 2 8 months in Indonesia to a high of 13 2 months in Pakistan, with the exception of Bangladesh, where no median could be determined⁵. For the region, excluding Bangladesh, the overall median is 7 5 months. In Latin America/Caribbean, the median ranges from 0 months in the Dominican Republic, to 6 7 months in Guatemala, with an overall median for the region of 3 9 months (excluding Brazil). In the Near East/North Africa, median age at introduction of complementary foods was calculated at 7 3 months. Additional tables showing the median age at introduction of complementary foods by other selected differentials are included in Appendix H.

It is important to remember that the median age represents the age at which 50 percent of children are introduced to complementary foods. The remaining 50 percent are introduced to foods either at an earlier age or a later age. Thus, in many countries, although the median age may be around the recommended time (i.e. 6 months), many children are being given foods much too early or too late. Both of these situations may be detrimental to the infant's health. Too early introduction is associated with increased risk of diarrhea. Late introduction may have adverse effects on growth and development.

The wide range of ages for introduction of foods across countries is illustrated in Figure 3 16. If those ages earlier than 4 months are considered 'too early' and those later than 8 months are 'too late,' it is clear that children in 9 of 18 sub-Saharan countries, in 2 of 4 Near East/North African countries, in 3 of 7 Asian countries, and in 2 of 8 in Latin America/Caribbean countries, are being introduced to foods at inappropriate ages. Timely introduction of appropriately prepared, nutritionally adequate complementary foods should be a focus of programs or improve the health and nutrition status of young children in many developing countries.

Socioeconomic Differentials

Differences in the median age at introduction of complementary foods are shown by urban-rural residence in Table 3 30, and by mother's level of education in Table 3 31. The differentials are of interest in understanding the influence of socioeconomic status on feeding practices, as proxied by area of residence and mother's educational attainment. In sub-Saharan Africa, only slight differences in the age of introduction of complementary foods exist between urban and rural areas. In Asia, differences of a half month or more (in both directions) exist between urban and rural areas in 4 of the 5 countries where medians could be determined, with the exception of Indonesia, where there was little urban-rural difference. In Pakistan and the Philippines, median age could not be determined for urban areas, but it is probably higher than in rural areas, as indicated by the total figures. In Egypt, complementary foods are introduced to children in rural areas almost a month later than to children in urban areas. In the other Near East/North Africa countries, medians could not be determined for children still breastfeeding⁶.

⁵ The Bangladesh median could not be calculated because less than 50 percent of breastfeeding children received complementary foods at the age covered by the survey.

⁶ The medians could not be calculated because less than 50 percent of breastfeeding children received complementary foods at the age covered by the surveys.

Table 3 30 Median age at introduction of complementary foods, by urban-rural residence

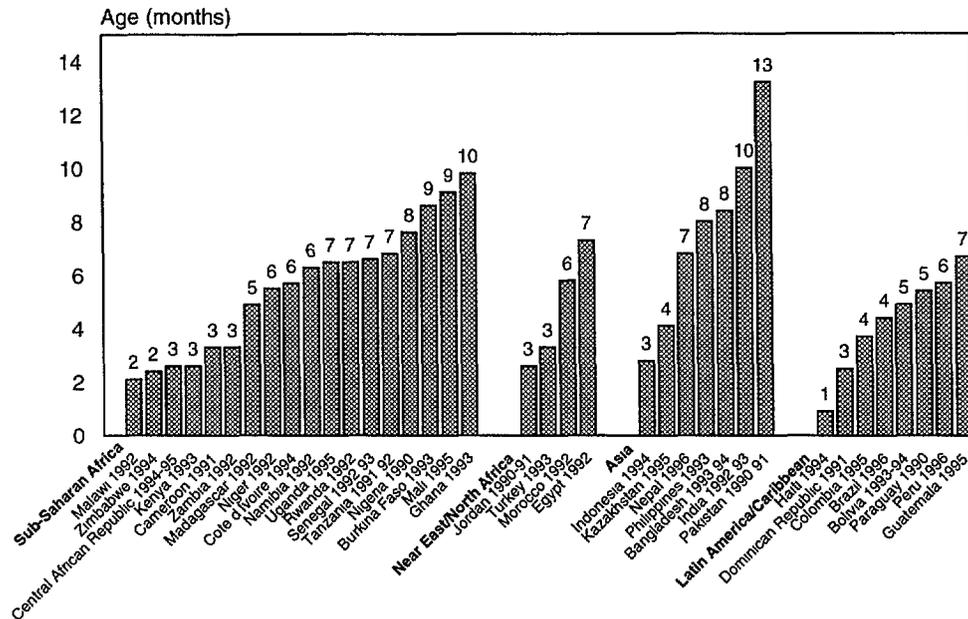
Median age (months) at introduction of complementary foods among last born currently breastfeeding children less than 3 years of age by urban rural residence Demographic and Health Surveys 1990 1996

Region country and date	Complementary foods			Number of children		
	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa						
Burkina Faso 1993	8 6	6 2	9 0	3 171	466	2 705
Cameroon 1991	3 3	3 6	3 1	1 696	652	1 043
Central African Republic 1994-95	2 6	2 3	2 9	2 267	925	1 342
Côte d'Ivoire 1994	5 7	5 3	5 9	3 335	1 135	2 200
Ghana 1993	9 8	9 0	10 0	1 879	543	1 336
Kenya 1993	2 6	3 4	2 6	2 921	390	2 531
Madagascar 1992	4 9	4 6	5 0	2 700	349	2 351
Malawi 1992	2 1	u	u	2 147	u	u
Mali 1995	9 1	8 1	9 3	4 719	1 256	3 463
Namibia 1992	6 3	8 1	6 0	2 076	696	1 380
Niger 1992	5 5	4 7	5 7	3 240	521	2 719
Nigeria 1990	7 6	6 4	8 0	3 851	798	3 053
Rwanda 1992	6 5	6 3	6 5	2 765	138	2 627
Senegal 1992 93	6 6	5 2	7 5	2 736	943	1 793
Tanzania 1991 92	6 8	6 9	6 7	4 150	884	3 266
Uganda 1995	6 5	6 1	6 6	3 632	409	3 223
Zambia 1992	3 3	2 9	3 6	3 110	1 457	1 653
Zimbabwe 1994	2 4	2 2	2 4	2 056	551	1 505
Near East/North Africa						
Egypt 1992	7 3	6 7	7 5	4 020	1 566	2 454
Jordan 1990	2 6	2 4	3 0	3 566	2 525	1 041
Morocco 1992	5 8	4 3	6 2	2 483	863	1 620
Turkey 1993	3 3	2 7	4 0	1 885	1 157	728
Asia						
Bangladesh 1993-94	8 4	6 1	a	3 353	345	3 048
India 1992 93	10 0	10 1	10 0	10 777	7 089	3 689
Indonesia 1994	2 8	2 9	2 8	8 887	2 538	6 349
Kazakhstan 1995	4 1	3 9	4 3	682	299	382
Nepal 1996	6 8	6 0	6 8	3 622	236	386
Pakistan 1990-91	13 2	a	12 2	3 164	926	238
Philippines 1993	8 0	a	6 3	4 211	2 058	2 153
Latin America/Caribbean						
Bolivia 1993 94	4 9	4 5	5 3	2 852	1 537	1 315
Brazil 1996	4 4	4 0	6 1	2 449	1 899	549
Colombia 1995	3 7	3 7	3 7	2 637	1 757	880
Dominican Republic 1991	0 0	0 0	0 0	1 908	1 149	759
Guatemala 1995	6 7	5 9	7 1	4 439	1 484	2 954
Haiti 1994	0 9	1 8	0 7	1 708	546	1 162
Paraguay 1990	5 4	6 4	4 9	1 909	904	1 005
Peru 1996	5 7	5 5	6 0	7 770	4 700	3 070

u = unknown (not available)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Figure 3.16 Median age at introduction of complementary foods, children less than 3 years old currently breastfeeding



Note Based on last born children only

Source DHS Surveys 1990-1996

For mother's level of education, in most countries where medians could be determined, complementary foods were introduced earlier with increasing level of education. The differences are clearest in sub-Saharan Africa because medians could be calculated for most countries, although among children of mothers with the highest educational level, cell sizes are small. In the other regions, the tendency toward earlier introduction of foods with higher level of education is discernible, but generalizations are problematic because of the lack of median data or small cell sizes. The earlier introduction of foods with higher maternal education may reflect the tendency for more educated women to return to the work force soon after birth, greater exposure among educated women to information regarding appropriate timing of complementary foods, greater economic ability to purchase complementary foods, better access to markets, or a combination of these factors.

Sex Differentials

Differences in the median age of introduction of complementary foods by child's sex are shown in Table 3.32. Regional averages for sex differences are shown in Figure 3.17, which additionally illustrates the overall differences in median age at introduction of complementary foods among regions. In Latin America/Caribbean and sub-Saharan Africa, there were few differences in age of introduction by sex, although in both regions foods were introduced to girls slightly earlier than to

boys. In the Asian countries, sex differences were more pronounced, with girls being started on complementary foods almost a month earlier than boys on average (7.7 vs 8.4 months). In the Near East/North Africa, median age data were available only for Egypt, where boys were given complementary foods almost a month earlier than girls (6.9 vs 7.7 months). Sex differences in the age of introduction of foods may reflect cultural/religious biases and may partially explain differences in nutritional status, morbidity, and mortality rates, although many other factors also influence these outcomes.

3.3 TYPES OF FOODS EATEN BY CHILDREN

In addition to breast- and bottle-feeding patterns and general feeding practices within different age groups of children, it is important to know what kinds of foods children are eating, and how often they are fed. Beginning with the third phase of the Demographic and Health Surveys program (DHS-III) only, mothers were asked what types of food were given to their children in the 7 days before the interview, and the number of days in the week the children were given those foods. Table 3.33 presents the results of the weekly recalls for all children over the age of 6 months. Because the results are from surveys conducted only during DHS-III, the data are limited to a relatively small number of countries from sub-Saharan Africa, Asia, and Latin America/Caribbean.

Table 3 31 Median age at introduction of complementary foods, by mother s education

Median age (months) at introduction of complementary foods among last born currently breastfeeding children less than 3 years of age by mother s education Demographic and Health Surveys 1990 1996

Region country and date	Complementary foods			Number of children		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub Saharan Africa						
Burkina Faso 1993	8 8	7 5	(5 9)	2 791	279	100
Cameroon 1991	4 5	2 2	3 2	683	646	367
Central African Republic 1994-95	2 9	2 5	(2 2)	1 122	835	310
Côte d'Ivoire 1994	6 1	5 0	(4 6)	2 217	826	292
Ghana 1993	10 8	9 0	*	741	1 026	112
Kenya 1993	3 4	2 6	2 3	526	1 714	681
Madagascar 1992	5 2	4 7	5 2	535	1 566	598
Malawi 1992	2 1	2 0	*	1 076	1 001	70
Mali 1995	9 1	9 1	(7 6)	3 983	524	211
Namibia 1992	6 8	6 0	6 8	337	1 045	693
Niger 1992	5 6	5 0	(3 4)	2 930	244	65
Nigeria 1990	8 5	6 2	7 2	2 409	957	484
Rwanda 1992	6 8	6 3	(5 6)	1 237	1 384	144
Senegal 1992-93	7 1	4 4	(4 0)	2 214	367	155
Tanzania 1991-92	7 4	6 5	(7 0)	1 397	2 622	131
Uganda 1995	6 8	6 5	6 1	1 121	2 119	392
Zambia 1992	2 8	3 4	3 3	510	1 971	629
Zimbabwe 1994	(2 9)	2 2	2 4	254	1 026	777
Near East/North Africa						
Egypt 1992	8 3	8 2	5 7	1 999	874	1 147
Jordan 1990	7 0	10 2	0 0	631	725	2 209
Morocco 1992	a	(0 0)	(0 0)	1 980	258	245
Turkey 1993	7 5	0 0	a	524	1 021	340
Asia						
Bangladesh 1993 94	11 0	11 4	13 0	1 919	934	540
India 1992 93	10 3	8 9	9 2	33	5 147	5 597
Indonesia 1994	2 2	2 8	3 0	919	5 296	2 673
Kazakhstan 1995	*	*	4 1	0	2	680
Nepal 1996	6 9	6 9	5 5	2 859	417	345
Pakistan 1990 91	12 4	a	a	2 476	297	391
Philippines 1993	(5 6)	6 3	a	109	1 667	2 435
Latin America/Caribbean						
Bolivia 1993-94	5 4	5 2	4 2	390	1 339	1 124
Brazil 1996	*	a	a	144	913	1 392
Colombia 1995	(3 9)	3 6	3 8	116	1 081	1 440
Dominican Republic 1991	*	0 0	0 0	157	993	759
Guatemala 1995	7 3	6 7	4 8	1 635	2 206	598
Haiti 1994	0 9	0 7	(2 5)	813	676	219
Paraguay 1990	*	5 1	6 4	60	1 331	518
Peru 1996	6 4	6 0	5 4	711	2 975	4 084

* = based on too few cases to show (0 24)

() = based on a small number of cases (25-49)

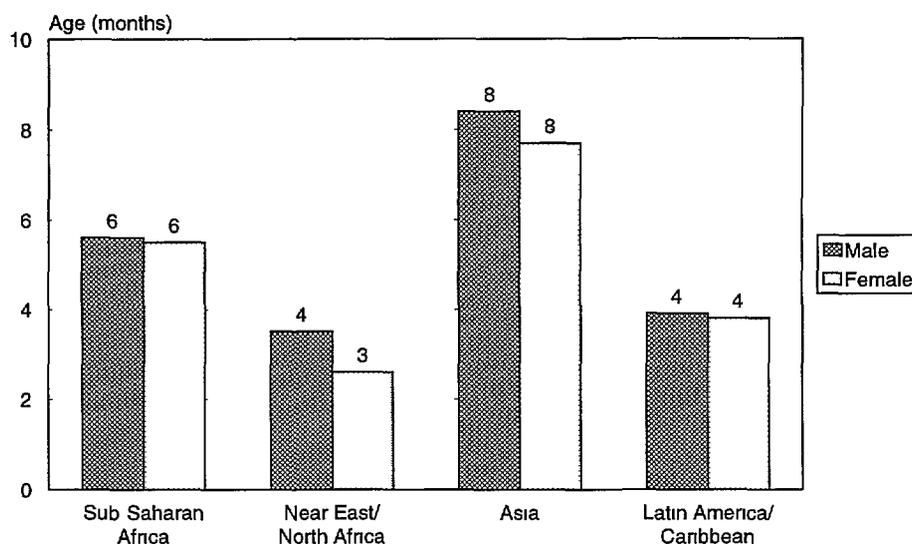
^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Table 3 32 Median age at introduction of complementary foods, by sex

Median age (months) at introduction of complementary foods among last-born currently breastfeeding children less than 3 years of age by sex Demographic and Health Surveys 1990 1996

Region, country, and date	Complementary foods		Number of children	
	Male	Female	Male	Female
Sub Saharan Africa				
Burkina Faso 1993	8.1	9.0	1 598	1 573
Cameroon 1991	2.9	3.6	840	856
Central African Republic 1994-95	2.5	2.7	1 148	1 120
Côte d'Ivoire 1994	5.9	5.6	1 680	1 655
Ghana 1993	10.3	9.2	966	913
Kenya 1993	2.8	2.5	1 455	1 466
Madagascar 1992	5.1	4.8	1 370	1 330
Malawi 1992	2.1	2.1	1 110	1 037
Mali 1995	8.7	9.3	2 324	2 395
Namibia 1992	6.4	6.2	1 038	1 038
Niger 1992	5.6	5.4	1 756	1 484
Nigeria 1990	7.7	7.2	1 945	1 906
Rwanda 1992	6.7	6.4	1 409	1 356
Senegal 1992 93	6.8	6.5	1 372	1 364
Tanzania 1991 92	6.5	6.9	2 093	2 057
Uganda 1995	6.5	6.6	1 775	1 857
Zambia 1992	3.3	3.2	1 561	1 550
Zimbabwe 1994	2.3	2.4	993	1 063
Near East/North Africa				
Egypt 1992	6.9	7.7	2 112	1 908
Jordan 1990	2.5	2.7	1 809	1 757
Morocco 1992	5.9	5.7	1 271	1 212
Turkey 1993	3.1	3.6	998	887
Asia				
Bangladesh 1993 94	11.8	10.5	1 729	1 663
India 1992 93	10.0	10.0	5 689	5 088
Indonesia 1994	2.5	3.2	4 543	4 345
Kazakhstan 1995	4.8	3.8	319	363
Nepal 1996	7.1	6.5	1 858	1 764
Pakistan 1990 91	14.3	12.4	1 644	1 520
Philippines 1993	8.4	7.7	2 169	2 041
Latin America/Caribbean				
Bolivia 1993 94	4.9	4.8	1 512	1 340
Brazil 1996	3.9	4.9	1 231	1 218
Colombia 1995	3.8	3.6	1 378	1 259
Dominican Republic 1991	2.5	2.6	946	962
Guatemala 1995	6.9	6.4	2 233	2 206
Haiti 1994	3.6	3.8	876	832
Paraguay 1990	5.4	5.3	986	923
Peru 1996	5.7	5.7	3 934	3 836

Figure 3 17 Median age at introduction of complementary foods, by sex and region



Note Based on last born children only

Source DHS Surveys 1990 1996

Water-based liquids (e.g., juice, tea, broth) are given to children in most countries about 2 to 3 times per week. In sub-Saharan Africa, about a third of children are given water-based liquids in the four countries studied. In Asia, a third of children are given water-based liquids, on average, but the range is from 10 percent in Indonesia to 53 percent in Kazakhstan. In Latin America/Caribbean, the range is from 16 percent in Colombia to 45 percent in Peru.

Milk-based liquids (i.e., milks other than breast milk) are also given to children, this type of feeding varies from 3 percent of children in Indonesia to 33 percent of children in Zimbabwe. As with water-based liquids, the weekly frequency of giving milk-based liquids is about 2 to 3 times per week.

At least half of the children in most countries were given eggs, fish, and poultry about 2 to 3 times per week on average. Nepal was the exception with only a third of children receiving these foods, and less than 2 times per week on average. Half or more of the children in sub-Saharan Africa and Latin America/Caribbean received red meat about 2.5 times per week. Fewer than half of all children in Asia received red meat, with Nepal at 27 percent again having the lowest prevalence.

Feeding of grains (reflecting cereals made from grain or grain flours) was reported unevenly, with 40 percent or more in the Central African Republic, Uganda, Bolivia, and Guatemala, but less than 20 percent in the remaining countries where the foods were reported. However, the frequency of feeding grains was 3 to 4 times per week. Tubers and plantains (again, probably reflecting cereals made from these foods) were given to a third or more of children in all the countries where those foods were reported. Tubers and grains were given from about 2.5 to 4 times per week. Other complementary foods were also given to children, ranging from 10 percent in Zimbabwe to 67 percent in the Central African Republic. Other complementary foods may include fruits, vegetables, snacks and sweets, garnishes, food mixes, or other processed foods. When foods of any kind were considered, more than 90 percent of children in most countries were given some type of food. In Mali, Brazil, and Colombia, only 77, 65, and 71 percent of children, respectively, were reportedly given any foods in the last week. Interestingly, in Latin American/Caribbean countries, the frequency of feeding any type of food was about 4 times per week, which is higher than the average number of times foods were given in either sub-Saharan Africa (2.9 times per week, on average) or Asia (3.3 times per week, on average).

Table 3.33 Percentage of children more than 6 months of age who received specific types of food in the last 7 days

Percentage of children more than 6 months of age who received specific types of food in the last 7 days and mean number of days food was received, Demographic and Health Surveys 1993-1996

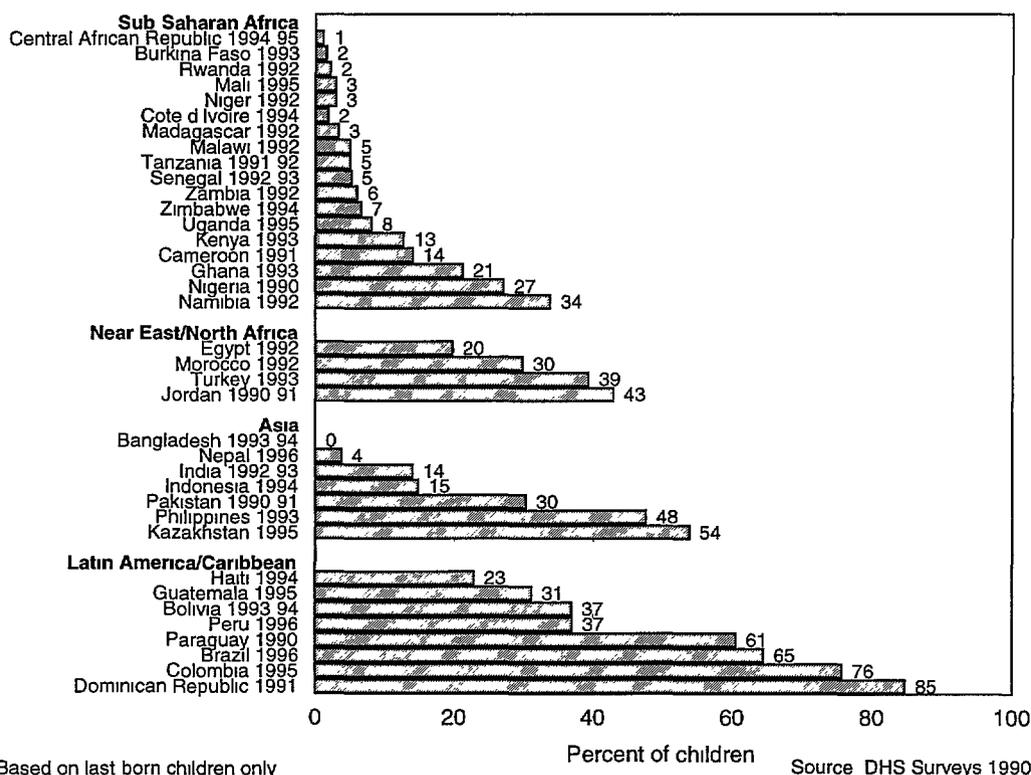
Region, country and date	Predominantly breastfed		Milk based liquids		Eggs, fish, poultry		Red meats		Grains		Tubers plantains		Other complementary foods		Any foods		Number of children
	Percent in 7 days	Mean no of days	Percent in 7 days	Mean no of days	Percent in 7 days	Mean no of days	Percent in 7 days	Mean no of days	Percent in 7 days	Mean no of days	Percent in 7 days	Mean no of days	Percent in 7 days	Mean no of days	Percent in 7 days	Mean no of days	
Sub-Saharan Africa																	
Central African																	
Republic 1994-95	32.1	2.3	8.9	2.6	61.7	2.2	77.8	2.8	42.7	2.8	32.7	4.1	67.0	3.2	92.7	2.8	1 661
Mali 1995	32.9	2.8	31.9	2.8	45.7	2.6	51.9	2.5	17.2	3.9	36.5	2.7	24.0	2.5	76.7	3.3	3 199
Uganda 1995	32.0	3.3	21.6	2.9	52.1	2.3	41.8	1.6	40.0	3.2	39.3	3.4	32.9	3.3	90.7	2.1	3 965
Zimbabwe 1994	39.2	2.9	32.5	2.8	54.3	2.2	56.3	2.5	u	*	u	*	9.5	3.8	88.2	3.4	1 431
Asia																	
Indonesia 1994	10.2	2.9	2.8	2.3	48.7	3.5	45.1	2.1	u	*	u	*	16.6	4.1	95.0	2.9	2 731
Kazakhstan 1995	52.5	4.2	24.9	3.9	65.2	2.7	38.4	3.8	10.3	4.8	52.5	3.8	47.7	2.5	93.7	3.8	533
Nepal 1996	39.4	3.5	16.4	3.0	33.4	1.7	27.1	1.5	4.1	4.0	39.1	3.2	44.4	3.2	96.7	3.3	2 711
Latin America/Caribbean																	
Bolivia 1993-94	30.6	3.7	27.9	2.9	70.3	2.9	40.3	3.3	47.3	3.4	41.1	3.4	26.1	3.3	90.4	4.0	2 184
Brazil 1996	29.9	3.3	11.9	3.4	66.4	3.1	58.9	3.0	14.3	2.9	40.6	2.7	u	*	65.1	4.5	3 684
Colombia 1995	16.3	4.2	17.5	3.2	61.4	3.2	59.7	3.0	19.7	3.9	34.1	3.4	37.4	3.4	71.3	4.7	3 932
Guatemala 1995	17.9	3.5	16.1	2.5	66.9	2.7	71.4	1.9	37.0	2.7	63.6	2.8	15.6	3.3	93.4	3.4	6 786
Peru 1996	45.2	3.5	30.9	3.1	69.1	3.3	67.0	2.4	33.0	4.0	39.0	3.8	59.1	3.9	91.5	3.7	2 018

Note: Question was not asked in Near East/North Africa countries. Data represents children < 5 years in LAC countries and Indonesia, and < 3 years in all other countries.

* = based on too few cases to show (0-24)

u = unknown (not available)

Figure 3 18 Percentage of children 0 to 11 months of age bottle-fed



34 BOTTLE-FEEDING

Bottle-feeding is not recommended for the vast majority of infants in developing countries because of the potentially adverse effects of contamination from water, utensils, and hands during preparation and storage of formula and other bottle-feeds, and the potential for overdilution of instant formula with water, rendering the bottle-feed nutritionally inadequate. Figure 3 18 presents the percentage of last-born infants 0 to 11 months of age currently receiving a bottle. By region, bottle-feeding is least prevalent in sub-Saharan Africa and most common in Latin America/Caribbean. In sub-Saharan Africa, the use of bottles is less than 10 percent in most countries, the highest rate of use is in Namibia, where one-third of infants receive a bottle. In Latin America/Caribbean, on the other hand, bottle-feeding ranges from 23 percent in Haiti to 85 percent in the Dominican Republic. In Near East/North Africa countries, the prevalence is intermediate, with a range of 20 to 43 percent. The range of bottle-feeding rates is quite wide in Asia, probably a result of the varied mix of countries in that regional grouping. Overall, as countries move higher on the economic development ladder, bottle-feeding rates increase, and become closer to the rates found in developed countries.

Summary

The data from 37 countries indicate that there is substantial divergence from the WHO recommendations for infant feeding. Exclusive breastfeeding of infants younger than 4 months is rare in all but a few countries. In contrast, most young infants are predominantly breastfed, i.e. given breast milk with some other liquids. Equally troubling is the fact that in a third of the countries studied fewer than half of children 6 to 9 months of age are receiving complementary foods as is recommended. At the same time, the median age at introduction of complementary foods among children under age three years is as young as 1, 2, or 3 months in 13 of the 37 countries. Thus, liquids and solids other than breast milk are being given to children at very early ages, increasing the risk of diarrhea. From the age of 6 months onward, when breast milk alone is nutritionally insufficient and complementary foods are needed, many children over 6 months are not fed any solid foods or are not fed them on a daily basis.

There is still an urgent need to promote adequate and safe feeding of young children. Breastfeeding patterns in the countries studied are far from optimal, with few young infants

breastfed exclusively and most given some form of liquids or solid foods during the first months of life. The danger is that liquids and solids given in these early months may be contaminated, thus increasing the risk of diarrhea, malnutrition, and death. Reducing the practice of very early introduction of non-breast-milk liquids and foods should be a critical area of

behavior change for program emphasis. For children 6 months and older, promotion of frequent feeding of nutritionally adequate, safe, affordable, locally available complementary foods in sufficient quantities, should be among the highest priority interventions.

4 Postpartum Amenorrhea, Abstinence, Insusceptibility, and Contraceptive Use

Beyond its benefits to the child, breastfeeding benefits the mother in several ways, notably a quicker recovery from the pregnancy (shrinking of the uterus, etc) and prolongation of the period of postpartum infecundity¹ Traditional societies appear to have always known about the fecundity effects of breastfeeding and its beneficial effects on the health of the mother and of her recently born children Indeed, many traditional societies proscribe sexual activity during breastfeeding to prolong the period of breastfeeding and to add to its infecundity effects More recently, demographers and other social researchers have studied those effects Models partitioning the effects of the principal intermediate variables find that lactational amenorrhea accounts for a substantial portion of the difference between potential and actual fertility levels, even in countries where there are high levels of contraceptive use and age at first marriage is relatively late

In the last decade, a “new” method of avoiding pregnancy, the lactational amenorrheic method (LAM), was defined based on the infecundity effects of breastfeeding, and found to be as effective as other modern methods (Kennedy et al , 1989, Labbok et al , 1994)

The association between breastfeeding and postpartum infecundity has been studied by both demographers and biodemographic researchers In the 1960s and 1970s, researchers tried to model the effects of breastfeeding on postpartum infecundity (using lactational amenorrhea as a marker) through the use of equations predicting the duration of amenorrhea based on the duration of breastfeeding (Jain and Bongaarts, 1981) The thinking behind the equations was that hormones involved in the production of breast milk also suppressed ovulation, but that the effect declined naturally over time

In the 1980s researchers began investigating the biodemographic pathways through which breastfeeding affects infecundity (McNeilly, 1993, McNeilly et al , 1994) Those researchers found that the act of suckling per se,

rather than the production of milk, provided the stimulus for the suppression of ova production in the mother They concluded that the frequency and duration of breastfeeds were the important factors in preserving infecundity and that ovulation would reinitiate if suckling decreased but could be suppressed again if suckling increased again The findings led the demographic researchers to reevaluate the simple equations predicting durations of amenorrhea from durations of breastfeeding In light of the findings, questions were added to demographic surveys about the frequency of feeds, about night feeding, and about foods received during breastfeeding, with the intention of studying the impact on postpartum infecundity

The purpose of this chapter is to examine the range of durations of postpartum effects including postpartum amenorrhea (taken as the marker for postpartum infecundity), abstinence and insusceptibility (the longer of amenorrhea and abstinence), differentials in durations of the postpartum variables according to demographic, social and biodemographic characteristics, the effect of different breastfeeding regimes on the duration of postpartum amenorrhea, the use of the lactation amenorrhea method (LAM), the knowledge and use of breastfeeding to avoid pregnancy, and the overlap of contraception with amenorrhea and breastfeeding

4.1 DHS DATA ON POSTPARTUM VARIABLES

Because the resumption of ovulation is unobservable except by clinical methods, the Demographic and Health Surveys (DHS) ask women about their first menstruation after giving birth, which is used as a marker for resumption of fecundity In the DHS-II and DHS-III rounds of surveys, women with children born in the last five years are asked, “Has your period returned since the birth of (NAME) [their last child]?” Women who say it has are then asked, “For how long after the birth of (NAME) did you *not* have a period?” Similarly, women who have had more than one birth in the last five years are asked, “Did your period return between the birth of (NAME) [next to last birth] and your next pregnancy?” If the answer is affirmative, they are also asked the question about the duration of amenorrhea as above

¹ After giving birth (during the postpartum period) women are temporarily unable to conceive again for a certain time (the postpartum infecundable period) In the absence of breastfeeding this period lasts approximately six weeks Breastfeeding the child can extend the period for several months

For postpartum sexual abstinence, nonpregnant women are asked, "Have you resumed sexual relations since the birth of (NAME) [last child]?" If the answer is yes, then they are asked, "For how many months after the birth of (NAME) did you not have sexual relations?" This question is also asked of women for their other births occurring in the time period. Questions on resumption of sexual activity were not included in the Malawi 1992 survey.

For "A-core" countries (high contraceptive prevalence) in the DHS-II phase, the durations of amenorrhea and abstinence were entered into a reproductive calendar of the last five years to check for overlapping inconsistencies with episodes of pregnancy. In the calendar, information was entered for each month of the five years preceding the survey. In one column the information entered for each month consisted of whether the woman was using contraception (including type of method) or whether she was pregnant or gave birth or terminated the pregnancy in that month. In other columns episodes of postpartum amenorrhea and postpartum abstinence were recorded for each month.² The use of a reproductive calendar to collect information on postpartum amenorrhea and abstinence was to alert the interviewer and respondent to inconsistencies in reporting whereby the duration of the variables made them overlap with periods when the woman was pregnant. It is thought that the inconsistencies arise because the respondent does not remember exactly the durations but tends to round them to the nearest "preferred" duration, such as 6 and 12 months. However, the reporting error that is detectable through calendar overlaps is overstatement of the duration, and understatement is not detectable. The correction elicited by the calendar process corrects only the overstatement of durations. If women tend to round to preferred durations, overstating and understating the true durations equally, a bias is created in the average duration.

The entry of breastfeeding, amenorrhea, and abstinence was discontinued in the DHS-III "A-core" reproductive calendar because the standard for using postpartum data in DHS statistics is based on current status, the correction of recall durations is one-sided and thus leads to additional biases, and there is no reproductive calendar in "B-core" countries (low contraceptive prevalence).

Information in this chapter is based on current status data. The information is in the form of dichotomies regarding whether or not a woman is amenorrheic, whether she is abstaining, and whether she is using contraception, by the number of months since the birth of a child. (Durations of amenorrhea and abstinence after pregnancy loss are not included in the results presented here and are available only for DHS-II "A-core" surveys from the reproductive calendar.) The period after each birth within the 36 months before the survey is represented. As such, if a woman had two live births within the period—for example, 6 months before the survey and 31 months before—she would be counted twice, once at 6 months for the last birth, during which she would be amenorrheic or not depending on her answer to the question given above, and once at 31 months for the next-to-last birth, for which she is considered to have terminated her amenorrhea. From the proportions amenorrheic at each given duration since birth, current status distributions, medians, and means can be determined that represent the distributions, medians, and means of durations of amenorrhea. Similarly, durations of postpartum abstinence and insusceptibility can be determined. See Appendix D for the methodology of calculating current status distributions, medians, life-table and prevalence-incidence means, and a comparison with results from the retrospective questions on duration.

4.2 DURATIONS OF POSTPARTUM AMENORRHEA, ABSTINENCE, AND INSUSCEPTIBILITY

The durations of postpartum effects are given in percentiles, medians (the 50th percentile), and means based on life-table and prevalence-incidence calculations. The percentiles represented are the number of months since the birth at which 10 percent, 25 percent, 50 percent, 75 percent, and 90 percent of women resumed menstruation, sexual relations, or susceptibility to conceiving. The life-table mean uses the proportions of women at each duration since birth to calculate a mean duration at resumption. However, the life-table mean is misleading in measuring central tendency if some women breastfeed for longer than the observation window (36 months here) or if the distribution is very skewed. The prevalence-incidence mean is the number of women currently amenorrheic, abstaining, or insusceptible divided by the average monthly number of births. Given the assumption that the number of births has not changed during the observation window, the mean duration is represented by the quotient. This assumption holds approximately for total samples where no marked trends or cyclical fluctuations in births exist, but is violated

² Other calendar columns collected information regarding reason for termination of a contraceptive episode, work status, and location of residence.

by specific subgroups of the population, especially those selecting young and older women. See Appendix D for details of calculation.

Postpartum Amenorrhea

In the 37 countries covered by the latest DHS-II and DHS-III surveys, the median duration of postpartum amenorrhea ranges from 3 months in Brazil to 17 months in Rwanda (Table 4.1). Because of skewing in the distributions, the medians are somewhat lower than the means, which have values ranging from 6 months in Turkey, the Dominican Republic, and Brazil (life-table) and in the Dominican Republic (prevalence-incidence) to 18 months in Rwanda (life-table), and in Rwanda, Nigeria, and Burkina Faso (prevalence-incidence).

Regionally, the sub-Saharan African countries have the longest durations of amenorrhea, with 14 of 18 countries having medians longer than a year (Figure 4.1). In no other region is the median duration of amenorrhea longer than a year. The Near East/North Africa region has the shortest durations, from 4 to 6 months, while the largest variation occurs in Latin America/Caribbean where median durations range from 3 or 4 months (Brazil, Colombia, and the Dominican Republic) to 11 months (Haiti, Bolivia, and Guatemala).

The distribution of amenorrhea durations represented by the interquartile range³ does not vary substantially. For most countries the range is between 11 and 13 months. Four countries have a range of 14 months and Rwanda has the highest dispersion at 17 months. The lowest dispersions (5 to 7 months) occur in the Latin America/Caribbean countries with the smallest medians.

Figure 4.2 shows the medians and distributions by region and for all countries combined. In this figure the countries within each region have been averaged so that the deciles, quartiles, and medians are the averages of the appropriate country statistics. The figure illustrates that sub-Saharan Africa has the longest durations of amenorrhea and the Near East/North Africa the shortest. For all countries combined the median duration is about 10 months with first and third quartiles of 5 and 16 months. The first deciles do not vary between regions but there is considerable variation in the last decile, from 16 months in the Near East/North Africa to 26 months in sub-Saharan Africa.

³ The difference between the first and third quartiles (25th and 75th percentiles)

Postpartum Abstinence

The majority of couples do not wait long to resume sexual relations after a birth. In the countries surveyed during DHS-II and DHS-III, the median duration of postpartum sexual abstinence is 2 to 3 months in all countries of the Near East/North Africa, Asia, and Latin America/Caribbean (Table 4.2). Only in sub-Saharan Africa do medians exceed 3 months. 7 of the 17 countries have medians for abstinence that exceed half a year. The longest durations of abstinence occur in Cameroon (13 months) and Burkina Faso (19 months) (Figure 4.3). Indeed, the duration of postpartum abstinence exceeds that of amenorrhea in Burkina Faso. It should be noted, however, that in countries with long median durations of abstinence, there is also a high proportion of unions that are polygynous. For example, in Cameroon, 39 percent of women are in a polygynous union, as are 51 percent of women in Burkina Faso. Although the countries with the longest median duration of abstinence are in sub-Saharan Africa, so is the country with the shortest, Rwanda (1 month).

The distributions of durations of abstinence, as noted by the interquartile ranges, vary substantially in sub-Saharan Africa from 1 to 19 months, but are nearly identical in the Near East/North Africa, where 75 percent of women have resumed sexual relations by 3 months after the birth and 90 percent have done so by 4 months after the birth. In Latin America/Caribbean and Asia, the ranges vary from 3 to 4 and 3 to 5 months, respectively (Figure 4.4). At the upper end of the distribution, the last decile is reached at quite long durations after birth for eight of the sub-Saharan African countries, where 10 percent of women wait two or more years to resume sexual intercourse.

Postpartum Insusceptibility

Postpartum insusceptibility to conception is the result of either being postpartum infecund (indicated by amenorrhea) or temporarily abstaining from sexual relations after the birth of a child. For each woman the duration of postpartum insusceptibility is the longer of either amenorrhea or abstinence. For current status calculations, women are considered insusceptible if they are either amenorrheic or abstaining or both. In general, because postpartum abstinence tends to be shorter than postpartum amenorrhea, postpartum insusceptibility follows the pattern of amenorrhea but is slightly longer. Table 4.3 presents the medians and means for postpartum insusceptibility across countries.

Table 4 1 Duration of postpartum amenorrhea

Number of months postpartum by which mothers of specific percentages of children had resumed menstruation and life table and prevalence incidence mean durations of postpartum amenorrhea Demographic and Health Surveys 1990 1996

Region country and date	No months postpartum by which mothers of specific percentage of children had resumed menstruation					Life table mean ¹	Prevalence incidence mean ¹	Number of births
	10%	25%	50% (median)	75%	90%			
Sub Saharan Africa								
Burkina Faso 1993	2.5	8.8	14.7	23.2	32.5	16.9	18.1	3 423
Cameroon 1991	2.1	4.8	10.6	16.9	25.0	12.9	14.6	2 041
Central African Republic 1994 95	2.2	8.6	14.2	21.0	26.5	15.7	16.3	2 816
Cote d'Ivoire 1994	2.6	7.2	12.3	18.0	24.7	13.9	13.9	3 998
Ghana 1993	2.5	6.5	13.3	19.1	25.5	14.7	16.3	2 204
Kenya 1993	1.6	3.6	10.9	17.3	26.3	12.9	13.3	3 655
Madagascar 1992	2.1	5.7	12.6	18.4	25.2	14.2	14.5	3 259
Malawi 1992	0.7	6.6	12.6	19.4	27.7	14.6	15.8	2 818
Mali 1995	1.9	7.3	13.7	19.3	24.6	14.8	15.7	6 031
Namibia 1992	0.6	2.6	8.4	16.4	22.1	11.2	13.1	2 541
Niger 1992	2.1	7.8	15.9	21.4	26.2	15.8	16.3	4 131
Nigeria 1990	2.0	7.5	14.9	21.7	28.4	16.2	17.7	4 738
Rwanda 1992	2.1	6.6	16.9	23.6	33.6	17.5	17.5	3 324
Senegal 1992 93	2.4	8.5	14.5	21.1	25.8	15.8	17.3	3 361
Tanzania 1991 92	2.3	6.7	13.5	20.1	25.5	14.8	15.1	5 107
Uganda 1995	2.1	5.8	12.8	19.2	27.4	14.4	14.6	4 434
Zambia 1992	2.1	5.9	11.9	17.4	23.3	13.3	14.6	4 074
Zimbabwe 1994	1.3	6.7	13.1	17.8	22.2	13.6	14.0	2 438
Near East/North Africa								
Egypt 1992	1.2	2.2	5.6	11.1	18.3	8.5	10.3	5 036
Jordan 1990 91	1.0	2.0	4.0	8.9	14.0	6.8	6.5	5 034
Morocco 1992	0.7	1.6	3.8	13.4	18.6	8.1	9.7	3 055
Turkey 1993	0.8	1.7	3.7	6.7	11.7	5.9	8.4	2 223
Asia								
Bangladesh 1993 94	1.4	3.4	10.6	17.1	22.4	12.3	12.4	3 925
India 1992 93	0.9	3.1	8.7	14.3	21.9	10.9	12.0	36 850
Indonesia 1994	1.3	2.5	7.2	15.6	24.4	10.9	11.0	10 776
Kazakhstan 1995	(1.0)	(2.1)	(4.2)	(10.8)	(17.7)	8.1	6.9	846
Nepal 1996	2.0	5.6	10.4	17.3	24.5	13.1	13.0	4 417
Pakistan 1990 91	0.7	2.0	6.6	12.3	21.3	9.7	11.2	3 978
Philippines 1993	1.0	2.1	5.6	11.1	15.9	7.9	8.3	5 583
Latin America/Caribbean								
Bolivia 1993 94	1.9	4.4	10.5	15.4	21.8	12.1	14.1	3 654
Brazil 1996	0.5	1.3	3.0	6.4	13.0	6.3	6.9	3 032
Colombia 1995	1.0	2.0	4.3	8.1	13.8	7.1	9.1	3 113
Dominican Republic 1991	0.7	1.6	3.5	6.6	12.0	5.7	5.7	2 622
Guatemala 1995	1.4	3.8	10.5	15.9	23.3	12.5	13.9	6 150
Haiti 1994	1.5	4.2	11.1	18.1	22.7	12.7	14.2	2 108
Paraguay 1990	1.1	2.0	4.5	9.2	14.4	7.0	7.6	2 596
Peru 1996	1.5	4.2	8.4	15.1	20.7	11.2	12.3	10 255

() = based on a small number of cases (25 49)

¹ See Appendix D

Figure 4 1 Median duration of postpartum amenorrhea

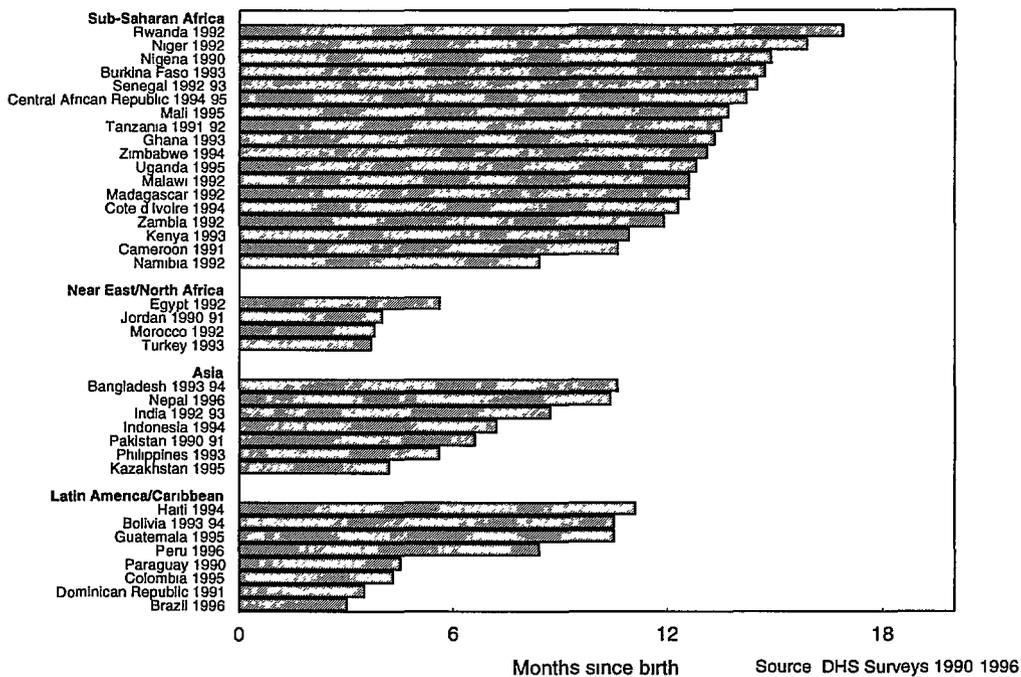
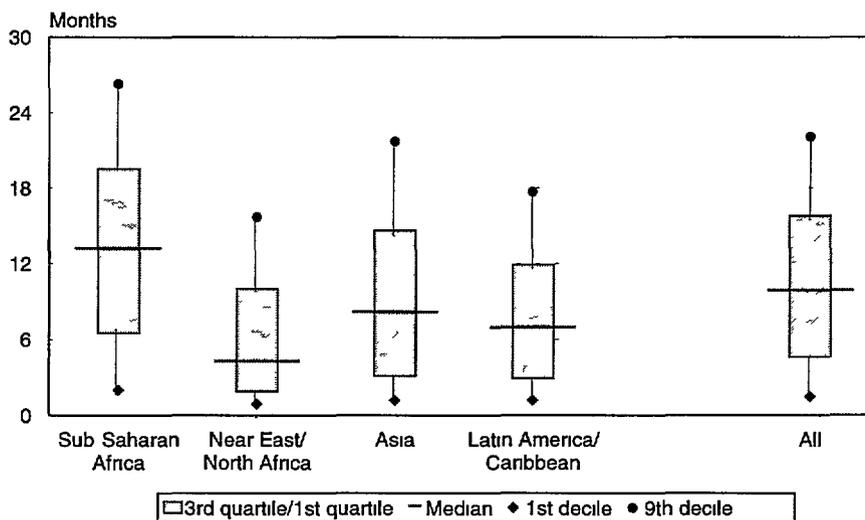


Figure 4 2 Distribution of duration of postpartum amenorrhea by region



Source: DHS Surveys 1990 1996

Table 4 2 Duration of postpartum abstinence

Number of months postpartum by which mothers of specific percentages of children had resumed sexual relations and life table and prevalence incidence mean durations of postpartum abstinence Demographic and Health Surveys 1990 1996

Region country and date	No months postpartum by which mothers of specific percentage of children had resumed sexual relations					Life table mean ¹	Prevalence incidence mean ¹	Number of births
	10%	25%	50% (Median)	75%	90%			
Sub Saharan Africa								
Burkina Faso 1993	1 9	8 2	19 0	27 0	>36 0	19 1	19 8	3 423
Cameroon 1991	2 4	5 7	13 4	20 8	26 3	14 8	15 9	2 041
Central African Republic 1994 95	1 4	3 4	10 3	17 4	26 2	12 8	13 3	2 816
Cote d Ivoire 1994	2 5	6 2	11 9	22 0	27 4	14 9	14 9	3 998
Ghana 1993	1 7	4 2	9 4	22 5	33 4	14 1	15 2	2 204
Kenya 1993	0 5	1 3	3 0	7 7	21 1	7 4	6 6	3 655
Madagascar 1992	0 9	1 7	3 6	6 8	15 9	7 1	6 7	3 259
Malawi 1992	0 1	0 2	0 4	0 6	0 7	0 8	0 0	2 818
Mali 1995	0 8	1 5	2 9	6 6	16 4	6 9	6 6	6 031
Namibia 1992	1 0	2 2	5 9	14 5	26 6	10 8	10 7	2 541
Niger 1992	0 6	1 3	2 3	4 2	12 9	5 2	4 9	4 131
Nigeria 1990	1 8	4 4	10 8	21 6	28 2	14 5	14 8	4 738
Rwanda 1992	0 1	0 3	0 6	1 8	4 3	3 4	2 6	3 324
Senegal 1992 93	0 9	1 7	3 5	7 8	21 6	7 8	7 8	3 361
Tanzania 1991 92	0 9	2 2	6 6	16 9	25 5	10 9	10 5	5 107
Uganda 1995	0 4	1 0	2 2	5 2	14 6	5 7	4 9	4 434
Zambia 1992	1 1	2 1	4 4	9 3	21 2	8 5	8 6	4 074
Zimbabwe 1994	1 1	1 8	3 6	6 5	15 3	7 1	7 0	2 438
Near East/North Africa								
Egypt 1992	0 4	1 0	1 8	2 9	4 3	3 4	2 8	5 036
Jordan 1990 91	0 5	1 1	1 9	2 9	4 1	2 9	1 6	5 034
Morocco 1992	0 2	0 6	1 5	2 6	4 0	2 9	2 3	3 055
Turkey 1993	0 5	1 0	1 9	3 0	4 4	3 0	2 3	2 223
Asia								
Bangladesh 1993 94	0 5	1 1	2 0	3 7	5 9	4 1	3 1	3 926
India 1992 93	0 7	1 5	3 2	6 4	13 0	6 3	6 1	36 850
Indonesia 1994	0 8	1 4	2 4	4 3	8 9	5 1	5 0	10 776
Kazakhstan 1995	(0 3)	(0 8)	(2 1)	(3 9)	(6 2)	4 4	3 3	846
Nepal 1996	0 8	1 5	3 1	6 2	11 8	5 8	5 1	4 417
Pakistan 1990 91	0 7	1 3	2 3	4 3	9 0	5 1	5 0	3 978
Philippines 1993	0 6	1 2	2 3	4 4	7 2	4 5	3 1	5 583
Latin America/Caribbean								
Bolivia 1993 94	0 5	1 3	2 5	5 8	17 0	6 4	6 0	3 654
Brazil 1996	0 5	1 2	2 2	4 2	9 1	5 7	4 0	3 032
Colombia 1995	0 7	1 3	2 2	4 6	14 5	5 9	6 2	3 113
Dominican Republic 1991	0 4	1 0	2 1	4 1	7 7	4 7	2 6	2 622
Guatemala 1995	0 6	1 3	2 4	4 8	14 7	5 8	5 3	6 150
Haiti 1994	1 0	1 8	3 4	6 7	16 5	7 3	6 4	2 108
Paraguay 1990	0 6	1 2	2 1	4 0	11 2	5 0	4 6	2 596
Peru 1996	0 6	1 2	2 3	4 8	12 2	5 8	4 7	10 255

Note >36 indicates the figure cannot be calculated because less than the indicated percentage was reached by 36 months the data cutoff age

() = based on a small number of cases (25 49)

¹ See Appendix D

Figure 4 3 Median duration of postpartum sexual abstinence

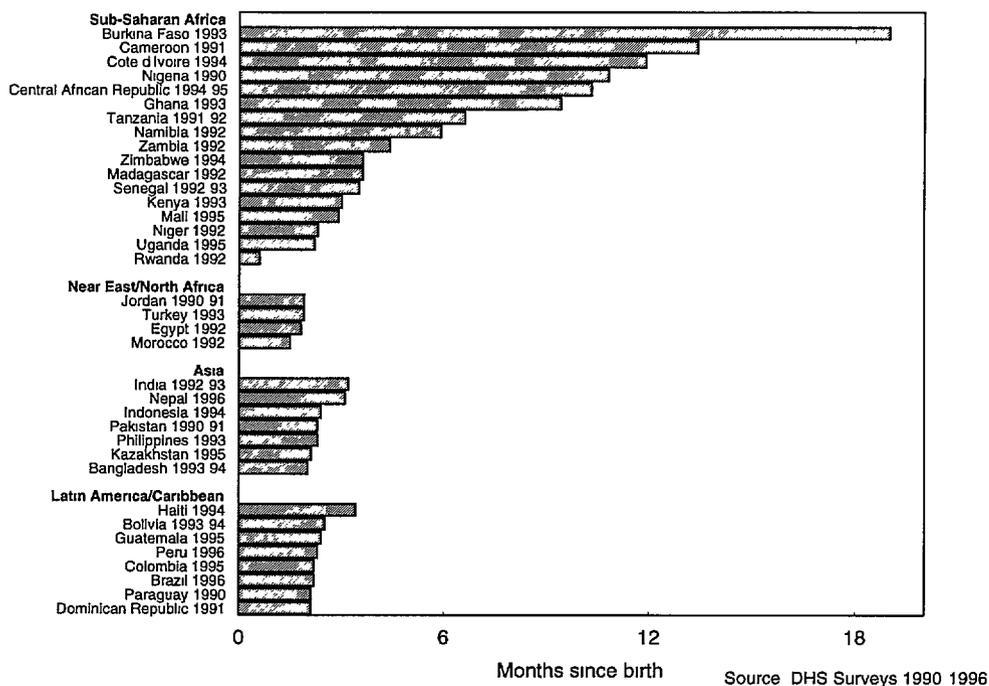
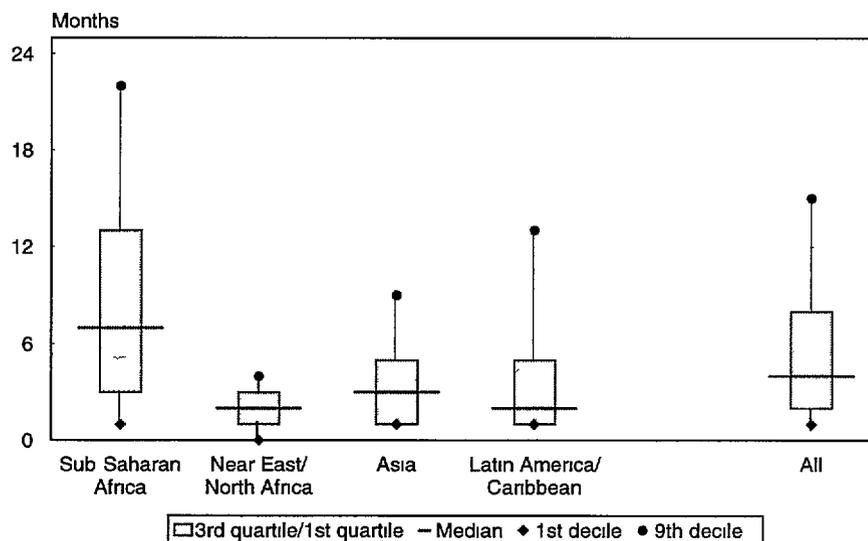


Figure 4 4 Distribution of duration of postpartum abstinence by region



Source: DHS Surveys 1990-1996

Table 4 3 Duration of postpartum insusceptibility

Number of months postpartum by which mothers of specific percentages of children had resumed susceptibility and life table and prevalence incidence mean durations of postpartum insusceptibility Demographic and Health Surveys 1990 1996

Region country and date	No months postpartum by which mothers of specific percentage of children had resumed susceptibility					Life table mean ¹	Prevalence-incidence mean ¹	Number of births
	10%	25%	50% (median)	75%	90%			
Sub Saharan Africa								
Burkina Faso 1993	6 2	13 9	22 5	31 2	>36 0	22 5	23 2	3 423
Cameroon 1991	5 2	10 0	16 1	22 6	33 2	17 7	19 3	2 041
Central African Republic 1994 95	4 1	10 3	16 6	22 9	>36 0	18 1	18 7	2 816
Côte d Ivoire 1994	6 2	10 6	16 7	23 9	29 6	18 1	18 1	3 998
Ghana 1993	4 5	9 2	16 5	24 4	>36 0	18 7	20 0	2 204
Kenya 1993	2 0	5 1	13 1	21 4	28 5	15 1	15 3	3 655
Madagascar 1992	2 4	6 5	13 6	20 1	>36 0	15 5	15 9	3 259
Malawi 1992	0 7	6 6	12 6	19 4	27 7	14 6	15 8	2 818
Mali 1995	2 3	8 7	14 4	20 8	26 4	15 9	16 7	6 031
Namibia 1992	2 5	6 4	13 2	20 8	33 7	15 6	16 8	2 541
Niger 1992	2 8	8 5	16 5	21 7	28 4	16 6	17 1	4 131
Nigeria 1990	5 3	11 2	19 4	24 4	>36 0	19 8	21 1	4 738
Rwanda 1992	2 3	7 6	17 4	24 7	34 4	18 2	18 2	3 324
Senegal 1992 93	4 0	9 8	16 5	22 4	33 3	17 5	19 0	3 361
Tanzania 1991 92	3 8	9 1	15 9	23 5	30 2	17 4	17 6	5 107
Uganda 1995	2 8	6 9	13 7	20 6	29 2	15 5	15 7	4 434
Zambia 1992	3 0	7 6	13 5	19 4	26 4	15 3	16 4	4 074
Zimbabwe 1994	3 0	8 0	14 4	19 8	27 7	15 6	16 0	2 438
Near East/North Africa								
Egypt 1992	1 2	2 3	6 1	11 7	19 4	9 0	11 0	5 036
Jordan 1990 91	1 2	2 1	4 1	9 3	14 2	7 0	6 7	5 034
Morocco 1992	0 8	1 8	4 0	13 8	19 5	8 6	10 2	3 055
Turkey 1993	1 1	2 0	4 1	7 1	12 1	6 3	9 3	2 223
Asia								
Bangladesh 1993 94	1 6	3 9	11 0	17 8	23 9	13 0	13 0	3 926
India 1992 93	1 8	4 6	9 7	16 2	25 2	12 5	13 6	36 850
Indonesia 1994	1 5	3 0	7 9	16 9	30 0	11 9	12 1	10 776
Kazakhstan 1995	(1 3)	(2 4)	(4 6)	(11 6)	(19 5)	8 9	8 1	846
Nepal 1996	2 8	6 6	11 5	18 0	26 2	14 0	13 9	4 417
Pakistan 1990 91	1 4	2 7	7 7	14 5	22 2	11 1	12 9	3 978
Philippines 1993	1 4	2 6	6 5	12 1	17 6	9 1	9 2	5 583
Latin America/Caribbean								
Bolivia 1993-94	2 4	5 4	11 7	18 4	29 1	13 9	15 7	3 654
Brazil 1996	1 0	1 9	4 3	8 3	25 6	8 7	7 8	3 032
Colombia 1995	1 3	2 5	5 6	11 2	19 2	9 6	11 7	3 113
Dominican Republic 1991	0 9	1 9	4 2	8 1	14 9	7 3	6 8	2 622
Guatemala 1995	2 0	5 4	11 7	17 7	>36 0	14 2	15 3	6 150
Haiti 1994	2 5	5 9	12 5	19 9	31 3	14 8	15 7	2 108
Paraguay 1990	1 3	2 2	5 4	11 7	16 6	8 6	9 3	2 596
Peru 1996	2 1	5 1	9 7	17 0	24 7	13 0	13 8	10,255

Note >36 indicates the figure cannot be calculated because less than the indicated percentage was reached by 36 months the data cutoff age

() = based on a small number of cases (25 49)

¹ See Appendix D

Because postpartum amenorrhea and abstinence overlap and for particular women one or the other may be longer, there is no unambiguous way to separate their effects on postpartum insusceptibility. Figures 4.5 and 4.6 show the effect of adding postpartum abstinence to amenorrhea on the duration of insusceptibility and vice versa, respectively.

As with postpartum abstinence, the country with the longest median duration of insusceptibility is Burkina Faso (23 months). This is eight months longer than the median duration of amenorrhea and four months longer than the median duration of abstinence. At four months, five countries tie for the lowest median duration of insusceptibility: Jordan, Morocco, Turkey, Brazil, and the Dominican Republic. As with amenorrhea and abstinence, sub-Saharan Africa is the region with the longest durations of insusceptibility. No surveyed sub-Saharan African country has a median less than one year, and the average of the medians for sub-Saharan Africa is 16 months. The Near East/North Africa has the shortest average median duration, five months, followed by Latin America/Caribbean and Asia with 8 and 9 months, respectively. In both the latter regions there is substantial variation between countries, with

medians from 4 to 13 months in Latin America/Caribbean and 5 to 12 months in Asia.

The dispersion of the distribution of durations of postpartum insusceptibility given by the interquartile ranges indicates little variation among the countries (Figure 4.7). Only five countries have a difference in the first and third quartiles of less than 9 months and only three countries have a difference of more than 14 months. For all countries the average interquartile range is 12 months. Sub-Saharan Africa again has the greatest dispersion, with 14 months, and the Near East/North Africa the least, with 8 months.

4.3 DIFFERENTIALS IN POSTPARTUM AMENORRHEA, ABSTINENCE, AND INSUSCEPTIBILITY

Differences in the durations of postpartum amenorrhea, abstinence, and insusceptibility according to biodemographic, health care, and social and economic characteristics of the child, woman, and household are presented using the median durations only.

Figure 4.5 Increase in median duration of postpartum insusceptibility added by postpartum abstinence

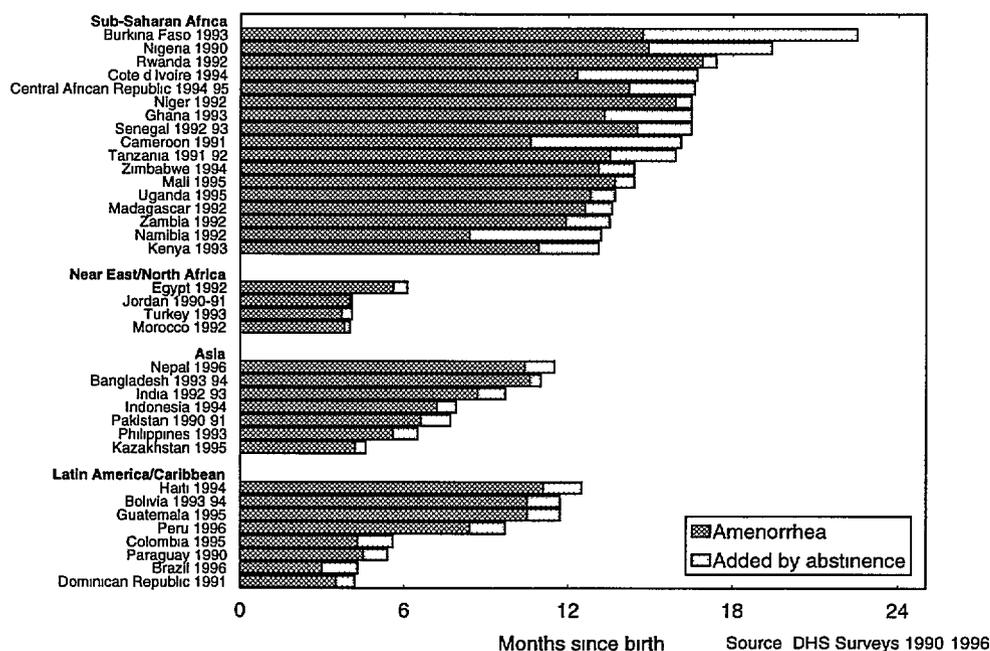


Figure 4 6 Increase in median duration of postpartum insusceptibility added by postpartum amenorrhea

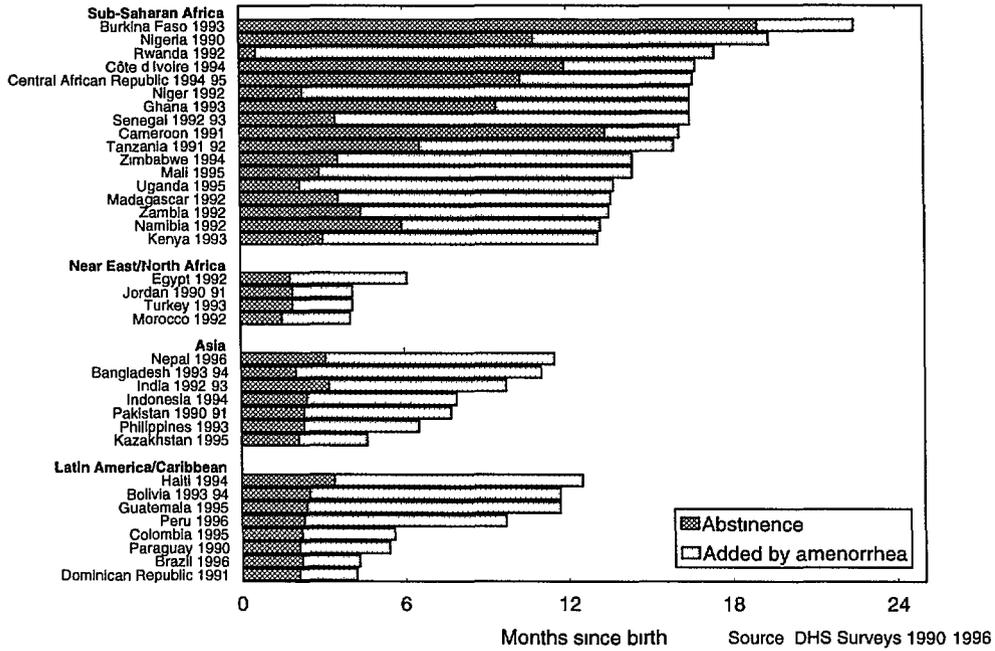
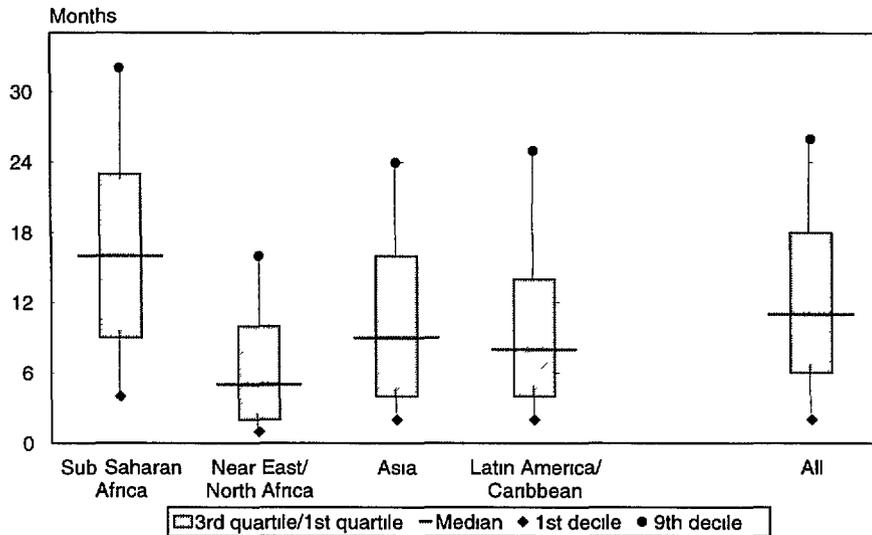


Figure 4 7 Distribution of duration of postpartum insusceptibility by region



Biodemographic Differentials

Biodemographic differentials that will be examined here include sex of child, mother's age at birth, birth order, and interval since the preceding birth

Sex of Child

Median durations of amenorrhea, abstinence, and insusceptibility by sex of child are presented in Table 4.4 along with the median duration for both sexes combined. Regional averages of the differences are presented in Table 4.5

For postpartum amenorrhea, overall there is only a small difference by sex of child, less than half a month on average. Only 10 of the 37 countries have differences in duration of amenorrhea by sex of the child that are larger than one month. For 7 of the 10, women had longer durations if the child was a boy and for 3 of the 10 if the child was a girl. The countries with the largest male-to-female differences are Ghana (2.6), Pakistan (2.5), Cameroon (2.4), and Malawi (2.2). The countries with the largest female-to-male differences are Bangladesh (2.2), Nigeria (1.2), and Uganda (1.2). The region with the largest average male-to-female difference in duration of amenorrhea is sub-Saharan Africa (0.8 months), followed by Asia (0.4 months), but both those regions have countries where the duration for females exceeds that of males.

Differences by sex for postpartum abstinence are smaller even than those for amenorrhea, and the average difference for any region does not exceed 0.2 of a month (less than a week). Only in the Central African Republic and Cameroon do male-to-female differences reach 1 month (1.2 and 1.0, respectively), and only in Ghana and Burkina Faso do the female-to-male differences reach 1 month in the opposite direction (1.4 and 1.2 months, respectively). Had large differences occurred, they may have been alternatively attributed to a desire to "protect" one sex more than the other or to go on and rapidly have a child of the preferred sex. Because the differences in postpartum abstinence are small and go in opposite directions, there does not appear to be a substantial effect of sex preference on delaying the resumption of sexual relations.

The resulting insusceptibility differentials are similar to those of amenorrhea, with the exception that there is no difference in insusceptibility in Ghana, the country with the greatest difference in amenorrhea, and there is a

difference of almost 2 months in Côte d'Ivoire where the amenorrhea and abstinence differences are both less than 1 month. The average male-to-female difference over all the countries surveyed is a little lower for insusceptibility than for amenorrhea, as is true for all regions except Asia.

Mother's Age at Birth

The effects of mother's age at birth on postpartum amenorrhea, abstinence, and insusceptibility are analyzed in four age categories, 15-19, 20-24, 25-34, and 35-49 years at the time of the birth of the child, and the results are presented in Table 4.6. The longest duration of amenorrhea, 21 months, occurs in Burkina Faso among mothers who were 35 to 49 years of age at the time of the birth. Those women also have the longest durations of postpartum abstinence (25 months) and insusceptibility (26 months). The shortest durations of amenorrhea occur in Brazil and Pakistan among women 15 to 19 years (both 2.2 months), while the shortest durations of abstinence occur in Rwanda for all age groups (0.5 to 0.7 months) and in Egypt for women 15 to 19 years (1.6 months). The shortest durations of insusceptibility are in Morocco for age groups 20 to 24 (2.8 months) and 15 to 19 (3.0) and in Jordan for age group 15 to 19 (3.1).

Table 4.7 presents regional averages of the differences in duration by age group. Overall, increases in age at birth are associated with increases in postpartum amenorrhea and insusceptibility as indicated by the average increase for all countries, but the effect is not large, less than 2 months for amenorrhea and a month or less for insusceptibility. Overall, abstinence declines as age increases except for the oldest age group.

Regionally, increases with age at birth for amenorrhea and insusceptibility are largest in sub-Saharan Africa. Asia also has increases of about a month between age groups for insusceptibility. Considering individual countries, the largest increases in duration of amenorrhea occur in Kenya (5.6 months) and Rwanda (5.1) between age groups 20 to 24 and 25 to 34 and in Burkina Faso (5.2 months), Malawi, and Pakistan (both 4.3 months) between age groups 25 to 34 and 35 to 49. For abstinence, the largest increases occur in Burkina Faso between age groups 15 to 19 and 20 to 24 and again in Burkina Faso (7.4 months) and Ghana (5.6 months) between age groups 25 to 34 and 35 to 49.

Table 4.4 Duration of postpartum amenorrhea, abstinence, and insusceptibility, by sex of child

Median duration (months) of postpartum amenorrhea abstinence and insusceptibility by sex of child Demographic and Health Surveys 1990 1996

Region, country, and date	Amenorrhea			Abstinence			Insusceptibility			Number of children		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Sub Saharan Africa												
Burkina Faso 1993	14.7	15.7	14.1	19.0	18.5	19.7	22.5	22.3	22.6	3 737	1 897	1 840
Cameroon 1991	10.6	11.8	9.4	13.4	13.9	12.9	16.1	17.0	14.7	2 127	1 056	1 071
Central African												
Republic 1994 95	14.2	14.7	13.9	10.3	10.9	9.7	16.6	16.9	16.1	2 836	1 439	1 397
Côte d'Ivoire 1994	12.3	12.5	12.0	11.9	12.3	11.7	16.7	17.6	15.7	3 989	2 024	1 966
Ghana 1993	13.3	14.7	12.1	9.4	8.4	9.8	16.5	16.5	16.5	2 204	1 132	1 072
Kenya 1993	10.9	11.7	10.0	3.0	3.0	3.1	13.1	13.4	12.6	3 645	1 794	1 851
Madagascar 1992	12.6	12.9	12.0	3.6	3.9	3.4	13.6	13.6	13.2	3 524	1 785	1 739
Malawi 1992	12.6	14.0	11.8	0.4	0.4	0.4	12.6	14.0	11.8	2 854	1 447	1 407
Mali 1995	13.7	13.9	13.5	2.9	2.8	2.9	14.4	14.7	14.2	6 019	2 956	3 063
Nambia 1992	8.4	8.8	7.9	5.9	5.8	6.1	13.2	13.7	12.6	2 496	1 232	1 265
Niger 1992	15.9	15.9	15.7	2.3	2.3	2.3	16.5	16.5	16.5	4 300	2 263	2 036
Nigeria 1990	14.9	14.3	15.5	10.8	11.2	10.4	19.4	19.9	19.2	4 881	2 473	2 408
Rwanda 1992	16.9	17.2	16.5	0.6	0.6	0.6	17.4	17.5	17.2	3 407	1 744	1 663
Senegal 1992 93	14.5	14.8	14.4	3.5	3.3	3.7	16.5	16.3	16.6	3 361	1 661	1 700
Tanzania 1991 92	13.5	13.8	13.1	6.6	6.3	6.8	15.9	16.1	15.6	5 131	2 602	2 530
Uganda 1995	12.8	12.2	13.4	2.2	2.4	2.1	13.7	13.3	14.0	4 659	2 279	2 380
Zambia 1992	11.9	11.6	12.1	4.4	4.3	4.5	13.5	13.7	13.3	4 064	2 049	2 015
Zimbabwe 1994	13.1	13.4	12.8	3.6	3.6	3.5	14.4	14.7	14.0	2 364	1 159	1 205
Near East/North Africa												
Egypt 1992	5.6	5.7	5.6	1.8	1.9	1.7	6.1	6.1	6.1	4 974	2 608	2 365
Jordan 1990 91	4.0	4.0	4.0	1.9	1.8	1.9	4.1	4.1	4.1	4 971	2 520	2 451
Morocco 1992	3.8	3.8	3.8	1.5	1.4	1.5	4.0	4.0	4.0	3 055	1 555	1 500
Turkey 1993	3.7	3.6	3.9	1.9	1.8	1.9	4.1	4.0	4.1	2 234	1 150	1 083
Asia												
Bangladesh 1993 94	10.6	9.1	11.3	2.0	2.1	2.0	11.0	10.1	11.5	3 926	2 005	1 921
India 1992 93	8.7	8.9	8.5	3.2	3.2	3.1	9.7	9.8	9.6	37 550	19 088	18 462
Indonesia 1994	7.2	7.8	6.8	2.4	2.4	2.4	7.9	8.8	7.4	10 131	5 178	4 953
Kazakhstan 1995	4.2	5.1	3.8	2.1	2.1	2.0	4.6	5.6	4.0	810	390	419
Nepal 1996	10.4	10.5	10.4	3.1	3.2	2.9	11.5	11.8	11.2	4 375	2 251	2 124
Pakistan 1990 91	6.6	8.3	5.8	2.3	2.5	2.1	7.7	9.0	6.3	4 078	2 143	1 935
Philippines 1993	5.6	5.5	5.7	2.3	2.3	2.2	6.5	6.4	6.7	5 393	2 800	2 593
Latin America/Caribbean												
Bolivia 1993 94	10.5	10.5	10.3	2.5	2.7	2.4	11.7	11.3	12.2	3 614	1 895	1 719
Brazil 1996	3.0	2.7	3.3	2.2	2.2	2.2	4.3	3.9	4.6	2 865	1 448	1 417
Colombia 1995	4.3	4.3	4.4	2.2	2.3	2.1	5.6	5.7	5.5	3 077	1 597	1 480
Dominican Republic 1991	3.5	3.8	3.3	2.1	2.1	2.2	4.2	4.3	4.0	2 397	1 187	1 210
Guatemala 1995	10.5	10.4	10.6	2.4	2.4	2.6	11.7	11.6	11.8	5 648	2 850	2 797
Haiti 1994	11.1	11.3	10.5	3.4	3.3	3.6	12.5	12.5	12.5	2 147	1 098	1 049
Paraguay 1990	4.5	5.1	4.2	2.1	2.2	1.9	5.4	6.1	5.0	2 426	1 241	1 185
Peru 1996	8.4	8.6	8.3	2.3	2.4	2.2	9.7	10.3	9.3	9 189	4 712	4 476

Table 4.5 Regional summary of median duration differences for postpartum effects, by sex of child

Average difference in months between male and female children for median durations of postpartum amenorrhea, abstinence, and insusceptibility by region. Demographic and Health Surveys 1990-1996

Region	Amenorrhea	Abstinence	Insusceptibility
	Male minus female	Male minus female	Male minus female
Sub-Saharan Africa	0.78	-0.02	0.55
Near East/North Africa	0.05	-0.03	0.02
Asia	0.41	0.16	0.69
Latin America/Caribbean	0.23	0.05	0.10
Total	0.49	0.05	0.41

Birth Order

Differentials in postpartum amenorrhea, abstinence, and insusceptibility are measured for the categories first birth, second or third birth, fourth or fifth birth, and sixth or higher birth. In general, amenorrhea increases with birth order (Table 4.8). The shortest duration of amenorrhea occurs for first births in Morocco, Pakistan, and Brazil (2 months) and the longest is for sixth or higher births in Burkina Faso (19 months). Over all countries, second or third births have a duration of postpartum amenorrhea over 2 months longer than first births, and fourth or fifth births have a duration over 2 months longer than second or third births (Table 4.9). Births in the highest category, sixth or higher, have only slightly longer durations. By region, the notable differences from the general pattern are that in the Near East/North Africa the first to second/third difference is a little less than 1 month and the fourth/fifth to sixth or higher difference is almost 2 months.

The duration of abstinence falls between the first and second/third births overall and in each region. The largest decline is in sub-Saharan Africa, almost 2 months less in the second group than in the first. There is little difference between the other birth-order categories. The shortest duration of abstinence (less than 1 month) is in Rwanda for all births, and in Morocco and Kazakhstan for second/third births (a little over 1 month). The longest duration of abstinence is 22 months for sixth or higher order births in Burkina Faso.

Although amenorrhea increases with birth order, there is an offsetting fall in abstinence between the first and second/third births. The result is that there is a large increase in insusceptibility between the second/third birth and the fourth/fifth birth. The shortest duration of insusceptibility (3 months) occurs after first births in Morocco, Jordan, and the Dominican Republic and the longest after fourth or higher order births in Burkina Faso (24 months).

Table 4.6 Median duration of postpartum amenorrhea, abstinence, and insusceptibility, by mother's age at birth

Median duration (months) of postpartum amenorrhea, abstinence and insusceptibility by mother's age at birth Demographic and Health Surveys 1990-1996

Region, country and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	15-19	20-24	25-34	35+	15-19	20-24	25-34	35+	15-19	20-24	25-34	35+	15-19	20-24	25-34	35+
Sub-Saharan Africa																
Burkina Faso 1993	11.5	13.6	15.8	21.0	15.1	21.0	17.6	25.0	18.9	21.8	22.7	25.6	613	994	1 536	594
Cameroon 1991	9.2	11.0	11.1	14.5	13.9	11.1	14.3	14.0	15.8	13.6	17.3	16.1	466	602	817	242
Central African Republic	11.4	14.1	14.7	15.2	12.4	11.0	9.6	10.2	15.7	16.4	16.1	20.1	613	768	1 140	316
Cote d'Ivoire 1994	9.7	12.1	13.0	13.8	11.6	10.4	12.3	13.0	15.0	16.2	17.3	19.2	818	1 060	1 628	484
Ghana 1993	10.9	12.5	14.6	14.5	12.1	12.9	7.6	13.2	16.2	16.5	16.1	20.5	294	566	1 000	344
Kenya 1993	7.2	6.7	12.3	14.0	6.8	2.5	2.6	3.6	11.2	12.1	13.2	16.2	610	1 083	1 463	489
Madagascar 1992	10.0	11.4	14.1	14.4	4.2	3.6	3.6	3.4	11.4	13.1	14.5	14.7	672	919	1 376	556
Malawi 1992	9.8	10.4	12.9	17.2	0.4	0.4	0.4	0.4	9.8	10.4	12.9	17.2	516	748	1 076	514
Mali 1995	9.9	13.1	14.4	15.2	3.8	3.0	2.4	3.5	12.4	13.7	15.4	15.5	1 075	1 420	2 568	957
Namibia 1992	8.5	6.4	9.6	12.3	13.2	6.4	5.3	4.0	15.9	10.9	13.1	13.4	402	648	1 006	441
Niger 1992	14.1	15.2	16.4	17.0	2.8	2.2	2.3	2.0	15.8	15.5	16.7	17.6	867	1 211	1 692	529
Nigeria 1990	15.9	14.3	13.1	18.3	8.1	11.7	10.7	12.2	19.3	18.8	18.6	22.1	840	1 311	2 042	689
Rwanda 1992	11.1	12.3	17.4	19.4	0.6	0.5	0.7	0.6	11.9	13.6	17.7	19.8	254	777	1 680	697
Senegal 1992-93	13.7	12.5	15.4	16.0	5.4	4.4	2.6	3.2	16.5	16.9	16.4	16.3	524	842	1 419	576
Tanzania 1991-92	11.4	12.1	14.3	17.8	7.0	5.0	7.0	8.3	13.2	16.3	16.3	18.8	933	1 472	1 969	757
Uganda 1995	9.6	10.7	14.4	16.1	2.4	2.0	2.2	2.4	10.9	12.8	14.9	16.2	1 018	1 381	1 758	502
Zambia 1992	9.5	11.4	14.4	13.3	5.8	4.0	4.4	4.3	13.8	12.7	15.0	13.9	856	1 191	1 506	510
Zimbabwe 1994	11.1	12.7	13.3	15.8	3.2	3.2	3.8	4.1	14.0	13.7	14.4	16.5	427	721	910	307
Near East/North Africa																
Egypt 1992	5.8	4.4	5.8	7.3	1.6	1.9	1.7	2.1	5.9	4.8	6.3	7.5	537	1 499	2 319	618
Jordan 1990-91	2.9	3.4	4.8	4.0	2.1	1.9	1.8	1.7	3.1	3.5	4.8	4.1	451	1 429	2 321	770
Morocco 1992	2.8	2.5	4.4	6.5	1.8	1.6	1.4	1.4	3.0	2.8	4.7	6.5	242	671	1 483	659
Turkey 1993	3.3	3.1	4.4	4.5	1.8	1.9	1.8	2.0	3.8	3.5	4.6	4.5	349	810	902	173
Asia																
Bangladesh 1993-94	7.2	10.9	11.6	12.2	1.8	2.1	2.0	2.5	8.4	11.3	12.1	12.2	1 021	1 378	1 287	242
India 1992-93	7.4	8.5	9.4	9.9	3.2	3.1	3.1	3.5	8.7	9.5	10.3	10.6	8 448	14 276	12 831	1 994
Indonesia 1994	5.9	4.1	7.7	9.0	2.2	2.3	2.5	2.7	6.3	6.6	8.3	9.9	1 347	2 859	4 655	1 270
Kazakhstan 1995	3.4	3.9	5.1	3.9	1.2	2.4	1.9	2.8	3.8	4.5	5.2	4.1	115	297	328	70
Nepal 1996	8.9	9.5	12.1	11.9	2.8	3.1	3.1	3.5	9.6	10.3	13.2	14.5	817	1 472	1 664	422
Pakistan 1990-91	2.2	4.4	6.7	11.0	2.0	2.3	2.2	3.0	4.8	6.6	7.0	11.7	449	1 189	1 890	550
Philippines 1993	5.2	6.0	5.4	5.9	3.1	2.1	2.1	2.5	5.7	7.1	6.2	7.0	437	1 447	2 633	876
Latin America/Caribbean																
Bolivia 1993-94	7.1	10.8	10.9	10.7	2.5	2.4	2.5	2.8	8.2	12.0	11.8	12.1	477	998	1 559	582
Brazil 1996	2.2	2.9	4.0	3.4	2.2	2.3	2.2	2.1	3.9	4.5	4.4	4.0	581	830	1 156	297
Colombia 1995	4.1	3.9	4.6	4.6	2.5	2.1	2.2	2.4	6.7	4.8	5.6	5.6	540	996	1 231	310
Dominican Republic 1991	3.1	3.3	3.5	5.9	2.1	2.1	2.2	2.9	3.7	4.2	4.0	6.4	433	889	929	147
Guatemala 1995	8.4	11.3	11.3	10.1	3.2	2.3	2.4	2.4	10.0	12.4	12.5	10.9	1 063	1 650	2 164	771
Haiti 1994	8.9	11.1	12.6	11.5	5.4	3.6	3.1	2.7	11.1	12.0	13.5	11.7	276	510	948	413
Paraguay 1990	2.4	3.9	5.5	5.8	1.8	2.1	2.1	2.2	4.2	4.4	5.9	6.4	346	619	1 056	405
Peru 1996	7.3	8.3	8.8	10.0	2.4	2.1	2.3	2.7	9.2	9.1	10.4	11.0	1 331	2 645	3 811	1 402

Table 4.7 Regional summary of median duration differences for postpartum effects, by mother's age at birth

Average difference in months between age groups (mother's age at birth) for median durations of postpartum amenorrhea, abstinence, and insusceptibility by region. Demographic and Health Surveys 1990-1991

Region	Amenorrhea			Abstinence			Insusceptibility		
	20-24 yr minus 15-19 yr	25-34 yr minus 20-24 yr	35+ yr minus 25-34 yr	20-24 yr minus 15-19 yr	25-34 yr minus 20-24 yr	35+ yr minus 25-34 yr	20-24 yr minus 15-19 yr	25-34 yr minus 20-24 yr	35+ yr minus 25-34 yr
	Sub-Saharan Africa	1.00	2.15	1.92	0.79	0.35	1.06	0.39	1.24
Near East/North Africa	0.35	1.50	0.73	0.00	0.15	0.13	0.30	1.45	0.55
Asia	1.01	1.83	0.83	0.16	0.07	0.51	1.23	0.91	1.10
Latin America/Caribbean	1.50	0.71	0.10	0.39	0.00	0.15	0.80	0.59	0.00
Total	0.96	1.65	1.19	0.43	0.19	0.65	0.57	1.06	1.02

Preceding Birth Interval

To view the effect of birth intervals on postpartum durations, births are categorized by the interval between the index birth *I* and the preceding birth *I-1* in three categories: less than 24 months, 24 to 47 months, and 48 months or more. Only the difference in birth dates for live births is taken into account so that differences resulting from pregnancies that ended in spontaneous or induced abortions or stillbirths are not distinguished. First births have no preceding birth interval and are separated. For births in each category, the median postpartum durations were calculated and are presented in Table 4.10.

Table 4.11 shows regional summaries of the differences in median duration of postpartum effects by birth interval categories. The interval category with the longest durations of amenorrhea and insusceptibility is the 24- to 47-months group, which on average has more than 2 months longer durations than the < 24-months group and 1 month longer for amenorrhea and half a month longer for

insusceptibility than the 48 months or more group. By region, the pattern of differentials is similar, except that in sub-Saharan Africa there is less of a differential between the 24 to 47 and 48 or higher categories than in the other regions. For abstinence, on average the longest postpartum durations occur in the shortest birth interval group in each region and the shortest postpartum durations occur in the 24- to 47-months birth interval group.

Health Care

Health care provision is closely related to socioeconomic conditions so the specific effects of having one type of provider versus another can be determined only in a multivariate analysis, which is beyond the scope of this report. Two aspects of health care are examined here: the impact of type of antenatal care provider and the differentials in type of facility used for delivery. Only delivery facilities are discussed here; information on antenatal care providers is included in Appendix I.

Table 4.8 Median duration of postpartum amenorrhea, abstinence, and insusceptibility, by child's birth order

Median duration (months) of postpartum amenorrhea, abstinence, and insusceptibility by child's birth order Demographic and Health Surveys 1990-1996

Region, country, and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	First birth	Second or third	Fourth or fifth	Sixth or higher	First birth	Second or third	Fourth or fifth	Sixth or higher	First birth	Second or third	Fourth or fifth	Sixth or higher	First birth	Second or third	Fourth or fifth	Sixth or higher
Sub-Saharan Africa																
Burkina Faso 1993	11.4	14.5	18.1	19.4	16.9	15.0	19.5	22.4	21.1	20.3	23.6	23.5	722	1 084	1 234	697
Cameroon 1991	8.2	9.8	12.4	12.9	12.7	13.3	14.1	14.5	13.7	14.4	17.6	18.0	407	652	668	400
Central African Republic	11.5	14.2	14.8	15.0	12.6	10.2	9.6	9.6	15.9	16.2	17.1	17.2	630	934	843	429
Côte d'Ivoire 1994	9.1	12.2	13.4	14.1	10.8	11.9	11.8	14.0	14.0	16.0	17.8	17.4	802	1 254	1 272	661
Ghana 1993	9.3	13.7	15.8	11.9	12.9	8.4	7.9	8.8	15.8	15.7	19.2	16.8	447	809	677	271
Kenya 1993	5.5	8.3	12.1	15.3	6.5	3.0	2.2	3.6	9.9	11.0	13.1	16.2	774	1 111	1 073	687
Madagascar 1992	9.2	11.7	14.4	14.8	5.0	2.8	3.9	3.4	10.1	12.4	14.8	14.8	697	1 050	967	810
Malawi 1992	9.2	12.7	12.5	15.7	0.4	0.4	0.4	0.4	9.2	12.7	12.5	15.7	524	817	911	602
Mali 1995	9.4	12.1	15.2	15.1	3.5	3.1	2.4	2.8	12.9	12.8	15.7	15.8	990	1 677	1 917	1 435
Namibia 1992	8.1	6.9	10.4	11.6	9.7	5.9	4.4	4.8	15.8	10.6	15.5	12.0	686	817	653	340
Niger 1992	12.1	13.5	17.0	16.8	3.5	2.3	2.2	2.1	13.9	14.3	17.2	17.0	647	1 194	1 478	980
Nigeria 1990	12.1	13.9	16.4	12.4	10.7	10.6	10.4	11.6	19.2	18.0	19.9	21.3	887	1 465	1 633	896
Rwanda 1992	10.0	16.7	19.0	17.9	0.5	0.6	0.6	0.6	10.5	16.9	19.3	18.2	646	992	1 089	680
Senegal 1992-93	13.0	12.5	15.9	15.9	4.3	4.2	3.2	2.7	17.2	14.7	17.0	16.4	556	971	1 091	743
Tanzania 1991-92	11.0	12.6	15.0	17.4	8.3	5.1	6.4	7.2	13.7	14.1	17.1	18.2	1 144	1 679	1 441	867
Uganda 1995	8.5	11.1	14.2	15.1	2.3	2.4	2.1	1.9	10.9	13.6	14.4	15.5	924	1 539	1 341	854
Zambia 1992	9.6	11.1	14.1	13.5	6.4	3.9	4.3	4.5	13.5	12.2	14.7	14.5	924	1 280	1 084	776
Zimbabwe 1994	10.3	13.0	14.1	15.0	3.3	3.3	4.0	4.0	12.4	14.5	14.7	15.0	623	830	605	306
Near East/North Africa																
Egypt 1992	3.7	4.8	7.4	9.4	1.9	1.8	1.7	1.9	3.9	5.5	7.9	9.4	1 092	1 759	1 399	724
Jordan 1990-91	3.0	3.6	5.3	4.4	1.9	1.8	2.0	1.6	3.1	3.8	5.4	4.5	815	1 386	1 426	1 344
Morocco 1992	2.2	3.6	5.5	9.2	1.6	1.2	1.6	1.5	2.6	3.6	5.6	9.2	590	901	902	662
Turkey 1993	3.1	3.1	5.8	8.8	2.0	1.6	2.1	1.9	3.5	3.4	5.8	8.8	797	885	370	183
Asia																
Bangladesh 1993-94	5.8	11.1	12.2	13.4	1.9	2.1	2.0	2.3	6.7	11.6	12.2	13.4	1 007	1 528	1 032	360
India 1992-93	5.7	9.1	11.1	10.2	3.4	3.1	2.9	3.1	7.1	10.0	12.0	10.8	10 347	15 588	7 201	4 413
Indonesia 1994	4.0	7.6	9.6	8.4	2.3	2.4	2.6	2.3	5.0	8.3	10.1	8.5	3 032	4 024	2 212	863
Kazakhstan 1995	3.9	4.4	5.9	*	2.3	1.4	1.6	*	4.2	5.0	5.9	*	320	360	116	14
Nepal 1996	8.0	10.2	13.0	12.9	3.0	3.1	3.1	2.9	9.2	11.3	14.7	13.6	1 004	1 684	1 250	437
Pakistan 1990-91	2.4	6.8	6.0	9.0	2.1	2.4	2.3	2.4	3.7	7.5	6.3	9.7	769	1 272	1 316	722
Philippines 1993	4.1	5.5	6.9	7.6	2.4	2.2	2.3	2.0	5.4	6.4	7.5	7.9	1 212	1 975	1 495	711
Latin America/Caribbean																
Bolivia 1993-94	6.6	10.5	12.4	11.0	3.3	2.3	2.4	3.1	8.8	12.1	12.8	11.5	820	1 226	965	603
Brazil 1996	2.3	3.7	2.7	2.9	2.3	2.2	1.9	1.9	4.3	4.4	3.8	3.6	1 019	1 238	437	172
Colombia 1995	3.7	4.1	5.6	8.5	2.4	2.1	1.8	3.6	5.9	4.9	6.0	8.5	1 098	1 288	530	162
Dominican Republic 1991	2.8	3.3	5.5	5.9	1.9	2.2	2.1	3.3	3.4	4.1	5.7	6.2	772	1 056	440	130
Guatemala 1995	6.1	10.5	12.4	11.8	3.5	2.2	2.3	2.6	9.8	11.7	13.2	12.2	1 231	1 868	1 521	1 028
Haiti 1994	5.6	9.5	13.5	13.8	4.3	3.9	2.7	2.7	10.6	11.1	13.7	15.6	487	717	614	329
Paraguay 1990	3.7	3.9	6.6	6.1	2.3	1.9	1.9	2.3	5.4	4.3	7.1	6.3	619	822	572	414
Peru 1996	6.2	8.3	11.7	12.9	2.4	2.2	2.2	2.5	7.9	8.9	12.5	13.2	2 659	3 446	2 109	975

* = based on too few cases to show (0-24)

Table 4.9 Regional summary of median duration differences for postpartum effects, by birth order

Average difference in months between birth order groups (1st 2nd/3rd 4th/5th 6+) for median durations of postpartum amenorrhea abstinence and insusceptibility by region Demographic and Health Surveys 1990-1996

Region	Amenorrhea			Abstinence			Insusceptibility		
	2nd/3rd minus 1st	4th/5th minus 2nd/3rd	6th + minus 4th/5th	2nd/3rd minus 1st	4th/5th minus 2nd/3rd	6th + minus 4th/5th	2nd/3rd minus 1st	4th/5th minus 2nd/3rd	6th + minus 4th/5th
	Sub Saharan Africa	2.39	2.46	0.28	1.41	0.18	0.56	0.42	2.41
Near East/North Africa	0.78	2.23	1.95	0.25	0.25	-0.13	0.80	2.10	1.80
Asia	2.97	1.39	0.39	0.10	0.01	0.23	2.69	1.16	0.56
Latin America/Caribbean	2.10	2.08	0.31	0.43	0.21	0.59	0.68	1.66	0.29
Total	2.26	2.15	0.34	0.81	0.07	0.34	0.96	1.97	0.13

For amenorrhea and insusceptibility, there are large differences in median durations by type of delivery facility (Table 4.12). Compared with women giving birth in homes and other nonmedical facilities, women who gave birth in a public hospital or clinic have substantially shorter durations of amenorrhea and insusceptibility—more than 3 months for amenorrhea and more than 2 months for insusceptibility—in all regions except the Near East/North Africa, where the difference is about 2 months. Durations after births in private hospitals and clinics are even shorter, except in the Near East/North Africa. Differences in abstinence by type of facility are less than 1 month. Table 4.13 gives a regional summary of the average differences in median duration of postpartum effects by type of delivery facility.

Socioeconomic Conditions

Socioeconomic characteristics are interrelated and affect the postpartum durations only through intervening variables. Therefore, to gauge their separate effects would require multivariate analysis, which is beyond the scope of this report. Moreover, their effects depend on the cultural norms of the individual country and the freedom that women in that country have to deviate from those norms. Although it is impossible to attribute an effect to a specific variable, several aspects will be examined. Differentials in the median durations of postpartum amenorrhea were tabulated by urban-rural residence, mother's education level of household assets, father's occupation, mother's work status and occupation, and mother's exposure to mass media. The first two comparisons are discussed in this section, the rest are included in tables in Appendix I.

Table 4 10 Median duration of postpartum amenorrhea, abstinence, and insusceptibility, by length of preceding birth interval

Median duration (months) of postpartum amenorrhea abstinence and insusceptibility by length of preceding birth interval (months) Demographic and Health Surveys 1990 1996

Region, country, and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	First birth	Less than 24	24 to 47	48 or more	First birth	Less than 24	24 to 47	48 or more	First birth	Less than 24	24 to 47	48 or more	First birth	Less than 24	24 to 47	48 or more
Sub Saharan Africa																
Burkina Faso 1993	11.4	15.6	16.0	19.7	16.9	11.4	20.0	22.4	21.1	23.5	22.5	23.6	722	383	1 968	561
Cameroon 1991	8.2	10.1	12.1	6.5	12.7	11.1	14.7	7.0	13.7	14.8	17.3	17.3	407	337	1 017	293
Central African Republic 1994 95	11.5	14.8	14.3	15.5	12.6	3.9	10.2	10.9	15.9	16.0	16.6	18.0	630	457	1 277	398
Cote d'Ivoire 1994	9.1	11.0	13.6	13.2	10.8	9.1	12.3	13.2	14.0	15.5	17.6	16.8	802	465	1 934	711
Ghana 1993	9.3	10.0	15.4	12.5	12.9	7.0	10.6	8.1	15.8	12.8	19.2	16.1	447	211	968	521
Kenya 1993	5.5	10.9	14.1	10.5	6.5	2.3	2.4	3.8	9.9	11.5	15.0	11.5	774	633	1 626	460
Madagascar 1992	9.2	10.8	15.0	14.8	5.0	3.2	3.4	4.1	10.1	11.2	15.2	16.4	697	819	1 410	446
Malawi 1992	9.2	9.9	14.3	14.8	0.4	0.4	0.4	0.4	9.2	9.9	14.3	14.8	524	435	1 350	475
Mali 1995	9.4	12.4	14.4	14.0	3.5	2.3	2.6	3.4	12.9	12.7	15.0	14.4	990	978	3 033	857
Namibia 1992	8.1	7.6	11.1	7.2	9.7	5.5	4.9	5.0	15.8	9.7	14.1	12.2	686	382	881	488
Niger 1992	12.1	16.9	16.5	16.1	3.5	1.9	2.3	2.1	13.9	16.9	16.8	17.0	647	878	2 176	459
Nigeria 1990	12.1	14.7	14.7	19.6	10.7	8.3	11.2	10.3	19.2	18.8	19.0	22.1	887	952	2 144	766
Rwanda 1992	10.0	14.7	18.8	17.9	0.5	0.7	0.6	0.6	10.5	14.9	19.0	19.1	646	475	1 778	401
Senegal 1992 93	13.0	13.6	15.6	15.1	4.3	2.6	3.4	3.9	17.2	13.7	17.1	16.8	556	493	1 710	514
Tanzania 1991 92	11.0	12.6	14.9	15.1	8.3	5.4	5.5	9.0	13.7	14.6	16.7	19.1	1 144	647	2 402	819
Uganda 1995	8.5	11.9	14.7	16.1	2.3	2.1	2.1	2.4	10.9	12.7	15.2	16.7	924	911	2 120	541
Zambia 1992	9.6	9.4	13.4	13.3	6.4	3.1	4.2	5.0	13.5	10.7	14.3	14.2	924	533	1 939	554
Zimbabwe 1994	10.3	12.6	14.9	13.5	3.3	3.4	3.3	4.3	12.4	13.2	15.2	14.7	623	174	967	561
Near East/North Africa																
Egypt 1992	3.7	5.4	7.7	6.3	1.9	1.4	1.9	1.9	3.9	5.8	8.1	7.4	1 092	1 081	1 871	762
Jordan 1990 91	3.0	3.7	6.1	4.8	1.9	1.8	2.0	1.9	3.1	3.8	6.3	4.8	815	2 053	1 512	408
Morocco 1992	2.2	3.6	6.4	3.9	1.6	1.6	1.4	1.4	2.6	3.7	6.4	4.1	590	584	1 241	530
Turkey 1993	3.1	4.2	4.3	4.0	2.0	2.0	1.9	1.6	3.5	4.5	4.6	4.3	797	398	522	467
Asia																
Bangladesh 1993 94	5.8	10.0	11.9	12.5	1.9	2.0	2.0	2.3	6.7	10.5	12.4	12.6	1 007	469	1 488	845
India 1992 93	5.7	8.4	10.6	9.7	3.4	2.8	3.0	3.4	7.1	9.4	11.3	10.7	10 347	16 288	14 021	5 775
Indonesia 1994	4.0	7.7	8.9	7.9	2.3	2.4	2.4	2.7	5.0	7.8	9.2	8.9	3 032	1 079	2 634	3 179
Kazakhstan 1995	3.9	2.5	5.8	4.1	2.3	1.0	2.0	2.3	4.2	2.5	6.6	4.3	320	150	164	152
Nepal 1996	8.0	9.3	12.1	11.0	3.0	3.3	2.8	3.6	9.2	10.2	13.0	13.2	1 004	721	1 870	615
Pakistan 1990 91	2.4	6.7	8.8	6.6	2.1	2.3	2.3	2.6	3.7	7.0	9.3	8.6	769	880	1 551	756
Philippines 1993	4.1	5.4	7.8	4.8	2.4	2.0	2.6	2.1	5.4	6.0	8.4	6.3	1 212	1 508	1 714	804
Latin America/Caribbean																
Bolivia 1993 94	6.6	9.4	12.7	10.6	3.3	2.1	2.3	3.2	8.8	10.1	13.1	12.6	820	753	1 384	565
Brazil 1996	2.3	2.5	2.9	4.0	2.3	2.1	2.1	2.2	4.3	4.6	3.6	4.4	1 019	516	591	701
Colombia 1995	3.7	5.2	5.0	4.4	2.4	2.3	2.0	2.1	5.9	5.7	5.9	5.1	1 098	550	722	644
Dominican Republic 1991	2.8	3.3	4.8	4.6	1.9	1.9	2.1	3.4	3.4	4.0	5.4	5.4	772	558	624	392
Guatemala 1995	6.1	9.1	12.4	10.5	3.5	2.3	2.4	2.1	9.8	10.3	13.3	12.4	1 231	1 303	2 167	732
Haiti 1994	5.6	9.0	13.7	11.1	4.3	2.4	3.3	3.3	10.6	9.9	13.8	11.9	487	370	899	303
Paraguay 1990	3.7	4.6	6.5	4.4	2.3	1.8	2.2	2.0	5.4	4.9	6.8	4.5	619	699	652	378
Peru 1996	6.2	8.2	12.6	9.0	2.4	2.3	2.3	2.4	7.9	8.6	13.0	11.0	2 659	1 547	2 804	1 926

Table 4 11 Regional summary of median duration differences for postpartum effects, by length of preceding birth interval

Average difference in months between birth interval groups (< 24 24 47 48+ months) for median durations of postpartum amenorrhea abstinence and insusceptibility by region Demographic and Health Survey 1990 1996

Region	Amenorrhea		Abstinence		Insusceptibility	
	<24 mo minus 24 47 mo	48+ mo minus 24 47 mo	<24 mo minus 24 47 mo	48+ mo minus 24 47 mo	<24 mo minus 24 47 mo	48+ mo minus 24 47 mo
Sub-Saharan Africa	2 46	0 47	2 59	1 69	2 61	0 04
Near East/North Africa	1 90	1 38	0 15	0 10	1 90	1 20
Asia	2 27	1 33	-0 23	0 19	2 40	0 80
Latin America/Caribbean	2 41	-1 50	-0 65	0 19	2 10	0 95
Total	2 35	-0 95	-1 46	0 91	2 38	0 47

Urban-Rural Residence

Table 4 14 shows the durations of amenorrhea, abstinence, and postpartum insusceptibility according to urban-rural⁴ All countries but one have durations of amenorrhea and insusceptibility that are shorter in urban areas than in rural, the exception is Brazil where the increase in duration for urban areas is less than 1 month Other countries with differences of less than 1 month are Turkey, Kazakhstan, Colombia, and Jordan Brazil, at 2 4 months, has the shortest duration of amenorrhea of any rural

area Overall, the difference between urban and rural areas is about 4 months for amenorrhea and 3 months for insusceptibility, the largest differences occurring in sub-Saharan Africa and the smallest in the Near East/North Africa (Table 4 15)

As for abstinence, only a few countries have urban-rural differences that exceed 1 month, all in sub-Saharan Africa Abstinence is over 4 months longer in rural areas in the Central African Republic, Burkina Faso, and Cameroon, and 3 months shorter in Tanzania

⁴ The Malawi urban rural designation is not available

Table 4 12 Median duration of postpartum amenorrhea, abstinence, and insusceptibility, by type of delivery facility

Median duration (months) of postpartum amenorrhea abstinence and insusceptibility by type of delivery facility Demographic and Health Surveys 1990 1996

Region country and date	Amenorrhea			Abstinence			Insusceptibility			Number of children		
	Public hosp clinic	Private hosp clinic	Non medical (home)	Public hosp clinic	Private hosp clinic	Non medical (home)	Public hosp clinic	Private hosp clinic	Non medical (home)	Public hosp clinic	Private hosp clinic	Non medical (home)
Sub Saharan Africa												
Burkina Faso 1993	13.7	*	16.0	18.1	*	19.5	21.3	*	23.3	1 569	24	2 127
Cameroon 1991	9.1	8.2	13.9	13.1	14.7	13.8	14.9	15.0	17.9	1 032	258	807
Central African Republic	12.7	13.1	16.8	8.2	7.9	11.6	14.4	17.3	18.8	1 321	91	1 402
Côte d'Ivoire 1994	11.4	(8.5)	13.1	9.7	(9.8)	12.6	15.9	(9.8)	17.6	1 752	36	2 185
Ghana 1993	11.9	11.5	14.9	7.0	8.3	11.8	15.3	14.5	19.0	695	233	1 256
Kenya 1993	6.3	8.0	12.7	2.6	4.3	3.2	8.5	10.2	14.6	1 201	343	2 046
Madagascar 1992	12.4	(4.5)	13.1	3.3	(3.5)	3.8	13.5	(4.5)	13.9	1 507	37	1 934
Malawi 1992	12.0	13.9	12.8	0.4	0.4	0.4	12.0	13.9	12.8	1 133	390	1 278
Mali 1995	12.2	(15.3)	14.5	3.1	(3.4)	2.8	13.0	(15.3)	15.2	1 800	31	3 771
Namibia 1992	7.5	(2.1)	12.2	6.2	(2.1)	5.7	12.0	(2.1)	15.3	1 642	43	794
Niger 1992	11.3	*	16.9	2.2	*	2.3	12.7	*	17.2	659	16	3 599
Nigeria 1990	10.2	15.7	18.2	11.8	8.3	10.3	15.5	19.4	21.2	1 458	82	3 289
Rwanda 1992	13.9	*	17.7	0.6	*	0.6	14.6	*	18.1	885	0	2 470
Senegal 1992 93	13.6	10.6	16.4	3.7	0.8	3.5	15.6	10.7	17.5	1 466	130	1 759
Tanzania 1991 92	11.6	14.9	14.5	7.6	10.5	5.0	15.2	16.9	16.6	2 318	363	2 434
Uganda 1995	10.4	9.7	14.2	2.2	1.8	2.3	11.4	10.7	14.7	948	656	3 015
Zambia 1992	10.1	9.1	13.5	4.6	3.6	4.6	12.1	10.8	14.8	1 588	468	1 984
Zimbabwe 1994	13.2	3.9	12.7	3.2	2.4	4.6	14.8	3.9	13.6	1 575	58	715
Near East/North Africa												
Egypt 1992	4.5	3.4	6.8	2.0	1.7	1.8	5.1	3.9	7.3	875	563	3 533
Jordan 1990 91	4.2	3.3	4.8	1.8	2.0	1.6	4.3	3.5	4.9	2 859	1 163	879
Morocco 1992	2.3	2.0	5.2	1.3	2.0	1.5	2.4	2.0	5.3	794	121	2 137
Turkey 1993	3.1	5.2	5.0	2.0	1.6	1.8	3.3	5.9	5.3	1 306	96	827
Asia												
Bangladesh 1993 94	8.3	7.3	10.7	2.0	2.0	2.0	9.4	7.3	11.1	78	59	3 775
India 1992 93	6.4	5.0	9.8	3.7	3.4	3.0	8.3	6.2	10.6	5 547	4 227	27 592
Indonesia 1994	3.6	3.7	7.9	2.4	2.3	2.4	7.3	4.3	8.4	850	995	8 263
Kazakhstan 1995	4.3	*	*	2.0	*	*	4.7	*	*	797	0	12
Nepal 1996	7.9	3.3	10.7	4.1	2.4	3.0	8.8	4.0	11.8	278	52	4 010
Pakistan 1990 91	3.6	2.6	7.7	2.5	2.2	2.3	4.3	3.7	8.7	313	259	3 462
Philippines 1993	4.1	3.2	7.0	2.1	2.4	2.3	5.0	4.0	7.8	1 001	584	3 798
Latin America/Caribbean												
Bolivia 1993 94	7.1	6.2	12.5	2.9	2.1	2.5	9.1	7.4	13.7	1 068	457	2 071
Brazil 1996	2.8	4.9	4.6	2.3	1.9	2.2	4.1	5.4	5.8	2 263	387	186
Colombia 1995	4.2	3.1	6.2	2.2	1.9	2.3	5.5	4.1	9.9	1 992	413	652
Dominican Republic 1991	3.7	2.1	8.8	2.3	1.9	1.8	4.2	2.8	9.6	1 546	671	158
Guatemala 1995	7.0	2.4	11.8	2.5	1.5	2.5	10.2	4.4	12.6	1 635	326	3 640
Haiti 1994	5.3	4.2	12.1	4.0	3.0	3.4	10.0	5.0	13.3	236	105	1 733
Paraguay 1990	4.2	4.0	5.1	2.1	1.7	2.2	4.9	4.6	6.2	974	342	1 084
Peru 1996	7.0	4.6	11.1	2.3	2.3	2.3	8.3	5.6	12.5	4 057	610	4 344

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table 4 13 Regional summary of median duration differences for postpartum effects, by type of delivery facility

Average difference in months between types of delivery facilities (public hosp /clinic private hosp /clinic nonmedical) for median durations of postpartum amenorrhea abstinence and insusceptibility by region Demographic and Health Surveys 1990 1996

Region	Amenorrhea		Abstinence		Insusceptibility	
	Public hosp / clinic minus nonmedical	Private hosp / clinic minus nonmedical	Public hosp / clinic minus nonmedical	Private hosp / clinic minus nonmedical	Public hosp / clinic minus nonmedical	Private hosp / clinic minus nonmedical
Sub-Saharan Africa	-3 37	3 82	-0 64	0 81	-2 86	3 93
Near East/North Africa	-1 93	1 98	0 10	0 15	1 93	1 88
Asia	-3 32	4 78	0 30	-0 05	-2 55	4 82
Latin America/Caribbean	-3 86	5 09	0 18	-0 36	3 41	-5 54
Total	3 31	4 11	0 21	0 38	2 83	-4 29

Mother's Education

Differentials in durations of amenorrhea, abstinence, and insusceptibility according to the level of the mother's education are presented in Table 4 16 by education groups no education, primary level, and secondary or higher level In general, as education rises the duration of amenorrhea and insusceptibility fall, the only exception for amenorrhea being Brazil, where there is basically no difference Overall, the average decline in amenorrhea is 2 7 months between no

education and primary education and 3 4 months between primary and secondary (Table 4 17) The overall average decline for insusceptibility is 2 5 months between no education and primary education and 3 0 months between primary and secondary levels The largest average differences between education groups occur in sub-Saharan Africa There is little change in abstinence by education level in regions other than sub-Saharan Africa In this region, the largest changes occur in Burkina Faso, Cameroon, the Central African Republic, Côte d'Ivoire, and Ghana

Table 4 14 Median duration of postpartum amenorrhea, abstinence, and insusceptibility, by urban rural residence

Median duration (months) of postpartum amenorrhea abstinence and insusceptibility by urban rural residence Demographic and Health Surveys 1990 1996

Region, country, and date	Amenorrhea			Abstinence			Insusceptibility			Number of births		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa												
Burkina Faso 1993	14.7	11.6	15.8	19.0	15.0	19.8	22.5	19.4	22.9	3 737	534	3 203
Cameroon 1991	10.6	6.4	13.2	13.4	10.0	14.5	16.1	12.7	18.3	2 127	837	1 290
Central African Republic 1994 95	14.2	11.6	16.5	10.3	6.7	12.1	16.6	13.5	18.2	2 836	1 166	1 670
Cote d'Ivoire 1994	12.3	10.6	12.9	11.9	9.4	12.2	16.7	16.1	17.2	3 989	1 350	2 639
Ghana 1993	13.3	10.6	14.5	9.4	8.2	9.7	16.5	15.4	18.5	2 204	614	1 590
Kenya 1993	10.9	5.3	12.2	3.0	2.1	3.2	13.1	6.3	14.0	3 645	473	3 172
Madagascar 1992	12.6	8.0	13.2	3.6	4.0	3.6	13.6	8.4	14.2	3 524	447	3 076
Malawi 1992	12.6	u	u	0.4	u	u	12.6	u	u	2 854	u	u
Mali 1995	13.7	11.1	14.5	2.9	3.3	2.7	14.4	12.3	15.2	6 019	1 541	4 477
Namibia 1992	8.4	3.2	10.5	5.9	5.4	6.2	13.2	9.2	14.9	2 496	799	1 698
Niger 1992	15.9	11.6	16.7	2.3	2.3	2.3	16.5	12.9	17.0	4 300	671	3 628
Nigeria 1990	14.9	12.0	16.9	10.8	11.6	10.6	19.4	15.3	20.4	4 881	1 021	3 861
Rwanda 1992	16.9	9.2	17.1	0.6	0.7	0.6	17.4	9.2	17.5	3 407	170	3 237
Senegal 1992 93	14.5	12.0	16.0	3.5	3.7	3.5	16.5	13.3	17.6	3 361	1 162	2 199
Tanzania 1991 92	13.5	9.8	14.3	6.6	9.2	6.1	15.9	12.4	16.2	5 131	1 084	4 047
Uganda 1995	12.8	6.5	13.5	2.2	2.2	2.2	13.7	9.1	14.1	4 659	532	4 127
Zambia 1992	11.9	9.5	13.6	4.4	4.8	4.1	13.5	11.5	14.7	4 064	1 912	2 151
Zimbabwe 1994	13.1	10.7	13.8	3.6	2.5	3.9	14.4	11.3	14.9	2 364	617	1 747
Near East/North Africa												
Egypt 1992	5.6	4.3	6.9	1.8	1.8	1.8	6.1	4.7	7.3	4 974	1 826	3 147
Jordan 1990 91	4.0	3.8	4.7	1.9	1.9	1.8	4.1	3.9	4.7	4 971	3 479	1 493
Morocco 1992	3.8	2.2	5.3	1.5	1.2	1.5	4.0	2.3	5.4	3 055	1 006	2 049
Turkey 1993	3.7	3.7	3.8	1.9	1.7	2.0	4.1	4.0	4.1	2 234	1 326	907
Asia												
Bangladesh 1993 94	10.6	8.0	10.8	2.0	2.1	2.0	11.0	8.5	11.2	3 926	395	3 531
India 1992 93	8.7	6.2	9.3	3.2	2.8	3.3	9.7	7.7	10.2	37 550	8 481	29 069
Indonesia 1994	7.2	3.9	8.0	2.4	2.2	2.6	7.9	4.8	8.4	131	2 817	7 314
Kazakhstan 1995	4.2	4.1	4.4	2.1	2.0	2.2	4.6	4.3	5.1	810	343	466
Nepal 1996	10.4	8.7	10.6	3.1	2.0	3.2	11.5	9.5	11.7	4 375	278	4 097
Pakistan 1990 91	6.6	4.2	8.6	2.3	2.4	2.3	7.7	5.2	9.1	4 078	1 232	2 847
Philippines 1993	5.6	4.3	7.2	2.3	2.3	2.3	6.5	5.2	8.1	5 393	2 636	2 757
Latin America/Caribbean												
Bolivia 1993 94	10.5	7.6	12.8	2.5	2.4	2.8	11.7	9.6	13.7	3 614	1 895	1 719
Brazil 1996	3.0	3.2	2.4	2.2	2.3	1.9	4.3	4.4	3.7	2 865	2 167	698
Colombia 1995	4.3	4.1	4.8	2.2	2.3	2.1	5.6	5.5	5.7	3 077	1 984	1 094
Dominican Republic 1991	3.5	3.0	4.4	2.1	2.2	2.0	4.2	3.9	4.8	2 397	1 410	987
Guatemala 1995	10.5	6.3	11.7	2.4	2.4	2.5	11.7	9.7	12.4	5 648	1 826	3 822
Haiti 1994	11.1	6.7	12.5	3.4	3.3	3.5	12.5	10.1	13.7	2 147	689	1 458
Paraguay 1990	4.5	3.8	5.5	2.1	1.9	2.2	5.4	4.7	6.4	2 426	1 098	1 329
Peru 1996	8.4	6.9	11.3	2.3	2.3	2.3	9.7	8.2	12.3	9 189	5 361	3 827

u = unknown (not available)

Table 4 15 Regional summary of median duration differences for postpartum effects, by urban-rural residence

Average difference in months between urban and rural areas for median durations of postpartum amenorrhea abstinence and insusceptibility by region Demographic and Health Surveys 1990 1996

Region	Amenorrhea	Abstinence	Insusceptibility
	Urban minus rural	Urban minus rural	Urban minus rural
Sub Saharan Africa	-5 03	-0 95	-4 56
Near East/North Africa	-1 68	-0 13	-1 65
Asia	-2 79	-0 30	-2 66
Latin America/Caribbean	-2 98	0 03	-2 08
Total	-3 76	0 53	-3 31

4 4 EFFECTS OF BREASTFEEDING ON THE DURATION OF POSTPARTUM AMENORRHEA

It has long been known that the manner in which children are breastfed determines the length of the postpartum amenorrhea period for women Starting with McNeilly et al (1994) a number of researchers have shown that the link between breastfeeding and amenorrhea is the intensity of breastfeeding, that is, the frequency and duration of periods of suckling That in turn is related to

the types of complementary foods received and the use of bottles for feeding The Demographic and Health Surveys measured two aspects of breastfeeding that have an impact on duration of amenorrhea infant feeding practices and frequency of breastfeeds during the day and during the night Duration of feeds was not measured The distribution of the measured behaviors was reported in Chapter 3, Complementary Feeding Here the focus is on the effects of breastfeeding on amenorrhea First the effect of the number of feeds in the last 24 hours and at night is examined, then the impact of complementary foods and the use of bottles

Table 4.16 Median duration of postpartum amenorrhea, abstinence, and insusceptibility, by mother's education

Median duration (months) of postpartum amenorrhea, abstinence, and insusceptibility by mother's education Demographic and Health Surveys 1990-1996

Region country, and date	Amenorrhea			Abstinence			Insusceptibility			Number of births		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub-Saharan Africa												
Burkina Faso 1993	15.6	11.5	7.6	20.2	13.7	6.0	22.9	18.5	10.6	3 284	337	116
Cameroon 1991	14.4	10.0	6.2	14.2	14.2	6.5	18.2	16.2	11.7	881	793	453
Central African												
Republic 1994-95	17.1	13.7	10.3	12.3	9.5	5.0	20.1	15.4	10.5	1 395	1 069	372
Côte d'Ivoire 1994	13.0	11.4	9.1	14.7	10.2	7.0	18.3	14.6	11.4	2 646	994	349
Ghana 1993	15.8	12.6	7.4	12.3	7.4	6.5	20.7	16.0	8.5	876	1 206	122
Kenya 1993	13.1	11.4	6.7	4.5	2.7	3.0	15.2	13.2	10.6	657	2 182	807
Madagascar 1992	15.5	13.1	9.7	4.9	3.5	2.9	16.6	14.1	10.2	688	2 071	765
Malawi 1992	14.9	9.9	7.4	0.4	0.4	0.4	14.9	9.9	7.4	1 436	1 328	89
Mali 1995	14.2	13.0	10.5	2.7	3.4	3.4	14.9	13.8	11.1	5 104	665	249
Namibia 1992	12.5	10.1	5.8	4.2	7.9	5.2	14.2	15.4	10.1	418	1 270	809
Niger 1992	16.3	11.5	5.4	2.3	2.3	2.0	16.6	12.3	12.6	3 896	322	82
Nigeria 1990	19.0	13.3	8.6	10.5	12.0	8.7	21.2	16.3	13.7	3 031	1 238	613
Rwanda 1992	18.8	16.6	5.9	0.8	0.5	1.0	19.6	17.0	6.3	1 537	1 688	182
Senegal 1992-93	15.6	12.3	7.5	3.5	3.9	3.2	17.1	14.5	8.3	2 703	470	188
Tanzania 1991-92	14.6	13.2	6.6	6.0	6.9	7.3	18.5	15.4	11.1	1 719	3 250	163
Uganda 1995	16.1	12.0	6.1	2.8	2.1	2.1	16.6	13.2	9.4	1 434	2 735	491
Zambia 1992	14.7	11.8	8.2	4.4	4.5	4.0	15.6	13.2	12.9	666	2 597	800
Zimbabwe 1994	16.7	12.9	11.9	7.1	3.7	3.0	16.8	13.6	14.7	297	1 183	884
Near East/North Africa												
Egypt 1992	8.3	5.3	3.6	1.8	1.8	1.9	8.7	5.9	3.8	2 530	1 075	1 368
Jordan 1990-91	4.9	4.2	3.8	1.8	1.6	1.9	5.0	4.3	4.0	861	1 006	3 104
Morocco 1992	4.4	2.2	1.3	1.5	1.1	0.5	4.5	2.3	1.3	2 478	305	272
Turkey 1993	5.1	3.2	3.9	2.0	1.9	1.7	5.4	3.4	4.3	659	1 208	367
Asia												
Bangladesh 1993-94	12.0	9.6	6.4	2.1	2.1	1.9	12.2	10.3	8.3	2 250	1 069	607
India 1992-93	10.0	7.7	4.7	3.2	3.1	3.2	10.8	8.9	6.2	24 708	6 266	6 575
Indonesia 1994	8.5	7.8	4.5	2.8	2.4	2.3	9.1	8.6	5.4	1 092	6 019	3 021
Kazakhstan 1995	*	*	4.3	*	*	2.1	*	*	4.7	0	3	807
Nepal 1996	11.2	9.1	6.4	3.0	3.4	3.3	12.1	10.1	7.8	3 470	510	394
Pakistan 1990-91	8.3	5.8	3.1	2.3	2.4	2.4	9.0	6.4	4.0	3 164	397	517
Philippines 1993	9.8	8.5	4.2	1.5	2.3	2.3	10.6	9.0	5.3	141	2 173	3 079
Latin America/Caribbean												
Bolivia 1993-94	13.6	12.1	6.6	2.4	2.7	2.4	14.2	13.0	8.5	514	1 757	1 344
Brazil 1996	2.5	2.9	3.2	1.6	2.3	2.2	2.5	4.3	4.5	189	1 122	1 554
Colombia 1995	5.9	4.7	3.9	2.2	2.3	2.2	10.8	6.0	5.1	144	1 297	1 636
Dominican												
Republic 1991	8.9	4.2	2.6	1.2	2.4	2.0	9.1	5.1	3.1	190	1 287	920
Guatemala 1995	12.6	9.6	4.1	2.5	2.4	2.3	13.2	10.7	9.1	2 160	2 774	714
Haiti 1994	14.3	10.7	5.4	3.5	3.4	3.6	15.1	12.3	7.3	1 019	872	257
Paraguay 1990	5.6	4.8	3.9	1.9	2.2	1.8	6.0	5.6	4.5	86	1 716	624
Peru 1996	14.8	10.2	6.8	2.3	2.3	2.3	15.8	11.7	8.0	903	3 653	4 632

* = based on too few cases to show (0-24)

Table 4 17 Regional summary of median duration differences for postpartum effects, by mother s education

Average difference in months between mother s education groups (primary secondary no education) for median durations of postpartum amenorrhea abstinence and insusceptibility by region Demographic and Health Surveys 1990 1996

Region	Amenorrhea		Abstinence		Insusceptibility	
	Primary minus no education	Secondary minus primary	Primary minus no education	Secondary minus primary	Primary minus no education	Secondary minus primary
Sub Saharan Africa	-3 20	4 41	-1 12	1 86	2 96	4 06
Near East/North Africa	-1 95	0 58	-0 18	0 10	-1 93	0 63
Asia	-1 88	3 20	0 13	0 05	-1 75	2 72
Latin America/Caribbean	-2 38	2 84	0 30	-0 15	2 25	2 33
Total	-2 66	3 43	0 47	-0 96	-2 47	3 04

Breastfeeding Frequency

The frequency of breastfeeding can be measured in two ways the number of feeds within a certain period and the time between feeding episodes From the former the average time between feeds can be calculated, while the latter gives the maximum time between feeds It is unclear from the current literature which is the important factor Since DHS did not ask about time between each feed, a proxy is used, which is the number of feeds given at night, because these are likely to be more spaced than those in the day

Median duration of amenorrhea by breastfeeding frequency is given in Table 4 18 for both the number of feeds in the 24 hours before the interview and the number of feeds during the previous night There are large differences between the median durations of amenorrhea by number of breastfeeds in 24 hours (Figure 4 8) Women who breastfeed seven or more times have a duration of amenorrhea 10 months longer than women who do not breastfeed Surprisingly for a supposed biodemographic relationship, the increase in duration of amenorrhea according to number of feeds is not uniform In Nigeria, women

who breastfeed seven or more times have a duration of 25 months while in Brazil women with this frequency have a duration of only 5 months On average, sub-Saharan women have the largest increases in duration of amenorrhea with increases in breastfeeding frequency and women in the Near East/North Africa, the smallest These large differences indicate that other factors must also be at work

One of the other factors is the amount of time in the longest interval between feeds The DHS data do not measure this directly but a proxy can be developed from the number of nighttime feeds If the longest intervals were the determining factor in duration of amenorrhea, then women with no night feeds should approximate the duration of women who do not breastfeed Although the data in Table 4 18 and Figure 4 9 are not conclusive, the number of nighttime feeds does not appear to be a determinant by itself of the duration of amenorrhea Women who do not breastfeed at night have durations of amenorrhea that are substantially longer than those of women who do not breastfeed at all, and women who breastfeed one to three times at night have durations of amenorrhea similar to those who breastfeed four to six times in 24 hours (the more or less equivalent category if nights last 12 hours)

Table 4 18 Median duration of postpartum amenorrhea, by number of feeds in 24 hours and number of nighttime feeds

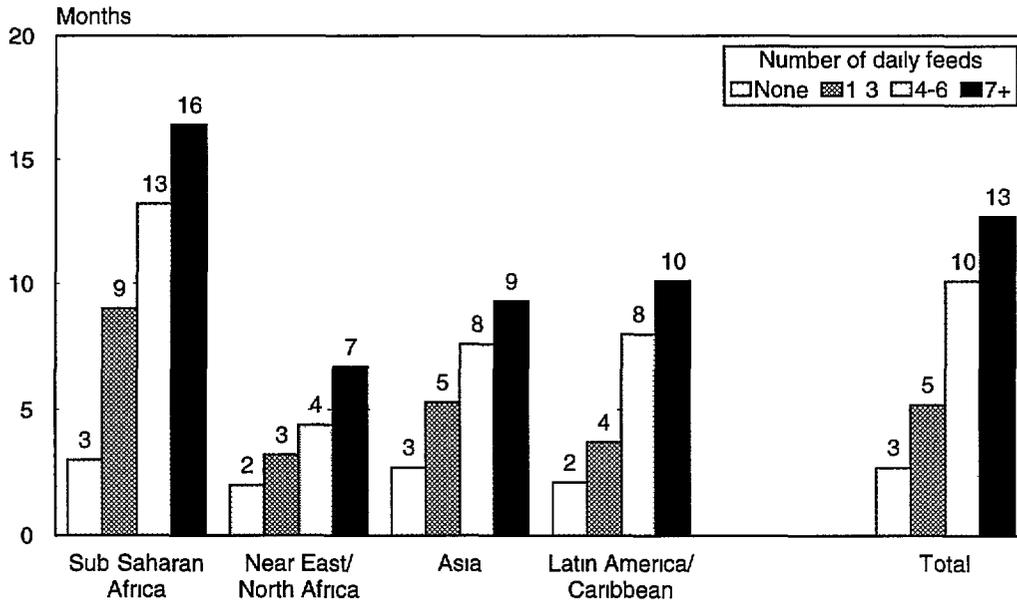
Median duration (months) of postpartum amenorrhea by number of feeds in preceding 24 hours and by number of nighttime feeds
Demographic and Health Surveys 1990 1996

Region, country, and date	Number of feeds in 24 hours				Number of nighttime feeds		
	0	1 4	4 6	7 +	0	1 3	4 +
Sub Saharan Africa							
Burkina Faso 1993	3 4	(17 2)	14 0	17 8	13 2	18 5	20 5
Cameroon 1991	3 9	*	9 2	13 6	9 7	11 7	14 1
Central African Republic 1994 95	2 1	*	11 3	17 9	12 8	16 6	17 2
Côte d Ivoire 1994	3 7	(4 9)	10 3	13 4	11 6	13 2	12 4
Ghana 1993	3 4	*	9 6	14 4	13 1	13 3	14 2
Kenya 1993	3 5	6 2	10 1	13 5	9 2	12 8	16 2
Madagascar 1992	3 3	1 6	12 6	15 1	10 1	13 6	15 9
Malawi 1992	3 5	(3 4)	11 7	15 3	11 7	12 4	20 1
Mali 1995	2 6	(7 0)	15 8	15 1	12 4	15 2	16 1
Namibia 1992	1 5	(2 2)	10 2	13 0	6 6	8 6	11 6
Niger 1992	4 6	(22 0)	18 3	19 9	12 5	21 2	13 7
Nigeria 1990	3 1	*	21 2	25 0	11 5	20 4	25 8
Rwanda 1992	2 2	18 7	20 9	18 2	14 5	19 8	22 3
Senegal 1992 93	3 2	(12 5)	13 2	22 3	13 5	17 4	19 2
Tanzania 1991 92	3 5	(6 4)	13 9	15 4	11 9	14 8	13 9
Uganda 1995	3 4	9 3	13 3	16 7	10 8	14 6	16 0
Zambia 1992	2 2	(13 1)	9 8	14 2	10 8	13 7	13 7
Zimbabwe 1994	2 2	(6 1)	12 3	14 8	12 7	12 4	15 5
Near East/North Africa							
Egypt 1992	2 1	(2 1)	6 0	6 9	5 2	5 5	7 5
Jordan 1990 91	2 0	2 2	4 3	6 6	3 7	3 7	7 0
Morocco 1992	1 8	(2 0)	4 5	8 3	2 9	4 9	6 5
Turkey 1993	1 9	4 1	2 7	4 9	3 2	3 8	7 7
Asia							
Bangladesh 1993 94	3 5	5 3	6 2	11 5	10 2	10 2	11 3
India 1992 93	2 4	4 3	7 1	9 8	7 6	8 8	10 4
Indonesia 1994	2 9	6 2	6 9	8 4	6 5	7 8	9 4
Kazakhstan 1995	2 1	(6 1)	6 5	5 8	2 8	6 5	*
Nepal 1996	4 0	8 3	10 3	11 4	10 3	10 5	11 2
Pakistan 1990 91	2 1	2 6	8 1	9 0	5 6	8 5	6 7
Philippines 1993	2 0	4 9	8 0	9 4	4 0	9 0	11 8
Latin America/Caribbean							
Bolivia 1993 94	2 6	5 9	12 5	13 7	7 5	13 3	11 6
Brazil 1996	1 5	1 8	5 6	5 1	2 2	5 3	6 8
Colombia 1995	1 7	2 6	4 9	6 9	3 5	5 3	(5 6)
Dominican Republic 1991	2 0	5 9	3 9	8 5	2 6	6 1	9 9
Guatemala 1995	2 0	4 3	11 4	12 8	9 2	11 4	13 5
Haiti 1994	2 3	(16 6)	12 2	15 3	10 1	13 0	19 1
Paraguay 1990	2 0	3 2	5 4	7 7	3 7	5 6	9 4
Peru 1996	2 9	2 1	8 4	10 9	7 5	9 0	11 9

* = based on too few cases to show (0 24)

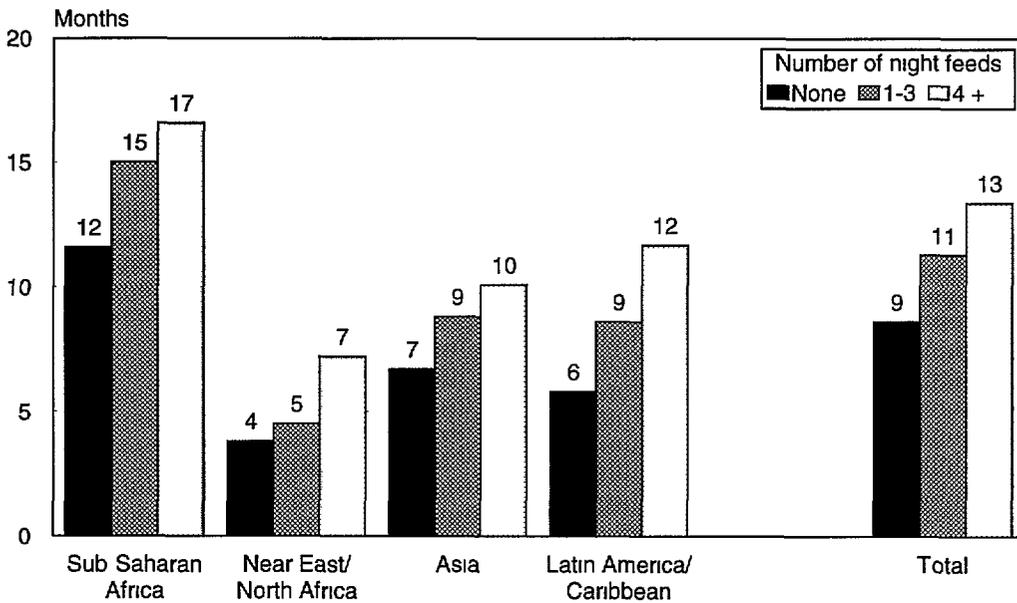
() = based on a small number of cases (25 49)

Figure 4 8 Median duration of amenorrhea by number of breastfeeds in 24 hours



Source DHS Surveys 1990 1996

Figure 4.9 Median duration of amenorrhea by number of nighttime breastfeeds



Source DHS Surveys 1990 1996

Feeding Patterns

The duration of postpartum amenorrhea by current feeding pattern is shown in Table 4.19. The feeding categories used are exclusive breastfeeding, full breastfeeding (including exclusive with or without plain water), liquids other than milk, milk (with or without other liquids), complementary foods (with or without milk or other liquids), and bottle use. The categories are for breastfed children. An additional category is the nonbreastfed children with any kind of food or liquids.

Although there are many countries with small proportions of children who are exclusively breastfed, the average median duration of amenorrhea for the exclusive category is almost the same as for full breastfeeding (Table 4.20). The following categories are in order of decreasing duration of amenorrhea: liquids other than milk, complementary foods, use of bottles while breastfeeding, milk, and not breastfeeding at all. The addition of liquids other than milk shortens the duration of breastfeeding by 2–3 months overall and between 1–2 months in sub-Saharan Africa and 5–3 months in the Near East/North Africa. The addition of complementary foods has a small additional effect, but less than 1 month overall. Milk and the use of bottles reduces the duration of amenorrhea by 5 to 6 months when compared with full breastfeeding. As noted above, the greatest reduction in median duration of amenorrhea from full breastfeeding is produced by not breastfeeding at all, about 10 months for all the countries combined, but varying from 13 months in sub-Saharan Africa to 8 months in the Near East/North Africa. The differences between countries and regions within each feeding category are likely to be due to the kinds and frequency of foods given and how they affect the frequency and duration of breastfeeds, as well as possibly on nutritional differences between mothers.

4.5 BREASTFEEDING AS A CONTRACEPTIVE

The contraceptive effects of breastfeeding have been known in many cultures from time immemorial. The effects of breastfeeding derive from the prolongation of amenorrhea. Some think that it also lowers the chances of conceiving among women whose menstruation has re-

sumed. A few DHS surveys have included the category “breastfeeding” as one of the methods asked about in the contraceptive knowledge and ever-use table in the women’s questionnaire. This practice has led to confusion, however, in the calculation of contraceptive prevalence rates because not all breastfeeding preserves amenorrhea or reduces the chances of becoming pregnant. Twelve DHS-III surveys included specific questions on the contraceptive effects of breastfeeding and the use of breastfeeding to avoid pregnancy, outside the knowledge and use table on contraception in the questionnaire.

Knowledge of the Contraceptive Effect of Breastfeeding and Ever Use for Contraceptive Purposes

A woman’s appreciation of the effect of breastfeeding on her ability to conceive and whether she has ever relied on breastfeeding is shown for all women of reproductive age in Table 4.21. To the questions “Do you think that breastfeeding can affect a woman’s chance of becoming pregnant?” and “Do you think a woman’s chance of becoming pregnant is increased or decreased by breastfeeding?” there are two correct answers: “Decreased” or “Depends.” In the four sub-Saharan Africa surveys, the majority of women do not know whether breastfeeding affects the chances of becoming pregnant. This is true in Guatemala as well. The answer “decreased” is given by relatively few women, varying from 7 percent in Mali to 35 percent in Indonesia. The answer “depends” varies from about 1 percent in Nepal and Guatemala to 16 percent in Zimbabwe, the exception being Haiti with 52 percent of women saying “depends.” In some countries, large percentages of women say that breastfeeding increases their chances of becoming pregnant: Peru (47 percent), Colombia (35 percent), and Brazil and Zimbabwe (20 percent). Women in the Near East/North Africa were not included in the survey.

The percentage of women who say that they have ever relied on breastfeeding to avoid pregnancy varies substantially from 7 percent in Brazil to 45 and 46 percent in Mali, Uganda, and Kazakhstan. In Mali 45 percent of women say they have relied on breastfeeding to avoid pregnancy, however, only 13 percent think that it reduces the chances of becoming pregnant or that it “depends.”

Table 4.19 Median duration of postpartum amenorrhea, by current feeding pattern

Median duration (months) of postpartum amenorrhea by current feeding pattern Demographic and Health Surveys 1990 1996

Region country and date	Total	Not breast feeding	Breast- feeding	Currently breastfeeding					
				Exclusive	Full	Predom- inantly breastfed	Milk	Solids	Bottle
Sub Saharan Africa									
Burkina Faso 1993	14.7	3.4	16.6	(29.3)	22.8	14.2	11.1	0.8	*
Cameroon 1991	10.6	3.9	12.4	(9.3)	14.0	9.0	6.4	12.5	9.3
Central African Republic 1994 95	14.2	2.1	17.1	*	12.7	15.5	6.2	17.3	*
Côte d'Ivoire 1994	12.3	3.6	13.4	(20.7)	12.8	11.9	10.5	13.5	(14.8)
Ghana 1993	13.3	3.4	14.0	(13.5)	12.2	13.9	8.5	13.4	10.3
Kenya 1993	10.9	3.5	12.8	9.6	8.1	12.7	10.3	12.8	9.5
Madagascar 1992	12.6	3.3	14.5	15.0	15.1	13.8	8.7	14.5	(11.4)
Malawi 1992	12.6	3.5	14.7	*	10.8	14.8	10.1	14.8	9.3
Mali 1995	13.7	2.6	15.2	14.3	25.0	14.7	10.8	14.7	10.3
Namibia 1992	8.4	1.4	11.6	6.5	11.2	12.1	3.2	11.3	11.0
Niger 1992	15.9	4.6	19.8	*	18.4	17.3	15.4	19.4	6.4
Nigeria 1990	14.9	3.1	24.8	*	0.0	24.7	11.8	22.1	26.7
Rwanda 1992	16.9	2.1	18.8	22.5	21.0	17.6	16.0	18.7	(5.1)
Senegal 1992 93	14.5	3.2	18.1	28.5	31.2	18.9	13.0	18.0	10.5
Tanzania 1991-92	13.5	3.5	15.0	15.7	15.3	14.7	11.8	14.9	8.1
Uganda 1995	12.8	3.0	15.7	0.0	23.0	15.3	9.6	15.5	17.3
Zambia 1992	11.9	2.2	13.9	21.4	14.6	12.7	10.4	13.8	8.2
Zimbabwe 1994	13.1	2.2	14.4	20.5	21.4	13.9	12.3	14.3	13.1
Near East/North Africa									
Egypt 1992	5.6	2.1	6.7	11.3	9.2	5.3	3.3	0.4	4.7
Jordan 1990 91	4.0	2.0	5.7	7.3	7.9	4.3	3.0	3.5	4.8
Morocco 1992	3.8	1.8	6.2	18.9	13.7	3.5	2.2	2.3	2.8
Turkey 1993	3.7	1.9	4.7	(5.3)	7.6	4.2	3.4	3.3	3.6
Asia									
Bangladesh 1993 94	*	3.4	11.4	14.8	14.6	9.4	9.6	11.5	*
India 1992 93	8.7	2.4	9.5	12.7	12.0	7.9	6.2	7.7	6.4
Indonesia 1994	7.2	2.8	8.2	14.8	14.2	7.6	3.6	7.8	4.2
Kazakhstan 1995	4.2	2.1	6.0	*	(7.7)	4.6	3.7	4.1	7.0
Nepal 1996	10.4	4.0	11.2	11.7	12.3	10.7	9.1	11.1	0.4
Pakistan 1990 91	6.6	2.1	8.7	19.8	10.2	8.2	4.7	0.4	6.8
Philippines 1993	5.6	2.0	9.0	8.3	8.9	9.3	4.4	8.8	7.7
Latin America/Caribbean									
Bolivia 1993 94	10.5	2.5	13.1	12.2	12.2	13.2	6.8	13.0	10.3
Brazil 1996	3.0	1.5	5.0	6.3	6.7	4.5	2.2	3.8	3.8
Colombia 1995	4.3	1.5	5.8	6.8	7.6	5.3	3.9	4.4	5.1
Dominican Republic 1991	3.5	2.0	7.2	*	9.2	6.2	2.6	2.3	6.1
Guatemala 1995	10.5	2.0	12.3	14.5	13.7	12.5	6.5	11.9	10.7
Haiti 1994	11.1	2.3	14.1	*	(0.0)	12.9	8.8	14.0	11.4
Paraguay 1990	4.5	2.0	6.4	*	6.7	6.2	3.8	6.3	5.7
Peru 1996	8.4	2.9	9.8	12.2	15.0	9.5	6.2	9.4	7.6

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table 4 20 Regional summary of median duration of postpartum amenorrhea, by current feeding patterns

Median duration in months of postpartum amenorrhea by breastfeeding status type of breastfeeding type of foods received and region Demographic and Health Surveys 1990 1996

Region	Total	Not breast-feeding	Breast feeding	Exclu sive	Type of breastfeeding/foods received				
					Full	Predom inantly breastfed	Milk	Comple mentary foods	Bottle
Sub Saharan Africa	13 2	3 0	15 7	15 4	16 1	14 9	10 3	14 6	11 5
Near East/North Africa	4 3	2 0	5 8	12 5	9 6	4 3	3 0	2 4	4 0
Asia	7 1	2 7	9 1	13 7	12 0	8 2	5 9	7 3	5 4
Latin America/Caribbean	7 0	2 1	9 2	10 4	10 2	8 8	5 1	8 1	7 6
Total	9 8	2 6	12 0	13 6	13 5	11 2	7 5	10 5	8 4

Table 4 21 Women s perception of the effect of breastfeeding on the ability to conceive, and whether breastfeeding was ever relied on to avoid pregnancy

Percentage of women who believe that breastfeeding has specific effects on the ability to conceive and percentage who ever relied on breastfeeding to avoid pregnancy Demographic and Health Surveys 1990 1996

Region country and date	Percentage of women who believe that breastfeeding has specific effects on ability to conceive						Ever relied on breast feeding to avoid pregnancy		
	Unchanged	Increased	Decreased	Depends	Don t know	Total	Number of women	Percent	Number of women
Sub-Saharan Africa									
Central African Republic 1994 95	0 0	4 0	9 3	10 8	75 9	100 0	4 406	22 4	1 264
Mali 1995	0 0	6 6	6 8	6 5	80 1	100 0	7 961	45 0	1 655
Uganda 1995	0 0	2 1	21 0	15 9	61 0	100 0	5 590	45 7	2 330
Zimbabwe 1994	0 0	20 3	10 0	16 0	53 7	100 0	4 330	29 5	1 193
Asia									
Indonesia 1994	24 5	9 1	34 5	4 9	27 0	100 0	5 978	u	u
Kazakhstan 1995	15 4	5 9	31 4	7 8	39 6	100 0	2 684	46 2	1 082
Nepal 1996	27 2	9 4	15 5	0 6	47 3	100 0	7 458	20 4	1 229
Latin America/Caribbean									
Brazil 1996	0 0	19 8	24 5	7 3	48 4	100 0	8 396	7 1	8 391
Colombia 1995	32 3	34 7	24 7	2 8	5 4	100 0	7 424	32 0	2 425
Guatemala 1995	0 6	8 7	14 5	0 7	75 5	100 0	8 242	18 8	1 392
Haiti 1994	23 3	8 2	12 8	51 7	4 1	100 0	3 316	13 7	3 308
Peru 1996	15 8	47 0	25 0	3 9	8 3	100 0	8 836	27 9	7 010

Note Questions were not asked in Near East/North Africa
u = unknown (not available)

Table 4 22 Breastfeeding women who rely on breastfeeding to avoid pregnancy

Among breastfeeding women the percentage who meet the LAM criteria and the percentage who rely on breastfeeding to avoid pregnancy among breastfeeding women who meet the LAM criteria the percentage who rely on breastfeeding to avoid pregnancy and among breastfeeding women who do not meet the LAM criteria the percentage who rely on breastfeeding to avoid pregnancy Demographic and Health Surveys 1993 1996

Region country and date	Breastfeeding mothers		Among breastfeeding mothers who meet LAM criteria percentage who rely on breastfeeding to avoid pregnancy	Among breastfeeding mothers who do not meet LAM criteria percentage who rely on breastfeeding to avoid pregnancy
	Percentage who meet LAM criteria	Percentage who rely on breastfeeding to avoid pregnancy		
Sub Saharan Africa				
Central African Republic 1994 95	11 5	80 7	81 8	u
Mali 1995	20 0	93 8	93 4	86 0
Uganda 1995	15 4	78 0	77 4	89 5
Zimbabwe 1994	8 8	71 9	73 6	u
Asia				
Indonesia 1994	7 2	u	u	u
Kazakhstan 1995	8 7	86 2	85 4	*
Nepal 1996	14 0	82 2	83 7	*
Latin America/Caribbean				
Bolivia 1993 94	14 3	u	u	u
Brazil 1996	11 8	59 5	57 3	*
Colombia 1995	4 7	60 0	60 5	*
Guatemala 1995	13 1	80 5	80 9	*
Haiti 1994	2 9	80 8	81 0	*
Peru 1996	13 0	49 1	46 4	58 5

Note The questions were not asked in Near East/North Africa

* = based on too few cases to show (0-24)

LAM = lactation amenorrhea method

u = unknown (not available or question not asked)

Lactation Amenorrhea Method and Current Reliance on Breastfeeding

In the last decade, a method of contraception based on continued breastfeeding has been developed. The method, called the *lactation amenorrhea method*, or LAM for short, has been shown to be as effective as other modern methods in the first 6 months postpartum. The method is based on the observation that first menses occurring before 6 months postpartum are almost always anovulatory so that the first menses in this period can be used by women as a marker of the resumption of fertility. If this were not the case, women could become pregnant while waiting for the menstruation marker. After 6 months, most menses are ovulatory. Use of the lactation amenorrhea method entails observing to four criteria: exclusive or full breastfeeding, less than 6

months since the birth of the child, being amenorrheic, and knowing that it is necessary to switch to another contraceptive method should any one of the preceding three criteria be violated. Under those conditions a woman is considered to be a lactation amenorrhea method (LAM) user.

For 12 DHS-III countries, Table 4 22 presents two pieces of information on breastfeeding women—whether they meet the LAM criteria and whether they currently rely on breastfeeding to avoid pregnancy. Among breastfeeding women, relatively few meet the lactation amenorrhea method criteria. The highest percent is reached in Mali (20 percent) and the lowest in Haiti (3 percent). In the majority of the countries in the table, the percentage of breastfeeding women who meet LAM criteria is between 12 and 15

percent. In contrast, in every country except Peru more than half of breastfeeding women say they currently relying on breastfeeding to avoid another pregnancy, even among those who do not meet the lactation amenorrhea method criteria. In most of the countries at least three-quarters of the women give this response. The fact that most women do not report that they know that breastfeeding decreases their chances of becoming pregnant, but most who are breastfeeding say they rely on it to avoid a pregnancy, brings the latter answer into question. It may be that the question on current reliance is inadequate and prompts many women to reply positively simply because they are breastfeeding.

4.6 CONTRACEPTION DURING POSTPARTUM AMENORRHEA

Contraceptive use during postpartum amenorrhea provides overlapping protection and additional costs that may be unnecessary for most women. There may be good programmatic reasons, however, to initiate contraception during this period, such as difficulty in contacting a woman before she resumes fecundity and the relative ease of sterilization and intrauterine device procedures at this time. The percentage of time that contraceptive methods other than LAM overlapped with postpartum amenorrhea for breastfeeding women is given in Table 4.23. The table was tabulated on a current status basis. Women who are breastfeeding and amenorrheic were tabulated by whether or not they used various types of methods and the number of months since the birth of their last child. The sum of the number of woman-months of use is then divided by the total number of woman-months for breastfeeding, amenorrheic women to get the percent of time spent with overlapping use. Traditional methods exclude periodic abstinence, because it cannot be used during amenorrhea and many women confuse it with postpartum abstinence.

Zimbabwe is the country with the highest amount of overlap, primarily because of pill use (not shown), as reflected in the percent of time overlapped by modern temporary methods, for which it is also highest. The highest country for traditional methods (excluding rhythm) is Jordan, where prolonged breastfeeding was considered a method. In general, the overlap is greatest in Latin America/Caribbean countries, where half the countries have more than 20 percent overlap. In that region, sterilization is widely used. Other countries with more than 20 percent overlap are Indonesia, Turkey, and Kazakhstan. In Turkey much of the overlap results from withdrawal (not shown).

Summary

The effect of breastfeeding on postpartum infecundity (marked by postpartum amenorrhea) and the associated period of insusceptibility resulting from either infecundity or sexual abstinence is one of the most important controls on fertility, even in countries with relatively high levels of contraceptive use. It has been seen that patterns of breastfeeding, in terms of frequency and use of complementary foods, affects the duration of the amenorrheic period and produces differentials by biodemographic, health care, and socioeconomic characteristics of women. The postpartum infecundity effect of breastfeeding has led to a newly defined method—the lactation amenorrhea method (LAM). Few breastfeeding women, however, satisfy the method's criteria and many say they do not know of breastfeeding's effect on their chances of becoming pregnant or think that it increases their chances, even though a large number of breastfeeding women say they rely on it to avoid a pregnancy. In many Latin America/Caribbean and other countries, there is considerable overlap between postpartum amenorrhea and contraceptive use (excluding the lactation amenorrhea method).

Table 4 23 Use of contraception by breastfeeding, amenorrhic women

Percentage of months breastfeeding women used contraceptive methods while amenorrhic by type of method used
Demographic and Health Surveys 1990-1996

Region country and date	Type of contraceptive method used while amenorrhic			Number of woman months of amenorrhea
	Any method (% of months)	Any modern method (% of months)	Traditional method excluding periodic abstinence (% of months)	
Sub Saharan Africa				
Burkina Faso 1993	3 0	0 6	0 2	1 692
Cameroon 1991	3 6	0 8	1 6	680
Central African Republic 1994 95	6 0	0 7	1 2	1 154
Côte d Ivoire 1994	1 6	0 4	0 4	1 431
Ghana 1993	8 2	2 6	1 3	821
Kenya 1993	11 1	5 4	1 3	1 103
Madagascar 1992	5 8	0 8	2 6	1 229
Malawi 1992	12 0	4 2	3 6	1 050
Mali 1995	2 1	0 7	0 8	2 370
Nambia 1992	16 6	10 2	5 0	684
Niger 1992	4 1	1 0	3 1	1 756
Nigeria 1990	1 8	0 7	0 7	2 028
Rwanda 1992	8 6	4 7	1 2	1 534
Senegal 1992-93	2 9	1 1	1 4	1 389
Tanzania 1991 92	5 3	1 4	2 7	1 913
Uganda 1995	9 1	1 4	5 6	1 648
Zambia 1992	11 8	2 8	7 5	1 368
Zimbabwe 1994	57 4	47 9	8 6	801
Near East/North Africa				
Egypt 1992	15 7	10 8	4 5	997
Jordan 1990-91	30 7	4 8	24 7	770
Morocco 1992	4 1	2 9	0 9	587
Turkey 1993	24 6	5 4	17 7	317
Asia				
Bangladesh 1993-94	5 8	3 3	1 7	1 221
India 1992 93	13 3	1 7	0 6	10 469
Indonesia 1994	36 1	33 9	1 0	2 622
Kazakhstan 1995	21 5	12 4	8 7	133
Nepal 1996	7 7	3 3	0 7	1 463
Pakistan 1990-91	3 6	1 0	0 6	1 003
Philippines 1993	15 3	3 2	7 8	938
Latin America/Caribbean				
Bolivia 1993-94	23 8	2 6	17 4	1 039
Brazil 1996	44 2	17 9	4 8	336
Colombia 1995	48 0	17 1	21 9	442
Dominican Republic 1991	17 7	4 3	3 4	279
Guatemala 1995	7 5	3 3	0 3	1 684
Haiti 1994	5 6	2 1	2 1	671
Paraguay 1990	13 5	4 3	4 5	386
Peru 1996	31 2	18 4	7 4	2 405

5 Trends in Breastfeeding and Postpartum Amenorrhea, Abstinence, and Insusceptibility

In the past, working with cross-sectional data from single surveys for individual countries, researchers surmised that durations of breastfeeding would decline. The conclusions were based on observing that young mothers had shorter durations of breastfeeding than older mothers and that younger mothers were more likely to be educated and working outside the home. The two relationships, together with predicted increases in urbanization, education, and women's status, were used to predict a decline in breastfeeding (see, e.g., Lesthaeghe, 1987). Based on these results, programs promoting breastfeeding were instituted to slow or reverse the trend. However, once the DHS survey data became available, it became obvious that the cross-sectional differences found in single surveys did not predict time trends (Sharma et al., 1990, Trussel et al., 1992). The apparent contradiction derives from the fact that as women age their breastfeeding durations tend to increase.¹ To evaluate the success of breastfeeding promotion and lactational amenorrheic method (LAM) programs, longitudinal changes in breastfeeding and amenorrhea durations need to be studied.

In this section changes over time in breastfeeding and its postpartum effects are analyzed by comparing information from multiple DHS surveys that have been carried out in a number of countries. In addition, information from the World Fertility Survey (WFS) is used² to gain an even larger window through which to view trends in breastfeeding.

¹ A similar phenomenon can be found for birth intervals and has been seen from single surveys with birth histories as well as across multiple surveys in the same country. In this case different cohorts of women had approximately the same birth interval when they were the same age. It is beyond the scope of this report to investigate the reasons for the increase in birth interval duration with age but the decreasing likelihood of a subsequent pregnancy occurring with increasing age—and therefore ending breastfeeding—may figure prominently. Also women with more children are likely to have had more experience with breastfeeding successfully.

² The WFS surveys are not strictly comparable with the DHS surveys as information was obtained only on the last two children (last child if the woman was pregnant) however the questions on breastfeeding were similar. Most WFS surveys did not use the Factors Other Than Contraception Affecting Fertility (FOTCAF) questionnaire module that contains information on postpartum amenorrhea and abstinence so we limit our trend comparisons for those variables to the DHS surveys.

5.1 BREASTFEEDING

Trends in the percentage of children who were ever breastfed are shown by urban-rural residence and mother's education in Table 5.1. Using the column for children who survived at least three days (one month in the case of WFS surveys), it can be seen that very high levels of starting breastfeeding have been maintained or increased in all countries. The only decrease was in Pakistan, from 97.1 percent to 96.1 percent between 1975 and 1990-91. Increases in ever breastfeeding can be noted in several Latin American countries. The largest increases occurred in Peru (6.4 percent), the Dominican Republic (5.8 percent), and Brazil (5.7 percent) between the earliest and latest surveys. In all three countries the increase was greater in urban than in rural areas, and in the first two countries the increase was greatest among mothers with secondary education or higher.

The duration of breastfeeding also has increased over time in most countries (Table 5.2). To compare trends, a 10-year (decadal) average rate of increase was calculated by dividing the increase in the median duration by the number of years between the surveys and multiplying by 10. The result is the amount of change that would occur in a decade. The averages of the decadal rates of change in median breastfeeding duration are shown for regions in Table 5.3. For regions, breastfeeding increased in duration at a decadal rate between 1 month in the Near East/North Africa and 2.5 months in sub-Saharan Africa. For all countries, duration increased at a rate of 1.7 months per decade. The rate of increase was greater in rural areas in sub-Saharan Africa and greater in urban areas in the Near East/North Africa, Asia, and Latin America/Caribbean. By mother's education, the largest rates of increase were among women with secondary or higher education except in Asia, where women with no education had the greatest rate of increase.

For individual countries, Rwanda and Peru had the highest rates of increase (Figure 5.1). Declines in breastfeeding duration occurred in six countries between the earliest and latest surveys but the decadal rates of decline were greater than 1 month only in the Dominican Republic (4.4 months) and Zimbabwe (1.7 months).

Table 5.1 Trends in percentage of children ever breastfed, by residence and mother's education

Percentage of children ever breastfed among children born in the five years preceding the survey by residence and mother's education - selected WFS and DHS surveys

Region country and date	Residence		Mother's education			Total	Total ¹	Number of children
	Urban	Rural	No education	Primary	Secondary or higher			
Sub Saharan Africa								
Cameroon 1978	96.6	97.8	97.7	97.9	93.1	97.5	97.5	10 546
Cameroon 1991	97.6	99.1	98.4	99.2	97.4	98.5	97.2	3 434
Côte d'Ivoire 1980	96.8	97.8	97.5	97.2	96.2	97.4	97.4	7 826
Côte d'Ivoire 1994	98.1	99.4	99.3	99.0	96.2	98.9	97.7	3 925
Ghana 1979-80	98.4	98.0	98.3	97.9	97.7	98.1	98.1	7 899
Ghana 1988	98.6	98.9	98.7	99.1	97.0	98.8	96.8	4 032
Ghana 1993	99.3	99.5	99.4	99.6	99.2	99.5	97.8	2 157
Kenya 1977-78	95.6	97.8	97.5	97.6	97.2	97.6	97.6	10 727
Kenya 1989	98.9	98.6	98.9	98.3	99.2	98.7	97.5	7 015
Kenya 1993	99.0	98.9	98.4	98.9	99.3	98.9	97.6	6 027
Mali 1987	99.5	99.4	99.4	99.7	(94.7)	99.4	97.9	3 372
Mali 1995	99.2	99.3	99.2	99.7	99.4	99.3	97.5	5 866
Nigeria 1982	98.4	97.8	97.9	97.7	99.4	97.9	97.9	1 245
Nigeria 1990	99.1	98.9	98.9	98.9	99.2	98.9	97.3	8 025
Rwanda 1984	97.8	97.6	97.3	97.9	99.1	97.7	97.6	6 868
Rwanda 1992	98.4	99.3	99.0	99.4	99.2	99.2	98.2	5 586
Senegal 1978	98.3	98.3	98.3	98.3	97.1	98.2	98.2	5 235
Senegal 1986	97.7	98.9	98.5	98.6	97.2	98.5	97.4	4 217
Senegal 1992-93	98.8	99.0	99.0	98.8	97.7	98.9	97.8	5 562
Uganda 1988-89	99.1	99.6	99.6	99.6	99.0	99.6	97.9	4 938
Uganda 1995	98.6	99.2	99.6	98.9	99.1	99.1	98.2	5 941
Zimbabwe 1988-89	99.1	99.8	100.0	99.6	99.1	99.6	98.7	3 301
Zimbabwe 1994	99.5	99.6	99.8	99.7	99.3	99.6	98.8	2 338
Near East/North Africa								
Egypt 1980	91.1	95.6	95.1	90.9	84.5	93.8	93.7	13 675
Egypt 1988-89	90.2	95.0	94.2	92.5	90.5	93.1	91.9	8 607
Egypt 1992	94.2	95.6	95.7	94.7	94.2	95.1	94.1	8 582
Jordan 1976	91.2	94.6	93.3	90.7	84.0	92.2	92.1	5 779
Jordan 1990-91	94.4	95.3	93.7	94.8	95.0	94.7	93.8	8 172
Morocco 1980	81.3	95.6	94.0	82.6	70.5	92.5	92.5	6 367
Morocco 1987	92.2	97.2	96.4	91.2	89.4	95.5	94.5	6 021
Morocco 1992	93.5	97.6	97.2	92.5	91.2	96.2	95.2	5 137
Turkey 1978	94.0	94.9	95.0	94.0	93.0	94.4	94.3	7 117
Turkey 1993	95.8	97.7	96.6	96.6	96.4	96.6	95.2	3 675

continued

Table 5.1 continued

Region country and date	Residence		Mother's education			Total	Total ¹	Number of children
	Urban	Rural	No education	Primary	Secondary or higher			
Asia								
Bangladesh 1975-76	96.5	97.6	97.5	98.0	95.7	97.6	97.5	9 685
Bangladesh 1993-94	98.1	98.2	98.4	98.4	97.3	98.2	96.4	3 835
Indonesia 1976	92.4	97.2	97.0	96.3	90.7	96.7	96.4	13 156
Indonesia 1987	94.8	97.3	97.7	96.8	95.0	96.7	96.1	8 175
Indonesia 1991	95.8	98.5	97.7	98.0	96.9	97.7	96.6	14 293
Indonesia 1994	96.8	98.5	98.7	98.1	97.6	98.0	96.7	16 723
Nepal 1976	96.7	97.4	97.3	97.2	98.7	97.3	97.4	8 433
Nepal 1996	98.9	99.3	99.3	99.3	99.0	99.2	97.7	4 298
Pakistan 1975	95.4	97.7	92.5	94.9	90.9	97.1	95.0	6 906
Pakistan 1990-91	94.6	96.8	96.7	96.8	91.8	96.1	94.8	6 360
Philippines 1978	78.0	90.7	93.0	92.9	83.7	86.7	86.6	15 759
Philippines 1993	83.0	92.7	98.1	93.0	83.7	88.0	87.3	8 767
Latin America/Caribbean								
Bolivia 1989	96.5	98.3	98.3	97.9	95.9	97.4	96.3	5 671
Bolivia 1993-94	97.1	98.7	98.6	98.1	97.3	97.9	96.5	3 556
Brazil 1987	86.5	90.5	86.5	87.2	91.4	87.8	86.7	3 422
Brazil 1996	93.7	92.8	90.1	94.0	93.5	93.5	92.7	4 725
Colombia 1976	89.5	93.9	91.2	92.6	84.5	91.8	90.0	5 507
Colombia 1986	93.7	94.1	93.6	94.0	93.7	93.9	93.1	2 675
Colombia 1990	93.6	94.8	89.0	94.3	94.4	94.0	93.4	3 705
Colombia 1995	95.1	96.3	96.9	95.7	95.2	95.5	94.6	4 993
Dominican Republic 1975	82.9	91.9	91.1	89.9	73.7	87.4	87.4	3 493
Dominican Republic 1986	88.4	93.8	91.1	92.2	86.6	90.7	89.2	4 361
Dominican Republic 1991	91.8	95.2	94.5	94.0	91.8	93.2	92.0	3 797
Guatemala 1987	93.9	97.0	97.6	95.2	90.6	96.1	94.6	4 542
Guatemala 1995	96.0	97.8	98.6	96.8	94.4	97.2	95.9	8 991
Haiti 1977	89.5	97.3	96.5	93.6	81.4	95.1	95.0	3 314
Haiti 1994	94.0	98.6	98.7	97.7	88.5	97.1	96.3	3 590
Paraguay 1979	89.8	92.8	93.4	92.6	86.2	91.5	91.5	4 811
Paraguay 1990	93.0	94.8	92.9	94.3	93.3	94.0	93.0	3 931
Peru 1977-78	88.2	95.7	96.0	92.4	83.1	91.6	89.8	9 220
Peru 1986	92.6	97.2	98.0	95.5	92.3	94.8	93.6	3 079
Peru 1991-92	96.4	98.5	98.3	97.7	96.5	97.2	96.1	8 428
Peru 1996	97.6	98.6	98.0	98.4	97.6	98.0	96.9	15 438

Note: Based on children surviving at least 3 days for DHS surveys (1986 and later) or at least 1 month for WFS surveys (1984 or earlier)

¹ Based on all children regardless of survival

Table 5.2 Trends in duration of breastfeeding, by urban-rural residence

Median duration of breastfeeding in months by urban-rural residence selected WFS and DHS surveys

Region country and date	Urban	Rural	Total
Sub Saharan Africa			
Cameroon 1978	15.5	18.1	17.8
Cameroon 1991	15.8	19.8	18.2
Ghana 1979-80	15.1	18.2	17.8
Ghana 1988	18.4	21.9	21.5
Ghana 1993	18.6	23.1	21.6
Kenya 1977-78	12.4	16.9	16.6
Kenya 1989	18.0	20.8	20.0
Kenya 1993	19.6	22.1	21.6
Mali 1987	18.3	18.8	18.6
Mali 1995	21.0	22.9	22.5
Nigeria 1982	15.8	17.3	17.0
Nigeria 1990	15.4	20.5	19.8
Rwanda 1984	19.8	21.0	20.9
Rwanda 1992	22.3	28.0	28.0
Senegal 1978	17.5	18.3	18.0
Senegal 1986	16.9	20.0	18.9
Senegal 1992-93	18.5	21.1	20.2
Uganda 1988-89	14.9	19.8	19.5
Uganda 1995	17.3	19.7	19.3
Zimbabwe 1988-89	17.1	19.8	19.1
Zimbabwe 1994	17.5	18.4	18.1
Near East/North Africa			
Egypt 1980	13.8	19.4	15.3
Egypt 1988-89	19.1	20.6	19.8
Egypt 1992	19.0	20.2	19.8
Jordan 1976	8.1	14.4	10.9
Jordan 1990-91	11.9	12.5	12.1
Morocco 1980	8.0	16.4	15.9
Morocco 1987	12.8	16.3	15.4
Morocco 1992	9.8	16.8	15.5
Turkey 1978	11.4	12.0	11.7
Turkey 1993	11.6	11.5	11.7

continued

Table 5.2 continued

Region country and date	Urban	Rural	Total
Asia			
Bangladesh 1975-76	19.8	26.0	25.8
Bangladesh 1993-94	26.7	> 36	> 36
Indonesia 1976	15.3	23.9	23.3
Indonesia 1987	22.1	23.6	23.3
Indonesia 1991	19.9	23.8	23.6
Indonesia 1994	23.0	23.8	23.7
Nepal 1976	(13.3)	24.2	24.2
Nepal 1996	23.9	31.5	31.3
Pakistan 1975	17.5	18.1	17.8
Pakistan 1990-91	16.5	22.1	18.5
Philippines 1978	10.9	14.3	14.1
Philippines 1993	13.5	16.3	15.4
Latin America/Caribbean			
Bolivia 1989	14.8	17.8	16.4
Bolivia 1993-94	15.9	17.8	17.5
Brazil 1986	5.3	7.8	5.8
Brazil 1996	7.7	9.0	7.8
Colombia 1976	6.0	10.9	7.9
Colombia 1986	6.4	12.7	9.1
Colombia 1990	8.4	9.4	9.3
Colombia 1995	9.5	12.0	10.3
Dominican Republic 1975	4.9	10.8	8.4
Dominican Republic 1986	7.6	8.7	8.1
Dominican Republic 1991	5.5	8.2	5.9
Guatemala 1987	8.3	18.8	20.6
Guatemala 1995	19.4	20.6	20.2
Haiti 1977	8.3	18.8	15.6
Haiti 1994	15.7	18.1	17.7
Paraguay 1979	7.5	13.4	12.4
Paraguay 1990	8.9	13.5	11.7
Peru 1977-78	10.8	17.8	14.5
Peru 1986	9.8	19.5	14.1
Peru 1991-92	15.3	19.9	18.1
Peru 1996	19.3	20.8	20.2

Note Based on children surviving at least 3 days for DHS surveys (1986 and later) or at least 1 month for WFS surveys (1984 or earlier) > 36 indicates the median cannot be calculated because less than 50 percent have stopped breastfeeding
() = based on a small number of cases (25-49)

Table 5.3 Regional summary of averages of decadal changes in median duration of breastfeeding

Decadal average rate of change in months in the median duration of breastfeeding by residence, education, and region selected WFS and DHS surveys

Region	Residence		Education			Total
	Urban	Rural	No education	Primary	Secondary or higher	
Sub-Saharan Africa	2.1	2.3	3.0	2.2	4.4	2.5
Near East/North Africa	1.6	0.3	0.5	3.5	5.9	0.9
Asia	3.4	2.3	4.7	1.3	2.0	2.0
Latin America/Caribbean	2.7	0.1	1.7	1.2	4.1	1.2
All	2.5	1.2	2.6	1.8	3.8	1.7

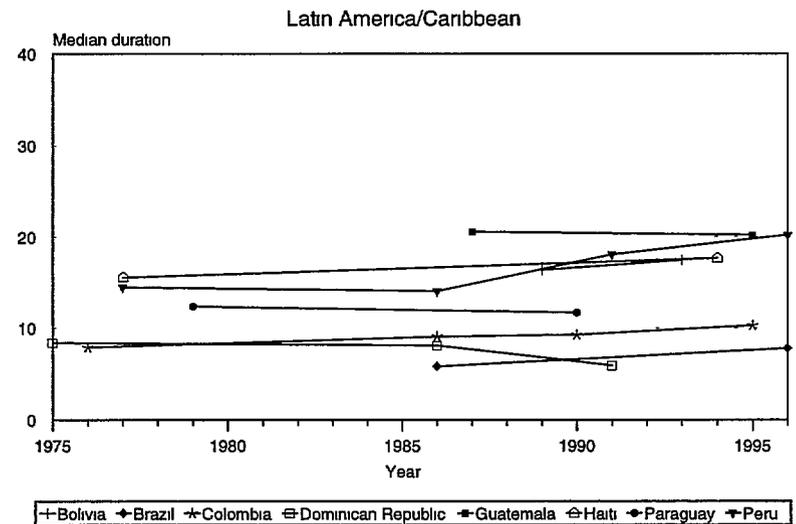
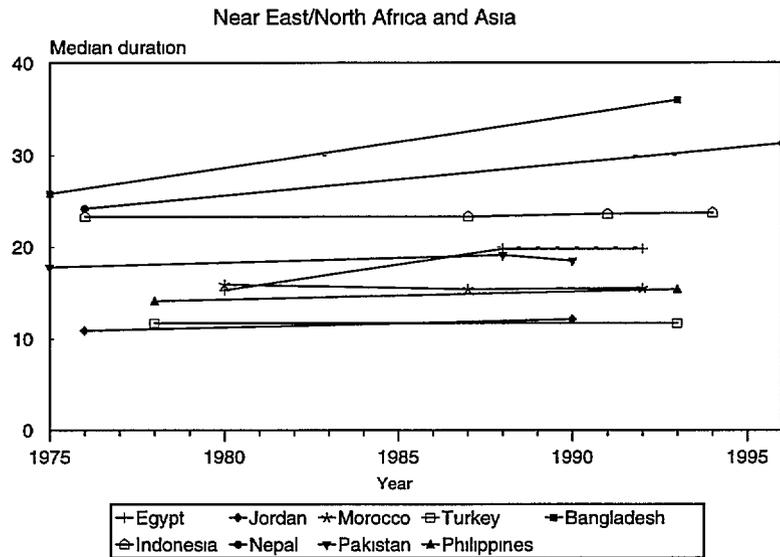
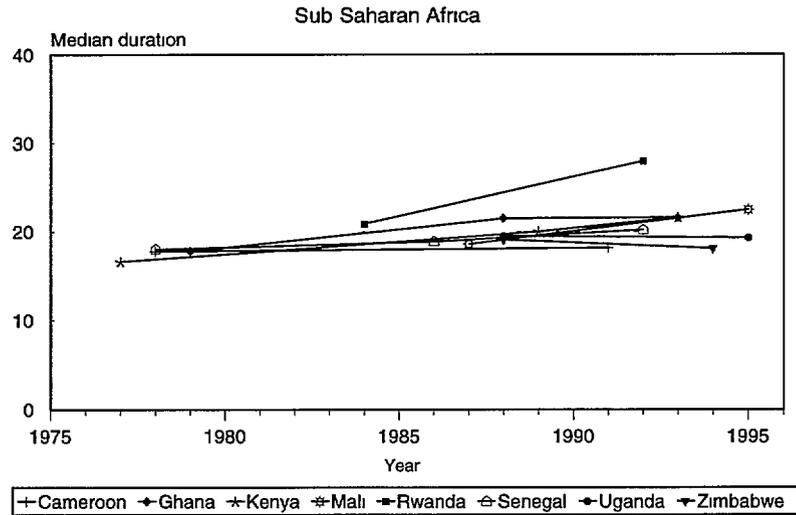
Note: Decadal average rate of change in months in the median duration of breastfeeding was calculated by dividing the increase in the median duration of breastfeeding by the number of years between the surveys and multiplying by 10.

Another way of looking at the duration of breastfeeding is to examine the percentage of children still breastfeeding at given ages. In Table 5.4, DHS-II and DHS-III countries with more than one survey are shown with the percentage of children currently breastfeeding by age. As can be seen from the table, in most countries there has been some change in breastfeeding under age 6 months. Given the high levels of breastfeeding already extant at these ages, there is little scope for increase in many countries. Several countries do show substantial increases between the earliest and latest surveys and Colombia, Peru, and Nigeria have increases of more than 10 percent. Only Pakistan shows a decrease for children under 6 months. At the other extreme, in most countries few children are breastfeeding at more than two years of age, and there has been little change, except in Peru, Bangladesh, Nepal, and Rwanda where the percentage of children breastfeeding has increased by 10, 17, 21, and 29 percent, respectively.

This analysis concentrates on children age 12 to 15 months and 20 to 23 months because it is between those ages that many children stop breastfeeding, and the World

Health Organization recommends that breastfeeding be continued into the second year of life. The changes in breastfeeding at those ages are presented graphically in Figure 5.2. For both age groups the large majority of countries show increasing percentages still breastfeeding—24 and 21 percent, respectively, of the 27 countries for which comparisons are possible. Only in Guatemala has the percentage at age 12 to 15 months declined by more than 5 percent, and Turkey is the only country where the percentage at age 20 to 23 months has declined by more than 5 percent, when considering the change between the earliest and latest surveys. The decadal changes in the percentage of children breastfeeding at the two ages are shown in Table 5.5. Overall the average rate of increase per 10-year period is about 9 percent for ages 12 to 15 months and 7 percent for ages 20 to 23 months. Sub-Saharan Africa had the largest increase at both ages and Near East/North Africa had a declining average rate at 20 to 23 months. In summary, both the median durations and the percentages at key ages indicate that breastfeeding behavior has been moving in the recommended direction, although there is still scope for substantial improvement.

Figure 5 1 Trends in median duration of breastfeeding



Source DHS Surveys 1990 1996

Table 5.4 Trends in percentage of children currently breastfeeding

Percentage of children currently breastfeeding by age in months selected WFS and DHS surveys

Region country and date	Age of child in months						
	0-5	6-11	12-15	16-19	20-23	24-35	36+
Sub Saharan Africa							
Cameroon 1978	92.5	86.6	76.0	50.7	26.8	10.9	1.5
Cameroon 1991	98.3	93.1	80.7	52.9	35.0	9.4	0.5
Côte d'Ivoire 1980	87.9	81.3	74.6	58.7	36.0	11.6	0.8
Côte d'Ivoire 1994	97.3	97.3	92.2	77.8	44.7	13.2	u
Ghana 1979-80	91.3	86.0	72.4	49.1	34.4	13.0	1.0
Ghana 1988	100.0	98.8	94.1	75.4	52.5	14.6	1.2
Ghana 1993	99.0	98.3	94.2	79.7	53.4	17.0	u
Kenya 1977-78	94.0	86.0	65.2	42.3	26.6	9.4	1.7
Kenya 1989	97.4	95.8	81.0	65.1	45.1	13.2	1.2
Kenya 1993	98.5	98.7	90.4	74.1	53.6	14.7	1.2
Mali 1987	99.0	99.5	89.7	66.1	43.8	21.0	3.2
Mali 1995	99.6	99.2	93.5	84.8	60.3	20.7	u
Nigeria 1982	86.6	80.2	63.4	49.7	43.1	15.1	5.5
Nigeria 1990	97.7	96.2	86.4	71.1	42.9	15.2	0.8
Rwanda 1984	93.7	89.6	81.1	70.5	51.7	20.7	3.9
Rwanda 1992	99.4	98.9	98.3	91.5	84.5	49.7	12.6
Senegal 1978	93.1	91.2	83.5	66.1	24.8	6.3	0.2
Senegal 1986	99.2	97.7	92.7	65.5	37.0	7.3	0.1
Senegal 1992-93	99.5	97.5	92.7	75.9	48.0	7.6	0.2
Uganda 1988-89	98.7	93.5	84.2	67.6	37.4	7.2	0.6
Uganda 1995	98.7	96.3	88.2	69.0	39.9	9.4	1.2
Zimbabwe 1988-89	99.0	97.3	90.0	65.7	25.5	5.1	0.3
Zimbabwe 1994	99.0	97.7	89.2	63.9	25.5	3.6	u
Near East/North Africa							
Egypt 1980	88.0	79.9	59.6	41.9	38.0	12.6	1.4
Egypt 1988-89	91.2	85.5	70.5	60.3	36.1	9.6	0.6
Egypt 1992	96.6	88.7	75.6	63.6	37.0	8.5	0.2
Jordan 1976	83.0	52.8	38.4	23.4	6.3	2.7	0.4
Jordan 1990-91	90.2	68.2	44.3	25.9	12.4	2.9	0.4
Morocco 1980	84.3	69.1	58.1	44.0	22.5	6.2	0.4
Morocco 1987	90.8	77.3	61.6	40.5	17.5	4.2	0.3
Morocco 1992	89.7	76.1	63.1	43.4	19.2	3.2	0.1
Turkey 1978	86.1	61.8	42.5	41.9	27.6	10.1	1.1
Turkey 1993	88.3	64.5	47.5	27.0	14.5	6.9	1.0

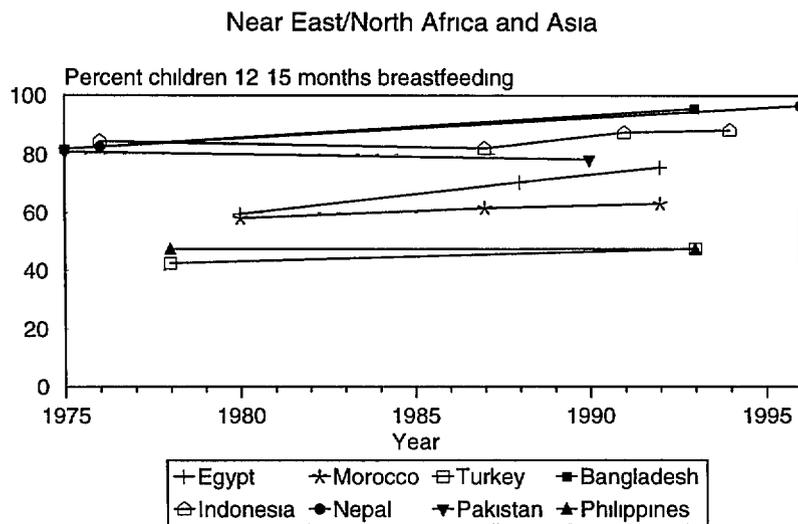
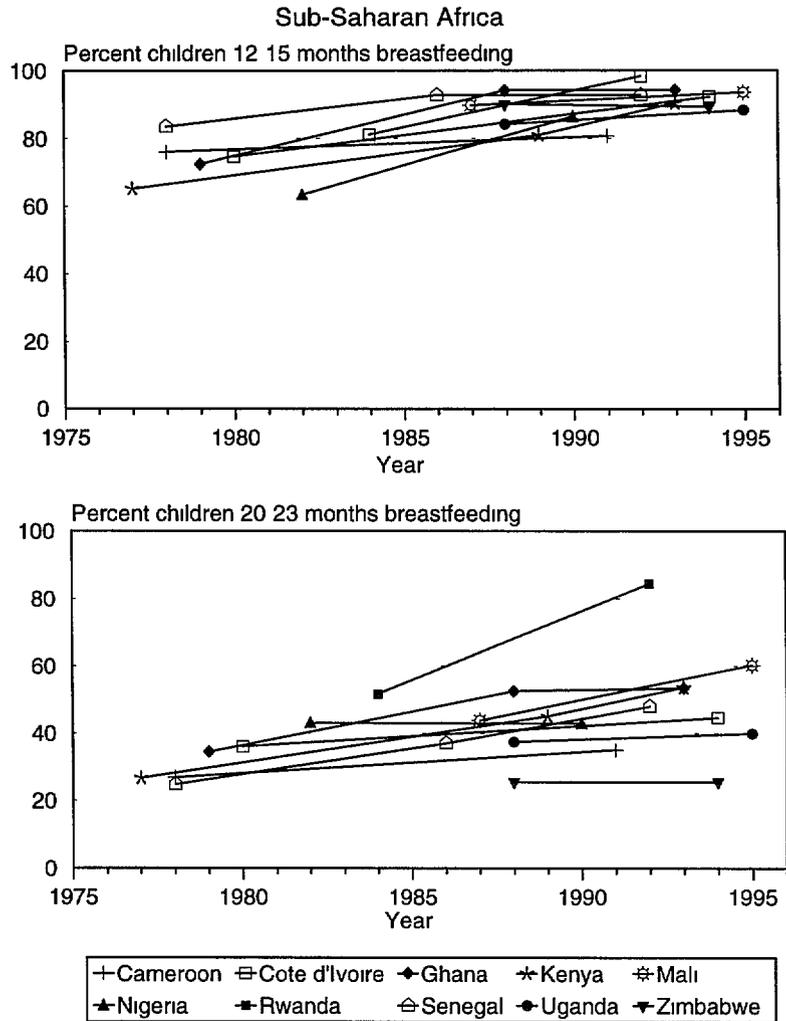
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Table 5.4 continued

Region country and date	Age of child in months						
	0-5	6-11	12-15	16-19	20-23	24-35	36+
Asia							
Bangladesh 1975-76	92.1	90.3	81.8	77.2	65.4	47.0	15.4
Bangladesh 1993-94	98.4	97.3	95.5	92.2	86.4	64.1	u
Indonesia 1976	94.5	90.4	84.4	66.8	59.4	36.2	10.5
Indonesia 1987	95.7	91.3	82.0	76.5	59.7	36.4	11.4
Indonesia 1991	97.1	92.8	87.4	71.6	61.5	35.8	8.1
Indonesia 1994	97.1	93.1	88.2	82.2	63.3	36.7	10.6
Nepal 1976	93.6	91.0	82.6	70.2	61.7	38.0	13.7
Nepal 1996	99.7	99.5	96.6	94.0	87.7	59.3	u
Pakistan 1975	97.4	89.6	80.9	69.1	43.5	18.8	0.8
Pakistan 1990-91	95.4	87.6	78.2	60.7	51.6	22.2	3.0
Philippines 1978	77.4	65.0	47.4	28.7	16.3	7.0	1.7
Philippines 1993	79.7	63.7	56.6	34.0	18.2	7.0	1.0
Latin America/Caribbean							
Bolivia 1989	95.3	86.0	72.8	45.4	29.5	5.4	0.7
Bolivia 1993-94	95.1	85.1	73.7	56.3	36.0	10.1	u
Brazil 1987	69.3	37.8	25.0	18.0	12.5	7.5	1.6
Brazil 1996	75.7	46.8	33.4	25.8	16.9	11.2	3.4
Colombia 1976	75.1	48.2	30.2	16.7	9.1	1.9	0.5
Colombia 1986	81.3	50.8	32.1	28.6	14.2	6.2	1.2
Colombia 1990	82.0	53.5	39.3	24.8	23.7	6.7	0.4
Colombia 1995	90.8	60.6	42.3	31.6	16.5	9.4	1.7
Dominican Republic 1975	70.9	42.7	22.6	13.6	4.7	1.0	0.3
Dominican Republic 1986	77.6	43.8	23.0	19.8	10.9	3.6	0.6
Dominican Republic 1991	75.2	37.2	29.0	12.7	7.2	2.5	0.9
Guatemala 1987	95.7	88.4	81.8	75.2	44.3	19.0	2.8
Guatemala 1995	96.5	90.8	74.9	64.1	43.1	16.3	2.9
Haiti 1977	91.8	83.0	61.7	51.5	18.9	5.3	0.3
Haiti 1994	96.2	90.6	81.2	54.0	24.7	5.8	0.0
Paraguay 1979	79.9	60.5	38.9	16.8	4.5	1.9	0.2
Paraguay 1990	82.9	61.3	39.8	15.1	8.3	2.6	0.2
Peru 1977-78	83.7	67.7	51.8	36.6	20.0	6.2	0.4
Peru 1986	89.7	74.6	56.9	49.4	39.1	15.2	2.1
Peru 1991-92	92.6	82.8	67.7	52.1	36.0	12.9	1.9
Peru 1996	97.4	90.0	77.6	62.4	42.5	16.1	2.6

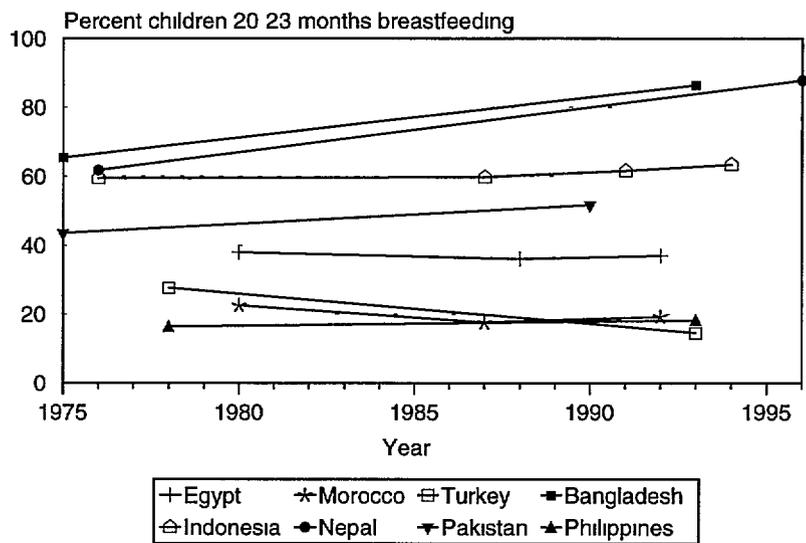
u = unknown (not available)

Figure 5 2 Trends in breastfeeding, children 12-15 months and 20-23 months

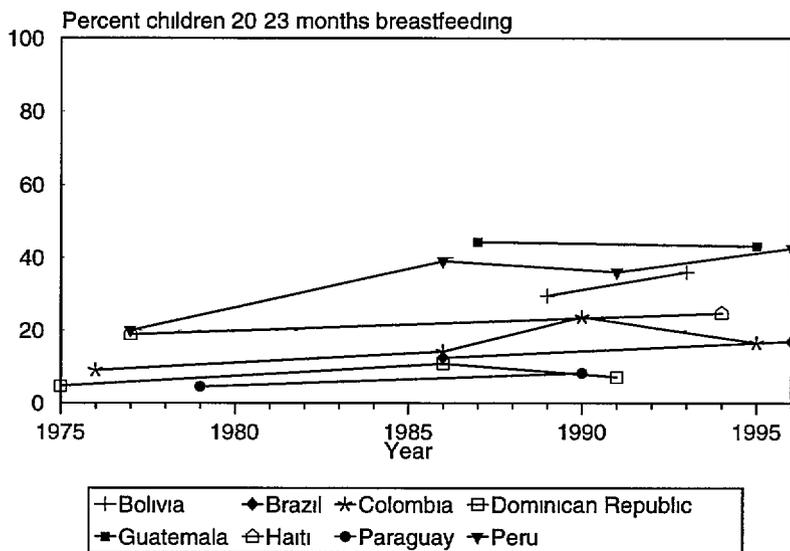
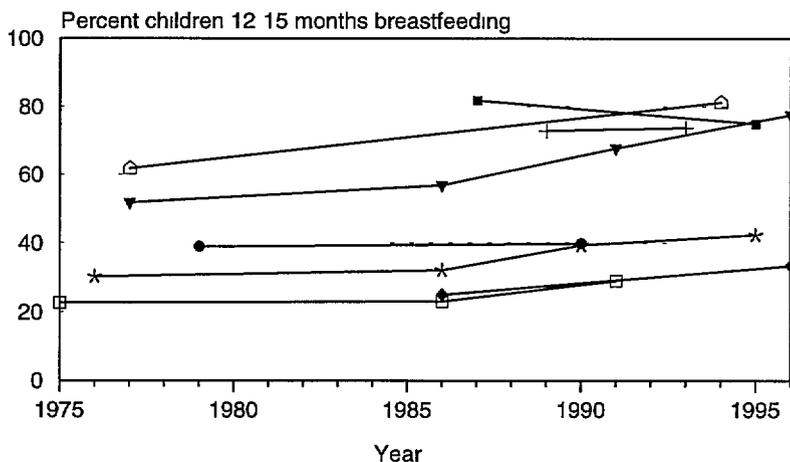


Source DHS Surveys 1990 1996

Near East/North Africa and Asia *cont*



Latin America/Caribbean



Source DHS Surveys 1990 1996

Table 5.5 Regional summary of decadal changes in percentage of children breastfeeding at two ages

Mean decadal change in percentage of children breastfeeding at ages 12 to 15 and 20 to 23 months by region selected WFS and DHS surveys

Region	Age (months)	
	12 to 15	20 to 23
Sub Saharan Africa	11.4	12.9
Near East/North Africa	7.7	2.4
Asia	4.7	6.0
Latin America/Caribbean	9.0	5.7
All	8.9	7.1

5.2 POSTPARTUM AMENORRHEA, ABSTINENCE, AND INSUSCEPTIBILITY

Change over time for postpartum variables is shown in Table 5.6 by urban-rural residence and in Table 5.7 by mother's level of education. Because there are fewer countries for which comparisons can be made in the Near East/North Africa and Asia because of the lack of World Fertility Survey data, the two regions have been combined for the summary tables.

Amenorrhea

Overall, the median duration of amenorrhea has decreased slightly at a decadal rate of about half a month (Table 5.8), in spite of the fact that the duration of breastfeeding has increased. The largest rate of decrease is in the Near East/North Africa and Asia (2.8 months), while amenorrhea increased slightly in Latin America. By residence there is no difference in the rate of decrease.³

The country with the largest rate of decrease is Morocco with 5.8 months (Figure 5.3). Overall, by education, there is little change in the duration of amenorrhea. However, in the Near East/North Africa, there is a decrease of almost 4 months among women with no education, while in Latin America there is an increase of almost 2 months among women with no education.

Abstinence

As Figure 5.3 shows, there is no substantial change in the median duration of abstinence. Overall, there is a slight increase at a rate of 0.2 months per decade for all countries together but neither residence nor education show differentials in the rate of increase (Table 5.9). By region, the largest rate of increase is among women with no education in sub-Saharan Africa (1.6 months in 10 years). From Table 5.6, it can be seen that no one country stands out in trends in abstinence.

Insusceptibility

Changes in postpartum insusceptibility to pregnancy are small except in the Near East/North Africa and Asia, where the 10-year rate of decline is 2.6 months (Table 5.10). The small low amount of change overall is due to offsetting changes in both directions within countries as shown in Figure 5.4. The countries with the largest declines are Morocco and Indonesia, 5.4 and 4.5 months, respectively. The Near East/North Africa and Asia have the largest regional changes in insusceptibility, with women in rural areas and uneducated women showing declines of more than 4 months. These substantial declines may have a significant impact on fertility because the women are less likely to use contraception than are their more urban and educated counterparts. In sub-Saharan Africa and Latin America/Caribbean, insusceptibility generally increases. The exceptions are Senegal and Guatemala.

³ The apparent inconsistency between changes in the median duration of amenorrhea by urban-rural residence and for the population as a whole for all countries combined results from a shift in the distribution of women from rural areas to urban areas.

Table 5.6 Trends in postpartum variables, by residence

Median duration of postpartum amenorrhea abstinence and insusceptibility by urban rural residence Demographic and Health Surveys 1986 1996

Region country and date	Amenorrhea			Abstinence			Insusceptibility			Number of births		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Sub-Saharan Africa												
Ghana 1988	13.0	15.1	14.7	7.9	10.6	8.8	15.2	17.8	16.8	703	1 862	2 565
Ghana 1993	10.6	14.5	13.3	8.2	9.7	9.4	15.4	18.5	16.5	614	1 590	2 204
Kenya 1989	7.6	11.1	10.7	2.3	2.7	2.6	8.9	11.8	11.4	603	3 785	4 388
Kenya 1993	5.3	12.2	10.9	2.1	3.2	3.0	6.3	14.0	13.1	473	3 172	3 645
Mali 1987	9.9	13.8	13.3	2.3	3.2	2.9	11.5	14.6	14.0	513	1 639	2 152
Mali 1995	11.1	14.5	13.7	3.3	2.7	2.9	12.3	15.2	14.4	1 541	4 477	6 019
Senegal 1986	12.5	17.8	15.7	3.1	3.3	3.2	14.2	19.6	18.3	896	1 684	2 580
Senegal 1992-93	12.0	16.0	14.5	3.7	3.5	3.5	13.3	17.6	16.5	1 162	2 199	3 361
Uganda 1988-89	7.2	12.7	12.2	2.3	2.0	2.0	8.3	13.7	13.1	314	2 862	3 176
Uganda 1995	6.5	13.5	12.8	2.2	2.2	2.2	9.1	14.1	13.7	532	4 127	4 659
Zimbabwe 1988-89	9.1	13.2	12.0	2.8	3.6	3.3	9.5	14.1	13.3	517	1 485	2 002
Zimbabwe 1994	10.7	13.8	13.1	2.5	3.9	3.6	11.3	14.9	14.4	617	1 747	2 364
Near East/North Africa												
Egypt 1988-89	3.9	7.6	5.6	1.7	1.8	1.8	4.2	8.5	6.1	2 123	3 047	5 171
Egypt 1992	4.3	6.9	5.6	1.8	1.8	1.8	4.7	7.3	6.1	1 826	3 147	4 974
Morocco 1987	3.7	8.2	6.7	0.4	0.4	0.4	3.7	8.2	6.7	1 218	2 397	3 615
Morocco 1992	2.2	5.3	3.8	1.2	1.5	1.5	2.3	5.4	4.0	1 006	2 049	3 055
Asia												
Indonesia 1987	6.5	10.4	9.3	2.4	2.5	2.4	6.8	11.0	9.9	1 252	3 400	4 652
Indonesia 1991	5.2	8.4	7.3	2.2	2.6	2.4	5.6	9.4	8.1	2 526	6 152	8 679
Indonesia 1994	3.9	8.0	7.2	2.2	2.6	2.4	4.8	8.4	7.9	2 817	7 314	10 131
Bolivia 1989	8.6	12.3		2.4	2.9	2.6	9.7	12.8	11.5	1 722	1 827	3 548
Bolivia 1993-94	7.6	12.8	10.9	2.4	2.8	2.5	9.6	13.7	11.7	1 895	1 719	3 614
Brazil 1986	2.4	2.8	10.5	2.0	1.7	1.9	3.1	3.5	3.2	1 280	680	1 960
Brazil 1996	3.2	2.4	2.5	2.3	1.9	2.2	4.4	3.7	4.3	2 167	698	2 865
Colombia 1986	2.8	4.2	3.0	2.4	2.5	2.5	4.3	4.5	4.4	971	633	1 604
Colombia 1990	3.1	4.4	3.5	2.2	2.9	2.3	4.8	5.5	5.0	1 556	745	2 301
Colombia 1995	4.1	4.8	3.6	2.3	2.1	2.2	5.5	5.7	5.6	1 984	1 094	3 077
Dominican Republic 1986	2.5	4.4	4.3	2.0	2.0	2.0	3.7	5.2	4.3	1 549	1 115	2 664
Dominican Republic 1991	3.0	4.4	3.4	2.2	2.0	2.1	3.9	4.8	4.2	1 410	987	2 397
Guatemala 1987	8.3	12.9	3.5	3.2	2.9	3.0	11.3	14.4	13.5	754	2 043	2 797
Guatemala 1995	6.3	11.7	12.2	2.4	2.5	2.4	9.7	12.4	11.7	1 826	3 822	5 648
Peru 1986	4.0	11.6	10.5	2.2	3.4	2.5	5.5	12.4	8.6	938	858	1 796
Peru 1991-92	6.1	11.7	6.1	2.2	2.3	2.2	7.1	12.5	9.4	2 986	1 974	4 960
Peru 1996	6.9	11.3	8.3	2.3	2.3	2.3	8.2	12.3	9.7	5 361	3 827	9 189

Table 5.7 Trends in postpartum variables, by education

Median duration of postpartum amenorrhoea, abstinence and insusceptibility by mother's education Demographic and Health Surveys 1986-1996

Region, country and date	Amenorrhoea			Abstinence			Insusceptibility			Number of births		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub-Saharan Africa												
Ghana 1988	16.3	14.0	6.2	14.5	7.4	5.8	21.0	15.8	8.9	1 102	1 334	129
Ghana 1993	15.8	12.6	7.4	12.3	7.4	6.5	20.7	16.0	8.5	876	1 206	122
Kenya 1989	14.6	10.4	6.4	2.6	2.8	2.3	14.8	10.8	8.2	1 123	2 447	818
Kenya 1993	13.1	11.4	6.7	4.5	2.7	3.0	15.2	13.2	10.6	657	2 182	807
Mali 1987	13.5	12.3	*	2.9	2.9	*	14.0	14.5	*	1 852	281	19
Mali 1995	14.2	13.0	10.5	2.7	3.4	3.4	14.9	13.8	11.1	5 104	665	249
Senegal 1986	17.0	12.5	6.5	3.1	3.8	2.8	19.2	13.4	10.5	2 144	303	133
Senegal 1992-93	15.6	12.3	7.5	3.5	3.9	3.2	17.1	14.5	8.3	2 703	470	188
Uganda 1988-89	15.3	11.1	6.9	1.9	1.9	3.5	15.8	11.8	7.6	1 295	1 615	267
Uganda 1995	16.1	12.0	6.1	2.8	2.1	2.1	16.6	13.2	9.4	1 434	2 735	491
Zimbabwe 1988-89	14.5	11.8	11.2	3.0	3.7	2.8	15.5	13.0	12.7	355	1 216	431
Zimbabwe 1994	16.7	12.9	11.9	7.1	3.7	3.0	16.8	13.6	14.7	297	1 183	884
Near East/North Africa												
Egypt 1988-89	7.5	4.9	3.5	1.7	1.7	1.9	8.3	5.6	3.6	2 649	1 585	937
Egypt 1992	8.3	5.3	3.6	1.8	1.8	1.9	8.7	5.9	3.8	2 530	1 075	1 368
Morocco 1987	7.8	4.9	2.4	0.4	0.4	0.4	7.8	4.9	2.4	3 061	330	224
Morocco 1992	4.4	2.2	1.3	1.5	1.1	0.5	4.5	2.3	1.3	2 478	305	272

continued

Table 5.7 continued

Region country and date	Amenorrhea			Abstinence			Insusceptibility			Number of births		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Asia												
Indonesia 1987	12.1	9.5	5.6	3.5	2.4	2.3	12.9	10.0	6.1	783	2 980	888
Indonesia 1991	10.8	8.3	4.9	2.5	2.6	2.2	11.6	9.2	5.3	1,175	5 464	2,039
Indonesia 1994	8.5	7.8	4.5	2.8	2.4	2.3	9.1	8.6	5.4	1 092	6 019	3 021
Latin America/Caribbean												
Bolivia 1989	12.8	11.8	7.3	3.3	2.5	2.5	12.8	12.4	8.5	711	1 824	1 013
Bolivia 1993-94	13.6	12.1	6.6	2.4	2.7	2.4	14.2	13.0	8.5	514	1 757	1,344
Brazil 1986	2.2	2.6	2.4	1.6	1.9	2.1	2.3	3.3	3.2	248	1 375	336
Brazil 1996	2.5	2.9	3.2	1.6	2.3	2.2	2.5	4.3	4.5	189	1 122	1 554
Colombia 1986	5.1	3.8	2.9	2.7	2.4	2.5	5.3	4.9	3.8	120	915	569
Colombia 1990	1.9	4.4	3.2	1.8	2.8	2.2	2.1	5.5	4.5	128	1,090	1 083
Colombia 1995	5.9	4.7	3.9	2.2	2.3	2.2	10.8	6.0	5.1	144	1 297	1 636
Dominican Republic 1986	4.1	3.7	2.7	1.0	2.1	2.0	4.5	5.0	3.3	171	1 763	730
Dominican Republic 1991	8.9	4.2	2.6	1.2	2.4	2.0	9.1	5.1	3.1	190	1 287	920
Guatemala 1987	14.1	11.2	5.0	3.1	3.0	2.4	15.2	12.6	5.3	1 375	1 222	200
Guatemala 1995	12.6	9.6	4.1	2.5	2.4	2.3	13.2	10.7	9.1	2 160	2 774	714
Peru 1986	12.5	8.9	4.0	3.3	3.3	2.1	13.2	10.9	5.1	293	819	684
Peru 1991-92	13.2	11.1	5.2	2.8	2.3	2.0	13.3	11.9	6.2	498	1 987	2 474
Peru 1996	14.8	10.2	6.8	2.3	2.3	2.3	15.8	11.7	8.0	903	3 653	4 632

* = based on too few cases to show (0-24)

Table 5 8 Regional summary of decadal changes in median duration of amenorrhea

Mean decadal change in median duration of amenorrhea by urban rural residence education and region selected WFS and DHS surveys

Region	Total	Residence		Education		
		Urban	Rural	No education	Primary	Secondary or higher
Sub-Saharan Africa	0.1	1.3	0.3	0.1	0.6	1.0
Near East/North Africa and Asia	2.8	2.4	3.5	3.9	2.2	1.3
Latin America/Caribbean	0.4	0.7	0.0	1.8	0.5	0.8
All	0.5	0.7	0.7	0.1	0.1	0.3

Table 5 9 Regional summary of decadal changes in median duration of abstinence

Mean decadal change in median duration of abstinence by urban rural residence education and region selected WFS and DHS surveys

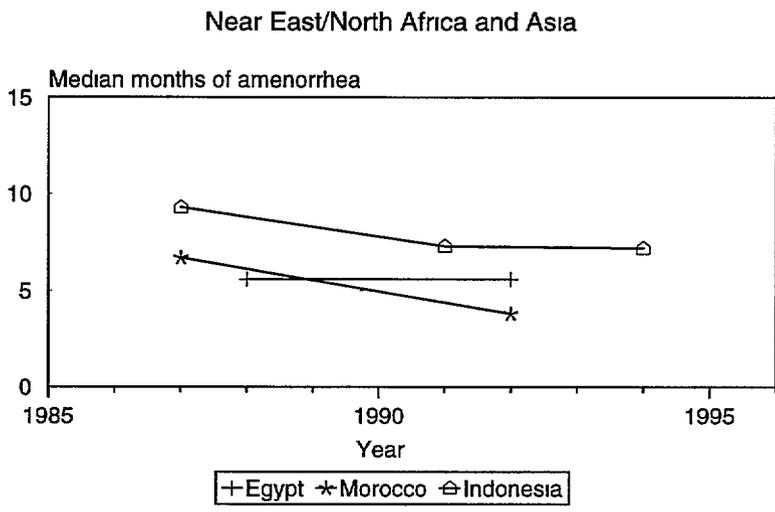
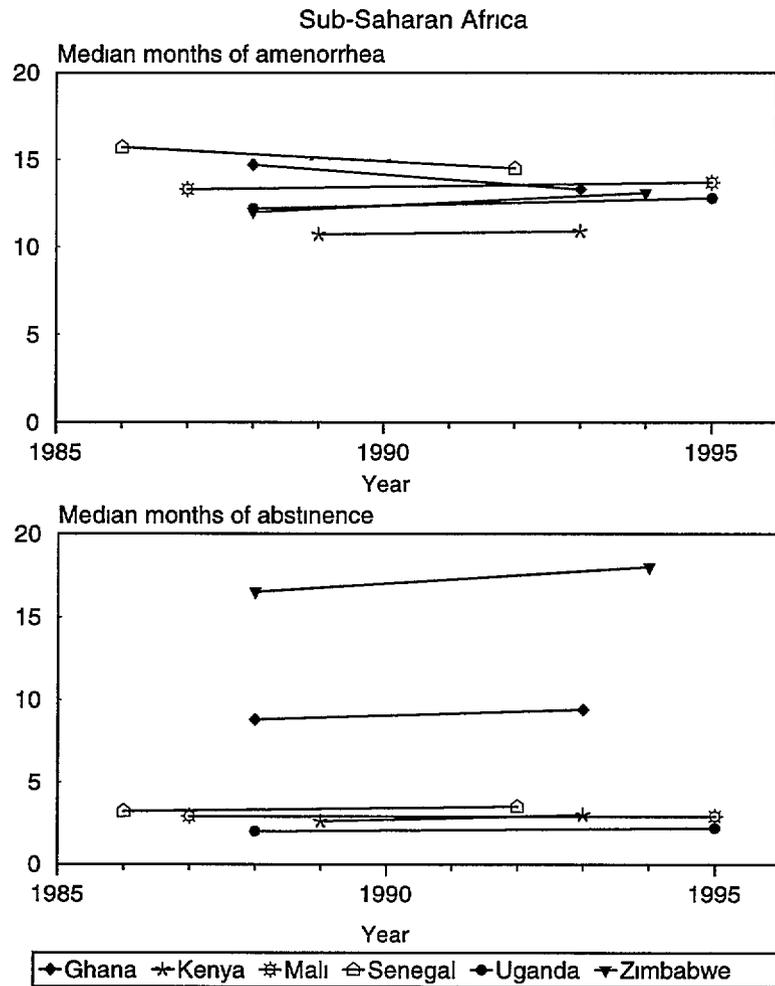
Region	Total	Residence		Education		
		Urban	Rural	No education	Primary	Secondary or higher
Sub Saharan Africa	0.6	0.3	0.0	1.6	0.1	0.4
Near East/North Africa and Asia	0.6	0.3	0.6	0.3	0.4	0.1
Latin America/Caribbean	0.2	0.0	0.4	0.7	0.1	0.1
All	0.2	0.1	0.0	0.3	0.1	0.1

Table 5 10 Regional summary of decadal changes in median duration of insusceptibility

Mean decadal change in median duration of insusceptibility by urban rural residence education and region selected WFS and DHS surveys

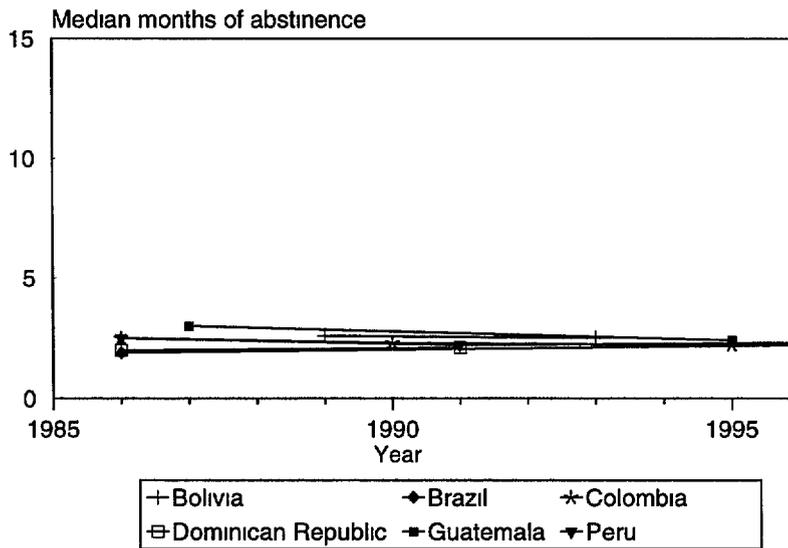
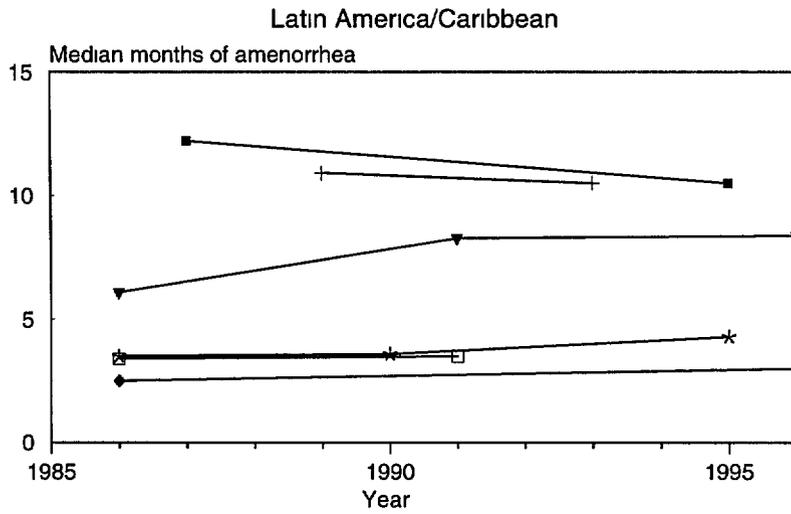
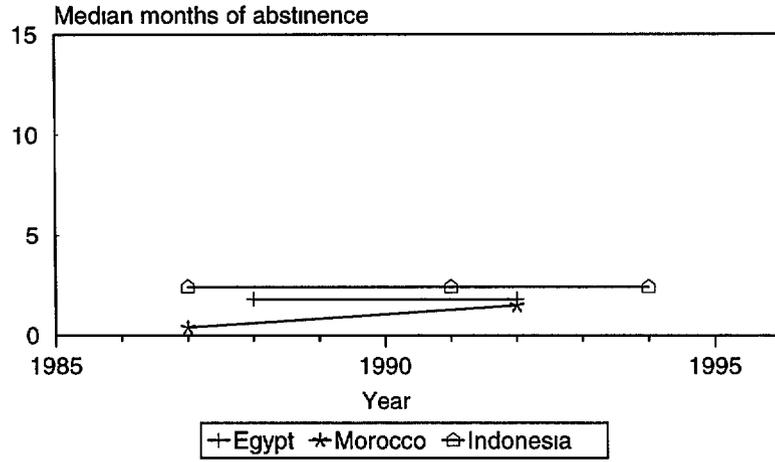
Region	Total	Residence		Education		
		Urban	Rural	No education	Primary	Secondary or higher
Sub-Saharan Africa	0.7	0.3	1.1	0.3	1.7	1.6
Near East/North Africa and Asia	2.6	1.8	4.1	4.3	2.9	0.8
Latin America/Caribbean	0.5	0.9	0.2	3.1	0.5	1.8
All	0.1	0.1	0.5	0.6	0.3	1.2

Figure 5 3 Trends in median duration of amenorrhea and abstinence



Source DHS Surveys 1990 1996

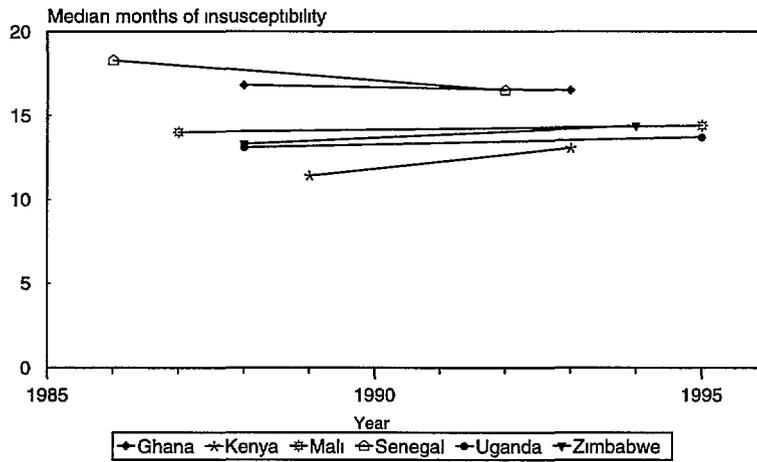
Near East/North Africa and Asia *cont*



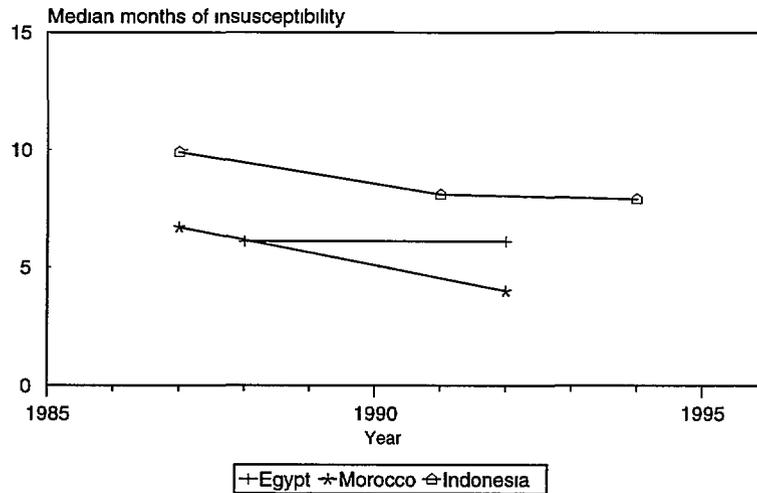
Source DHS Surveys 1990 1996

Figure 5 4 Trends in median duration of insusceptibility

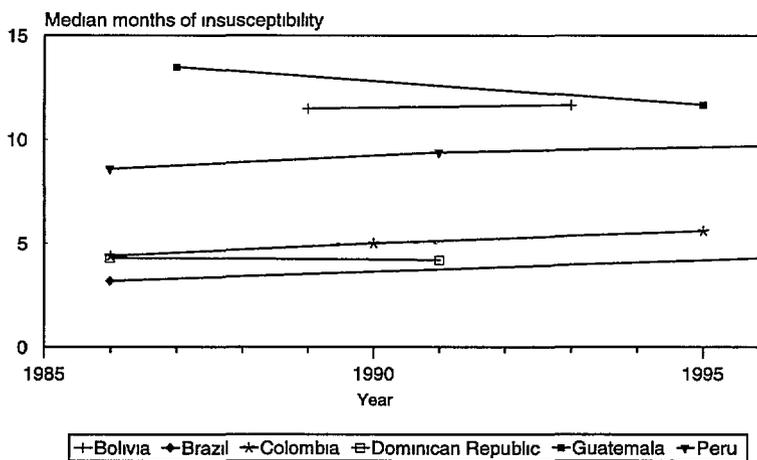
Sub Saharan Africa



Near East/North Africa and Asia



Latin America/Caribbean



Source DHS Surveys 1990-1996

Summary

Until recently breastfeeding researchers and advocates predicted a decline in breastfeeding over time resulting from increases in women's status education, and urbanization. The predictions were based primarily on cross-sectional analyses at a single point in time. The repeated collection of data on breastfeeding and postpartum effects nationally by the Demographic and Health Surveys makes possible true trend analysis. The newly available data allow us to see that in general the predictions were wrong. The percentage of children that have ever been breastfed has not declined and has even increased in some countries. The duration of breastfeeding has also increased in most of the countries studied, on average almost 2 months in a 10-year period. Only two countries, the Dominican Republic and Zimbabwe, had declines that exceeded 1 month over 10 years. Viewed another way, there was a 9 percent increase in breastfeeding among children age 12 to 15 months and a 7 percent increase among children age 20 to 23 months.

In spite of the increase in breastfeeding, the duration of postpartum amenorrhea has decreased by about 0.5 months in a 10-year period. Postpartum abstinence, linked to breastfeeding and postpartum amenorrhea primarily in sub-Saharan African countries, shows no trend. There has been no overall trend in insusceptibility (the combination of amenorrhea and abstinence) as well. In the Near East/North Africa and Asia regions, however, both postpartum amenorrhea and abstinence have decreased in length, a change occurring in both urban and rural areas and in all education groups.

That breastfeeding prevalence and duration have increased is encouraging and may be due to the influence of programs designed to promote breastfeeding. The decrease in amenorrhea in the Near East/North Africa and Asia regions indicates a shift in the intensity of breastfeeding, likely due to earlier introduction of complementary foods. This may or may not be beneficial, depending on the age of the child involved. Unfortunately, there is little information from older surveys to establish trends in age at introduction of complementary foods.

References

- Billewicz, W Z 1979 The timing of postpartum menstruation and breastfeeding A simple formula *Journal of Biosocial Science* 11 141
- Bongaarts, J 1978 A framework for analyzing the proximate determinants of fertility *Population and Development Review* 4(1) 105-132
- Brown, K H , R Y Stallings, H Creed de Kanashiro, G Lopez de Romana, and R E Black 1990 Effects of common illness on infants' energy intakes from breastmilk and other foods during longitudinal community-based studies in Huascar (Lima), Peru *American Journal of Clinical Nutrition* 52(6) 1005-13
- Brozek, J , and B Schurch 1984 *Malnutrition and behavior Critical assessment of key issues* Nestle Foundation publication series Vol 4 Lausanne, Switzerland Nestlé Foundation
- Clemens, J D , and B F Stanton 1987 An educational intervention for altering water-sanitation behaviours to reduce childhood diarrhoea in urban Bangladesh 1 Application of the case-control method for development of an intervention *American Journal of Epidemiology* 125(2) 284-291
- Cohen, R J , K H Brown, J Canahuait, L L Rivera, and K G Dewey 1994 Effect of age of introduction of complementary foods on infant breastmilk intake, total energy intake, and growth A randomized intervention study in Honduras *Lancet* 334(8918) 288-293
- de Carvalho, M , S Robertson, A Friedman, and M Klaus 1983 Effect of frequent breast-feeding on early milk production and infant weight gain *Pediatrics* 72(3) 307-311
- Dickin, K L , K H Brown, D Fagbule, M Adedoyin, J Gittelsohn, S A Esrey, and G A Oni 1990 Effect of diarrhoea on dietary intake by infants and young children in rural villages of Kwara State, Nigeria *European Journal of Clinical Nutrition* 44(4) 307-317
- Engle, P , and M E Pedersen 1992 Maternal work for earnings and children's nutritional status in urban Guatemala *Ecology of Food and Nutrition* 221(3) 211-223
- Esrey, S A , R G Feachem, and J M Hughes 1985 Interventions for the control of diarrhoeal diseases among young children Improving water supplies and excreta disposal facilities *Bulletin of the World Health Organization* 63(4) 757-772
- Ferry, B 1981 *Breastfeeding* World Fertility Survey Comparative Studies No 13 London International Statistical Institute
- Grummer-Strawn, L M 1993 Does prolonged breastfeeding impair child growth? A critical review *Pediatrics* 91(4) 766-771
- Grummer-Strawn, L M , and J Trussell 1993 Computing the mean duration of breastfeeding from current-status data *Genus* 49(1-2) 25-42
- Habicht, J -P , R Martorell, C Yarbrough, R M Malina, and R E Klein 1974 Height and weight standards for preschool children How relevant are ethnic differences in growth potential? *Lancet* 1(858) 611-614
- Haggerty, P A , K Muladi, B R Kirkwood, A Ashworth, and M N Manun'Ebo 1994 Community-based hygiene education to reduce diarrhoeal disease in rural Zaire Impact of the intervention on diarrhoeal morbidity *International Journal of Epidemiology* 23(5) 1050-1059
- Haggerty, P A , M N Manun'Ebo, A Ashworth, K Muladi, and B R Kirkwood 1994 Methodological approaches in a baseline study of diarrhoeal morbidity in weaning-age children in rural Zaire *International Journal of Epidemiology* 23(5) 1040-1049
- Hoddinot, J , and L Haddad 1992 Household economics and the economics of households Paper presented at the IFPRI/World Bank Conference on Intra-Household Resource Allocation, Washington, D C , February 12-14
- Hoyle, B , M Yunus, and L C Chen 1980 Breast-feeding and food intake among children with acute diarrheal disease *American Journal of Clinical Nutrition* 33(11) 2365-2371

- Huffman, S L , and C Combest 1990 Role of breastfeeding in the prevention and treatment of diarrhoea *Journal of Diarrhoeal Disease Research* 8(3) 68-81
- Hytten, F E 1980 Nutrition In *Clinical physiology in obstetrics*, ed F E Hytten and G Chamberlain Oxford, England Blackwell Scientific Publications 163-192
- Institute of Medicine (IOM) 1990 *Nutrition during pregnancy* Washington, D C National Academy Press
- Institute of Medicine (IOM), Committee to Study the Prevention of Low Birthweight 1985 *Preventing low birthweight* Washington, D C National Academy Press
- James, W P T , A Ferro-Luzzi, and J C Waterlow 1988 Definition of chronic energy deficiency in adults Report of a working party of the International Dietary Energy Consultative Group *European Journal of Clinical Nutrition* 42(12) 969-981
- Jain, A K 1969 Pregnancy outcome and the time required for next conception *Population Studies* 23 421-433
- Jain, A K , and J Bongaarts 1981 Breastfeeding Patterns, correlates, and fertility effects *Studies in Family Planning* 12(3) 79-99
- Jamison, D T 1993 Disease control priorities in developing countries An overview In *Disease control priorities in developing countries*, ed D T Jamison, W H Mosley, A R Measham, and J L Bobadilla New York Oxford University Press
- Jonsson, U 1995 Ethics and child nutrition *Food and Nutrition Bulletin* 16(4) 293-298
- Kennedy, K I, R Rivera, and A S McNeilly 1989 Consensus statement on the use of breastfeeding as a family planning method *Contraception* 39(5) 477-496
- Kramer, M 1987 Determinants of low birth weight Methodological assessments and meta-analysis *Bulletin of the World Health Organization* 65 663-737
- Krasovec, K , and M Anderson 1991 *Maternal nutrition and pregnancy outcomes Anthropometric assessment* PAHO Scientific Publications No 259 Washington, D C Pan American Health Organization
- Labbok, M H , A Perez, V Valdes, F Sevilla, K Wade, V H Laukaran, K A Cooney, S Coly, C Sanders, and J T Queenan 1994 The lactational amenorrhea method (LAM) A postpartum introductory family planning method with policy and program implications *Advances in Contraception* 10(2) 93-109
- Leslie, J 1989 Women's work and child nutrition in the Third World In *Women, work and child welfare*, ed J Leslie and M Paolisso Boulder, Colorado Westview Press
- Lesthaeghe, R 1987 Lactation and lactation related variables, contraception and fertility An overview of data problems and world trends *International Journal of Gynecology and Obstetrics* 25(Supple) 143-73
- Liljestrand, J 1985 Maternal mortality in Mozambique Dissertation, Faculty of Medicine, University of Uppsala, Uppsala, Sweden
- Lutter, C K , J O Mora, J -P Habicht, K M Rasmussen, D S Robson, and M G Herrera 1990 Age-specific responsiveness of weight and length to nutritional supplementation *American Journal of Clinical Nutrition* 51(3) 359-364
- Lutter, C K , J O Mora, J -P Habicht, K M Rasmussen, D S Robson, S G Sellers, C Super, and M G Herrera 1989 Nutritional supplementation Effects on child stunting because of diarrhea *American Journal of Clinical Nutrition* 50(1) 1- 8
- Macro International Inc 1996 *Nutrition of infants and young children in Mali Findings from the 1995/96 Mali DHS Survey* Calverton, Maryland Macro International Inc
- Manun'Ebo, M N , P A Haggerty, M Kalengate, A Ashworth, and B R Kirkwood 1994 Influence of demographic, socioeconomic and environmental variables on childhood diarrhoea in a rural area of Zaire *Journal of Tropical Medicine and Hygiene* 97(1) 31-38
- Martorell, R , J -P Habicht, C Yarbrough, A Lechtig, and R E Klein 1976 Underreporting in fortnightly recall morbidity surveys *Journal of Tropical Pediatric Environmental Child Health* 22(3) 129-134

- McNeilly, A S 1993 Breastfeeding and fertility In *Biomedical and demographic determinants of reproduction*, ed R Grey, H Leridon, and A Spira Oxford Clarendon Press 391-412
- McNeilly, A S , C C K Tay, and A Glasier 1994 Physiological mechanisms underlying lactational amenorrhea In *Human reproductive ecology Interactions of environment, fertility, and behavior*, ed Kenneth L Campbell and James W Wood *Annals of the New York Academy of Sciences* 709 145-155
- Molla, A , A M Molla, S A Sarker, and M Khatun 1983 Whole-gut transit time and its relationship to absorption of macronutrients during diarrhoea and after recovery *Scandinavian Journal of Gastroenterology* 18 537-543
- Moore, M , and M Favin 1990 *Behavioral determinants of maternal health care choices in developing countries* Working Paper No 2 Arlington, Virginia MotherCare Project
- Pelletier, D L , E A Frongillo, Jr , and J -P Habicht 1993 Epidemiologic evidence for a potentiating effect of malnutrition on child mortality *American Journal of Public Health* 83(8) 1130-1133
- Perez, A , M H Lobbok, and J T Queenan 1992 Clinical study of lactational amenorrhoea method for family planning *Lancet* 339(8799) 968-970
- Perez-Escamilla, R , S Seguro-Millan, J Canahuati, and H Allen 1996 Prelacteal feeds are negatively associated with breastfeeding outcomes in Honduras *Journal of Nutrition* 126(11) 2765-73
- Rahaman, M M , and M A Wahed 1983 Direct nutrient loss and diarrhea In *Diarrhea and malnutrition Interactions mechanisms and interventions*, ed L C Chen and N S Scrimshaw New York Plenum Press 155-160
- Righard, L , and M O Alade 1990 Effect of delivery room routines on success of first breast-feed *Lancet* 336(8723) 1105-1107
- Rivera, J 1988 Nutritional supplementation during two consecutive pregnancies and the interim lactation period Effect on birth weight *Pediatrics* 81 51-57
- Rosenberg, I H , N W Solomons, and R E Schneider 1977 Malabsorption associated with diarrhea and intestinal infections *American Journal of Clinical Nutrition* 30(8) 1248-1253
- Sachdev, H P S , J Krishna, R K Puri, L Satyanarayana, and S Kumar 1991 Water supplementation in exclusively breastfed infants during summer in the tropics *Lancet* 337(8747) 929-933
- SANAS and Wellstart International 1995 *Etude qualitative sur l'allaitement maternel au Sénégal* Wellstart International Working Paper Expanded Promotion of Breastfeeding Washington, D C Wellstart International
- Scrimshaw, N S , C E Taylor, and J E Gordon 1968 *Interactions of nutrition and infection* World Health Organization Monograph Series No 57 Geneva World Health Organization
- Sharma, R K , S O Rutstein, M Lobbok, G Ramos, and S Effendi 1990 Trends and differentials in breastfeeding Findings from the World Fertility Survey and the Demographic and Health Surveys Paper presented at Population Association of America annual meeting, May, Toronto, Canada
- Sharma, R K , S O Rutstein, M Lobbok, G Ramos, and S Effendi 1990 A comparative analysis of trends and differentials in breastfeeding Findings from the DHS surveys Paper presented at the annual meeting of the Population Association of America, May, Toronto, Canada
- Singh, S , and B Ferry 1984 *Biological and traditional factors that influence fertility Results from WFS surveys* WFS Comparative Studies No 40 Voorburg, Netherlands International Statistical Institute
- Trussell, J , L M Grummer-Strawn, G Rodriguez, and M VanLandingham 1992 Trends and differentials in breastfeeding behaviour Evidence from the WFS and DHS *Population Studies* 46(2) 285-307
- UNICEF 1990 *Strategy for improved nutrition of children and women in developing countries* New York UNICEF
- Victoria, C G , J P Vaughan, C Lombardi, S M Fuchs, L P Gigante, P G Smith, L C Nobre, A M Teixeira, L B Moreira, and F C Barros 1987 Evidence for protection by breast-feeding against infant deaths from infectious diseases in Brazil *Lancet* 2(8554) 319-322

Von Braun, J, and E Kennedy 1992 Agricultural commercialization, development and nutrition International Food Policy Research Institute, Washington, D C Mimeo

World Bank 1993 *Growing out of poverty* Uganda World Bank

World Bank 1993 *World development report 1993* New York Oxford University Press

World Federation of Public Health Associations (WFPHA) 1983 *Maternal nutrition Information for action-resource guide* Prepared for UNICEF New York

World Health Assembly (WHA) 1994 Infant and child nutrition Resolution 47.5 of the 47th World Health Assembly, Geneva, May 9 Geneva World Health Organization

World Health Organization (WHO) 1979 *A guideline for the measurement of nutritional impact of supplementary feeding programs aimed at vulnerable groups* Geneva World Health Organization

World Health Organization (WHO) 1996 *WHO Global Data Bank on Breastfeeding-Breastfeeding The best start in life* WHO/NUT/96.1 Geneva World Health Organization

World Health Organization(WHO)/UNICEF 1990 Meeting on breastfeeding in the 1990s A global initiative Innocenti declaration on the protection, promotion, and support of breastfeeding Florence, Italy, August 1 New York UNICEF

Appendix A

Definitions Used in the WHO Global Data Bank on Breastfeeding

Definitions Used in the WHO Global Data Bank on Breastfeeding

Category of infant feeding	Requires that the infant receive	Allows the infant to receive	Does not allow the infant to receive
Exclusive breastfeeding	Breast milk (including milk expressed or from wet nurse)	Drops, syrups (vitamins, minerals, medicines)	Anything else
Predominant breastfeeding	Breast milk (including milk expressed or from wet nurse) as the predominant source of nourishment	Liquids (water, and water-based drinks, fruit juice), oral rehydration therapy, ritual fluids, and drops or syrups (vitamins, minerals, medicines)	Anything else (in particular, nonhuman milk, food-based fluids)
Complementary feeding	Breast milk and solid or semisolid foods	Any food or liquid including nonhuman milk	
Breastfeeding	Breast milk	Any food or liquid including nonhuman milk	
Bottle-feeding	Any liquid or semisolid food from a bottle with nipple/teat	Any food or liquid including nonhuman milk Also allows breast milk by bottle	

Source WHO, 1996

Appendix B

Timing of Initial Breastfeeding, by Selected Background Characteristics

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Table B 1 Timing of initial breastfeeding, by provider of delivery assistance

Percentage of children breastfed immediately after birth the first day the second day or later by provider of delivery assistance Demographic and Health Surveys 1990 1996

Region country and date	Immediately				First day ¹				Second day				Later			
	Doctor	Other medical person	TBA	Other no one	Doctor	Other medical person	TBA	Other no one	Doctor	Other medical person	TBA	Other no one	Doctor	Other medical person	TBA	Other no one
Sub Saharan Africa																
Burkina Faso 1993	20.9	33.3	19.8	35.2	44.0	55.3	41.4	48.8	6.7	17.1	18.0	17.1	49.3	27.6	40.6	34.1
Cameroon 1991	5.5	12.0	9.8	16.3	21.6	35.2	23.9	25.3	33.8	30.0	21.1	16.8	44.6	34.8	55.0	57.9
Central African Republic 1994 95	(17.3)	38.5	29.4	30.5	(54.2)	72.9	59.3	54.4	(8.9)	17.0	23.8	28.7	(36.8)	10.1	16.9	16.9
Côte d'Ivoire 1994	36.7	46.6	46.7	39.8	57.1	67.4	63.2	58.7	16.9	18.2	18.4	21.1	25.9	14.3	18.4	20.2
Ghana 1993	17.9	18.0	12.5	16.9	38.2	54.4	38.8	40.7	12.2	16.7	14.0	13.0	49.6	28.9	47.2	46.2
Kenya 1993	51.2	58.8	52.4	56.3	80.0	88.4	86.5	85.0	8.0	5.3	4.9	5.8	12.0	6.4	8.6	9.2
Madagascar 1992	4.8	4.4	6.7	15.3	41.6	40.2	51.6	57.3	37.7	41.4	23.7	26.5	20.7	18.4	24.7	16.1
Malawi 1992	39.6	57.2	59.8	63.4	84.2	92.6	92.5	93.4	9.9	3.9	3.0	3.1	5.9	3.5	4.5	3.5
Mali 1995	(3.5)	10.6	11.6	8.3	(56.0)	73.4	59.7	60.4	(19.7)	18.0	23.3	20.1	(24.3)	8.6	17.0	19.5
Namibia 1992	47.5	51.7	67.3	63.8	79.2	86.6	86.5	81.4	8.7	7.5	9.5	10.5	12.0	5.9	4.0	8.1
Niger 1992	*	36.9	12.4	24.3	*	53.3	18.1	35.1	*	17.0	11.3	14.5	*	29.6	70.6	50.4
Nigeria 1990	37.5	30.2	38.2	38.0	59.8	63.0	50.6	52.1	6.0	9.4	4.1	6.7	34.3	27.6	45.3	41.2
Rwanda 1992	8.6	21.0	18.4	19.8	33.5	55.8	47.9	51.3	23.1	24.8	26.5	23.1	43.4	19.4	25.6	25.5
Senegal 1992 93	6.7	12.3	9.7	13.8	42.7	53.0	43.9	39.0	22.7	19.9	19.9	20.3	34.7	27.1	36.2	40.7
Tanzania 1991 92	41.8	45.4	51.3	42.8	80.5	86.8	88.5	80.5	7.0	6.6	4.7	7.9	12.5	6.6	6.9	11.6
Uganda 1995	38.1	52.1	52.9	46.0	78.9	88.9	88.1	84.3	6.7	4.8	6.3	6.1	14.4	6.4	5.6	9.6
Zambia 1992	21.2	38.2	49.4	45.1	59.7	89.0	93.3	92.5	10.9	5.7	1.9	4.2	29.4	5.3	4.8	3.3
Zimbabwe 1994	32.2	43.4	33.9	40.2	82.6	94.2	87.8	90.7	9.2	3.9	6.9	5.1	8.2	1.9	5.4	4.2
Near East/North Africa																
Egypt 1992	23.2	28.6	28.1	20.7	67.1	73.4	66.5	62.2	10.7	8.0	6.5	8.7	22.2	18.6	27.0	29.1
Jordan 1990	43.0	42.5	45.8	50.2	67.0	73.0	73.3	68.7	16.2	16.2	13.9	14.4	16.7	10.8	12.8	16.9
Morocco 1992	43.3	42.4	57.7	56.0	72.9	84.2	91.6	91.9	7.6	6.0	2.8	2.4	19.5	9.8	5.6	5.7
Turkey 1993	20.1	20.8	21.7	22.5	77.0	84.8	72.0	70.4	10.2	8.2	15.7	17.4	12.7	7.0	12.3	12.2
Asia																
Bangladesh 1993 94	11.5	11.4	9.0	8.1	54.1	53.6	51.0	45.8	9.5	14.7	11.3	10.4	36.4	31.7	37.7	43.8
India 1992-93	12.4	11.8	7.7	9.7	37.8	33.5	23.0	21.9	15.9	14.6	14.4	9.8	46.3	51.9	62.6	68.3
Indonesia 1994	7.4	7.3	8.5	5.9	48.2	48.4	55.2	61.8	16.3	24.2	17.2	19.7	35.5	27.4	27.6	18.5
Kazakhstan 1995	11.7	4.0	*	*	42.6	30.6	*	*	31.0	47.3	*	*	26.4	22.1	*	*
Nepal 1996	18.1	19.7	13.3	19.8	65.1	65.7	41.4	65.2	8.8	9.6	7.7	7.5	26.1	24.7	50.9	27.3
Pakistan 1990 91	5.9	8.8	9.3	6.4	34.3	30.5	24.5	23.0	22.2	17.0	14.5	13.9	43.6	52.6	61.0	63.1
Philippines 1993	36.2	42.2	43.2	60.7	60.4	72.8	75.1	86.7	13.6	14.7	13.0	3.2	26.0	12.5	11.9	10.2

continued

Table B 1 *continued*

Region, country and date	Immediately				First day ¹				Second day				Later			
	Doctor	Other medical person	TBA	Other no one	Doctor	Other medical person	TBA	Other, no one	Doctor	Other medical person	TBA	Other, no one	Doctor	Other medical person	TBA	Other no one
Latin America/Caribbean																
Bolivia 1993 94	28 8	21 5	22 3	19 2	73 4	61 2	58 6	59 7	13 7	23 2	18 1	19 8	12 9	15 6	23 4	20 6
Brazil 1996	31 3	39 0	33 1	32 2	72 7	74 9	61 0	62 9	16 3	14 3	18 0	8 3	11 0	10 8	21 0	28 8
Colombia 1995	48 2	52 4	55 6	48 3	82 9	76 9	75 0	76 2	8 2	9 6	10 4	10 9	8 9	13 5	14 6	13 0
Dominican Republic 1991	35 2	35 3	44 5	23 7	66 2	58 5	70 1	65 0	14 4	19 0	8 7	12 9	19 4	22 6	21 2	22 1
Guatemala 1995	48 7	62 6	56 1	49 2	80 7	84 6	73 3	67 6	8 7	6 6	9 3	12 5	10 6	8 9	17 4	19 9
Haiti 1994	40 5	35 4	36 0	32 2	47 2	41 1	42 9	42 0	9 4	13 4	11 7	14 9	43 4	45 5	45 4	43 1
Paraguay 1990	25 4	37 7	41 2	38 0	48 4	61 2	55 9	52 1	6 5	6 5	3 6	3 6	45 2	32 3	40 5	44 3
Peru 1996	44 3	48 5	42 9	40 3	77 9	83 9	69 8	70 8	10 9	8 1	13 5	15 6	11 2	8 0	16 7	13 6

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

TBA = traditional birth attendant

¹ Includes children breastfed immediately after birth

Table B 2 Timing of initial breastfeeding, by provider of antenatal care

Percentage of children breastfed immediately after birth the first day the second day or later by provider of antenatal care Demographic and Health Surveys 1990-1996

Region country and date	Immediately			First day ¹			Second day			Later		
	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one
Sub Saharan Africa												
Burkina Faso 1993	25.6	30.8	28.0	46.2	51.7	45.5	13.1	18.3	16.0	40.7	30.0	38.5
Cameroon 1991	10.4	12.1	14.9	28.6	33.7	22.6	32.4	27.7	16.1	39.0	38.6	61.3
Central African Republic 1994-95	26.0	35.5	30.5	65.0	67.4	55.4	23.4	20.0	26.6	11.6	12.6	17.9
Côte d'Ivoire 1994	34.9	44.6	44.2	50.0	64.3	62.7	27.7	19.0	17.9	22.3	16.7	19.4
Ghana 1993	20.4	14.5	14.3	50.8	44.6	36.8	18.3	13.7	11.8	30.9	41.8	51.5
Kenya 1993	54.7	56.0	55.5	82.3	87.2	81.6	7.1	5.3	6.1	10.6	7.5	12.3
Madagascar 1992	8.4	4.6	11.6	42.6	42.9	57.3	38.6	36.4	23.1	18.8	20.7	19.6
Malawi 1992	55.0	58.4	64.1	92.9	92.4	91.9	4.2	3.6	5.6	2.9	4.0	2.5
Mali 1995	15.5	9.1	10.4	57.3	70.1	61.0	28.8	18.1	21.5	13.8	11.8	17.5
Namibia 1992	46.6	55.1	66.1	72.6	87.5	80.5	13.9	7.0	10.5	13.5	5.5	9.0
Niger 1992	10.5	32.3	16.1	36.6	48.0	22.4	10.3	16.4	12.3	53.1	35.6	65.3
Nigeria 1990	34.3	33.5	39.6	56.3	62.4	49.4	7.2	7.3	5.7	36.5	30.3	44.9
Rwanda 1992	16.3	19.4	24.3	48.5	51.2	55.7	27.3	24.1	20.6	24.2	24.7	23.7
Senegal 1992-93	10.3	12.1	11.3	52.6	48.1	41.8	17.1	21.1	17.8	30.3	30.8	40.4
Tanzania 1991-92	51.7	43.8	52.1	88.8	83.8	87.0	6.3	7.3	3.0	4.9	9.0	9.9
Uganda 1995	35.0	50.6	48.6	85.0	86.4	85.8	6.7	5.4	7.4	8.3	8.2	6.8
Zambia 1992	28.1	42.0	40.8	83.4	89.5	91.6	4.4	5.2	3.8	12.1	5.3	4.6
Zimbabwe 1994	39.1	41.8	23.6	90.8	92.2	82.6	4.3	4.9	11.3	4.9	2.9	6.1
Near East/North Africa												
Egypt 1992	25.1	*	27.1	68.3	*	65.2	9.1	*	7.2	22.6	*	27.6
Jordan 1990	42.1	51.6	45.3	69.0	77.0	70.1	16.0	13.7	16.7	14.9	9.3	13.2
Morocco 1992	46.0	41.9	56.4	81.1	86.7	91.4	6.5	4.1	2.9	12.4	9.2	5.7
Turkey 1993	19.8	22.5	21.5	81.1	79.8	76.1	10.2	8.5	12.3	8.7	11.7	11.6
Asia												
Bangladesh 1993-94	10.8	6.3	8.7	54.9	52.1	48.2	13.5	10.3	10.6	31.6	37.6	41.3
India 1992-93	11.9	6.9	8.7	34.5	24.7	21.9	15.1	14.6	11.8	50.5	60.7	66.3
Indonesia 1994	7.7	7.9	8.3	49.8	52.1	57.3	19.2	19.9	18.6	31.0	28.0	24.1
Kazakhstan 1995	11.6	3.9	(15.8)	46.0	22.4	(35.6)	27.5	54.6	(42.8)	26.5	23.0	(21.7)
Nepal 1996	19.6	13.0	20.0	62.5	51.5	62.5	9.5	8.3	7.1	27.9	40.3	30.4
Pakistan 1990-91	7.3	7.2	8.9	34.7	25.4	23.2	19.5	23.9	13.9	45.9	50.8	63.0
Philippines 1993	36.6	43.7	47.0	64.0	74.5	77.5	14.8	12.7	12.4	21.2	12.8	10.1

continued

Table B 2. *continued*

Region country and date	Immediately			First day ¹			Second day			Later		
	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one
Latin America/Caribbean												
Bolivia 1993 94	26 3	7 9	22 0	69 9	51 9	61 7	15 0	22 8	19 2	15 1	25 3	19 2
Brazil 1996	31 2	44 2	36 0	72 9	78 7	61 8	16 0	12 2	18 8	11 2	9 1	19 4
Colombia 1995	47 8	52 8	56 1	81 8	78 1	79 6	8 8	9 5	7 5	9 4	12 4	12 9
Dominican Republic 1991	39 1	31 5	47 1	66 3	59 5	71 0	15 3	17 3	6 9	18 4	23 2	22 1
Guatemala 1995	51 6	52 0	54 9	78 7	72 8	73 3	8 2	10 5	10 1	13 0	16 7	16 6
Haiti 1994	39 1	34 2	33 5	45 4	41 4	40 6	11 6	12 9	12 5	43 0	45 8	46 8
Paraguay 1990	36 2	36 8	40 9	58 2	58 2	57 1	5 4	6 1	3 2	36 3	35 7	39 7
Peru 1996	44 7	43 9	44 6	78 1	77 7	73 1	10 4	12 4	11 9	11 5	10 0	15 1

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

TBA = traditional birth attendant

¹ Includes children breastfed immediately after births

Table B 3 Timing of initial breastfeeding, by type of delivery facility

Percentage of children breastfed immediately after birth the first day the second day or later by type of delivery facility Demographic and Health Surveys 1990 1996

Region, country, and date	Immediately			First day ¹			Second day			Later		
	Public hosp clinic	Private hosp clinic	Non medical home	Public hosp clinic	Private hosp clinic	Non medical home	Public hosp clinic	Private hosp clinic	Non medical home	Public hosp clinic	Private hosp clinic	Non medical home
Sub Saharan Africa												
Burkina Faso 1993	31.9	32.1	27.8	53.1	67.0	45.9	17.7	20.5	16.7	29.1	12.5	37.4
Cameroon 1991	11.7	10.2	14.4	34.4	30.4	25.7	29.7	34.9	18.0	35.8	34.7	56.2
Central African Republic 1994 95	37.5	20.2	30.7	71.8	70.8	55.2	17.1	14.6	27.5	11.1	14.6	17.3
Côte d'Ivoire 1994	46.3	(43.1)	42.6	67.4	(53.1)	60.7	18.2	(29.4)	19.8	14.4	(17.5)	19.5
Ghana 1993	17.7	17.0	15.0	54.0	47.1	39.8	15.1	20.9	13.2	30.9	32.0	46.9
Kenya 1993	58.2	52.6	55.0	86.8	83.8	85.6	5.6	7.1	5.4	7.6	9.1	9.0
Madagascar 1992	4.1	(2.9)	8.3	41.2	(20.9)	49.8	40.3	(44.6)	28.8	18.4	(34.5)	21.4
Malawi 1992	58.8	46.7	62.7	92.3	90.5	93.0	4.4	4.2	3.2	3.2	5.4	3.8
Mali 1995	10.6	*	9.3	74.7	*	60.7	16.8	*	21.1	8.5	*	18.2
Namibia 1992	50.5	(48.3)	65.0	85.1	(76.2)	83.0	7.7	(11.0)	10.3	7.3	(12.9)	6.7
Niger 1992	33.9	*	18.1	50.3	*	26.1	18.5	*	12.6	31.3	*	61.2
Nigeria 1990	31.6	32.0	38.6	61.6	65.0	51.7	8.8	1.4	5.8	29.6	33.6	42.5
Rwanda 1992	20.0	*	19.5	53.5	*	50.6	24.5	*	23.7	22.0	*	25.6
Senegal 1992 93	12.1	12.1	11.6	52.2	51.0	42.0	20.7	18.1	19.8	27.1	30.9	38.2
Tanzania 1991 92	46.3	38.6	44.8	85.8	87.7	82.5	6.8	5.2	7.1	7.4	7.1	10.3
Uganda 1995	53.0	47.1	48.1	88.5	86.8	85.4	4.8	5.9	5.8	6.7	7.4	8.7
Zambia 1992	37.5	33.7	46.0	86.3	85.8	92.7	6.6	5.0	3.7	7.1	9.2	3.6
Zimbabwe 1994	41.7	34.5	37.0	92.1	92.0	89.1	5.0	2.1	5.9	2.8	5.9	5.0
Near East/North Africa												
Egypt 1992	21.6	20.1	27.9	66.5	64.8	67.4	12.1	10.9	6.9	21.4	24.3	25.7
Jordan 1990	44.3	39.5	44.4	73.5	60.7	68.8	13.5	21.8	16.8	13.1	17.5	14.4
Morocco 1992	41.2	49.7	56.6	84.0	73.8	91.1	5.1	11.0	3.0	10.8	15.2	6.0
Turkey 1993	20.1	15.9	22.5	80.1	83.0	77.5	9.1	10.6	13.2	10.8	6.4	9.4
Asia												
Bangladesh 1993 94	13.1	12.7	8.8	53.4	62.8	49.5	13.4	12.4	11.0	33.2	24.8	39.5
India 1992 93	12.9	12.5	8.9	38.7	40.9	22.9	15.5	17.1	12.4	45.7	42.0	64.7
Indonesia 1994	7.9	5.7	8.2	53.7	44.6	53.5	17.9	26.1	19.0	28.5	29.3	27.5
Kazakhstan 1995	10.0	*	*	40.2	*	*	34.3	*	*	25.6	*	*
Nepal 1996	21.1	(21.4)	18.1	69.4	(68.8)	58.9	7.2	(4.8)	7.8	23.4	(26.4)	33.3
Pakistan 1990 91	8.0	4.3	8.9	34.2	33.6	24.6	21.2	22.4	14.5	44.6	44.0	60.8
Philippines 1993	41.1	28.8	43.2	68.7	47.1	74.5	12.5	15.7	13.4	18.8	37.2	12.1

continued

Table B 3 *continued*

Region, country, and date	Immediately			First day ¹			Second day			Later		
	Public hosp clinic	Private hosp clinic	Non medical home	Public hosp clinic	Private hosp clinic	Non medical home	Public hosp clinic	Private hosp clinic	Non medical home	Public hosp clinic	Private hosp clinic	Non medical home
Latin America/Caribbean												
Bolivia 1993 94	31 1	26 2	19 4	73 0	76 2	59 2	14 7	11 1	19 8	12 3	12 8	21 0
Brazil 1996	32 5	31 4	29 6	72 9	73 5	53 3	16 2	15 2	18 5	11 0	11 3	28 2
Colombia 1995	50 5	38 5	52 3	83 9	79 5	74 7	7 7	9 8	10 9	8 4	10 7	14 4
Dominican Republic 1991	40 0	25 1	39 2	67 1	52 6	68 0	13 9	22 4	10 9	19 0	25 0	21 0
Guatemala 1995	49 9	50 5	55 1	82 1	77 5	72 4	7 4	11 0	9 9	10 4	11 5	17 7
Haiti 1994	38 6	37 7	35 1	44 8	46 7	41 8	9 2	10 9	12 8	46 0	42 3	45 5
Paraguay 1990	37 1	32 5	39 4	62 3	56 8	54 2	6 7	7 6	3 9	31 1	35 6	41 9
Peru 1996	47 0	41 6	41 7	81 9	74 7	71 0	9 2	11 7	14 0	8 9	13 6	15 0

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

¹ Includes children breastfed immediately after births

Table B 4 Timing of initial breastfeeding, by length of preceding birth interval

Percentage of children breastfed immediately after birth the first day the second day or later by length of preceding birth interval Demographic and Health Surveys 1990 1996

Region country and date	Immediately				First day ¹				Second day				Later			
	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months
Sub Saharan Africa																
Burkina Faso 1993	28.6	28.9	30.3	28.4	43.5	50.8	50.1	50.9	17.3	16.7	17.5	6.7	39.1	32.6	32.4	32.4
Cameroon 1991	8.4	15.0	13.1	12.5	24.2	29.8	33.5	28.8	27.4	26.7	25.0	26.7	48.4	43.6	41.5	44.5
Central African Republic 1994-95	31.0	30.2	34.5	36.9	58.1	63.7	65.0	64.8	24.7	22.8	21.5	21.5	17.3	13.5	13.6	13.7
Côte d'Ivoire 1994	40.0	44.6	45.0	46.3	55.6	64.9	65.3	66.3	21.4	16.8	19.2	18.0	23.0	18.4	15.5	15.7
Ghana 1993	16.2	22.1	15.8	14.0	44.3	45.9	44.0	47.6	15.7	14.0	14.2	14.9	39.9	40.1	41.8	37.5
Kenya 1993	46.9	60.3	57.3	56.4	81.1	85.2	87.8	86.7	7.3	6.1	4.6	7.1	11.6	8.7	7.6	6.2
Madagascar 1992	6.7	5.7	6.8	6.3	45.0	42.8	47.4	47.0	33.5	34.1	34.0	33.0	21.4	23.1	18.5	20.1
Malawi 1992	55.2	60.4	58.0	62.5	90.3	92.5	92.5	94.2	3.7	3.6	4.0	3.4	6.0	3.9	3.5	2.4
Malawi 1995	10.3	8.6	9.5	12.1	64.0	65.7	64.5	68.3	20.7	20.0	20.4	17.9	15.3	14.3	15.1	13.8
Namibia 1992	51.6	56.7	56.8	56.0	81.5	85.9	86.9	82.5	10.4	10.8	6.3	8.3	8.1	3.3	6.7	9.1
Niger 1992	14.1	20.8	22.2	21.9	22.1	30.8	32.1	29.3	10.5	12.5	14.3	14.6	67.4	56.7	53.6	56.2
Nigeria 1990	30.2	41.4	36.3	36.4	47.2	60.5	56.3	52.0	7.1	5.9	7.0	6.1	45.7	33.6	36.7	41.9
Rwanda 1992	18.2	23.7	19.0	19.2	49.1	55.2	51.0	51.9	25.5	21.7	24.1	24.3	25.4	23.2	24.9	23.8
Senegal 1992-93	8.8	11.5	12.3	13.5	41.5	48.8	48.0	46.0	20.4	17.2	20.4	20.7	38.1	34.0	31.6	33.3
Tanzania 1991-92	43.3	46.3	44.4	48.0	81.9	83.5	85.0	86.3	8.0	6.4	7.3	4.5	10.1	10.1	7.7	9.2
Uganda 1995	43.3	49.5	51.5	46.2	82.4	86.2	87.8	86.1	6.1	5.8	5.4	6.3	11.5	8.0	6.8	7.6
Zambia 1992	38.7	40.9	42.4	41.4	83.8	90.3	91.6	89.0	7.0	5.3	3.9	5.7	9.2	4.3	4.5	5.3
Zimbabwe 1994	35.3	36.6	42.4	42.2	87.9	91.1	92.2	93.5	7.5	5.0	4.3	4.5	4.6	4.0	3.5	2.0
Near East/North Africa																
Egypt 1992	18.4	29.6	27.3	25.5	56.1	70.4	67.8	70.8	12.2	5.5	7.9	8.8	31.7	24.0	24.3	20.5
Jordan 1990-91	35.3	45.8	44.8	38.5	58.0	72.1	72.1	67.2	19.6	16.0	14.6	16.9	22.5	11.9	13.3	15.9
Morocco 1992	46.8	53.5	54.0	51.3	81.2	90.6	90.7	86.9	4.9	2.9	3.5	5.0	13.9	6.5	5.8	8.0
Turkey 1993	17.4	22.0	24.5	20.1	75.8	80.2	81.3	80.8	11.5	9.1	11.4	9.9	12.7	10.8	7.3	9.4
Asia																
Bangladesh 1993-94	7.1	12.0	9.0	9.0	46.4	51.3	51.4	49.6	10.7	8.8	10.9	13.0	42.8	39.9	37.8	37.3
India 1992-93	9.7	10.0	9.8	10.3	28.0	27.9	26.6	27.6	14.0	12.4	13.6	13.0	58.0	59.6	59.8	59.4
Indonesia 1994	7.0	8.4	8.3	8.3	51.1	50.6	53.7	53.7	19.3	22.8	19.9	18.6	29.6	26.6	26.4	27.7
Kazakhstan 1995	9.7	12.5	7.6	12.2	41.6	36.2	38.3	43.1	29.2	43.8	43.9	23.8	29.2	19.9	17.8	33.1
Nepal 1996	15.9	20.1	18.1	19.9	52.8	64.6	60.7	61.6	10.9	4.7	7.1	8.2	36.3	30.7	32.2	30.2
Pakistan 1990-91	5.8	9.1	9.0	8.8	22.8	28.0	24.5	29.0	15.4	17.0	15.4	14.2	61.8	55.0	60.2	56.9
Philippines 1993	36.9	44.4	42.2	40.5	63.6	73.8	72.5	71.2	13.4	13.0	14.1	12.9	23.0	13.2	13.5	15.9

continued

Table B 4 *continued*

Region country and date	Immediately				First day ¹				Second day				Later			
	First birth	< 24 months	24 47 months	48+ months	First birth	< 24 months	24 47 months	48+ months	First birth	< 24 months	24 47 months	48+ months	First birth	< 24 months	24 47 months	48+ months
Latin America/Caribbean																
Bolivia 1993 94	23 3	24 6	24 4	21 8	60 8	68 6	66 2	66 7	19 7	14 6	17 0	16 9	19 4	16 9	16 7	16 4
Brazil 1996	30 2	40 1	33 1	28 8	70 5	75 1	70 6	73 0	16 3	15 0	17 1	15 6	13 1	9 9	12 3	11 4
Colombia 1995	44 7	56 2	53 5	45 8	78 3	85 0	84 1	80 4	8 9	7 8	8 0	9 4	12 8	7 3	7 9	10 2
Dominican Republic 1991	32 8	41 3	35 5	31 1	57 0	67 0	67 4	59 6	18 0	15 6	13 8	17 3	25 0	17 4	18 8	23 1
Guatemala 1995	45 4	56 6	55 0	52 4	70 3	77 1	76 9	77 9	12 7	7 4	9 8	6 1	17 0	15 4	13 4	15 9
Haiti 1994	32 8	39 8	35 5	38 5	39 4	45 6	42 5	45 8	12 0	11 6	11 7	14 9	48 6	42 8	45 7	39 3
Paraguay 1990	38 1	41 6	38 5	28 6	57 3	59 5	60 2	53 6	6 6	3 3	5 9	7 2	36 0	37 1	33 9	39 1
Peru 1996	43 8	45 0	45 1	43 6	76 3	76 0	76 7	76 9	11 8	11 9	11 6	11 0	11 9	12 1	11 7	12 1

¹ Includes children breastfed immediately after births

Table B 5 Timing of initial breastfeeding, by size and weight at birth

Percentage of children breastfed immediately after birth the first day the second day or later by size and weight at birth Demographic and Health Surveys 1990 1996

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Average or larger	Small or very small	2.5 kg or more	Under 2.5 kg	Average or larger	Small or very small	2.5 kg or more	Under 2.5 kg	Average or larger	Small or very small	2.5 kg or more	Under 2.5 kg	Average or larger	Small or very small	2.5 kg or more	Under 2.5 kg
Sub-Saharan Africa																
Burkina Faso 1993	28.8	32.9	34.4	33.9	50.0	47.5	60.2	58.7	16.4	20.9	15.0	11.7	33.6	31.6	24.8	29.6
Cameroon 1991	12.9	9.7	11.5	5.6	31.2	26.1	33.2	25.8	26.6	21.8	31.1	22.9	42.2	52.1	35.7	51.3
Central African Republic 1994-95	32.8	34.3	35.9	37.8	63.3	60.5	71.2	67.1	22.8	21.9	18.5	18.1	13.8	17.6	10.3	14.8
Côte d'Ivoire 1994	44.0	44.8	45.9	39.1	64.0	60.4	67.1	63.3	19.4	18.3	18.8	14.3	16.6	21.2	14.1	22.4
Ghana 1993	16.5	12.7	18.4	(7.7)	45.6	41.7	51.8	(42.3)	14.6	14.9	15.9	(19.2)	39.8	43.4	32.3	(38.5)
Kenya 1993	56.6	49.8	58.8	40.9	86.9	79.5	88.0	73.6	5.6	6.4	5.8	5.4	7.5	14.1	6.3	21.0
Madagascar 1992	5.6	9.2	3.5	3.1	45.9	45.7	40.6	37.0	34.3	32.7	41.0	38.7	19.8	21.6	18.4	24.4
Malawi 1992	58.6	57.7	55.1	54.0	92.8	90.4	91.7	89.0	3.8	4.3	4.5	4.3	3.4	5.3	3.8	6.7
Mali 1995	10.0	9.3	13.0	11.0	65.5	63.8	77.2	66.2	20.2	18.3	15.3	22.1	14.3	17.9	7.4	11.7
Namibia 1992	56.7	46.7	50.0	45.0	85.5	79.2	85.1	80.7	8.1	10.3	7.9	5.2	6.4	10.4	7.0	14.1
Niger 1992	24.0	15.5	35.1	23.6	34.5	23.0	51.8	34.2	15.0	10.9	17.8	14.6	50.5	66.0	30.4	51.1
Nigeria 1990	38.2	27.1	29.4	(18.3)	57.5	41.2	59.7	(60.1)	6.5	7.4	10.5	(1.1)	36.0	51.4	29.8	(38.8)
Rwanda 1992	19.5	20.6	20.3	17.7	51.6	49.5	55.7	43.0	24.3	21.3	24.7	23.8	24.1	29.2	19.7	33.2
Senegal 1992-93	11.7	12.0	12.7	10.3	45.9	48.0	53.8	43.3	20.9	18.7	19.4	28.9	33.2	33.3	26.8	27.8
Tanzania 1991-92	45.8	37.3	46.5	38.3	85.1	76.6	88.1	80.1	6.6	10.1	5.6	8.9	8.3	13.3	6.2	11.0
Uganda 1995	50.1	43.9	50.9	49.9	86.4	86.3	87.8	90.2	5.2	7.1	5.4	4.7	8.4	6.6	6.7	5.2
Zambia 1992	41.7	37.5	38.1	25.9	90.2	82.7	87.6	76.3	4.8	6.5	5.8	8.7	5.0	10.8	6.6	14.9
Zimbabwe 1994	40.7	37.0	41.2	30.6	91.8	88.9	93.3	79.2	5.2	5.2	4.3	8.0	3.0	5.8	2.4	12.8
Near East/North Africa																
Egypt 1992	26.4	23.6	25.4	(17.3)	67.8	62.9	67.6	(56.3)	8.3	8.3	14.3	(8.9)	24.0	28.8	18.1	(34.9)
Jordan 1990-91	44.7	36.4	43.8	37.9	71.6	60.5	71.5	60.7	15.6	17.4	15.7	13.8	12.8	22.1	12.8	25.5
Morocco 1992	52.0	52.6	45.4	54.7	88.2	88.9	80.7	81.1	4.3	2.7	7.3	3.8	7.5	8.4	12.1	15.1
Asia																
India 1992-93	9.9	9.2	13.2	13.1	27.4	26.3	44.1	38.5	13.5	13.1	17.4	18.0	59.0	60.6	38.6	43.5
Indonesia 1994	8.2	6.7	7.6	6.4	52.9	52.7	50.6	39.8	19.6	18.7	20.9	25.2	27.5	28.6	28.4	35.0
Kazakhstan 1995	10.2	10.0	10.4	(6.0)	41.6	33.2	41.5	(23.8)	35.8	30.0	34.7	(30.7)	22.7	36.8	23.9	(45.5)
Nepal 1996	17.4	20.4	*	*	58.8	62.2	*	*	7.8	7.5	*	*	33.4	30.2	*	*
Pakistan 1990-91	9.3	5.9	7.2	5.5	25.8	26.1	39.3	31.9	15.8	14.6	21.5	22.0	58.4	59.3	39.2	46.1
Philippines 1993	41.2	41.9	38.5	40.4	71.1	69.6	67.5	65.4	13.2	14.9	14.5	16.3	15.7	15.5	17.9	18.3

continued

Table B 5 *continued*

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Average or larger	Small very small	2.5 kg or more	Under 2.5 kg	Average or larger	Small very small	2.5 kg or more	Under 2.5 kg	Average or larger	Small very small	2.5 kg or more	Under 2.5 kg	Average or larger	Small very small	2.5 kg or more	Under 2.5 kg
Latin America/Caribbean																
Bolivia 1993-94	24.3	21.2	26.6	21.4	68.3	55.7	71.4	55.6	16.2	20.4	15.1	15.8	15.5	23.9	13.4	28.5
Brazil 1996	32.8	30.6	32.3	31.8	73.4	67.4	74.0	62.7	15.9	16.8	15.7	20.8	10.7	15.9	10.3	16.5
Colombia 1995	49.9	45.4	48.8	37.1	82.9	74.5	83.7	62.9	8.5	9.5	8.1	11.5	8.6	16.1	8.1	25.6
Dominican Republic 1991	34.8	38.2	35.3	28.5	62.6	65.0	63.8	49.8	16.7	13.4	16.7	14.8	20.7	21.6	19.6	35.4
Guatemala 1995	53.6	51.1	53.9	50.1	77.7	70.5	78.6	71.5	8.8	10.5	8.4	11.4	13.5	19.0	13.1	17.0
Haiti 1994	36.7	34.6	47.4	(44.4)	43.3	41.8	53.5	(47.2)	12.7	11.2	11.7	(11.8)	44.0	47.0	34.8	(41.0)
Paraguay 1990	37.4	37.1	37.1	30.4	59.2	51.8	59.3	47.7	5.9	4.4	6.4	2.3	34.9	43.8	34.3	50.1
Peru 1996	45.1	41.2	46.5	38.3	78.1	70.3	80.3	67.4	11.2	13.1	10.4	11.6	10.8	16.6	9.4	21.0

Note: Question not asked in Turkey and Bangladesh

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

¹ Includes children breastfed immediately after births

Table B 6 Timing of initial breastfeeding, by maturity and form of delivery

Percentage of children breastfed immediately after birth the first day the second day or later by maturity and form of delivery Demographic and Health Surveys 1990 1996

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Full term	Pre mature	Vaginal birth	Caesarean birth	Full term	Pre mature	Vaginal birth	Caesarean birth	Full term	Pre-mature	Vaginal birth	Caesarean birth	Full term	Pre mature	Vaginal birth	Caesarean birth
Sub-Saharan Africa																
Burkina Faso 1993	29.6	27.4	29.7	20.2	49.2	45.2	49.2	38.6	17.3	12.4	17.3	12.8	33.5	42.4	33.4	48.6
Cameroon 1991	12.5	(11.2)	12.6	6.9	30.6	(21.3)	30.6	28.5	25.9	(26.8)	25.9	21.3	43.5	(51.9)	43.4	50.2
Central African Republic 1994-95	u	u	33.8	(14.9)	u	u	63.8	(40.3)	u	u	22.3	(26.5)	u	u	14.0	(33.2)
Côte d'Ivoire 1994	u	u	44.0	50.7	u	63.4	62.7	u	u	u	19.2	16.8	u	u	17.4	20.5
Ghana 1993	16.1	(14.7)	16.5	7.9	45.3	(32.4)	45.6	30.3	14.3	(32.4)	14.9	11.2	40.3	(35.3)	39.5	58.4
Kenya 1993	56.5	31.1	57.0	32.6	86.8	58.4	87.0	65.4	5.6	9.0	5.5	10.3	7.6	32.6	7.5	24.3
Madagascar 1992	6.5	4.5	6.4	(6.4)	46.0	37.7	45.7	(55.4)	33.8	37.5	34.2	(6.4)	20.2	24.9	20.1	(38.2)
Malawi 1992	58.8	52.3	59.3	42.5	92.8	77.8	93.0	76.1	3.7	8.8	3.5	10.5	3.5	13.3	3.4	13.4
Mali 1995	u	u	9.8	(16.8)	u	u	65.3	(51.0)	u	u	20.0	(22.9)	u	u	14.8	(26.1)
Namibia 1992	56.1	32.9	56.2	37.8	85.0	69.0	85.0	74.0	8.5	7.8	8.2	13.3	6.5	23.3	6.8	12.7
Niger 1992	20.8	*	20.9	13.9	30.2	*	30.2	27.4	13.4	*	13.4	13.1	56.4	*	56.3	59.5
Nigeria 1990	36.3	32.3	36.2	39.1	54.7	69.4	54.9	52.8	6.7	2.9	6.6	6.3	38.7	27.7	38.4	40.9
Rwanda 1992	19.7	12.0	19.8	7.75	1.7	30.0	51.6	37.4	24.0	24.3	24.0	23.9	24.3	45.7	24.4	38.7
Senegal 1992 93	11.8	(17.2)	11.7	13.4	46.8	(27.6)	46.9	40.2	19.9	(37.9)	20.1	19.5	33.2	(34.5)	33.0	40.2
Tanzania 1991 92	45.5	25.3	45.2	33.8	84.9	62.5	85.0	63.1	6.6	16.2	6.8	10.0	8.5	21.2	8.2	26.9
Uganda 1995	u	u	49.0	39.6	u	u	86.6	72.6	u	u	5.6	8.2	u	u	7.8	19.2
Zambia 1992	41.9	22.6	41.8	22.6	90.1	69.9	90.3	56.7	4.9	8.0	4.8	10.6	5.0	22.1	4.9	32.8
Zimbabwe 1994	u	u	41.2	23.0	u	u	92.2	76.7	u	u	4.7	11.9	u	u	3.1	11.3
Near East/North Africa																
Egypt 1992	26.1	20.1	26.9	9.9	67.3	55.7	69.0	31.6	8.1	14.7	7.6	19.5	24.6	29.6	23.4	48.9
Jordan 1990 91	45.1	28.9	44.8	20.4	71.1	59.3	72.3	30.9	15.4	21.0	15.6	22.7	13.6	19.7	12.1	46.3
Morocco 1992	52.0	*	52.3	43.2	88.4	*	89.0	62.2	3.9	*	3.8	8.1	7.6	*	7.2	29.7
Turkey 1993	21.1	8.3	22.0	8.3	79.6	61.8	81.8	51.4	10.5	18.7	9.6	21.6	9.9	19.5	8.6	27.0
Asia																
Bangladesh 1993 94	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
India 1992 93	9.9	10.0	9.0	8.0	27.3	27.3	27.7	24.6	13.4	12.6	14.1	16.6	59.2	60.1	58.2	58.8
Indonesia 1994	u	u	8.0	2.9	u	u	52.7	46.4	u	u	19.8	15.0	u	u	27.5	38.6
Kazakhstan 1995	u	u	10.3	(9.0)	u	u	41.4	(10.7)	u	u	36.0	(5.0)	u	u	22.6	(84.3)
Nepal 1996	u	u	18.1	(20.9)	u	u	59.9	(40.7)	u	u	7.7	(8.1)	u	u	32.3	(51.2)
Pakistan 1990 91	8.5	9.3	8.6	2.5	25.6	47.0	26.0	13.6	15.4	22.0	15.5	16.3	59.0	31.0	58.5	70.0
Philippines 1993	41.7	26.6	42.4	28.3	71.2	56.3	72.4	47.8	13.4	20.4	13.3	16.7	15.5	23.3	14.3	35.5

continued

Table B 6 *continued*

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Full term	Pre-mature	Vaginal birth	Caesarean birth	Full term	Pre-mature	Vaginal birth	Caesarean birth	Full term	Pre-mature	Vaginal birth	Caesarean birth	Full term	Pre-mature	Vaginal birth	Caesarean birth
Latin America/Caribbean																
Bolivia 1993 94	u	u	243	195	u	u	666	571	u	u	171	171	u	u	163	258
Brazil 1996	u	u	356	274	u	u	753	673	u	u	132	201	u	u	115	126
Colombia 1995	u	u	542	258	u	u	849	653	u	u	68	170	u	u	83	177
Dominican Republic 1991	358	242	392	235	638	399	682	458	158	232	132	255	204	368	186	286
Guatemala 1995	u	u	536	475	u	u	762	725	u	u	91	110	u	u	147	165
Haiti 1994	u	u	361	(308)	u	u	428	(395)	u	u	123	(87)	u	u	449	(518)
Paraguay 1990	376	(237)	399	222	584	(404)	608	416	57	(26)	54	66	359	(570)	338	518
Peru 1996	u	u	459	312	u	u	784	603	u	u	107	183	u	u	108	215

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

u = unknown (not asked)

¹ Includes children breastfed immediately after births

Table B 7 Timing of initial breastfeeding, by household asset level

Percentage of children breastfed immediately after birth the first day the second day or later by household asset level Demographic and Health Surveys 1990-1996

Region, country, and date	Immediately			First day ¹			Second day			Later		
	Low	Middle	High	Low	Middle	High	Low	Middle	High	Low	Middle	High
Sub Saharan Africa												
Burkina Faso 1993	29.5	29.5	34.7	47.2	55.3	67.0	17.2	17.8	10.4	35.5	26.9	22.6
Cameroon 1991	12.8	11.7	12.8	29.3	31.8	33.8	22.4	30.2	32.9	48.3	38.0	33.4
Central African Republic 1994-95	32.5	38.4	(39.4)	60.6	78.3	(67.1)	24.2	12.5	(16.4)	15.2	9.2	(16.5)
Côte d'Ivoire 1994	42.4	45.3	52.6	61.2	65.5	70.5	19.1	19.8	16.1	19.7	14.7	13.3
Ghana 1993	14.8	19.5	16.9	43.3	50.2	47.5	13.1	18.8	16.9	43.6	31.0	35.6
Kenya 1993	55.9	55.7	54.2	86.1	84.9	83.7	5.8	5.6	3.7	8.1	9.5	12.7
Madagascar 1992	6.7	3.9	5.6	47.4	32.0	33.3	32.4	46.8	46.3	20.2	21.2	20.4
Malawi 1992	59.5	53.7	(38.2)	93.0	89.3	(76.3)	3.5	5.5	(10.3)	3.5	5.1	(13.5)
Mali 1995	9.2	12.1	16.9	62.2	79.4	74.5	21.0	14.7	20.8	16.8	5.9	4.8
Namibia 1992	57.6	52.2	48.6	87.9	79.0	76.8	6.8	11.1	12.0	5.3	9.9	11.1
Niger 1992	19.5	33.5	38.1	28.3	48.5	50.5	12.9	18.3	23.4	58.8	33.2	26.2
Nigeria 1990	38.1	33.1	30.4	52.8	58.6	60.3	6.9	5.8	8.5	40.2	35.7	31.2
Rwanda 1992	19.4	22.2	*	50.9	60.5	*	24.0	23.7	*	25.1	15.8	*
Senegal 1992-93	11.4	12.4	12.7	41.5	53.8	57.3	20.5	20.0	16.4	38.0	26.1	26.3
Tanzania 1991-92	45.3	42.6	(50.0)	84.4	85.1	(75.9)	7.0	6.3	(5.1)	8.7	8.6	(19.0)
Uganda 1995	48.9	48.5	(32.3)	86.3	85.8	(79.8)	5.5	7.8	(5.0)	8.2	6.3	(15.2)
Zambia 1992	43.4	39.4	30.4	91.3	87.8	80.1	4.2	5.9	7.6	4.5	6.4	12.3
Zimbabwe 1994	39.3	43.1	36.6	91.1	91.0	93.5	5.5	5.2	3.0	3.4	3.8	3.5
Near East/North Africa												
Egypt 1992	22.5	26.2	26.8	50.6	65.7	73.2	7.5	6.1	10.1	42.0	28.2	16.7
Jordan 1990-91	39.5	44.2	42.3	66.4	70.8	68.5	14.7	15.3	17.5	18.9	13.9	14.0
Morocco 1992	56.2	53.2	44.3	93.5	88.0	80.4	1.8	4.0	7.3	4.7	8.0	12.3
Turkey 1993	25.0	20.0	20.8	78.5	78.3	80.9	10.1	10.4	9.3	11.4	11.3	9.8
Asia												
Bangladesh 1993-94	8.5	10.3	16.3	49.1	51.1	62.5	10.8	14.6	13.3	40.2	34.3	24.2
India 1992-93	9.4	10.7	13.4	24.5	33.4	40.7	12.3	15.6	18.3	63.2	51.0	41.1
Indonesia 1994	7.8	8.2	7.1	47.0	42.1	39.0	18.5	21.1	19.8	26.8	28.6	34.1
Kazakhstan 1995	4.3	10.5	11.0	26.2	42.3	37.0	54.5	34.1	29.8	19.4	23.6	33.3
Nepal 1996	18.1	19.2	(20.4)	59.0	67.7	(72.9)	7.4	10.1	(9.2)	33.6	22.1	(17.9)
Pakistan 1990-91	10.3	4.8	8.2	25.2	25.9	32.0	11.7	20.4	22.8	63.2	53.7	45.2
Philippines 1993	44.6	38.8	35.6	75.3	67.4	61.6	12.4	14.7	11.9	12.3	17.9	26.6

continued

Table B 7 *continued*

Region, country, and date	Immediately			First day ¹			Second day			Later		
	Low	Middle	High	Low	Middle	High	Low	Middle	High	Low	Middle	High
Latin America/Caribbean												
Bolivia 1993 94	21 0	24 9	26 5	59 7	67 5	72 2	20 1	16 3	13 7	20 2	16 2	14 2
Brazil 1996	36 2	31 5	30 6	62 4	73 3	72 9	16 6	16 9	15 1	21 0	9 7	12 0
Colombia 1995	54 1	52 2	45 9	74 6	84 3	81 5	10 3	7 2	9 1	15 1	8 5	9 4
Dominican Republic 1991	42 6	35 2	29 2	71 1	62 7	56 0	12 1	16 2	19 6	16 8	21 1	24 4
Guatemala 1995	54 4	52 2	50 7	73 1	77 7	80 7	10 3	8 2	8 3	16 6	14 1	11 1
Haiti 1994	36 3	35 0	42 7	42 4	43 5	45 6	12 3	12 2	11 5	45 3	44 3	42 8
Paraguay 1990	37 8	37 2	36 6	54 5	61 3	59 5	3 6	6 1	8 6	41 9	32 6	32 0
Peru 1996	43 1	46 1	44 0	73 6	79 1	77 7	12 7	10 2	11 8	13 7	10 7	10 6

Note Household asset level is a measure of household wealth based on durable consumer goods and utility services

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

¹ Includes children breastfed immediately after births

Table B 8 Timing of initial breastfeeding, by mother's current work status

Percentage of children breastfed immediately after birth, the first day, the second day or later, by mother's current work status Demographic and Health Surveys 1990-1996

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for	
			Self family	Others			Self family	Others			Self, family	Others			Self family	Others
Sub Saharan Africa																
Burkina Faso 1993	31.1	30.7	27.3	2.9	49.4	53.8	46.1	58.4	15.5	13.0	20.9	17.5	35.1	33.2	33.1	24.2
Cameroon 1991	9.0	14.2	14.7	13.5	26.8	25.1	34.7	39.3	27.3	23.7	24.9	30.3	45.9	51.2	40.4	30.4
Central African																
Republic 1994-95	41.2	38.0	30.4	*	71.9	70.5	59.7	*	16.5	15.8	25.1	*	11.5	13.7	15.1	*
Côte d'Ivoire 1994	49.4	38.6	42.9	40.7	69.0	60.1	61.7	62.0	15.8	19.2	20.7	17.6	5.2	20.7	17.6	20.4
Ghana 1993	16.6	16.9	15.2	18.8	45.3	45.9	44.5	48.5	15.3	14.6	13.8	18.8	39.4	39.5	41.7	32.7
Kenya 1993	55.0	53.7	56.8	60.6	85.2	84.2	88.1	87.3	6.5	6.6	3.5	4.6	8.3	9.2	8.4	8.1
Madagascar 1992	10.2	3.8	7.2	4.0	44.2	47.2	44.8	40.9	36.7	34.2	32.8	35.2	19.1	18.6	22.4	23.9
Malawi 1992	62.2	49.6	46.5	47.8	93.6	91.6	86.6	84.8	3.1	4.2	7.7	5.3	3.3	4.2	5.6	9.9
Mali 1995	8.3	10.8	11.0	15.8	69.3	65.9	59.8	67.9	18.9	18.8	21.9	15.9	11.8	15.3	18.3	16.2
Namibia 1992	58.0	55.7	42.9	47.3	84.8	89.5	87.1	78.0	9.2	3.6	6.6	9.9	6.1	6.9	6.3	12.1
Niger 1992	21.6	22.6	16.3	48.9	30.3	32.8	26.7	57.9	13.2	14.4	13.1	14.5	56.5	52.8	60.1	27.6
Nigeria 1990	39.8	30.9	37.6	27.4	52.4	48.7	60.6	55.9	5.6	6.9	7.1	9.1	42.0	44.5	32.3	35.0
Rwanda 1992	21.7	21.7	19.2	21.5	66.3	52.6	50.8	51.8	20.6	26.5	23.7	25.6	13.0	20.9	25.4	22.6
Senegal 1992-93	11.0	12.6	12.5	19.0	47.4	55.3	42.9	50.6	18.7	17.6	22.0	27.8	33.8	27.1	35.1	21.5
Tanzania 1991-92	47.5	40.5	44.7	56.0	89.3	81.7	82.6	82.8	4.8	9.2	7.0	5.6	5.8	9.1	10.4	11.6
Uganda 1995	47.1	50.5	49.8	47.7	85.2	88.4	85.6	85.0	6.9	4.1	6.0	4.9	8.0	7.5	8.5	10.1
Zambia 1992	44.3	38.0	40.4	31.6	89.6	88.5	91.1	82.6	4.8	6.3	4.2	6.7	5.5	5.2	4.8	10.7
Zimbabwe 1994	40.2	35.8	42.1	45.4	90.9	90.1	93.7	90.5	5.3	4.7	5.6	5.9	3.8	5.2	0.6	3.6
Near East/North Africa																
Egypt 1992	26.1	26.1	19.4	26.0	67.9	58.5	54.3	64.8	7.8	16.6	11.4	9.6	24.3	24.9	34.4	25.6
Jordan 1990-91	44.0	48.1	(23.9)	35.7	70.3	78.4	(49.7)	63.1	15.9	8.2	(32.8)	17.1	13.8	13.4	(17.5)	19.8
Morocco 1992	50.3	61.3	(54.8)	58.7	88.4	86.2	(85.7)	89.9	3.9	3.6	(7.1)	3.8	7.7	10.2	(7.1)	6.3
Turkey 1993	20.4	*	*	*	78.9	*	*	*	10.8	*	*	*	10.3	*	*	*
Asia																
Bangladesh 1993-94	8.9	9.4	8.2	*	49.5	50.3	52.2	*	11.4	7.4	11.9	*	39.0	42.4	35.8	*
India 1992-93	9.2	12.9	9.4	13.4	27.1	32.9	24.5	29.6	13.7	13.8	12.0	13.2	59.3	53.3	63.5	57.2
Kazakhstan 1995	11.2	*	*	*	42.5	*	*	*	30.9	*	*	*	26.6	*	*	*
Nepal 1996	15.9	23.7	19.3	7.9	47.3	78.0	65.1	28.3	7.9	6.2	7.9	7.1	44.8	15.8	27.0	64.6
Pakistan 1990-91	8.0	12.1	7.9	13.7	24.4	36.8	33.4	27.1	15.3	17.8	17.2	13.4	60.3	45.4	49.4	59.5
Philippines 1993	41.8	40.1	42.7	40.3	70.0	71.9	73.1	72.9	14.5	12.2	12.7	10.4	15.5	15.9	14.2	16.7

continued

Table B 8 *continued*

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for	
			Self family	Others			Self family	Others			Self family	Others			Self family	Others
Latin America/Caribbean																
Bolivia 1993-94	26.4	23.9	20.9	21.6	67.7	61.7	62.8	67.1	16.7	20.4	17.0	15.3	15.6	17.9	20.2	17.6
Brazil 1996	32.4	27.8	*	*	71.5	67.8	*	*	16.6	19.7	*	*	11.9	12.6	*	*
Colombia 1995	50.9	50.2	46.0	45.4	83.0	84.5	76.0	77.4	8.2	7.1	8.5	10.8	8.8	8.4	15.4	11.8
Dominican Republic 1991	37.3	24.6	44.5	33.8	63.9	58.3	68.8	61.5	16.5	18.8	13.0	14.5	19.6	22.9	18.2	24.0
Guatemala 1995	54.2	47.0	52.8	51.9	75.6	75.1	74.6	79.0	9.8	9.5	5.6	8.1	14.6	15.4	19.8	12.9
Haiti 1994	35.4	34.4	36.6	44.9	42.1	42.8	43.3	51.2	10.1	16.1	14.9	11.1	47.7	41.1	41.8	37.7
Paraguay 1990	38.4	30.5	37.5	40.4	57.4	53.6	61.9	65.2	5.1	7.0	4.1	7.1	37.5	39.5	34.0	27.7
Peru 1996	48.8	42.0	37.0	42.6	78.7	75.1	71.5	78.7	9.8	11.2	14.6	13.4	11.5	13.7	13.9	7.9

Note: The question was not asked in Indonesia

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

¹ Includes children breastfed immediately after births

Table B 9 Timing of initial breastfeeding, by mother's occupation

Percentage of children breastfed immediately after birth the first day the second day or later by mother's occupation Demographic and Health Surveys 1990-1996

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Prof tech cler manag	Sales and service	Manual and domestic	Agricul tural												
Sub-Saharan Africa																
Burkina Faso 1993	27.6	29.3	37.1	32.7	46.5	47.7	64.9	56.4	14.9	19.1	9.0	16.8	38.6	33.2	26.1	26.7
Cameroon 1991	8.4	14.6	11.9	16.2	27.7	34.3	31.3	36.7	43.6	23.2	30.4	28.4	28.7	42.4	38.3	34.9
Central African Republic 1994-95	*	30.5	33.2	40.1	*	57.6	69.6	74.0	*	25.8	17.6	17.1	*	16.6	12.8	8.9
Côte d'Ivoire 1994	46.4	42.5	43.8	43.4	63.5	59.2	65.0	65.0	9.6	22.2	19.7	19.6	26.8	18.6	15.4	15.5
Ghana 1993	17.6	15.3	17.1	20.9	48.6	42.6	52.2	50.5	15.7	11.9	15.1	14.8	35.7	45.5	32.7	34.6
Kenya 1993	59.1	59.7	58.1	54.4	85.5	89.6	85.4	87.1	5.2	3.7	5.8	4.8	9.4	6.7	8.8	8.1
Madagascar 1992	3.5	6.7	2.7	3.0	51.0	46.5	31.8	39.7	31.6	32.9	46.8	36.3	17.5	20.6	21.3	24.0
Malawi 1992	53.2	40.5	56.1	55.3	92.3	85.5	92.7	94.6	4.4	5.4	3.5	2.7	3.2	9.1	3.8	2.7
Mali 1995	12.3	11.1	13.5	11.1	59.3	52.3	78.5	73.4	18.4	23.0	15.3	17.1	22.3	24.7	6.2	9.5
Nambia 1992	50.7	*	52.8	54.3	83.3	*	83.5	83.5	6.8	*	8.2	10.2	9.9	*	8.3	6.3
Niger 1992	30.3	14.0	35.2	22.8	42.9	24.8	49.1	32.2	14.5	14.4	15.0	15.7	42.6	60.8	35.9	52.1
Nigeria 1990	16.0	41.8	32.5	37.6	44.1	61.8	61.2	60.6	8.2	7.1	6.7	8.2	47.6	31.1	32.2	31.2
Rwanda 1992	26.1	19.4	20.0	25.8	58.4	50.6	57.7	56.2	27.5	24.0	19.8	27.9	14.2	25.4	22.5	15.9
Senegal 1992-93	17.5	13.2	11.7	10.3	54.0	38.8	50.3	50.4	20.6	24.0	21.4	19.5	25.4	37.2	28.3	30.0
Tanzania 1991-92	43.0	43.7	46.3	(23.6)	86.2	81.6	85.5	(77.2)	6.5	8.0	6.6	(5.7)	7.4	10.4	7.9	(17.1)
Uganda 1995	49.7	50.3	45.3	46.1	88.1	87.1	85.7	85.3	4.6	4.8	7.7	4.9	7.3	8.1	6.5	9.8
Zambia 1992	35.6	38.7	33.5	39.3	90.2	91.7	84.4	88.0	3.8	4.4	7.5	5.5	6.0	3.9	8.0	6.5
Zimbabwe 1994	36.8	41.2	37.9	46.3	89.3	92.8	91.3	91.5	4.7	5.3	4.3	5.8	6.0	1.9	4.4	2.7
Near East/North Africa																
Egypt 1992	27.6	24.2	26.5	26.6	61.2	59.6	71.1	68.1	11.6	7.4	10.5	7.4	27.2	32.9	18.3	24.5
Jordan 1990-91	39.8	29.8	42.0	41.8	72.2	60.9	68.7	71.2	13.3	16.1	17.1	16.8	14.5	23.0	14.2	12.1
Morocco 1992	55.9	67.8	44.7	43.7	83.0	95.7	82.5	85.8	4.9	0.7	5.8	5.6	12.0	3.6	11.7	8.6
Turkey 1993	17.5	24.0	20.8	20.0	70.7	80.4	83.7	80.9	16.6	10.5	7.4	9.8	12.6	9.1	8.9	9.2
Asia																
Bangladesh 1993-94	11.0	*	11.3	9.2	54.4	*	58.0	51.8	6.6	*	13.9	9.1	39.1	*	28.1	39.1
India 1992-93	16.2	15.6	11.8	11.1	34.5	21.4	19.0	13.7	17.8	15.9	15.1	11.3	31.5	48.2	54.1	64.0
Indonesia 1994	6.4	7.2	7.2	7.7	55.2	55.3	50.5	51.2	17.2	18.6	22.6	19.8	27.6	26.1	26.9	29.0
Kazakhstan 1995	8.9	0.7	9.6	12.2	41.6	35.0	32.6	37.3	31.3	47.5	36.7	36.9	27.0	17.5	30.7	25.7
Nepal 1996	20.8	19.1	17.5	16.1	78.5	62.7	66.9	54.4	5.5	7.6	7.0	7.7	16.0	29.6	26.1	37.9
Pakistan 1990-91	11.4	11.8	6.3	9.0	33.0	35.0	32.0	27.5	17.9	14.2	19.6	17.5	49.1	50.8	48.5	54.9
Philippines 1993	39.4	43.6	32.4	40.5	71.6	75.4	59.8	66.8	12.8	11.0	16.0	13.2	15.6	13.6	24.2	20.1

continued

Table B 9 *continued*

Region, country, and date	Immediately				First day ¹				Second day				Later			
	Prof tech cler manag	Sales and service	Manual and domestic	Agricul tural	Prof tech cler manag	Sales and service	Manual and domestic	Agricul tural	Prof tech, cler, manag	Sales and service	Manual and domestic	Agricul tural	Prof tech cler, manag	Sales and service	Manual and domestic	Agricul tural
Latin America/Caribbean																
Bolivia 1993 94	224	187	276	273	581	587	747	751	206	202	119	137	213	211	134	112
Brazil 1996	294	382	339	293	729	682	743	698	171	130	153	160	99	188	104	142
Colombia 1995	440	502	444	494	800	781	818	811	93	94	88	95	108	124	94	94
Dominican Republic 1991	334	429	310	314	614	724	592	620	164	88	193	166	222	188	215	213
Guatemala 1995	460	510	512	513	759	752	817	790	79	102	63	88	161	145	120	121
Haiti 1994	*	377	414	337	*	444	518	397	*	162	131	136	*	394	351	466
Paraguay 1990	271	296	341	379	508	510	582	594	95	54	78	81	397	436	339	325
Peru 1996	399	350	435	457	763	684	783	790	102	173	116	93	135	144	101	117

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

¹ Includes children breastfed immediately after births

Table B 10 Timing of initial breastfeeding, by father's occupation

Percentage of children breastfed immediately after birth the first day the second day or later by father's occupation Demographic and Health Surveys 1990-1996

Region country and date	Immediately				First day ¹				Second day				Later			
	Prof tech cler manag	Sales and service	Manual and domestic	Agricul- tural	Prof tech cler manag	Sales and service	Manual and domestic	Agricul tural	Prof tech cler manag	Sales and service	Manual and domestic	Agricul tural	Prof tech cler manag	Sales and service	Manual and domestic	Agricul tural
Sub Saharan Africa																
Burkina Faso 1993	32.8	28.6	35.5	35.5	52.2	47.2	35.5	35.5	20.4	17.2	35.5	35.5	27.4	35.5	35.5	35.5
Cameroon 1991	9.2	14.5	49.1	49.1	34.3	29.2	49.1	49.1	25.3	21.7	49.1	49.1	40.4	49.1	49.1	49.1
Central African Republic 1994-95	33.8	30.1	17.7	17.7	68.8	55.6	17.7	17.7	19.7	26.7	17.7	17.7	11.5	17.7	17.7	17.7
Côte d'Ivoire 1994	46.2	44.1	18.7	18.7	68.7	62.1	18.7	18.7	17.3	19.2	18.7	18.7	14.0	18.7	18.7	18.7
Ghana 1993	16.5	15.1	45.9	45.9	47.3	42.1	45.9	45.9	17.8	12.0	45.9	45.9	34.8	45.9	45.9	45.9
Kenya 1993	53.4	58.1	8.0	8.0	84.8	86.9	8.0	8.0	6.1	5.1	8.0	8.0	9.1	8.0	8.0	8.0
Madagascar 1992	4.5	7.5	20.3	20.3	39.4	48.6	20.3	20.3	41.0	31.1	20.3	20.3	19.6	20.3	20.3	20.3
Malawi 1992	59.0	60.4	3.8	3.8	92.8	92.1	3.8	3.8	3.7	4.1	3.8	3.8	3.4	3.8	3.8	3.8
Mali 1995	7.6	9.4	17.2	17.2	72.8	60.9	17.2	17.2	14.8	21.9	17.2	17.2	12.4	17.2	17.2	17.2
Namibia 1992	57.0	56.6	9.4	9.4	84.8	76.8	9.4	9.4	8.2	13.8	9.4	9.4	7.0	9.4	9.4	9.4
Niger 1992	28.0	19.1	59.6	59.6	38.4	28.1	59.6	59.6	18.1	12.3	59.6	59.6	43.5	59.6	59.6	59.6
Nigeria 1990	34.0	36.4	43.4	43.4	61.4	50.4	43.4	43.4	3.7	6.2	43.4	43.4	34.9	43.4	43.4	43.4
Rwanda 1992	22.9	18.9	25.7	25.7	53.8	50.8	25.7	25.7	25.8	23.5	25.7	25.7	20.4	25.7	25.7	25.7
Senegal 1992-93	12.1	12.4	39.0	39.0	55.1	40.3	39.0	39.0	18.3	20.7	39.0	39.0	26.6	39.0	39.0	39.0
Tanzania 1991-92	40.8	45.6	9.1	9.1	80.0	84.1	9.1	9.1	10.6	6.8	9.1	9.1	9.4	9.1	9.1	9.1
Uganda 1995	50.3	50.0	7.9	7.9	87.4	86.1	7.9	7.9	5.1	6.0	7.9	7.9	7.5	7.9	7.9	7.9
Zambia 1992	39.4	45.7	3.5	3.5	88.6	93.3	3.5	3.5	5.1	3.3	3.5	3.5	6.3	3.5	3.5	3.5
Zimbabwe 1994	38.6	40.0	3.0	3.0	90.8	92.2	3.0	3.0	5.5	4.8	3.0	3.0	3.6	3.0	3.0	3.0
Near East/North Africa																
Egypt 1992	27.3	23.8	34.2	34.2	71.0	58.8	34.2	34.2	8.5	7.0	34.2	34.2	20.5	34.2	34.2	34.2
Jordan 1990-91	44.3	46.3	17.1	17.1	70.6	65.8	17.1	17.1	14.9	17.1	17.1	17.1	14.5	17.1	17.1	17.1
Morocco 1992	53.0	57.1	4.6	4.6	86.3	93.4	4.6	4.6	4.3	2.1	4.6	4.6	9.4	4.6	4.6	4.6
Turkey 1993	20.5	22.7	9.9	9.9	77.0	77.9	9.9	9.9	11.8	12.2	9.9	9.9	11.2	9.9	9.9	9.9
Asia																
Bangladesh 1993-94	9.4	7.8	41.0	41.0	48.4	47.8	41.0	41.0	11.7	11.2	41.0	41.0	39.9	41.0	41.0	41.0
India 1992-93	11.7	10.8	9.1	9.9	23.5	20.9	17.9	14.4	15.8	15.1	15.4	12.1	49.0	53.2	59.6	63.6
Indonesia 1994	8.9	7.6	26.2	26.2	51.9	54.7	26.2	26.2	18.8	19.1	26.2	26.2	29.4	26.2	26.2	26.2
Kazakhstan 1995	9.9	9.8	20.8	20.8	43.3	39.0	20.8	20.8	30.5	40.2	20.8	20.8	26.2	20.8	20.8	20.8
Nepal 1996	18.6	18.6	34.2	34.2	60.4	59.2	34.2	34.2	10.2	6.6	34.2	34.2	29.4	34.2	34.2	34.2
Pakistan 1990-91	8.7	8.7	64.3	64.3	23.8	25.1	64.3	64.3	18.0	10.5	64.3	64.3	58.2	64.3	64.3	64.3
Philippines 1993	40.6	43.7	12.3	12.3	69.6	74.9	12.3	12.3	13.8	12.8	12.3	12.3	16.6	12.3	12.3	12.3

continued

Table B 10 *continued*

Region country and date	Immediately				First day ¹				Second day				Later			
	Prof tech cler manag	Sales and service	Manual and domestic	Agricul- tural	Prof tech cler, manag	Sales and service	Manual and domestic	Agricul- tural	Prof tech cler manag	Sales and service	Manual and domestic	Agricul- tural	Prof tech cler manag	Sales and service	Manual and domestic	Agricul- tural
Latin America/Caribbean																
Bolivia 1993 94	23 9	21 1	20 9	20 9	66 3	60 4	20 9	20 9	17 4	18 8	20 9	20 9	16 3	20 9	20 9	20 9
Brazil 1996	31 4	36 3	14 8	14 8	74 4	68 1	14 8	14 8	16 6	17 2	14 8	14 8	9 0	14 8	14 8	14 8
Colombia 1995	48 5	52 4	11 0	11 0	83 1	80 6	11 0	11 0	8 2	8 4	11 0	11 0	8 7	11 0	11 0	11 0
Dominican Republic 1991	38 2	38 7	17 7	17 7	63 5	66 7	17 7	17 7	13 9	15 7	17 7	17 7	22 6	17 7	17 7	17 7
Guatemala 1995	52 2	54 8	17 2	17 2	78 1	72 9	17 2	17 2	9 0	9 9	17 2	17 2	12 9	17 2	17 2	17 2
Haiti 1994	34 2	36 3	44 8	44 8	40 8	42 5	44 8	44 8	9 8	12 6	44 8	44 8	49 5	44 8	44 8	44 8
Paraguay 1990	38 0	36 1	44 7	44 7	62 6	51 7	44 7	44 7	6 9	3 6	44 7	44 7	30 5	44 7	44 7	44 7
Peru 1996	47 7	42 1	15 1	15 1	79 9	71 5	15 1	15 1	10 7	13 4	15 1	15 1	9 4	15 1	15 1	15 1

¹ Includes children breastfed immediately after births

Table B 11 Timing of initial breastfeeding, by mother's access to mass media

Percentage of children breastfed immediately after birth the first day the second day or later by mother's access to mass media Demographic and Health Surveys 1990-1996

Region, country, and date	Immediately					First day ¹					Second day					Later				
	No access	Print only	Radio only	Tele vision	All media	No access	Print only	Radio only	Tele vision	All media	No access	Print only	Radio only	Tele vision	All media	No access	Print only	Radio only	Tele vision	All media
Sub-Saharan Africa																				
Burkina Faso 1993	31.6	*	25.8	28.8	35.0	48.5	*	48.1	55.7	67.5	16.5	*	18.7	17.3	14.0	35.0	*	33.2	27.0	18.5
Cameroon 1991	13.4	*	12.2	11.1	*	28.9	*	32.4	32.2	*	23.5	*	25.5	30.4	*	47.6	*	42.1	37.4	*
Central African Republic 1994-95	36.0	*	30.4	37.1	38.4	56.9	*	63.6	78.0	73.0	25.9	*	22.6	13.1	16.1	17.2	*	13.8	8.9	10.9
Côte d'Ivoire 1994	45.2	(42.9)	39.0	44.3	43.9	62.5	(62.9)	60.5	66.0	63.1	18.5	(25.9)	20.1	19.6	19.5	19.0	(11.2)	19.3	14.4	17.4
Ghana 1993	16.3	*	15.6	15.7	18.2	43.9	*	44.0	48.0	44.7	13.5	*	13.0	15.9	23.5	42.6	*	42.9	36.0	31.8
Kenya 1993	55.9	59.6	54.9	53.7	57.5	84.5	86.0	86.8	85.5	86.4	5.5	5.1	6.1	7.2	4.7	10.0	8.9	7.1	7.3	8.8
Madagascar 1992	7.9	3.8	3.3	5.9	3.6	49.9	40.7	40.0	33.0	31.3	31.1	33.2	37.9	46.0	44.7	19.0	26.1	22.2	21.1	24.1
Malawi 1992	63.3	59.6	53.2	*	*	92.7	95.7	91.9	*	*	3.2	1.0	4.6	*	*	4.1	3.3	3.5	*	*
Malï 1995	11.5	*	7.6	9.8	15.2	62.6	*	61.1	73.4	83.5	20.4	*	22.0	17.1	13.2	17.0	*	17.0	9.5	3.4
Namibia 1992	58.9	49.6	58.8	53.2	45.6	88.2	85.1	86.4	77.4	76.9	7.3	6.6	7.8	10.0	11.6	4.5	8.3	5.8	12.7	11.5
Niger 1992	16.6	*	22.9	37.4	39.9	24.0	*	33.4	54.5	54.6	11.9	*	14.8	18.0	16.2	64.1	*	51.8	27.5	29.2
Nigeria 1990	40.3	*	34.1	30.5	*	53.9	*	53.5	59.2	*	6.8	*	6.9	5.8	*	39.3	*	39.6	34.9	*
Rwanda 1992	19.6	*	*	*	*	51.4	*	*	*	*	24.0	*	*	*	*	24.7	*	*	*	*
Senegal 1992-93	13.7	*	10.4	11.8	11.4	42.8	*	44.6	53.4	54.6	20.4	*	20.4	19.9	17.5	36.9	*	35.0	26.7	27.9
Tanzania 1991-92	45.6	44.5	43.7	51.5	45.1	83.4	85.5	86.4	82.2	79.9	7.7	5.1	5.8	4.4	8.2	8.9	9.5	7.8	13.5	11.9
Uganda 1995	49.6	40.2	48.7	51.5	49.6	86.4	82.0	87.0	83.2	87.4	5.7	7.9	5.5	6.7	3.7	8.0	10.1	7.6	10.1	8.9
Zambia 1992	44.7	40.3	40.2	35.3	36.9	91.4	87.2	91.0	85.1	84.6	4.5	5.9	4.1	5.7	7.0	4.1	6.9	5.0	9.2	8.4
Zimbabwe 1994	41.6	37.1	42.9	39.7	37.5	91.3	91.4	91.1	92.6	90.7	5.1	5.4	6.0	3.9	5.1	3.6	3.2	2.9	3.4	4.1
Near East/North Africa																				
Egypt 1992	24.3	30.9	26.7	*	*	60.4	72.8	71.0	*	*	8.5	12.7	7.8	*	*	31.1	14.6	21.2	*	*
Jordan 1990-91	43.3	*	*	*	*	69.8	*	*	*	*	16.0	*	*	*	*	14.3	*	*	*	*
Morocco 1992	55.7	*	56.3	50.4	43.9	93.0	*	93.2	85.9	79.5	2.1	*	1.9	4.8	8.0	4.9	*	4.9	9.3	12.5
Turkey 1993	23.5	*	16.5	20.0	21.6	67.8	*	70.7	78.3	83.2	14.8	*	14.0	11.5	8.5	17.4	*	15.3	10.1	8.3
Asia																				
Bangladesh 1993-94	8.5	(5.6)	8.5	10.7	13.3	46.8	(55.3)	54.0	51.8	57.1	11.2	(8.2)	9.4	13.9	13.0	41.9	(36.5)	36.6	34.3	29.8
India 1992-93	8.8	*	10.8	11.5	*	22.9	*	29.0	35.1	*	12.5	*	12.3	16.0	*	64.6	*	58.7	48.9	*
Indonesia 1994	7.6	6.4	6.1	9.2	6.7	57.1	52.0	53.9	51.7	50.2	19.3	26.5	18.3	19.0	21.4	23.6	21.5	27.7	29.2	28.4
Kazakhstan 1995	(2.0)	(10.5)	*	7.2	11.7	(34.4)	(44.5)	*	29.9	43.7	(48.2)	(44.0)	*	45.4	29.6	(17.3)	(11.5)	*	24.7	26.7
Nepal 1996	17.6	*	19.4	18.0	22.6	56.6	*	66.6	59.3	65.7	7.1	*	8.3	9.1	12.9	36.3	*	25.1	31.6	21.4
Pakistan 1990-91	9.3	2.9	8.8	8.1	5.5	24.4	29.9	24.4	26.9	33.1	13.0	6.7	15.9	19.0	24.7	62.6	63.4	59.6	54.2	42.2
Philippines 1993	45.4	42.6	41.8	43.0	40.2	78.3	65.4	75.0	72.5	67.8	11.5	15.8	11.4	13.0	14.7	10.2	18.8	13.7	14.5	17.5

continued

Table B 11 *continued*

Region, country, and date	Immediately					First day ¹					Second day					Later				
	No access	Print only	Radio only	Tele vision	All media	No access	Print only	Radio only	Tele- vision	All media	No access	Print only	Radio only	Tele- vision	All media	No access	Print only	Radio only	Tele vision	All media
Latin America/Caribbean																				
Bolivia 1993 94	21 6	(35 4)	18 8	25 6	27 6	57 8	(61 0)	61 3	69 7	72 2	23 2	(14 4)	17 0	16 1	13 5	19 1	(24 6)	21 7	14 2	14 3
Brazil 1996	35 0	(41 2)	35 6	31 4	31 7	65 1	(67 8)	64 6	72 0	73 9	15 8	(14 6)	16 0	17 2	15 2	19 1	(17 6)	19 5	10 7	10 9
Colombia 1995	52 7	49 1	52 5	47 8	48 9	71 4	76 5	79 9	81 7	82 5	10 9	10 3	8 7	9 3	8 1	17 6	13 2	11 4	9 0	9 4
Dominican Republic 1991	38 1	(31 5)	38 7	33 5	26 5	63 2	(52 4)	67 9	61 9	58 8	14 9	(14 5)	13 7	18 1	17 3	21 9	(33 1)	18 3	20 0	23 9
Guatemala 1995	54 6	59 2	52 5	55 1	50 0	72 3	78 2	72 2	75 5	82 4	10 3	8 4	10 3	10 8	6 3	17 4	13 4	17 5	13 6	11 4
Haiti 1994	33 8	41 8	38 8	36 1	37 6	40 5	49 7	45 6	42 5	45 0	13 2	12 7	11 8	9 7	12 0	46 3	37 6	42 6	47 8	43 0
Paraguay 1990	30 2	37 1	39 4	35 1	38 6	50 6	56 8	56 3	57 5	59 9	4 1	4 7	4 4	4 4	6 6	45 4	38 4	39 3	38 1	33 4
Peru 1996	44 2	43 8	39 5	40 5	47 0	74 2	73 9	71 6	74 1	79 3	13 1	9 1	14 2	11 8	10 5	12 6	17 0	14 2	14 0	10 3

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

¹ Includes children breastfed immediately after births

Appendix C

Children Currently Breastfeeding, by Age and Selected Background Characteristics

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Table C.1 Children currently breastfeeding, by age and mother's access to mass media

Among children born in the preceding two years the percentage currently breastfeeding by age and mother's access to mass media, Demographic and Health Surveys 1990-1996

Region, country, and date	0 to 5 months					6 to 9 months					12 to 15 months					20 to 23 months				
	No access	Print only	Radio only	Television	All media	No access	Print only	Radio only	Television	All media	No access	Print only	Radio only	Television	All media	No access	Print only	Radio only	Television	All media
Sub-Saharan Africa																				
Burkina Faso 1993	99.3	*	99.4	98.7	(96.7)	99.4	*	100.0	(100.0)	*	99.4	*	96.0	(90.3)	*	80.7	*	87.5	(55.1)	*
Cameroon 1991	98.4	*	100.0	96.8	*	98.3	*	(89.0)	85.9	*	94.8	*	(83.9)	62.5	*	54.1	*	(20.4)	12.1	*
Central African																				
Republic 1994-95	100.0	*	99.6	(100.0)	(100.0)	97.9	*	100.0	*	*	97.4	*	97.7	*	*	73.8	*	52.3	(23.4)	*
Cote d'Ivoire 1994	97.9	*	95.7	97.8	93.0	97.4	*	(100.0)	98.3	(90.5)	95.5	*	(91.1)	93.3	(75.7)	62.0	*	(51.0)	31.7	(9.9)
Ghana 1993	99.5	*	98.9	100.0	*	98.1	*	100.0	98.4	*	95.5	*	100.0	96.4	*	66.7	*	55.6	32.7	*
Kenya 1993	97.9	(100.0)	98.6	*	(98.9)	98.2	*	99.2	*	*	89.6	*	92.2	*	(87.0)	58.2	(44.3)	54.7	*	(45.1)
Madagascar 1992	98.8	*	99.2	(90.4)	(94.9)	98.8	*	99.3	*	(93.2)	93.7	*	85.3	*	*	47.7	*	45.3	*	*
Malawi 1992	98.8	*	99.2	*	*	99.2	*	98.2	*	*	94.1	*	90.8	*	*	61.1	*	51.5	*	*
Mali 1995	100.0	*	99.4	100.0	(95.0)	100.0	*	99.0	100.0	*	94.0	*	91.6	94.9	*	72.9	*	54.2	57.7	*
Namibia 1992	97.8	(95.8)	97.7	*	76.7	95.9	*	91.5	*	64.6	80.6	*	71.9	*	44.1	34.5	*	19.6	*	(10.8)
Niger 1992	98.4	*	98.6	100.0	*	98.4	*	100.0	98.1	*	96.1	*	95.2	93.7	*	60.9	*	65.7	48.4	*
Nigeria 1990	98.2	*	96.3	99.5	*	98.6	*	97.1	94.4	*	91.7	*	89.5	68.4	*	58.8	*	48.9	10.2	*
Rwanda 1992	99.4	*	*	*	*	99.1	*	*	*	*	98.3	*	*	*	*	84.5	*	*	*	*
Senegal 1992-93	99.5	*	99.6	99.3	(100.0)	99.0	*	98.4	96.8	*	94.0	*	91.6	96.4	(80.0)	61.5	*	47.3	32.8	*
Tanzania 1991-92	99.6	(100.0)	98.9	*	*	97.8	(100.0)	99.1	*	(94.3)	94.9	(85.8)	95.0	*	*	56.4	*	57.3	*	*
Uganda 1995	98.7	(100.0)	98.2	*	*	98.4	(100.0)	97.0	*	(87.2)	90.7	(83.6)	83.6	*	*	46.2	(34.4)	23.2	*	*
Zambia 1992	98.4	100.0	99.4	(97.1)	100.0	99.4	(100.0)	100.0	(100.0)	96.1	95.6	(83.5)	87.9	*	82.7	42.7	(24.0)	38.2	*	18.8
Zimbabwe 1994	99.0	100.0	100.0	*	96.5	99.6	95.1	(100.0)	*	(100.0)	91.9	(93.6)	*	*	(75.4)	32.0	(17.3)	(30.1)	*	(17.6)
Near East/North Africa																				
Egypt 1992	96.6	(99.0)	96.4	*	*	91.4	(92.4)	88.8	*	*	77.8	(41.2)	76.7	*	*	39.1	(10.4)	38.8	*	*
Jordan 1990-91	90.2	*	*	*	*	69.2	*	*	*	*	44.3	*	*	*	*	12.4	*	*	*	*
Morocco 1992	93.8	*	98.3	87.3	(56.3)	92.9	*	89.6	78.1	(28.6)	81.7	*	78.4	56.0	(15.4)	35.7	*	18.2	14.1	(6.1)
Turkey 1993	(94.4)	*	*	89.4	84.9	*	*	*	72.6	51.7	*	*	*	55.2	32.5	*	*	*	17.9	6.2
Asia																				
Bangladesh 1993-94	98.3	*	98.9	98.4	(97.2)	99.6	*	99.0	92.8	*	98.5	*	94.3	85.9	*	90.7	*	87.2	78.1	*
India 1992-93	97.7	*	98.8	96.1	*	97.4	*	96.2	91.2	*	92.1	*	88.8	75.7	*	75.9	*	66.1	50.5	*
Indonesia 1994	98.1	*	99.6	97.0	94.8	97.7	*	99.3	95.3	88.0	93.1	*	87.1	91.7	79.4	61.6	*	72.6	66.7	55.6
Kazakhstan 1995	*	*	*	*	73.3	*	*	*	*	61.7	*	*	*	(64.3)	45.7	*	*	*	*	23.3
Nepal 1996	99.5	*	100.0	(100.0)	*	99.1	*	99.1	(100.0)	*	96.8	*	95.6	(100.0)	*	90.4	*	83.7	*	*
Pakistan 1990-91	96.0	*	99.9	91.3	96.1	93.8	*	(91.9)	87.0	71.4	83.0	*	(90.8)	69.9	49.9	54.2	*	(74.1)	42.6	(23.0)
Philippines 1993	94.1	*	92.1	84.1	70.7	92.5	*	91.5	47.1	54.9	67.2	*	67.6	56.1	47.0	17.0	*	23.9	11.2	17.7

continued

Table C.1 *continued*

Region, country, and date	0 to 5 months					6 to 9 months					12 to 15 months					20 to 23 months				
	No access	Print only	Radio only	Tele-vision	All media	No access	Print only	Radio only	Tele-vision	All media	No access	Print only	Radio only	Tele-vision	All media	No access	Print only	Radio only	Tele-vision	All media
Latin America/Caribbean																				
Bolivia 1993 94	96 1	*	99 1	96 7	88 2	95 1	*	95 6	91 2	77 5	83 0	*	88 1	74 7	56 1	51 5	*	41 5	38 9	21 8
Brazil 1996	(83 4)	*	(86 5)	73 7	73 9	(59 6)	*	*	49 4	46 6	*	*	(31 2)	35 9	31 4	(16 8)	*	*	15 8	16 1
Colombia 1995	(92 6)	*	85 2	95 0	89 5	*	*	(74 2)	63 6	63 4	*	*	(53 7)	39 3	39 2	*	*	(18 1)	11 3	19 2
Dominican Republic 1991	81 8	*	79 4	68 8	(63 1)	51 0	*	55 7	35 1	*	43 4	*	30 5	21 1	*	7 4	*	(12 9)	5 2	*
Guatemala 1995	98 8	(98 9)	98 9	95 7	91 7	96 3	(100 0)	97 7	87 9	84 6	86 2	*	92 8	68 2	53 1	50 8	*	60 2	32 3	25 6
Haiti 1994	98 9	*	98 7	(95 0)	(75 1)	95 7	*	95 6	(90 0)	*	94 1	*	78 6	(64 3)	*	31 0	*	25 6	(13 9)	(14 1)
Paraguay 1990	90 2	*	92 2	82 3	78 1	(85 8)	*	(94 1)	(71 3)	58 4	(56 4)	*	60 2	41 9	28 4	(10 2)	*	8 9	(9 3)	6 4
Peru 1996	99 2	(92 2)	99 5	98 4	96 2	98 9	(96 7)	98 2	88 3	87 0	90 5	(84 7)	88 8	79 2	70 5	58 4	(42 5)	37 9	37 8	41 0

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table C 2 Children currently breastfeeding, by age, household asset level and possession of a refrigerator

Among children born in the preceding two years the percentage currently breastfeeding by age household asset level and possession of a refrigerator Demographic and Health Surveys 1990-1996

Region country and date	0 to 5 months					6 to 9 months					12 to 15 months					20 to 23 months				
	Household asset level			Refrigerator		Household asset level			Refrigerator		Household asset level			Refrigerator		Household asset level			Refrigerator	
	Low	Middle	High	No	Yes	Low	Middle	High	No	Yes	Low	Middle	High	No	Yes	Low	Middle	High	No	Yes
Sub-Saharan Africa																				
Burkina Faso 1993	99.2	99.2	*	99.2	*	99.6	100.0	*	99.6	*	98.2	96.2	*	97.8	*	84.3	70.9	*	81.5	*
Cameroon 1991	100.0	96.1	(95.4)	98.8	93.7	97.3	87.5	(88.3)	95.0	(79.0)	93.3	72.8	(49.8)	86.4	(48.1)	48.4	13.2	(20.0)	38.1	(12.8)
Central African Republic 1994-95	99.8	100.0	*	99.8	*	99.6	(100.0)	*	99.3	*	98.7	(86.8)	*	97.1	*	57.5	(27.6)	*	52.1	*
Cote d'Ivoire 1994	97.1	98.4	(92.2)	97.7	93.7	97.4	98.3	(89.7)	97.6	(94.8)	94.2	92.9	(71.2)	93.8	(80.4)	61.8	33.4	(6.0)	48.8	(9.1)
Ghana 1993	99.7	97.7	*	99.2	(96.7)	98.9	98.4	*	99.2	*	96.7	94.0	*	96.3	*	65.5	23.2	*	58.0	*
Kenya 1993	98.6	97.9	*	98.7	*	98.6	99.6	*	98.8	*	90.1	94.3	*	91.1	*	58.6	34.8	*	55.0	*
Madagascar 1992	98.8	96.1	*	98.7	*	99.1	93.7	*	98.6	*	92.7	(68.5)	*	91.0	*	46.0	(39.4)	*	45.6	*
Malawi 1992	98.9	100.0	*	99.0	*	98.8	98.6	*	98.8	*	94.3	(84.5)	*	92.7	*	59.6	37.8	*	56.2	*
Mali 1995	99.7	99.1	*	99.8	(95.0)	99.6	99.8	*	99.6	*	93.8	93.5	*	94.0	*	64.3	41.7	*	61.2	*
Namibia 1992	98.0	94.0	67.9	97.4	73.4	94.9	80.4	(42.5)	91.3	(60.1)	77.5	63.4	(30.9)	75.4	(33.4)	24.7	(19.4)	(16.5)	24.7	(11.4)
Niger 1992	98.8	96.7	*	98.6	*	98.8	99.3	*	98.9	*	95.9	92.1	*	95.6	*	63.1	34.6	*	60.0	*
Nigeria 1990	96.8	99.2	(100.0)	97.5	99.4	98.6	95.4	85.2)	97.8	90.5	90.1	82.0	(55.1)	88.7	54.7	60.2	18.0	(10.9)	47.3	14.8
Rwanda 1992	99.4	(100.0)	*	99.4	*	99.2	*	*	99.1	*	98.6	*	*	98.2	*	85.6	*	*	85.0	*
Senegal 1992-93	99.5	99.5	(100.0)	99.5	(100.0)	98.6	98.2	*	98.4	(90.3)	92.7	91.7	*	92.7	(92.6)	59.8	29.3	*	49.4	*
Tanzania 1991-92	99.5	99.0	*	99.4	*	98.1	100.0	*	98.4	*	94.8	91.4	*	94.5	*	59.2	39.9	*	57.1	*
Uganda 1995	98.7	98.6	*	98.7	*	98.2	89.2	*	97.5	*	89.1	78.2	*	88.3	*	41.2	23.4	*	40.0	*
Zambia 1992	99.2	99.0	(97.7)	99.0	(100.0)	99.6	98.6	(96.9)	99.2	(97.8)	96.6	83.5	*	91.6	*	43.0	24.5	*	36.1	*
Zimbabwe 1994	99.4	100.0	(89.7)	99.6	*	98.5	100.0	*	98.9	*	92.0	(86.7)	*	91.7	*	29.6	19.3	*	26.9	(15.3)
Near East/North Africa																				
Egypt 1992	97.0	96.8	97.3	96.9	96.2	96.3	94.0	84.4	95.2	85.0	82.7	80.9	65.3	79.6	71.5	49.3	47.2	23.3	46.6	26.7
Jordan 1990-91	93.5	92.0	85.9	91.3	90.0	(66.9)	71.9	64.5	71.2	68.6	(48.1)	45.2	41.4	44.7	44.2	(16.5)	14.6	6.4	18.1	10.6
Morocco 1992	97.4	91.5	69.1	94.4	70.1	91.7	84.0	52.2	87.7	48.0	80.0	64.4	25.3	72.1	26.9	28.8	12.9	8.6	23.7	7.1
Turkey 1993	(95.4)	85.6	87.5	87.8	88.4	(72.3)	72.8	58.2	(80.9)	62.7	(64.3)	50.2	36.3	(59.3)	45.3	*	19.4	3.5	(42.0)	10.6
Asia																				
Bangladesh 1993-94	98.6	100.0	*	98.4	86.4	99.0	95.3	*	98.1	86.4	96.6	93.5	*	95.5	86.4	89.9	(72.2)	*	86.4	86.4
India 1992-93	98.0	96.3	95.4	97.7	93.9	97.1	94.3	79.4	96.3	78.7	92.1	77.8	62.7	88.6	65.9	74.1	55.1	29.3	68.8	32.8
Indonesia 1994	97.8	96.7	(83.3)	97.5	89.2	97.6	91.2	(93.3)	95.7	76.2	91.1	86.9	(55.9)	90.0	69.7	70.7	55.6	(30.7)	65.4	32.1
Kazakhstan 1995	*	77.0	(92.7)	*	79.0	*	79.7	*	(89.8)	59.3	*	55.8	*	(66.3)	47.8	*	23.4	*	(19.3)	21.2
Nepal 1996	99.7	(100.0)	*	99.7	*	99.3	97.7	*	99.2	*	96.8	(92.2)	*	96.6	*	89.1	(80.3)	*	87.7	*
Pakistan 1990-91	95.5	96.9	90.9	95.9	92.1	97.2	75.7	68.9	92.1	74.9	86.0	70.2	34.7	83.2	41.9	57.7	48.3	(29.7)	55.4	30.6
Philippines 1993	90.5	71.5	(51.6)	84.0	60.5	84.7	49.9	(20.0)	73.4	34.2	67.3	46.3	*	62.4	28.0	24.6	15.6	(0.0)	20.7	7.5

continued

Table C 2 *continued*

Region country and date	0 to 5 months					6 to 9 months					12 to 15 months					20 to 23 months				
	Household asset level			Refrigerator		Household asset level			Refrigerator		Household asset level			Refrigerator		Household asset level			Refrigerator	
	Low	Middle	High	No	Yes	Low	Middle	High	No	Yes	Low	Middle	High	No	Yes	Low	Middle	High	No	Yes
Latin America/Caribbean																				
Bolivia 1993 94	98.8	93.5	91.0	97.4	82.7	97.4	90.5	72.5	94.7	69.4	85.4	72.7	55.4	82.2	42.7	44.9	36.9	23.2	41.7	18.6
Brazil 1996	88.4	72.6	76.7	78.2	74.3	(59.0)	47.4	52.5	49.1	51.0	40.2	36.5	30.0	36.7	31.8	(26.2)	19.0	11.9	21.7	14.2
Colombia 1995	93.4	89.3	90.9	92.0	89.4	88.9	62.7	59.2	75.0	56.3	64.3	44.1	34.9	50.3	36.0	21.4	14.9	15.7	19.5	13.4
Dominican Republic 1991	86.7	74.6	62.9	79.3	67.7	69.9	37.9	(23.4)	47.0	30.2	52.5	25.8	(4.9)	39.6	13.8	14.9	4.6	(4.0)	10.3	2.3
Guatemala 1995	99.3	96.2	83.0	98.2	86.0	97.6	90.5	(73.9)	94.9	77.4	87.9	66.5	(47.1)	81.6	41.2	52.1	34.4	(31.0)	46.7	24.0
Haiti 1994	98.3	92.6	*	97.0	*	96.5	85.6	*	94.3	*	89.5	69.7	*	85.1	*	29.0	17.4	*	25.8	*
Paraguay 1990	90.1	80.2	71.0	87.0	76.1	85.0	64.6	(35.3)	80.9	48.5	53.0	35.1	(17.2)	49.5	21.5	9.7	7.3	(6.2)	8.2	8.7
Peru 1996	98.7	96.9	95.0	98.0	95.7	96.7	90.5	77.8	94.6	80.0	88.7	75.0	56.6	85.1	58.3	45.6	40.7	37.5	43.9	38.2

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table C.3 Percentage of children currently breastfeeding, by age and father's occupation

Among children born in the preceding two years the percentage currently breastfeeding by age and father's occupation Demographic and Health Surveys 1990-1996

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Professional technical clerical managerial	Sales and service	Manual and domestic	Agricul tural												
Sub Saharan Africa																
Burkina Faso 1993	99.2	99.2	85.5	85.5	(100.0)	99.5	85.5	85.5	97.2	97.7	85.5	85.5	(64.1)	85.5	85.5	85.5
Cameroon 1991	100.0	100.0	54.0	54.0	(89.2)	99.3	54.0	54.0	81.4	94.9	54.0	54.0	25.8	54.0	54.0	54.0
Central African Republic 1994-95	100.0	99.6	68.1	68.1	100.0	99.3	68.1	68.1	(95.5)	97.8	68.1	68.1	(33.9)	68.1	68.1	68.1
Côte d'Ivoire 1994	97.9	97.4	62.3	62.3	97.7	97.9	62.3	62.3	94.3	93.1	62.3	62.3	40.7	62.3	62.3	62.3
Ghana 1993	96.8	100.0	68.1	68.1	(100.0)	99.3	68.1	68.1	(100.0)	96.5	68.1	68.1	(38.5)	68.1	68.1	68.1
Kenya 1993	96.4	99.4	48.0	48.0	98.3	98.5	48.0	48.0	89.0	89.5	48.0	48.0	58.6	48.0	48.0	48.0
Madagascar 1992	98.2	98.9	45.5	45.5	99.1	99.3	45.5	45.5	88.5	92.2	45.5	45.5	(38.0)	45.5	45.5	45.5
Malawi 1992	97.6	99.4	64.4	64.4	99.4	98.0	64.4	64.4	94.2	92.7	64.4	64.4	42.8	64.4	64.4	64.4
Mali 1995	100.0	99.7	67.3	67.3	97.7	99.8	67.3	67.3	(100.0)	93.7	67.3	67.3	(66.2)	67.3	67.3	67.3
Namibia 1992	87.9	(91.5)	*	*	93.7	(90.4)	*	*	64.2	*	*	*	23.1	*	*	*
Niger 1992	99.4	98.4	63.7	63.7	96.9	99.1	63.7	63.7	92.9	96.2	63.7	63.7	45.1	63.7	63.7	63.7
Nigeria 1990	(100.0)	97.9	58.0	58.0	87.3	97.6	58.0	58.0	*	91.9	58.0	58.0	*	58.0	58.0	58.0
Rwanda 1992	100.0	99.2	85.8	85.8	(100.0)	99.2	85.8	85.8	93.2	99.2	85.8	85.8	(82.9)	85.8	85.8	85.8
Senegal 1992-93	99.3	99.6	63.9	63.9	100.0	99.3	63.9	63.9	94.4	92.4	63.9	63.9	46.5	63.9	63.9	63.9
Tanzania 1991-92	99.0	99.3	54.8	54.8	96.3	97.5	54.8	54.8	93.4	95.0	54.8	54.8	(68.7)	54.8	54.8	54.8
Uganda 1995	99.7	99.1	49.9	49.9	100.0	98.1	49.9	49.9	79.8	90.8	49.9	49.9	20.4	49.9	49.9	49.9
Zambia 1992	97.7	99.5	46.0	46.0	99.1	100.0	46.0	46.0	88.8	95.8	46.0	46.0	23.1	46.0	46.0	46.0
Zimbabwe 1994	98.0	98.8	29.7	29.7	98.9	100.0	29.7	29.7	92.3	89.9	29.7	29.7	28.9	29.7	29.7	29.7
Near East/North Africa																
Egypt 1992	97.2	96.2	47.2	47.2	87.2	93.3	47.2	47.2	73.4	78.7	47.2	47.2	25.1	47.2	47.2	47.2
Jordan 1990-91	90.6	(94.8)	(19.6)	68.2	(83.9)	(19.6)	(19.6)	43.6	(63.7)	(19.6)	(19.6)	10.9	(19.6)	(19.6)	(19.6)	(19.6)
Morocco 1992	88.2	96.6	30.1	30.1	82.2	88.2	30.1	30.1	62.8	80.0	30.1	30.1	19.7	30.1	30.1	30.1
Turkey 1993	84.6	90.9	(39.9)	(39.9)	64.1	(74.1)	(39.9)	(39.9)	39.8	(62.5)	(39.9)	(39.9)	13.3	(39.9)	(39.9)	(39.9)
Asia																
Bangladesh 1993-94	98.1	98.8	92.2	92.2	97.5	99.4	92.2	92.2	94.7	97.1	92.2	92.2	87.2	92.2	92.2	92.2
Indonesia 1994	95.8	99.0	67.7	67.7	95.8	97.3	67.7	67.7	89.2	92.4	67.7	67.7	60.7	67.7	67.7	67.7
Kazakhstan 1995	75.7	(75.9)	(18.8)	(18.8)	(74.4)	*	(18.8)	(18.8)	54.3	*	(18.8)	(18.8)	(18.1)	(18.8)	(18.8)	(18.8)
Nepal 1996	100.0	99.5	86.7	86.7	99.0	99.4	86.7	86.7	96.2	96.6	86.7	86.7	91.2	86.7	86.7	86.7
Pakistan 1990-91	97.6	94.0	66.5	66.5	90.1	98.5	66.5	66.5	78.8	87.5	66.5	66.5	48.7	66.5	66.5	66.5
Philippines 1993	72.3	94.2	23.9	23.9	55.7	85.9	23.9	23.9	50.3	71.8	23.9	23.9	14.9	23.9	23.9	23.9

continued

Table C 3 *continued*

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Professional technical clerical managerial	Sales and service	Manual and domestic	Agricul tural												
Latin America/Caribbean																
Bolivia 1993 94	95 9	96 2	43 6	43 6	88 6	95 5	43 6	43 6	71 5	81 3	43 6	43 6	33 4	43 6	43 6	43 6
Brazil 1996	77 2	76 4	18 1	18 1	52 1	61 0	18 1	18 1	28 1	48 6	18 1	18 1	15 9	18 1	18 1	18 1
Colombia 1995	89 8	93 7	15 7	15 7	69 2	79 3	15 7	15 7	43 4	49 9	15 7	15 7	16 0	15 7	15 7	15 7
Dominican Republic 1991	75 5	83 1	11 0	11 0	36 3	73 7	11 0	11 0	29 6	54 2	11 0	11 0	9 4	11 0	11 0	11 0
Guatemala 1995	96 3	98 2	54 4	54 4	93 0	97 6	54 4	54 4	68 0	88 4	54 4	54 4	36 2	54 4	54 4	54 4
Haiti 1994	93 4	100 0	33 1	33 1	(94 0)	97 0	33 1	33 1	(74 7)	92 8	33 1	33 1	(15 4)	33 1	33 1	33 1
Paraguay 1990	86 3	87 4	11 1	11 1	70 3	88 4	11 1	11 1	35 6	57 0	11 1	11 1	7 3	11 1	11 1	11 1
Peru 1996	97 4	99 7	45 0	45 0	92 0	97 4	45 0	45 0	76 9	89 2	45 0	45 0	49 2	45 0	45 0	45 0

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table C 4 Children currently breastfeeding, by age and birth order

Among children born in the preceding two years the percentage currently breastfeeding by age and birth order Demographic and Health Surveys 1990-1996

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	First or second	Second or third	Fourth or fifth	Sixth or higher	First or second	Second or third	Fourth or fifth	Sixth or higher	First or second	Second or third	Fourth or fifth	Sixth or higher	First or second	Second or third	Fourth or fifth	Sixth or higher
Sub Saharan Africa																
Burkina Faso 1993	99.4	100.0	99.7	98.4	98.9	(100.0)	100.0	100.0	95.8	96.7	99.5	98.8	69.4	85.1	86.3	85.5
Cameroon 1991	99.1	(100.0)	99.1	95.7	85.2	(94.6)	98.3	98.4	78.1	*	(78.0)	(96.4)	31.1	(37.2)	29.2	42.1
Central African Republic 1994 95	100.0	100.0	99.2	100.0	99.1	100.0	100.0	98.5	96.7	95.6	96.9	96.7	37.7	(53.0)	61.0	62.9
Côte d'Ivoire 1994	98.6	95.1	97.0	97.0	96.9	97.3	96.6	98.9	90.9	96.2	90.9	92.4	35.3	34.5	47.7	66.4
Ghana 1993	98.0	98.2	100.0	100.0	99.1	(97.8)	98.1	(100.0)	92.4	*	95.4	(100.0)	44.6	(55.3)	(46.5)	(76.2)
Kenya 1993	99.5	97.2	98.3	97.6	99.0	100.0	99.8	97.4	91.2	88.9	94.0	87.3	53.3	34.6	62.7	59.0
Madagascar 1992	97.7	98.7	99.5	98.9	98.6	96.7	99.1	99.2	85.7	(98.9)	85.5	95.9	30.3	(37.4)	45.3	64.0
Malawi 1992	100.0	97.5	98.1	99.1	97.7	(100.0)	98.0	100.0	93.2	(93.2)	92.8	91.8	51.0	(56.9)	53.7	62.2
Mali 1995	99.3	100.0	100.0	99.6	98.9	100.0	100.0	99.8	92.5	87.7	90.6	98.1	51.3	60.7	60.4	69.2
Namibia 1992	90.9	94.3	92.1	97.5	82.2	(89.6)	85.2	93.3	66.6	(60.6)	65.3	79.1	15.7	32.0	27.2	22.5
Niger 1992	97.9	99.3	98.6	98.7	100.0	96.4	98.3	99.0	95.8	93.1	92.8	97.8	54.5	(65.9)	58.9	60.9
Nigeria 1990	95.6	96.8	99.6	98.9	97.1	98.5	96.5	97.2	84.9	88.6	81.0	91.7	35.4	(34.9)	44.1	55.7
Rwanda 1992	100.0	96.8	99.0	100.0	99.4	(97.5)	98.6	100.0	96.6	(97.6)	99.6	99.3	71.0	(85.6)	89.1	92.2
Senegal 1992 93	99.5	100.0	99.3	99.5	98.1	96.2	97.6	98.1	89.8	(87.8)	91.9	97.7	33.3	*	61.3	54.3
Tanzania 1991 92	99.4	100.0	99.6	99.1	97.1	100.0	100.0	96.9	92.7	96.0	95.0	95.5	48.2	58.1	54.3	70.8
Uganda 1995	98.8	97.2	99.8	98.4	97.8	94.6	98.3	98.4	84.0	89.2	90.3	92.5	33.2	37.1	46.0	45.4
Zambia 1992	100.0	98.8	97.8	98.7	98.9	98.6	98.4	100.0	88.4	(92.9)	91.2	91.6	24.1	33.7	32.9	49.4
Zimbabwe 1994	98.8	97.9	100.0	99.3	98.8	(98.7)	98.0	100.0	86.8	(94.1)	(89.0)	(91.2)	17.0	(19.4)	(34.1)	39.1
Near East/North Africa																
Egypt 1992	97.5	97.0	97.2	93.8	87.4	92.5	90.9	93.5	68.5	79.8	81.1	81.8	23.6	30.8	46.9	57.7
Jordan 1990 91	88.0	86.8	96.7	90.5	60.0	74.6	73.5	73.4	25.6	45.5	47.7	57.5	3.0	3.4	10.8	22.9
Morocco 1992	85.2	88.3	94.7	91.9	65.2	(73.3)	90.8	93.0	35.0	64.9	77.5	79.8	7.0	(14.6)	30.5	28.9
Turkey 1993	86.8	83.9	93.2	(94.6)	59.4	(79.5)	(75.1)	(78.5)	39.9	(49.1)	(64.0)	(73.7)	7.5	(16.6)	(34.8)	*
Asia																
Bangladesh 1993 94	99.0	98.4	99.1	95.3	97.0	98.1	100.0	(100.0)	94.3	94.7	95.8	100.0	83.4	87.0	88.9	90.7
India 1992 93	97.1	98.5	98.3	96.7	94.1	96.2	96.9	97.0	84.4	89.1	92.4	90.0	59.2	69.9	78.7	79.8
Indonesia 1994	97.6	95.4	98.0	96.7	93.8	94.5	94.7	97.1	87.0	87.7	89.4	92.0	60.8	64.2	63.6	73.7
Kazakhstan 1995	76.4	*	*	*	66.1	*	*	*	36.3	*	*	*	12.0	*	*	*
Nepal 1996	100.0	100.0	98.6	100.0	98.2	100.0	100.0	100.0	96.8	98.2	93.1	98.8	84.6	91.5	90.6	90.3
Pakistan 1990 91	96.1	98.2	94.1	93.6	88.1	84.8	95.1	89.4	74.5	87.0	70.1	85.0	32.3	(61.6)	68.4	54.8
Philippines 1993	77.2	78.7	80.9	84.9	58.5	61.4	75.1	73.5	53.4	50.3	59.8	65.2	10.9	24.1	18.0	31.3

continued

Table C 4 *continued*

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	First or second	Second or third	Fourth or fifth	Sixth or higher	First or second	Second or third	Fourth or fifth	Sixth or higher	First or second	Second or third	Fourth or fifth	Sixth or higher	First or second	Second or third	Fourth or fifth	Sixth or higher
Latin America/Caribbean																
Bolivia 1993 94	94 1	93 9	96 6	96 3	84 3	88 6	91 5	92 7	71 6	(64 7)	77 3	79 2	23 9	45 5	35 6	52 4
Brazil 1996	75 6	76 0	81 3	(69 5)	47 4	(55 7)	(49 9)	(65 2)	27 2	35 0	(55 9)	(50 9)	11 9	(15 4)	29 1	(32 2)
Colombia 1995	89 9	88 3	(95 3)	(95 1)	59 7	72 3	80 4	(76 8)	35 4	45 8	(52 3)	*	11 0	25 2	21 4	(31 4)
Dominican Republic 1991	72 2	70 7	85 0	(91 1)	35 7	38 7	(69 4)	(70 4)	17 4	(27 3)	45 7	(59 7)	3 6	10 1	(15 2)	(8 8)
Guatemala 1995	94 1	97 3	99 5	97 5	87 9	94 1	96 8	94 6	61 5	73 0	87 5	90 0	30 6	28 7	60 8	59 1
Haiti 1994	93 7	94 4	100 0	98 5	85 6	(93 9)	94 4	98 2	68 0	(81 5)	88 5	(95 7)	12 1	(41 3)	(26 7)	32 6
Paraguay 1990	77 8	90 4	90 5	85 0	58 1	(59 3)	79 5	87 8	23 9	(40 5)	53 2	61 4	6 5	(7 2)	4 4	13 6
Peru 1996	97 0	98 1	98 2	97 6	89 0	93 7	93 4	96 2	72 1	71 4	89 6	89 4	35 7	41 5	49 9	55 0

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table C 5 Children currently breastfeeding, by age and length of preceding birth interval

Among children born in the preceding two years the percentage currently breastfeeding by age and length of preceding birth interval Demographic and Health Surveys 1990-1996

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months
Sub Saharan Africa																
Burkina Faso 1993	98.9	(100.0)	99.5	98.4	100.0	*	100.0	98.0	91.8	(100.0)	99.2	95.0	(65.4)	(89.3)	81.4	(88.5)
Cameroon 1991	98.3	(98.5)	98.2	(98.8)	(80.6)	(93.8)	97.0	(94.5)	74.7	(83.7)	85.1	(71.5)	(26.0)	(44.5)	29.5	(49.7)
Central African Republic 1994-95	100.0	(100.0)	100.0	99.0	98.4	(100.0)	100.0	98.1	98.5	(93.2)	96.7	(95.5)	35.8	(39.9)	58.0	(67.4)
Côte d'Ivoire 1994	98.1	96.8	98.4	94.5	100.0	(97.8)	97.0	95.8	92.8	(87.6)	92.6	92.0	31.6	(54.4)	51.8	35.4
Ghana 1993	97.2	*	100.0	98.4	98.2	*	99.1	98.5	88.9	*	94.4	98.1	(39.1)	*	57.9	(75.0)
Kenya 1993	99.0	100.0	98.2	97.4	99.7	100.0	98.6	96.6	88.7	87.2	93.0	89.3	50.3	46.8	54.2	65.2
Madagascar 1992	98.1	99.2	98.0	100.0	99.2	98.6	98.2	(98.9)	86.4	86.5	92.5	96.4	29.0	43.3	48.7	(55.3)
Malawi 1992	100.0	97.8	99.2	98.1	98.4	(100.0)	98.3	100.0	92.5	(96.6)	92.6	(89.4)	(44.0)	(55.3)	55.9	(68.8)
Mali 1995	99.4	100.0	99.5	100.0	100.0	98.5	99.6	100.0	90.0	89.3	95.2	94.1	49.6	59.0	63.9	61.1
Namibia 1992	89.1	96.8	97.2	88.3	92.2	(84.2)	87.7	75.4	68.6	(57.1)	77.9	59.9	18.2	(25.0)	23.1	25.2
Niger 1992	100.0	98.7	97.9	100.0	100.0	100.0	98.8	96.6	98.2	91.4	96.3	(94.7)	(46.3)	54.6	62.4	(70.6)
Nigeria 1990	92.3	99.0	98.9	98.1	97.1	100.0	97.1	95.7	84.6	85.5	86.3	90.1	46.6	38.7	40.3	52.5
Rwanda 1992	100.0	100.0	99.2	98.6	99.5	(100.0)	98.8	(99.1)	97.8	(95.8)	98.7	(99.3)	62.9	(70.0)	91.2	(94.8)
Senegal 1992-93	100.0	100.0	99.1	100.0	(98.0)	94.0	99.5	94.3	90.8	(93.5)	91.7	97.0	(28.3)	(55.9)	53.7	(45.0)
Tanzania 1991-92	98.9	98.2	99.8	100.0	99.5	97.8	99.7	92.2	95.0	92.9	96.4	88.0	47.4	55.3	56.1	71.7
Uganda 1995	98.4	98.5	98.4	100.0	100.0	98.7	96.1	97.8	80.0	89.6	90.7	90.3	34.0	36.5	40.6	49.2
Zambia 1992	100.0	100.0	98.4	98.9	98.0	98.1	100.0	98.4	85.5	95.4	92.5	87.3	19.2	(34.4)	37.2	(50.1)
Zimbabwe 1994	98.4	(98.0)	98.8	100.0	98.0	*	99.6	100.0	86.4	*	96.8	83.0	20.1	*	29.3	26.7
Near East/North Africa																
Egypt 1992	96.5	96.8	96.4	96.8	87.9	82.9	94.6	91.4	69.1	78.0	80.8	71.0	23.2	35.0	42.8	47.6
Jordan 1990-91	85.8	91.6	92.2	89.7	55.9	71.2	75.0	(63.3)	16.4	44.1	53.2	(59.4)	2.9	9.3	16.9	(25.1)
Morocco 1992	81.9	89.3	94.2	87.2	58.4	79.7	88.5	81.7	(22.4)	60.9	75.2	65.6	8.2	16.4	21.7	28.1
Turkey 1993	87.0	93.7	86.5	89.0	57.0	66.9	80.4	63.8	33.7	(62.1)	54.9	57.9	8.8	(20.1)	14.7	16.8
Asia																
Bangladesh 1993-94	99.4	100.0	97.2	98.7	97.7	(100.0)	99.2	96.2	94.7	(96.6)	94.8	97.4	79.1	(81.3)	91.9	87.6
India 1992-93	96.6	98.4	98.0	97.1	94.3	95.8	96.2	95.3	83.2	84.3	89.7	92.7	52.8	69.2	72.2	77.1
Indonesia 1994	96.5	96.7	97.2	97.8	94.2	89.5	96.2	95.2	86.0	87.6	91.5	87.3	61.3	55.7	60.9	70.1
Kazakhstan 1995	77.6	*	(93.4)	*	(59.7)	*	*	*	(34.3)	*	*	*	(5.6)	*	(38.0)	*
Nepal 1996	100.0	100.0	99.8	98.5	97.9	98.1	100.0	100.0	96.2	98.2	95.7	98.4	78.1	82.6	92.5	94.3
Pakistan 1990-91	95.6	96.3	96.3	93.0	89.9	80.1	93.9	90.8	72.1	73.9	83.1	79.1	23.1	50.3	60.1	65.1
Philippines 1993	72.9	75.7	88.0	79.5	56.6	59.5	76.4	62.1	47.5	56.3	62.3	56.3	7.7	20.6	23.6	19.6

continued

Table C 5 *continued*

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months	First birth	< 24 months	24-47 months	48+ months
Latin America/Caribbean																
Bolivia 1993-94	93.7	93.3	96.8	95.0	84.7	83.3	95.8	81.8	69.4	60.6	80.2	74.8	22.8	30.9	47.6	36.3
Brazil 1996	67.7	74.1	84.5	79.6	43.8	57.1	43.0	62.3	27.7	24.2	45.9	37.1	11.1	14.3	19.0	26.1
Colombia 1995	89.1	94.1	92.5	88.9	52.9	74.1	75.6	68.6	36.9	42.8	44.4	47.4	9.0	15.6	23.3	22.8
Dominican Republic 1991	65.9	75.6	77.1	(91.0)	20.9	42.1	58.3	(57.9)	13.6	21.1	57.0	(16.2)	1.4	5.9	7.7	(18.9)
Guatemala 1995	92.9	96.9	98.5	95.4	84.4	87.3	98.0	93.0	59.7	70.8	88.5	70.5	24.1	36.3	56.6	50.0
Haiti 1994	89.7	(100.0)	98.8	(93.5)	(83.6)	(91.5)	95.2	(93.2)	69.4	(77.7)	89.0	(75.6)	5.6	(28.5)	29.9	(35.5)
Paraguay 1990	77.1	90.8	83.1	79.8	56.7	71.2	80.3	(60.9)	15.9	34.2	58.0	(50.2)	2.9	3.5	14.9	(14.7)
Peru 1996	95.7	97.5	99.4	96.9	86.7	92.6	96.6	89.6	71.2	77.9	85.1	74.8	31.9	43.7	48.5	45.1

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table C 6 Children currently breastfeeding, by age and provider of antenatal care

Among children born in the preceding two years the percentage currently breastfeeding by age and provider of antenatal care Demographic and Health Surveys 1990-1996

Region country and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one
Sub Saharan Africa												
Burkina Faso 1993	*	99.0	99.5	*	99.3	100.0	*	97.1	99.0	*	77.8	87.4
Cameroon 1991	96.4	99.7	96.1	(84.5)	92.0	100.0	(74.9)	80.0	*	(8.8)	29.5	(66.8)
Central African Republic 1994-95	*	100.0	99.5	*	99.0	100.0	*	97.2	96.9	*	45.0	69.8
Côte d'Ivoire 1994	*	97.1	98.4	*	97.7	95.6	*	92.2	94.4	*	42.1	(73.4)
Ghana 1993	98.9	99.2	98.4	98.4	98.7	(100.0)	91.9	96.6	(89.7)	44.1	55.5	(64.3)
Kenya 1993	95.4	99.4	(100.0)	97.5	99.1	*	90.1	90.5	*	43.6	55.9	*
Madagascar 1992	98.2	98.4	99.1	(98.4)	98.4	99.4	(81.3)	92.1	91.2	(50.3)	45.8	41.5
Malawi 1992	(100.0)	99.2	(96.7)	*	99.1	(95.9)	(97.7)	91.8	*	*	54.4	*
Mali 1995	*	99.2	100.0	*	99.6	99.7	*	94.7	92.6	*	54.6	66.4
Namibia 1992	(76.8)	95.0	(96.9)	(64.0)	90.6	(81.2)	(54.7)	69.4	(74.7)	(16.7)	20.0	(45.7)
Niger 1992	*	99.3	98.3	*	99.5	98.5	*	95.8	95.2	*	45.0	66.3
Nigeria 1990	97.8	98.9	96.8	95.0	100.0	97.4	81.9	88.1	89.3	28.5	42.4	64.5
Rwanda 1992	*	99.3	(100.0)	*	99.5	*	*	98.2	*	*	84.9	*
Senegal 1992-93	(100.0)	99.3	100.0	*	98.4	98.7	*	93.3	90.4	*	40.8	71.7
Tanzania 1991-92	(100.0)	99.3	100.0	(100.0)	98.0	(98.0)	(89.4)	94.9	(91.4)	(59.6)	56.4	(58.2)
Uganda 1995	97.6	98.7	99.7	96.5	98.0	(93.8)	(82.5)	88.4	(91.6)	19.6	41.5	(45.9)
Zambia 1992	(92.8)	99.6	96.8	*	99.2	(100.0)	*	90.5	(94.5)	*	34.3	(47.4)
Zimbabwe 1994	96.5	99.4	(100.0)	99.0	98.8	*	(80.0)	90.8	*	25.4	25.3	*
Near East/North Africa												
Egypt 1992	95.7	*	97.8	88.4	*	92.2	72.8	*	80.0	33.4	*	41.7
Jordan 1990-91	89.0	96.9	94.0	67.7	(72.8)	75.0	42.5	35.1	57.2	11.0	(22.7)	13.4
Morocco 1992	70.1	88.0	95.5	47.4	82.0	90.0	28.0	(65.8)	74.3	12.3	(8.2)	24.7
Turkey 1993	86.7	88.9	90.8	58.5	70.5	73.7	39.0	43.5	63.3	8.7	(5.9)	25.6
Asia												
Bangladesh 1993-94	98.4	100.0	98.2	94.8	(100.0)	98.8	92.2	(89.0)	97.5	85.7	(88.4)	86.4
India 1992-93	96.3	96.3	98.8	93.0	95.5	97.6	81.2	90.0	92.1	58.5	65.9	75.0
Indonesia 1994	92.1	98.4	95.1	84.5	95.6	98.6	72.3	91.1	89.4	49.4	64.4	68.9
Kazakhstan 1995	79.4	(82.6)	*	62.0	*	*	47.1	(61.7)	*	23.1	(20.0)	*
Nepal 1996	98.4	100.0	99.9	98.4	100.0	99.0	94.1	96.9	96.9	76.8	90.2	89.0
Pakistan 1990-91	95.6	*	95.3	75.9	*	94.8	62.4	*	82.3	36.8	*	55.6
Philippines 1993	64.1	89.6	89.6	45.0	77.3	81.2	37.5	64.9	72.2	10.9	23.1	23.9

continued

Table C 6 *continued*

Region country and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA, other no one	Doctor	Other medical person	TBA other no one	Doctor	Other medical person	TBA other no one
Latin America/Caribbean												
Bolivia 1993 94	92 1	*	98 3	82 1	*	95 4	63 9	*	83 4	27 3	*	46 6
Brazil 1996	74 7	(87 5)	80 7	49 1	(42 7)	(62 0)	34 1	(40 0)	(24 5)	15 8	*	20 1
Colombia 1995	89 4	*	96 6	63 4	*	(83 1)	40 8	*	(50 7)	15 4	*	23 1
Dominican Republic 1991	82 2	67 2	*	47 8	31 7	*	41 8	15 7	*	9 9	4 8	*
Guatemala 1995	94 1	98 9	98 3	89 9	89 6	95 4	65 6	78 3	83 7	32 6	39 7	54 1
Haiti 1994	90 5	100 0	99 2	84 8	96 9	94 5	68 1	90 3	91 5	16 1	31 6	32 9
Paraguay 1990	83 9	81 2	92 9	(64 0)	67 2	(78 5)	(45 3)	39 8	37 1	(5 7)	8 1	11 2
Peru 1996	95 2	99 1	97 4	83 5	94 9	95 8	64 2	81 2	87 6	36 3	43 8	47 4

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

TBA = traditional birth attendant

Table C 7 Children currently breastfeeding, by age and type of delivery facility

Among children born in the preceding two years the percentage currently breastfeeding by age and type of delivery facility Demographic and Health Surveys 1990-1996

Region, country, and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	Public hosp clinic	Private hosp clinic	Non-medical home	Public hosp clinic	Private hosp clinic	Non-medical home	Public hosp clinic	Private hosp clinic	Non-medical home	Public hosp clinic	Private hosp clinic	Non-medical home
Sub Saharan Africa												
Burkina Faso 1993	99.6	*	99.3	99.1	*	100.0	97.5	*	97.8	73.0	*	87.2
Cameroon 1991	99.3	(94.5)	98.0	89.1	(90.9)	97.6	77.4	(72.3)	(90.7)	21.1	(24.7)	56.6
Central African Republic 1994-95	100.0	*	99.6	98.5	*	100.0	96.0	*	97.3	31.7	*	70.0
Côte d'Ivoire 1994	96.8	*	98.0	96.8	*	97.7	90.8	*	94.1	31.9	*	57.4
Ghana 1993	98.2	(100.0)	99.6	98.6	(100.0)	98.6	91.9	*	96.1	30.3	*	66.4
Kenya 1993	97.2	(99.0)	98.9	98.5	(98.8)	98.9	90.2	(81.1)	92.4	50.3	(49.9)	56.7
Madagascar 1992	98.0	*	98.8	98.7	*	98.8	93.7	*	89.1	47.4	*	42.1
Malawi 1992	99.2	99.3	98.6	98.4	(98.9)	99.1	91.7	(87.7)	95.8	52.5	(62.3)	58.2
Mali 1995	99.5	*	99.7	99.9	*	99.7	93.0	*	93.0	50.9	*	65.2
Namibia 1992	91.4	*	99.0	84.2	*	92.3	63.2	*	81.0	17.1	*	37.1
Niger 1992	98.6	*	98.5	99.4	*	98.8	92.3	*	95.9	37.9	*	64.6
Nigeria 1990	99.7	*	96.6	94.9	*	98.0	73.3	*	92.0	20.0	*	57.2
Rwanda 1992	100.0	*	99.1	99.3	*	99.1	95.7	*	99.0	71.8	*	88.3
Senegal 1992 93	99.6	*	99.4	98.1	*	99.4	93.3	*	91.8	36.9	*	57.3
Tanzania 1991-92	99.5	100.0	99.3	97.7	(100.0)	98.1	93.7	(97.4)	94.2	54.5	(59.5)	58.4
Uganda 1995	98.6	99.5	98.8	95.8	96.7	98.3	79.7	80.3	92.5	27.1	17.7	49.4
Zambia 1992	99.6	97.3	99.4	98.2	100.0	99.5	85.9	89.3	94.5	25.9	(32.7)	41.4
Zimbabwe 1994	99.3	*	99.6	99.1	*	98.5	87.5	*	92.2	23.3	*	29.1
Near East/North Africa												
Egypt 1992	97.2	95.1	96.7	83.3	82.1	93.4	74.6	73.2	76.3	34.2	22.3	40.2
Jordan 1990-91	90.3	87.1	97.3	70.5	59.8	76.5	43.4	42.5	49.3	15.6	7.4	8.3
Morocco 1992	79.8	*	94.8	66.3	*	87.9	38.2	*	76.0	10.1	*	23.3
Turkey 1993	87.8	(83.0)	90.3	57.7	*	79.5	41.5	*	61.6	8.7	*	24.7
Asia												
Bangladesh 1993 94	*	*	98.5	*	*	98.4	*	*	96.4	*	*	87.5
India 1992 93	95.9	94.4	98.3	93.7	86.6	97.3	81.7	67.3	91.4	60.6	41.0	72.5
Indonesia 1994	98.5	90.2	97.8	94.8	73.6	97.0	88.1	71.5	91.3	57.9	52.6	65.3
Kazakhstan 1995	79.3	*	*	68.0	*	*	52.9	*	*	20.6	*	*
Nepal 1996	95.6	*	100.0	(96.6)	*	99.3	(96.6)	*	96.7	(75.5)	*	88.9
Pakistan 1990 91	94.8	98.1	95.3	(74.6)	(68.6)	92.7	(60.6)	(59.8)	80.8	(19.2)	(40.5)	55.7
Philippines 1993	71.3	51.7	86.9	52.4	23.8	75.6	38.5	(15.5)	65.8	16.0	2.4	21.7

continued

Table C.7 *continued*

Region, country, and date	0 to 5 months			6 to 9 months			12 to 15 months			20 to 23 months		
	Public hosp clinic	Private hosp clinic	Non medical, home	Public hosp clinic	Private hosp clinic	Non medical home	Public hosp clinic	Private hosp clinic	Non-medical, home	Public hosp clinic	Private hosp clinic	Non medical, home
Latin America/Caribbean												
Bolivia 1993-94	91.5	(90.5)	97.7	80.6	75.8	95.8	61.2	(51.5)	86.4	25.5	(24.9)	45.1
Brazil 1996	73.8	83.9	(86.5)	50.7	(41.7)	(55.1)	35.7	27.6	*	16.7	(1.2)	(32.8)
Colombia 1995	90.6	(89.9)	91.7	61.0	(53.0)	91.3	37.5	(34.2)	62.3	14.1	(13.8)	25.0
Dominican Republic 1991	77.1	66.5	(88.9)	40.5	31.7	*	33.3	9.9	(62.7)	8.3	3.4	*
Guatemala 1995	96.6	(75.2)	98.1	82.6	*	98.7	63.1	(36.0)	84.3	30.0	(47.3)	49.1
Haiti 1994	(89.5)	*	98.3	*	*	95.1	*	*	86.8	(22.2)	*	27.2
Paraguay 1990	80.7	72.8	89.3	56.9	(58.0)	80.6	31.2	(37.1)	48.3	10.3	(6.9)	7.2
Peru 1996	96.5	91.2	99.2	88.2	74.1	96.8	68.6	65.3	89.2	40.7	28.8	46.1

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table C 8 Children currently breastfeeding, by age and provider of delivery assistance

Among children born in the preceding two years the percentage currently breastfeeding by age and provider of delivery assistance Demographic and Health Surveys 1990-1996

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Doctor	Other medical person	Trad birth attend	Other no one	Doctor	Other medical person	Trad birth attend	Other no one	Doctor	Other medical person	Trad birth attend	Other no one	Doctor	Other medical person	Trad birth attend	Other no one
Sub-Saharan Africa																
Burkina Faso 1993	*	99.6	99.3	98.7	*	99.0	100.0	100.0	*	97.3	98.7	97.0	*	72.1	91.5	82.3
Cameroon 1991	*	99.7	(100.0)	97.3	*	91.1	(100.0)	96.3	*	77.8	*	(94.5)	*	25.3	*	56.2
Central African Republic 1994-95	*	100.0	99.2	100.0	*	98.4	100.0	100.0	*	96.0	97.2	97.6	*	30.0	75.6	69.1
Côte d'Ivoire 1994	*	96.4	97.0	99.1	*	97.4	97.0	98.2	*	91.0	92.6	95.5	*	34.2	58.8	55.1
Ghana 1993	*	99.2	99.2	99.1	*	99.0	98.7	98.4	*	95.2	97.1	94.6	*	34.7	69.3	(60.5)
Kenya 1993	95.7	98.6	99.3	98.8	(95.5)	99.6	100.0	98.1	(77.0)	90.4	94.5	91.7	54.7	49.6	63.3	52.9
Madagascar 1992	98.9	97.9	98.7	100.0	*	98.7	99.6	(97.8)	(94.7)	89.9	91.8	(89.1)	*	44.5	44.1	*
Malawi 1992	(100.0)	99.2	98.3	99.0	*	98.5	97.7	100.0	*	90.6	(93.0)	97.7	*	55.7	(65.7)	53.5
Mali 1995	*	99.6	99.6	99.7	*	99.4	99.3	100.0	*	94.9	95.2	91.4	*	53.2	74.4	60.7
Namibia 1992	77.4	93.6	*	98.8	(66.6)	86.3	*	96.1	(45.5)	67.7	*	81.8	(6.8)	18.8	*	38.5
Niger 1992	*	98.6	98.5	98.7	*	99.0	98.5	99.2	*	91.8	95.5	96.6	*	35.5	55.7	74.3
Nigeria 1990	99.2	100.0	94.9	97.6	92.9	95.8	96.6	98.9	61.7	77.2	87.6	94.7	16.7	20.2	52.4	61.5
Rwanda 1992	*	100.0	100.0	98.9	*	99.6	(100.0)	98.8	*	95.8	(100.0)	98.8	*	71.0	(98.1)	86.2
Senegal 1992-93	*	99.6	100.0	98.7	*	97.6	99.0	98.7	*	92.6	93.4	91.6	*	37.4	55.9	59.4
Tanzania 1991-92	(100.0)	99.5	99.3	99.2	(93.2)	98.9	100.0	97.7	(73.8)	96.7	93.1	94.4	(61.6)	55.0	52.8	59.8
Uganda 1995	(94.6)	99.8	96.8	99.1	(96.3)	96.3	98.7	98.2	*	81.5	95.5	92.1	(13.7)	26.8	60.7	46.4
Zambia 1992	(100.0)	98.9	100.0	98.9	*	99.5	(100.0)	99.4	*	88.1	(93.9)	94.7	*	27.6	(41.2)	41.6
Zimbabwe 1994	(93.7)	99.5	100.0	99.1	(98.1)	99.3	100.0	(96.6)	*	89.0	(92.7)	(92.1)	(24.1)	23.6	(24.8)	(36.9)
Near East/North Africa																
Egypt 1992	96.9	96.2	96.3	(97.9)	82.9	(96.5)	94.8	(88.1)	72.9	(62.5)	78.7	(79.6)	30.1	(31.4)	41.4	(50.3)
Jordan 1990-91	87.8	93.0	(93.7)	*	62.6	75.3	(79.1)	*	42.5	44.3	(52.3)	*	11.5	14.0	12.5	*
Morocco 1992	*	76.8	96.9	95.1	*	62.1	88.4	90.9	*	38.5	78.9	75.0	*	8.4	25.2	22.6
Turkey 1993	86.7	87.6	(94.0)	(89.6)	51.9	68.0	*	(86.0)	38.5	50.3	*	*	6.3	13.5	*	*
Asia																
Bangladesh 1993-94	(96.7)	(100.0)	98.4	98.5	*	(96.4)	98.5	100.0	*	(80.8)	96.7	98.0	*	*	87.5	90.0
India 1992-93	95.1	96.7	98.4	98.6	90.6	94.0	97.1	98.1	75.4	82.6	91.5	92.9	51.8	56.8	74.6	75.2
Indonesia 1994	91.2	96.3	98.3	100.0	76.7	94.7	97.0	96.9	57.3	88.6	92.3	89.3	58.5	56.7	68.5	53.7
Kazakhstan 1995	78.7	(82.5)	*	*	62.9	*	*	*	48.3	*	*	*	23.5	(15.3)	*	*
Nepal 1996	(96.4)	(97.9)	100.0	100.0	(100.0)	*	100.0	99.1	(91.8)	*	95.0	97.2	(75.6)	*	89.0	88.8
Pakistan 1990-91	95.4	99.2	95.9	91.0	72.8	(79.9)	92.1	97.5	61.2	75.1	80.3	86.1	26.8	*	53.0	(75.7)
Philippines 1993	63.0	81.3	89.5	*	39.4	65.3	82.0	*	29.7	62.5	64.6	*	9.6	15.4	26.1	*

continued

Table C 8 *continued*

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Doctor	Other medical person	Trad birth attend	Other no one	Doctor	Other medical person	Trad birth attend	Other no one	Doctor	Other medical person	Trad birth attend	Other no one	Doctor	Other medical person	Trad birth attend	Other, no one
Latin America/Caribbean																
Bolivia 1993 94	91 2	(98 0)	100 0	97 2	77 8	(97 3)	(92 9)	97 2	56 6	*	(72 7)	92 9	27 3	*	(27 7)	49 7
Brazil 1996	74 2	79 5	83 7	*	47 4	(59 3)	(65 8)	*	33 2	(38 5)	(30 4)	*	16 1	(10 9)	(28 7)	*
Colombia 1995	90 3	92 2	(90 1)	(94 5)	59 6	(89 4)	*	(84 7)	37 2	(48 9)	(61 8)	*	13 5	(24 7)	(19 1)	(30 6)
Dominican Republic 1991	75 5	71 4	(88 9)	*	41 2	33 3	*	*	33 5	18 0	*	*	4 8	11 5	*	*
Guatemala 1995	94 2	(87 5)	97 9	100 0	79 4	(96 7)	99 0	97 6	55 5	(85 9)	82 2	94 8	31 4	*	48 4	52 7
Haiti 1994	(81 9)	96 4	98 0	(100 0)	*	94 7	95 1	*	(49 7)	86 7	87 8	*	(8 5)	25 4	30 5	*
Paraguay 1990	(74 3)	80 8	91 8	*	*	65 4	79 6	*	(25 5)	38 7	49 7	*	(14 8)	7 5	7 4	*
Peru 1996	95 1	97 7	98 9	99 3	82 6	92 4	97 4	96 3	64 1	77 3	87 1	91 8	35 5	43 6	43 5	51 6

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table C 9 Children currently breastfeeding, by age and mother's current work status

Among children born in the preceding two years the percentage currently breastfeeding by age and mother's current work status Demographic and Health Surveys 1990-1996

Region, country, and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for	
			Self family	Others			Self family	Others			Self family	Others			Self family	Others
Sub-Saharan Africa																
Burkina Faso 1993	99.8	99.6	98.9	*	99.1	100.0	100.0	*	98.2	98.6	96.7	*	82.7	73.2	86.3	*
Cameroon 1991	96.8	(98.5)	100.0	*	88.1	(92.9)	100.0	*	73.5	(87.0)	93.8	*	25.8	(45.8)	39.1	*
Central African Republic	100.0	(100.0)	99.7	*	98.6	*	99.5	*	90.9	(97.0)	97.9	*	25.9	*	63.8	*
Côte d'Ivoire 1994	97.1	98.1	98.0	*	96.0	(96.8)	97.8	*	89.7	(91.8)	94.0	*	33.6	(31.3)	53.7	*
Ghana 1993	97.7	100.0	99.4	*	100.0	(97.9)	98.5	*	(94.1)	(90.5)	97.4	*	(40.0)	(51.2)	59.2	*
Kenya 1993	99.6	95.9	97.5	(98.9)	98.4	100.0	97.4	(100.0)	88.7	91.3	94.6	(87.8)	52.7	49.0	59.0	(56.9)
Madagascar 1992	97.5	100.0	98.4	(95.8)	100.0	98.9	98.5	*	92.8	(88.8)	89.3	*	40.4	43.9	48.0	*
Malawi 1992	98.7	100.0	(100.0)	*	98.6	(100.0)	(100.0)	*	94.5	(96.3)	(85.4)	*	54.3	(50.3)	*	*
Mali 1995	99.8	99.2	99.6	*	99.6	99.7	99.6	*	90.4	98.6	95.5	*	59.6	56.9	64.4	*
Namibia 1992	96.2	(91.5)	*	78.1	90.8	(85.0)	*	(61.5)	75.7	(63.8)	*	(40.2)	25.4	*	*	18.5
Niger 1992	98.1	99.6	99.1	*	99.3	98.5	98.1	*	94.7	96.4	98.3	*	53.0	60.5	73.1	*
Nigeria 1990	96.1	97.4	99.2	(100.0)	97.0	96.3	98.4	*	86.5	82.4	90.9	*	53.3	38.9	44.0	*
Rwanda 1992	(100.0)	(100.0)	99.3	*	*	(100.0)	99.0	*	*	(98.6)	98.5	*	*	*	85.2	*
Senegal 1992-93	99.5	(100.0)	99.5	*	96.6	(100.0)	98.3	*	93.6	94.1	90.9	*	43.5	(23.1)	63.6	*
Tanzania 1991-92	99.6	100.0	99.2	(100.0)	94.1	99.0	99.7	*	91.1	97.9	95.0	*	54.7	63.2	52.3	*
Uganda 1995	98.2	98.4	100.0	(95.3)	97.7	99.2	97.8	*	83.7	96.1	86.8	*	46.1	37.3	37.4	*
Zambia 1992	99.0	100.0	98.3	(100.0)	99.5	98.6	99.2	*	89.0	96.5	91.6	*	31.9	44.1	36.8	*
Zimbabwe 1994	99.5	98.5	100.0	(93.7)	98.5	98.4	100.0	*	93.0	(85.0)	(84.4)	*	29.3	14.5	(28.0)	*
Near East/North Africa																
Egypt 1992	97.1	*	*	95.4	88.9	*	*	94.3	76.5	*	*	71.0	36.3	*	*	38.8
Jordan 1990-91	90.1	*	*	90.6	70.1	*	*	(57.0)	44.7	*	*	(38.5)	13.1	*	*	(4.3)
Morocco 1992	90.4	(90.0)	*	82.7	80.2	(80.8)	*	(62.5)	64.8	(60.0)	*	(52.8)	18.0	(20.0)	*	(24.2)
Turkey 1993	89.3	*	*	*	66.6	*	*	*	44.4	*	*	*	14.3	*	*	*
Asia																
Bangladesh 1993-94	98.5	(96.6)	*	*	98.6	(96.0)	*	*	95.4	(98.2)	*	*	86.7	(91.3)	*	*
India 1992-93	97.4	99.2	99.2	96.9	95.1	93.4	97.4	96.0	86.9	86.0	89.4	89.4	63.2	68.6	74.8	79.3
Kazakhstan 1995	79.6	*	*	*	68.9	*	*	*	52.4	*	*	*	20.4	*	*	*
Nepal 1996	99.2	100.0	100.0	(100.0)	98.0	(100.0)	99.6	*	95.1	98.5	96.8	(100.0)	86.2	(84.1)	88.5	(93.5)
Pakistan 1990-91	95.8	(88.5)	*	*	89.2	(95.2)	*	*	76.8	(86.7)	*	*	50.7	(50.1)	*	*
Philippines 1993	83.3	76.6	(71.9)	52.3	68.9	70.8	62.7	42.4	61.4	55.2	51.9	36.6	16.6	27.5	(19.8)	18.4

continued

Table C 9 *continued*

Region, country, and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for	
			Self family	Others			Self family	Others			Self family	Others			Self family	Others
Latin America/Caribbean																
Bolivia 1993 94	94 5	94 3	98 6	(86.5)	83 4	(96 4)	97 8	(79 9)	64 1	(63 2)	90 2	(68 6)	30 1	(31 5)	49 4	(23 7)
Brazil 1996	76 6	*	*	*	47 4	*	*	*	38 0	(15 4)	*	*	16 9	(9 7)	*	*
Colombia 1995	91 4	(94 8)	*	83 8	68 8	(83 2)	*	46 2	40 9	(49 6)	*	41 9	16 0	(18 6)	(18 2)	11 9
Dominican Republic 1991	76 9	(78 2)	*	65 1	49 0	(36 7)	*	27 3	30 6	(28 6)	*	(23 0)	7 0	(3 3)	*	10 1
Guatemala 1995	96 9	92 7	96 8	(93 3)	93 2	90 7	(67 9)	(99 1)	75 9	72 2	76 1	(63 7)	44 2	(46 7)	(29 5)	(44 0)
Haiti 1994	95 8	*	98 5	*	93 5	*	93 6	*	78 0	*	85 5	*	20 6	*	29 7	*
Paraguay 1990	85 7	(77 9)	*	(66 6)	70 7	(83 0)	*	(33 4)	42 9	(47 8)	*	(21 0)	8 2	(15 2)	*	(2 4)
Peru 1996	97 7	97 2	99 0	91 2	91 6	95 9	91 4	83 1	78 9	69 1	88 2	62 6	37 5	50 1	53 4	32 1

Note The survey questionnaire used in Indonesia in 1994 did not ask current work status

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table C 10 Children currently breastfeeding, by age and mother's occupation

Among children born in the preceding two years the percentage currently breastfeeding by age and mother's occupation Demographic and Health Surveys 1990-1996

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Professional technical clerical managerial	Sales and service	Manual and domestic	Agricul tural												
Sub-Saharan Africa																
Burkina Faso 1993	97.9	100.0	*	99.4	(100.0)	*	(100.0)	100.0	(98.7)	(96.9)	*	98.7	(74.4)	*	(87.6)	73.6
Cameroon 1991	*	100.0	97.6	(100.0)	*	(83.2)	98.5	*	*	(95.4)	(58.0)	(86.4)	*	*	44.9	*
Central African Republic 1994-95	*	99.7	(100.0)	100.0	*	*	99.5	(100.0)	*	97.6	(96.3)	(90.5)	*	*	67.7	(34.0)
Côte d'Ivoire 1994	*	97.2	(95.9)	95.8	*	(94.9)	97.7	95.0	*	95.7	(74.7)	91.1	*	(26.2)	60.7	26.0
Ghana 1993	(100.0)	100.0	(97.9)	(100.0)	(96.9)	(93.5)	100.0	(100.0)	(89.5)	100.0	(85.2)	*	(38.5)	*	69.9	*
Kenya 1993	(93.3)	97.0	97.0	100.0	*	99.6	99.6	98.4	*	95.2	(86.3)	92.4	*	(53.0)	51.3	62.3
Madagascar 1992	99.4	98.8	(98.2)	(95.3)	98.0	*	98.3	*	89.4	90.8	(82.0)	*	45.5	*	48.8	*
Malawi 1992	100.0	(100.0)	99.0	100.0	(100.0)	(100.0)	*	(98.9)	(95.0)	*	(93.6)	(89.0)	(59.6)	(48.9)	*	(49.4)
Mali 1995	98.8	100.0	100.0	99.2	(99.6)	(100.0)	100.0	99.6	(95.1)	96.2	(85.2)	91.8	(67.9)	(44.1)	66.9	39.0
Namibia 1992	91.9	*	(85.2)	*	79.1	(79.8)	*	*	58.7	*	*	*	21.2	*	*	*
Niger 1992	(99.1)	98.8	(94.5)	100.0	(95.9)	(96.0)	(97.8)	100.0	(96.9)	(100.0)	*	93.5	(76.0)	(43.7)	(75.6)	55.0
Nigeria 1990	*	99.3	99.3	95.2	*	95.7	99.5	98.0	*	92.4	67.0	87.8	*	25.1	45.1	29.9
Rwanda 1992	*	99.3	(100.0)	*	*	*	99.3	*	*	98.7	*	*	*	*	86.4	*
Senegal 1992 93	*	99.2	100.0	99.2	*	(93.1)	98.5	98.4	*	95.2	(86.0)	94.7	*	*	70.6	(33.3)
Tanzania 1991 92	100.0	99.1	100.0	*	100.0	(100.0)	99.8	*	97.6	95.8	(92.6)	*	54.6	(50.0)	58.0	*
Uganda 1995	(99.3)	99.3	99.4	96.8	*	(94.9)	98.3	94.9	*	91.5	(87.1)	86.2	*	32.8	38.4	27.0
Zambia 1992	97.7	100.0	100.0	99.0	(100.0)	(100.0)	100.0	98.1	(94.4)	97.1	(78.6)	(93.4)	(47.5)	(20.6)	41.3	(35.0)
Zimbabwe 1994	(100.0)	98.8	100.0	99.3	(97.3)	(98.5)	100.0	(100.0)	(86.7)	91.5	(72.6)	(94.9)	(24.0)	(16.0)	29.9	(20.6)
Near East/North Africa																
Egypt 1992	*	93.5	95.6	96.8	*	86.1	(96.2)	93.1	*	80.9	65.6	84.4	*	29.5	50.7	46.8
Jordan 1990-91	*	*	90.9	84.0	*	69.0	*	66.4	*	*	45.7	39.7	*	11.6	*	16.1
Morocco 1992	(84.4)	(100.0)	(85.7)	76.2	(73.3)	(48.7)	(96.3)	67.3	(51.4)	(83.9)	(26.5)	42.0	(15.6)	(12.9)	(36.0)	1.9
Turkey 1993	*	86.9	(95.3)	89.9	*	*	(62.8)	58.6	*	55.5	(48.0)	49.1	*	(3.4)	(25.7)	11.6
Asia																
Bangladesh 1993 94	*	*	(100.0)	98.2	*	(92.8)	*	100.0	(100.0)	*	(97.4)	92.6	(91.0)	*	*	85.1
India 1992 93	84.9	(92.7)	98.1	99.1	74.3	96.5	(90.7)	98.4	54.3	(93.4)	92.1	93.4	32.6	62.2	(56.1)	63.6
Indonesia 1994	97.4	97.0	95.6	95.9	(100.0)	87.6	95.8	91.7	(85.8)	92.3	80.6	84.4	(68.1)	54.7	71.1	64.5
Kazakhstan 1995	*	*	*	*	*	*	*	*	(50.3)	*	*	*	(11.4)	*	*	*
Nepal 1996	*	99.9	(100.0)	(100.0)	*	(96.9)	99.6	(100.0)	*	97.0	(96.9)	(100.0)	*	*	88.5	(82.1)
Pakistan 1990-91	(99.0)	(89.3)	92.1	93.2	(93.2)	65.4	*	86.1	(87.6)	*	56.3	73.6	(58.6)	36.7	*	49.5
Philippines 1993	73.4	(98.0)	64.6	67.5	62.5	(30.0)	86.0	58.0	47.4	74.7	(35.7)	38.6	12.9	(10.3)	30.4	15.3

continued

Table C 10 *continued*

Region country and date	0 to 5 months				6 to 9 months				12 to 15 months				20 to 23 months			
	Professional technical clerical managerial	Sales and service	Manual and domestic	Agricul- tural												
Latin America/Caribbean																
Bolivia 1993 94	(94 8)	98 3	87 4	(95 7)	*	72 7	100 0	(94 1)	(59 2)	93 6	(63 1)	(67 5)	*	23 6	54 9	*
Brazil 1996	75 6	*	76 5	74 3	(35 6)	40 2	*	53 7	26 2	*	37 1	24 6	(28 4)	23 2	*	11 6
Colombia 1995	(80 6)	*	86 5	94 9	*	(53 8)	*	57 8	*	*	(24 2)	37 9	(11 0)	(10 9)	(23 1)	17 0
Dominican Republic 1991	76 0	*	(65 5)	73 9	36 3	(33 3)	*	31 3	(29 7)	*	(5 7)	20 3	9 0	(0 0)	*	6 0
Guatemala 1995	96 8	(100 0)	90 9	(92 8)	89 2	76 7	(100 0)	(78 6)	70 3	(90 5)	(37 9)	(66 5)	35 1	18 6	(53 5)	(34 1)
Haiti 1994	*	(100 0)	(80 3)	(91 3)	*	(64 7)	*	*	*	*	(53 4)	*	*	*	*	*
Paraguay 1990	*	(95 8)	(80 7)	71 0	*	*	*	(48 1)	*	(55 0)	*	(23 6)	*	(1 6)	(9 7)	(5 9)
Peru 1996	96 8	100 0	96 2	95 6	90 8	81 8	99 6	88 7	71 4	94 7	60 4	71 4	46 6	33 1	54 6	26 7

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Appendix D

Measurement of Postpartum Durations

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PERSPECTIVES

The calculation of postpartum durations, such as the duration of breastfeeding, amenorrhea, or abstinence, can be made based on either the child or the mother. Although mothers may have more than one episode of the event, for example breastfeeding, during a specific period, each child has only one such episode. Each basis for calculation is valid because both answer different questions. "How long are children breastfed?" would be answered by calculations based on children, and "How long do women breastfeed?" would be answered by calculations based on women. The first question is unambiguous because for each child there is a single duration. However, the second question can be ambiguous because if a woman has had more than one child, each can be fed for a different duration. Calculations based on the child are used in this publication for all postpartum durations because they are unambiguous and less liable to bias.

Bias enters into the calculation of women-based durations if an attempt is made to select only a designated single episode per woman, such as the last birth, the next-to-last birth, the first birth in the period, and so forth. Last-birth durations are longer than the average of all durations and next-to-last are shorter (because to be included during a specific period the interval between the births needs to be shorter than the length of the period). A simple average of the next-to-last and last-birth durations alleviates most bias, while a weighted average of all births or a random selection of births eliminates the bias but is more complicated to apply.

FORMS OF DATA

As there are two perspectives to view the durations, there are two ways of collecting duration data in one-time surveys: recall of postpartum durations (retrospective data) based on questions such as "For how many months did you breastfeed (NAME)?" and current status based on questions such as "Are you still breastfeeding (NAME)?" Because of the censoring of recalled durations when the child is still breastfeeding at the time of interview, both forms of data require life-table techniques to calculate average durations.

Theoretically, retrospective data are more useful as individual episodes each contain information on current status for every month since birth and can easily be used in multivariate analyses such as hazard regressions. Current status data contain information only on the current (interview) month. Thus, for a 36-month period of observation

the number of cases for current status data is limited to the number of children born X months ago, while for retrospective data the number of cases is the number of children born between X and 36 months ago (because each child passed through month X since birth). Therefore, more cases are available from retrospective data and significance tests are more powerful.

Quality of Retrospective Data

The big drawback to retrospective data is their quality of reporting. Previous studies of data quality (see Jain and Bongaarts 1981, Ferry 1981) have found that retrospective data suffer from two types of errors: declaration of preferred durations, such as multiples of 3, 6, and 12 months (for example, by conversion of responses of "one year," "stopped when child was one and a half years old"), and inconsistencies, where the child was breastfed longer than he/she lived (due to either death of child or coming of the interview) or woman abstained longer than interval between birth and next pregnancy. To control for reporting errors, a calendar format to collect the information was instituted during DHS-II in countries where the reproductive calendar was used. In that format, whether or not a woman was breastfeeding, amenorrheic, or abstaining was recorded in a visual grid for each month in the last five years. By being able to visualize the information, both the interviewer and the respondent would catch inconsistencies and report durations more accurately. The form was not continued in DHS-III, however, because its basic purpose was not achieved and the one-sided correction of inconsistencies can bias averages downward.

Tables D 1, D 2, and D 3 present summary information on the reporting of retrospective durations of breastfeeding, postpartum amenorrhea, and postpartum abstinence, respectively. Distributions of selected countries, representative of different levels of heaping, are shown in Figures D 1, D 2, and D 3, respectively. Reporting of preferred durations—heaping—is pervasive and large in the DHS data sets, as has been found in other, similar, surveys. Inconsistencies are much less of a problem.

Table D 1 shows the results of retrospective reporting for duration of breastfeeding among children surveyed by the DHS. The windows of observation are either five or three calendar years prior to interview, five plus or three plus years of observation. The "plus" comes because the lower date limit for collecting information was set at the beginning of the calendar year five or three years previous to the year of interview.

Inconsistent reports, which for breastfeeding means that the reported duration was longer than the birth to interview or birth to death, are less than 1 percent of all reported durations except Bangladesh with 1.2 percent. When excluding never and still-breastfeeding categories, inconsistencies are still below 1 percent of reports except for Bangladesh (6.4 percent), Pakistan (1.3 percent), Uganda (1.1 percent), and Niger (1.0 percent). The response of “don’t know” was not allowed in some countries and even where it was, it is not an important source of error, at less than 0.5 percent of responses except in Mali (2.6 percent). Missing information, most likely from interviewers who failed to record a response, reaches a maximum of 1.8 percent in Namibia and Pakistan with most surveys between 0.5 and 1.2 percent of responses. Together, the inconsistent, “don’t know,” and missing responses constitute less than 2 percent of all responses except in four countries where they are less than 3 percent.

Heaping is measured by a rough index. The index is the number of responses on a multiple of 6 months (excluding 0) divided by 9 (number of multiples under 60 months) divided by the number of responses not on multiples of 6 months (including 0) divided by 51 (number of nonmultiples under 60 months). If there were no heaping on multiples of 6 months, the index would be 1.0. In general the index is far above that, ranging from a low of 1.4 (Dominican Republic) to 9.2 (Senegal), meaning 40 percent and 820 percent more reports on multiples of 6 months than an even distribution, respectively. Eleven countries have indexes between 1.4 and 2.9, 12 between 3.0 and 4.9, 13 between 5.0 and 9.2. Figure D 1 shows the distributions of reported durations of breastfeeding for the Dominican Republic (heaping index 1.4), Egypt (heaping index 3.5), and Senegal (heaping index 8.9). It can be seen from this figure that even at index values such as that for Egypt, the transference of cases onto just a few preferred durations (12, 18, and 24 months) far exceeds the number withdrawn from the neighboring months. Thus, rather than reports that are just heaped on nearby preferred digits, the heaping appears to result from an almost random selection of a preferred duration because the actual duration is not known but an answer is required. This conclusion leads us to abandon the use of retrospective reports for durations.

For durations of amenorrhea, Table D 2 indicates that the combination of inconsistent,¹ “don’t know,” and missing reports is much higher than for recalled breastfeeding durations reports. Up to 8.5 percent of the reports in a survey is in one of these categories, and 17 of the surveys have more than 3 percent of their cases in one of the categories. The increase in problem reports is mainly due to more inconsistencies and “don’t knows” in the African surveys. On the other hand, heaping is less of a problem for reports of amenorrhea, the maximum index value being 3.8 in Burkina Faso. Undoubtedly this is due to the shorter durations of amenorrhea than of breastfeeding (see Figure D 2). While it is conceivable that breastfeeding may stop at a heaped duration for real reasons (for example, 24 months is prescribed in the Koran), it is unlikely that the heaps on 6 months for amenorrhea or abstinence are real.

Reporting of abstinence is even more problematic for inconsistency and “don’t know” than reporting of amenorrhea. Up to 10 percent of the reports are in one of the three problem categories. Only the Near East region is relatively free of the reporting problems. In line with the usually short durations of abstinence that rarely exceed 3 months since birth, heaping on a multiple of 6 months is a problem in only a couple of countries. Indeed, because durations are so short for most countries, the index is below 1.0. See Figure D 3 for illustrative abstinence durations.

Quality of Current Status Data

The quality of current status postpartum data depends on the report of breastfeeding, amenorrhea, and abstinence at the time of the interview. Although a woman may report an incorrect status through misunderstanding of the question or willful misrepresentation, a lack of knowledge is inconceivable and inconsistency is not possible. The durations calculated from current status data do depend on accurate reports of the time since birth. Table D 4 shows the percentage of birth dates that were completely reported as well as the heaping index for multiples of 6 months of time since birth. Only in sub-Saharan Africa do the percentages of children with complete (month and year) birth dates fall below 95 percent. The countries with percentages below 90 percent are Niger (81 percent), Senegal and Cameroon (83 percent), and Burkina Faso (86 percent). Such high levels of complete reporting are to be

¹ Inconsistency for amenorrhea and abstinence includes durations that exceed the birth to interview interval or birth to conception interval (with allowance for premature births). Although it is possible for a woman not to have menstruated between pregnancies—becoming pregnant on the first ovulation—she should not report a duration in this case.

expected for children born in the last five years. There is no evidence of heaping on multiples of 6 months as the maximum value of the heaping index is 1.1 and Figure D.4 shows no preference for another multiple.

There is reason to believe that the heaping on multiples of 6 months in duration of breastfeeding seen in retrospective data results in part from real behavior. Indeed, the Koran advises women to breastfeed for 24 months.² To evaluate the accuracy of retrospective breastfeeding data, they can be compared with current status data. If the heaps represent real behavior, they should be evident in both data forms. Figure D.5 compares the decumulated percentages stopping breastfeeding calculated from the recall duration data with that of the current status data for Egypt, a survey with moderate amounts of heaping in the retrospective data. It is easy to see from this figure that there is a lot of difference between the two curves: the current status is unimodal and occurs at a different month from the bimodes of the retrospective data. The median calculated from the retrospective data using life-table techniques is 18.9 months, while that from the current status data is 19.8.³

CALCULATIONS OF CENTRAL TENDENCY WITH CURRENT STATUS DATA

Three main measures of central tendency are used with current status postpartum data: means, medians, and prevalence-incidence means. Means (called life-table means to distinguish their origin from means based on retrospective data) and medians are based on the proportions currently in a state (breastfeeding, amenorrheic, abstaining, or insusceptible) according to the current time

² From the second sura of the Koran "The Cow"

[2:233] And the mothers should suckle their children for two whole years for him who desires to make complete the time of suckling and their maintenance and their clothing must be borne by the father according to usage no soul shall have imposed upon it a duty but to the extent of its capacity neither shall a mother be made to suffer harm on account of her child nor a father on account of his child and a similar duty (devolves) on the (father's) heir but if both desire weaning by mutual consent and counsel there is no blame on them and if you wish to engage a wet nurse for your children there is no blame on you so long as you pay what you promised for according to usage and be careful of (your duty to) Allah and know that Allah sees what you do

³ If the data on completed durations are used without considering the effects of censoring then the median is 17.3 months

since birth. The proportions correspond to the l_x proportions in a life-table, and the assumption is made that the proportions come from a distribution with no short-term change. Theoretically the l_x proportions are monotonic. However, because of the independent calculation of the proportions and relatively small numbers of cases for each month, nonmonotonicity occurs. To correct for such random fluctuation, the data are tabulated in two-month groups. Three-group moving averages of both numerator and denominator are used for the proportions.

To calculate the means (as in the mean of the l_x column in the life-table), the sum of the proportions times their width (2 months in this case) is used.⁴ Two problems can arise with the life-table mean: skewness and truncation. If the distribution is very skewed with a few cases having very long durations, the life-table mean is greatly affected especially for surveys where by randomness a few large outliers may appear. In the other direction, the life-table mean is downwardly biased if the observation period is too short because the distribution is truncated.

The current-status median is based on the smoothed distribution and is taken as the first duration where the proportions fall below 50 percent. Linear interpolation is used to calculate the exact median value. Because of skew, the medians are usually a little smaller than the means.

Prevalence-incidence means are based on the assumption not only that the recent distribution of durations is unchanging, but that the number of births is too. Under those assumptions (corresponding to a stationary population), the number of cases in a state (prevalence) corresponds to the sum of the distribution of proportions times the number of births starting out (incidence). Thus the mean is calculated by dividing the prevalence (e.g. the number of children still breastfeeding) by the monthly incidence (monthly number of births), the result being the average duration in months. Randomness can affect constancy of the incidence, so that an average of the number of births is used for the denominator.⁵ The assumption of constancy of births works fairly well over an entire sample for a short time but is easily violated for subgroups, especially those linked to age, and so is unsuitable for assessing differentials.

⁴ A special case arises for children born in the month of interview (age 0 months). Those children are exposed for approximately 0.3 of a month. Because of smaller numbers of children in month 0 the combined 0-1 group has about 0.75 months of exposure.

⁵ See Trussell and Grummer-Strawn (1993) for a discussion of the optimal periods of observation to use with prevalence-incidence postpartum means.

Table D 1 Retrospective reporting of breastfeeding duration

Percent distribution of children by retrospective reporting of breastfeeding duration and heaping index for multiples of six months since birth Demographic and Health Surveys 1990-1996

Region country and date	Percent							Total	Heaping index	Number of children
	Never breastfed	Still breastfeeding	Not multiple of 6 months	Multiple of 6 months	Inconsistent	Don't know	Missing			
Sub Saharan Africa										
Burkina Faso 1993	1.7	51.4	17.9	27.8	0.3	0.0	1.0	100.0	8.8	6 366
Cameroon 1991	2.8	35.3	37.1	24.4	0.2	0.0	0.2	100.0	3.7	3 488
Central African Republic 1994-95	2.1	58.8	26.6	11.8	0.1	0.5	0.2	100.0	2.5	2 837
Côte d'Ivoire 1994	2.3	61.5	22.0	12.9	0.2	0.0	1.1	100.0	3.3	3 989
Ghana 1993	2.2	64.3	15.1	17.3	0.1	0.0	1.0	100.0	6.5	2 204
Kenya 1993	2.4	38.6	26.0	31.4	0.4	0.0	1.2	100.0	6.8	6 127
Madagascar 1992	2.2	43.0	24.5	29.3	0.0	0.0	1.0	100.0	6.8	5 683
Malawi 1992	2.5	47.7	26.9	21.5	0.4	0.0	1.1	100.0	4.5	4 574
Mali 1995	2.5	70.0	14.9	9.9	0.0	2.6	0.2	100.0	3.8	6 019
Namibia 1992	4.5	33.0	32.0	28.3	0.4	0.1	1.8	100.0	5.0	3 859
Niger 1992	2.1	47.2	29.4	20.1	0.5	0.0	0.8	100.0	3.9	7 207
Nigeria 1990	2.7	40.7	27.3	27.8	0.5	0.0	1.0	100.0	5.8	8 204
Rwanda 1992	1.8	55.1	24.1	17.7	0.2	0.0	1.2	100.0	4.2	5 662
Senegal 1992-93	2.2	39.9	21.8	35.4	0.2	0.0	0.6	100.0	9.2	5 645
Tanzania 1991-92	1.8	43.4	33.9	19.8	0.6	0.1	0.5	100.0	3.3	6 027
Uganda 1995	1.9	44.2	21.4	31.2	0.3	0.0	1.1	100.0	8.3	8 117
Zambia 1992	2.2	42.3	34.3	20.2	0.4	0.0	0.7	100.0	3.3	6 279
Zimbabwe 1994	1.2	51.4	30.4	16.3	0.3	0.0	0.3	100.0	3.0	2 364
Near East/North Africa										
Egypt 1992	5.9	28.6	40.3	25.2	0.0	0.0	0.0	100.0	3.5	8 697
Jordan 1990-91	6.2	20.9	52.9	19.9	0.1	0.0	0.0	100.0	2.1	8 261
Morocco 1992	4.8	23.8	52.1	19.3	0.0	0.0	0.1	100.0	2.1	5 197
Turkey 1993	4.8	22.8	47.4	25.0	0.0	0.0	0.1	100.0	3.0	3 736
Asia										
Bangladesh 1993-94	3.6	77.6	8.6	8.0	1.2	0.0	1.0	100.0	5.3	3 926
India 1992-93	4.1	58.6	15.3	21.0	0.1	0.0	0.9	100.0	7.8	50 001
Indonesia 1994	3.3	43.1	25.1	28.5	0.0	0.0	0.0	100.0	6.4	16 983
Kazakhstan 1995	4.1	36.7	44.8	14.1	0.0	0.3	0.0	100.0	1.8	810
Nepal 1996	2.3	78.3	13.5	5.7	0.1	0.1	0.1	100.0	2.4	4 375
Pakistan 1990-91	5.2	40.6	20.4	31.4	0.7	0.0	1.8	100.0	8.7	6 492
Philippines 1993	12.7	22.7	47.0	17.0	0.2	0.0	0.4	100.0	2.1	8 859

continued

Table D 1 *continued*

Region country and date	Percent							Total	Heaping index	Number of children
	Never breastfed	Still breastfeeding	Not multiple of 6 months	Multiple of 6 months	Inconsistent	Don't know	Missing			
Latin America/Caribbean										
Bolivia 1993-94	3.5	48.6	32.7	14.8	0.0	0.1	0.4	100.0	2.6	3 615
Brazil 1996	7.3	19.9	55.3	15.9	0.1	0.2	1.3	100.0	1.6	4 782
Colombia 1995	5.4	22.7	48.7	22.8	0.0	0.1	0.2	100.0	2.7	5 050
Dominican Republic 1991	8.0	14.9	62.0	14.9	0.0	0.0	0.2	100.0	1.4	3 847
Guatemala 1995	4.2	35.1	38.6	21.4	0.2	0.0	0.5	100.0	3.1	9 150
Haiti 1994	3.7	33.6	33.2	29.1	0.0	0.0	0.4	100.0	5.0	3 624
Paraguay 1990	7.0	19.1	56.9	16.8	0.1	0.0	0.2	100.0	1.7	3 975
Peru 1996	3.1	32.8	34.9	28.8	0.1	0.1	0.2	100.0	4.7	15 639

Table D 2 Retrospective reporting of amenorrhea duration

Percent distribution of children by retrospective reporting of amenorrhea duration and heaping index for multiples of six months since birth
Demographic and Health Surveys 1990-1996

Region, country, and date	Percent							Heaping index	Number of children
	Still abstaining	Not multiple of 6 months	Multiple of 6 months	Inconsistent	Don't know	Missing	Total		
Sub Saharan Africa									
Burkina Faso 1993	29.5	37.6	25.1	2.8	4.0	1.0	100.0	3.8	6 366
Cameroon 1991	22.5	53.2	20.5	2.2	1.1	0.6	100.0	2.2	3 488
Central African Republic 1994-95	43.6	44.1	10.7	0.9	0.8	0.1	100.0	1.4	2 837
Cote d'Ivoire 1994	38.2	52.5	7.7	0.6	0.8	0.2	100.0	0.8	3 989
Ghana 1993	41.6	36.7	19.4	0.2	1.1	1.0	100.0	3.0	2 204
Kenya 1993	22.9	50.5	21.2	2.5	0.8	2.0	100.0	2.4	6 128
Madagascar 1992	27.3	45.8	23.8	0.5	1.0	1.7	100.0	2.9	5 683
Malawi 1992	29.1	48.1	18.3	3.2	1.1	0.2	100.0	2.2	4 574
Mali 1995	42.3	39.7	12.2	0.4	4.9	0.5	100.0	1.7	6 019
Namibia 1992	21.5	55.4	17.4	1.4	2.6	1.7	100.0	1.8	3 859
Niger 1992	27.9	45.9	17.8	6.0	1.9	0.6	100.0	2.2	7 207
Nigeria 1990	28.6	42.5	20.7	4.8	2.4	1.0	100.0	2.8	8 205
Rwanda 1992	31.6	42.9	21.5	1.9	1.0	1.1	100.0	2.8	5 662
Senegal 1992-93	29.0	43.9	21.5	2.0	3.2	0.4	100.0	2.8	5 645
Tanzania 1991-92	27.8	45.2	23.3	2.2	0.4	1.1	100.0	2.9	8 117
Uganda 1995	32.0	47.6	16.0	3.6	0.3	0.5	100.0	1.9	6 027
Zambia 1992	25.4	52.1	18.8	2.4	0.5	0.9	100.0	2.0	6 279
Zimbabwe 1994	37.3	46.3	15.0	0.5	0.4	0.5	100.0	1.8	2 364
Near East									
Egypt 1992	12.2	72.7	15.1	0.0	0.0	0.0	100.0	1.2	8 697
Jordan 1990-91	10.0	79.1	10.9	0.1	0.0	0.0	100.0	0.8	8 261
Morocco 1992	12.2	75.5	11.8	0.5	0.1	0.0	100.0	0.9	5 197
Turkey 1993	9.1	79.4	11.4	0.1	0.0	0.0	100.0	0.8	3 736
Asia									
Bangladesh 1993-94	33.6	45.3	20.7	0.1	0.1	0.2	100.0	2.6	3 926
India 1992-93	23.7	52.8	21.4	0.5	0.7	0.8	100.0	2.3	50 001
Indonesia 1994	18.9	61.6	18.4	0.0	0.4	0.7	100.0	1.7	16 983
Kazakhstan 1995	19.9	67.0	11.6	0.2	1.4	0.0	100.0	1.0	810
Nepal 1996	35.5	46.6	17.3	0.2	0.1	0.3	100.0	2.1	4 375
Pakistan 1990-91	19.0	54.3	20.6	2.7	1.7	1.8	100.0	2.2	6 492
Philippines 1993	12.0	74.3	12.9	1.1	0.0	0.7	100.0	1.0	8 859
Latin America/Caribbean									
Bolivia 1993-94	32.6	50.6	15.2	0.6	0.5	0.6	100.0	1.7	3 615
Brazil 1996	10.9	78.3	6.4	0.2	2.6	1.7	100.0	0.5	4 782
Colombia 1995	11.4	76.9	10.7	0.3	0.4	0.3	100.0	0.8	5 050
Dominican Republic 1991	8.3	82.4	9.0	0.0	0.0	0.2	100.0	0.6	3 848
Guatemala 1995	23.8	51.7	22.9	0.0	0.8	0.9	100.0	2.5	9 150
Haiti 1994	22.4	57.3	16.3	0.7	1.1	2.2	100.0	1.6	3 624
Paraguay 1990	10.8	79.6	9.2	0.3	0.0	0.1	100.0	0.7	3 975
Peru 1996	18.9	58.8	21.2	0.5	0.3	0.3	100.0	2.0	15 639

Table D 3 Retrospective reporting of abstinence duration

Percent distribution of children by retrospective reporting of abstinence duration and heaping index for multiples of six months since birth
Demographic and Health Surveys 1990-1996

Region, country, and date	Percent							Heaping index	Number of children
	Still abstaining	Not multiple of 6 months	Multiple of 6 months	Inconsistent	Don't know	Missing	Total		
Sub Saharan Africa									
Burkina Faso 1993	33.3	35.0	21.2	3.0	6.2	1.4	100.0	3.4	6 366
Cameroon 1991	25.6	49.6	19.5	2.5	2.4	0.4	100.0	2.2	3 488
Central African Republic 1994-95	35.1	50.8	11.9	0.9	1.1	0.3	100.0	1.3	2 837
Côte d'Ivoire 1994	41.1	49.7	7.3	0.8	0.9	0.2	100.0	0.8	3 989
Ghana 1993	39.9	37.1	20.6	0.4	1.2	0.9	100.0	3.1	2 204
Kenya 1993	11.5	72.4	10.9	2.7	1.1	1.4	100.0	0.9	6 128
Madagascar 1992	12.2	68.5	14.2	0.9	2.2	1.8	100.0	1.2	5 683
Malawi 1992	u	u	u	u	u	u	u	u	u
Mali 1995	18.4	69.7	6.2	1.6	3.9	0.3	100.0	0.5	6 019
Namibia 1992	20.5	56.4	16.6	1.7	3.5	1.2	100.0	1.7	3 859
Niger 1992	8.5	78.5	3.6	6.6	2.0	0.8	100.0	0.3	7 207
Nigeria 1990	26.0	44.3	20.1	5.7	2.6	1.3	100.0	2.6	8 205
Rwanda 1992	5.5	88.3	1.7	2.4	0.9	1.2	100.0	0.1	5 662
Senegal 1992-93	13.4	72.1	8.1	3.1	3.0	0.4	100.0	0.6	5 645
Tanzania 1991-92	19.2	57.9	19.1	2.4	0.4	1.0	100.0	1.9	8 117
Uganda 1995	10.6	79.5	5.5	3.7	0.3	0.4	100.0	0.4	6 027
Zambia 1992	15.5	66.1	13.9	2.5	0.9	1.1	100.0	1.2	6 279
Zimbabwe 1994	18.3	70.0	10.6	0.6	0.2	0.4	100.0	0.9	2 364
Near East/North Africa									
Egypt 1992	4.0	95.0	1.0	0.0	0.0	0.0	100.0	0.1	8 697
Jordan 1990-91	3.2	96.4	0.3	0.1	0.0	0.0	100.0	0.0	8 261
Morocco 1992	3.5	95.3	0.5	0.5	0.0	0.2	100.0	0.0	5 197
Turkey 1993	3.6	95.0	1.2	0.1	0.0	0.0	100.0	0.1	3 736
Asia									
Bangladesh 1993-94	9.0	88.0	1.8	0.2	0.4	0.7	100.0	0.1	3 926
India 1992-93	12.9	73.2	11.0	0.7	1.3	0.9	100.0	0.9	50 001
Indonesia 1994	7.5	82.3	6.9	0.2	0.7	2.3	100.0	0.5	16 983
Kazakhstan 1995	9.6	88.0	1.7	0.6	0.1	0.0	100.0	0.1	810
Nepal 1996	14.3	77.0	8.1	0.2	0.3	0.2	100.0	0.6	4 375
Pakistan 1990-91	8.9	80.5	4.3	3.3	1.3	1.7	100.0	0.3	6 492
Philippines 1993	6.5	88.5	4.3	0.1	0.0	0.7	100.0	0.3	8 859
Latin America/Caribbean									
Bolivia 1993-94	15.6	74.8	5.7	0.7	2.7	0.6	100.0	0.4	3 615
Brazil 1996	9.2	83.7	2.3	0.9	1.9	2.2	100.0	0.2	4 782
Colombia 1995	9.5	84.3	5.1	0.5	0.4	0.2	100.0	0.3	5 050
Dominican Republic 1991	6.9	90.7	2.2	0.0	0.0	0.2	100.0	0.1	3 848
Guatemala 1995	9.8	83.9	3.6	0.2	1.6	0.9	100.0	0.2	9 150
Haiti 1994	12.0	78.5	5.9	1.2	1.8	0.6	100.0	0.4	3 624
Paraguay 1990	7.5	89.6	2.3	0.4	0.0	0.2	100.0	0.1	3 975
Peru 1996	9.1	83.3	5.7	0.6	0.9	0.3	100.0	0.4	15 639

u = unknown (not available)

Table D 4 Completeness of birth date reporting and heaping index

Percentage of children for whom the month and year of birth were completely reported and the heaping index for multiples of six months since birth Demographic and Health Surveys 1990-1996

Region country and date	Month and year of birth reported (%)	Heaping index	Number of children
Sub Saharan Africa			
Burkina Faso 1993	86.2	1.0	6 366
Cameroon 1991	83.3	1.0	3 488
Central African Republic 1994-95	97.5	0.9	2 837
Côte d'Ivoire 1994	97.5	0.9	3 989
Ghana 1993	94.2	0.8	2 204
Kenya 1993	96.9	1.0	6 128
Madagascar 1992	91.7	1.1	5 683
Malawi 1992	98.4	1.1	4 574
Mali 1995	99.2	0.9	6 019
Namibia 1992	96.5	1.0	3 859
Niger 1992	80.8	1.0	7 207
Nigeria 1990	89.9	1.0	8 205
Rwanda 1992	97.7	1.1	5 662
Senegal 1992-93	82.8	1.0	5 645
Tanzania 1991-92	98.0	1.0	6 027
Uganda 1995	94.7	1.0	8 117
Zambia 1992	98.9	1.0	6 279
Zimbabwe 1994	100.0	1.0	2 364
Near East/North Africa			
Egypt 1992	99.9	1.0	8 697
Jordan 1990-91	100.0	1.1	8 261
Morocco 1992	99.9	1.1	5 197
Turkey 1993	100.0	1.1	3 736
Asia			
Bangladesh 1993-94	100.0	0.9	3 926
India 1992-93	99.3	1.0	50 001
Indonesia 1994	99.6	1.0	16 983
Kazakhstan 1995	100.0	0.9	810
Nepal 1996	100.0	1.0	4 375
Pakistan 1990-91	96.1	1.0	6 492
Philippines 1993	99.9	1.0	8 859
Latin America/Caribbean			
Bolivia 1993-94	99.9	1.0	3 615
Brazil 1996	99.7	1.0	4 782
Colombia 1995	100.0	1.1	5 050
Dominican Republic 1991	100.0	1.0	3 848
Guatemala 1995	100.0	1.0	9 150
Haiti 1994	99.1	1.0	3 624
Paraguay 1990	100.0	1.0	3 975
Peru 1996	100.0	1.0	15 639

Figure D.1 Retrospective reporting of breastfeeding duration

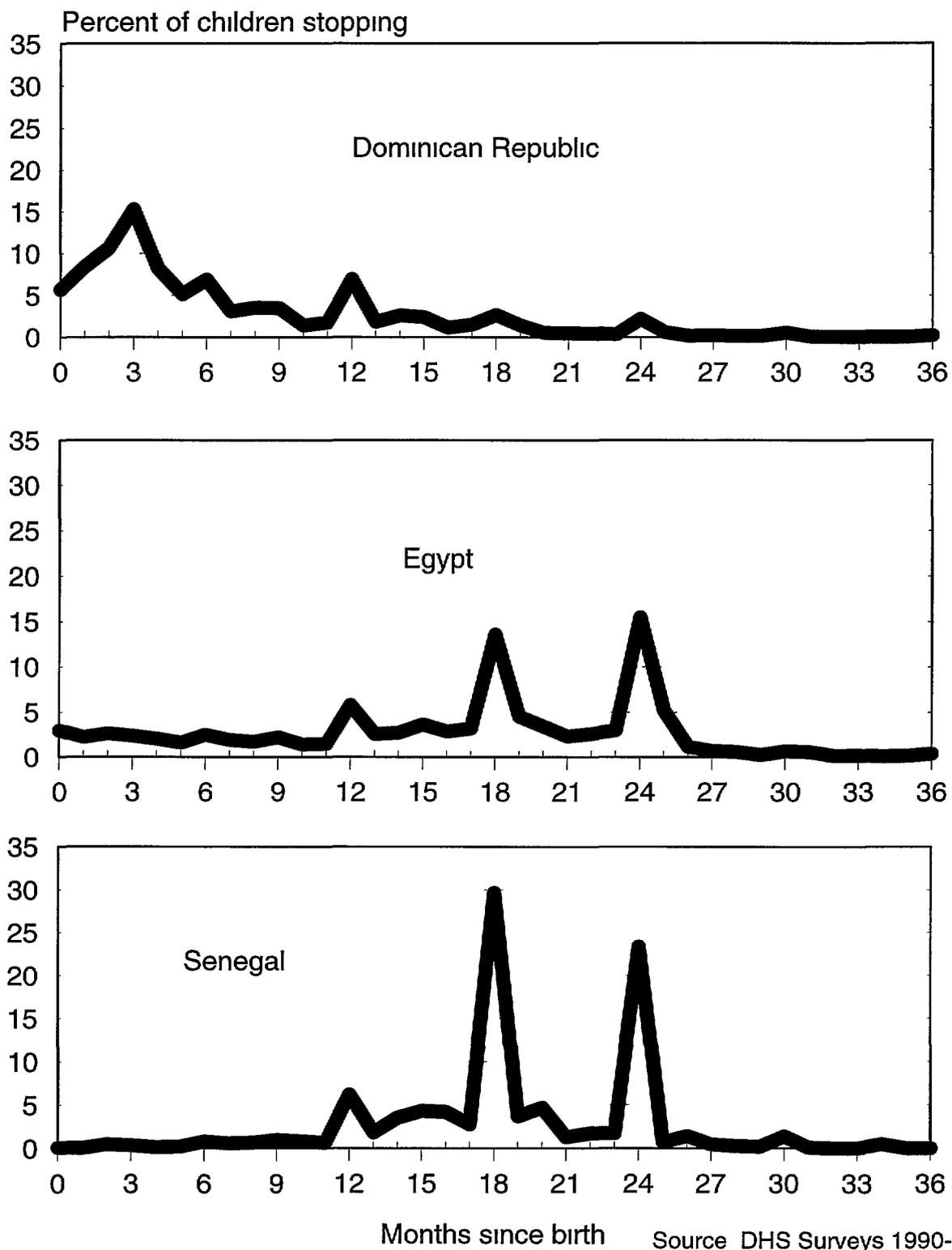
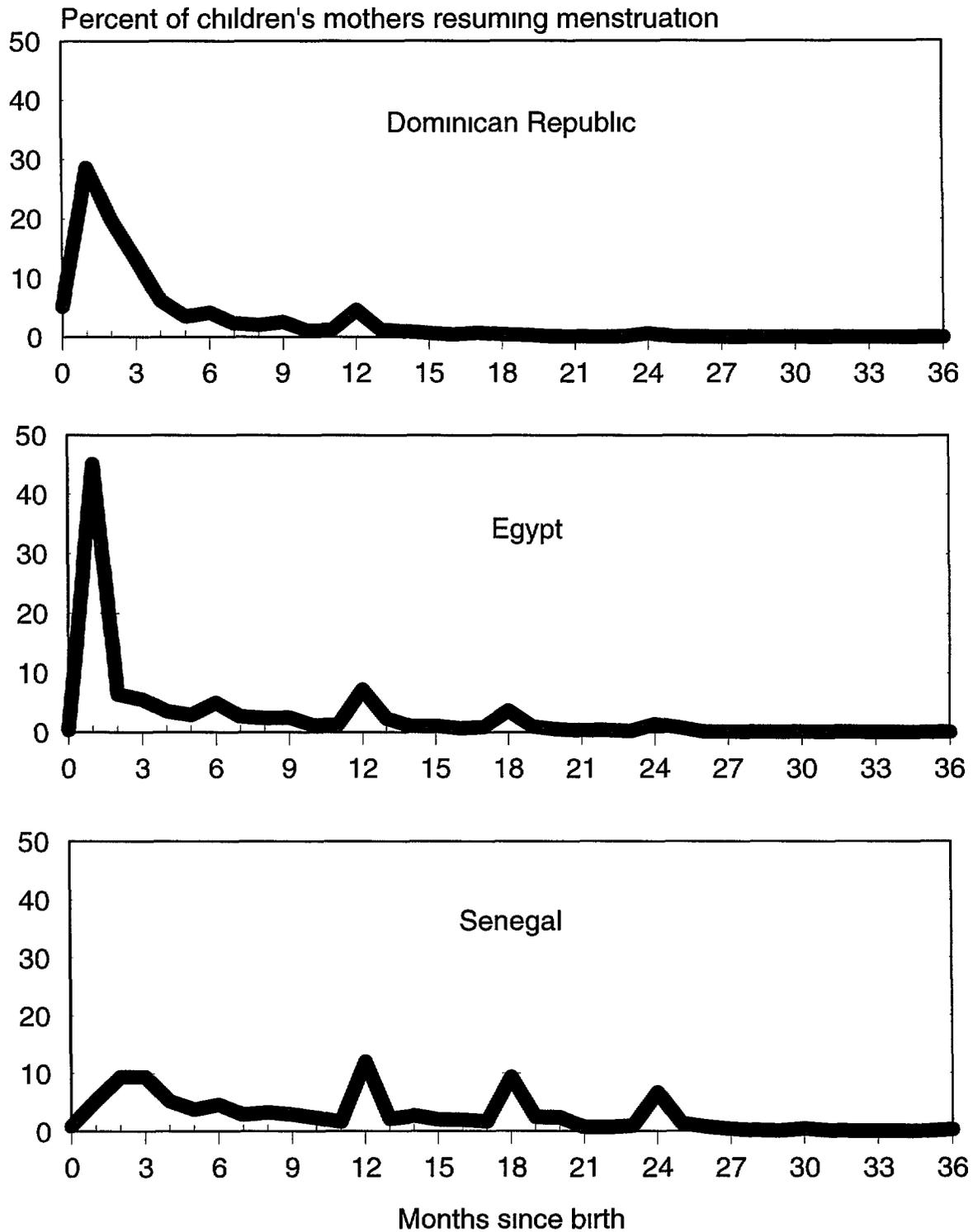


Figure D.2 Retrospective reporting of amenorrhea duration



Source DHS Surveys 1990-1996

Figure D.3 Retrospective reporting of abstinence duration

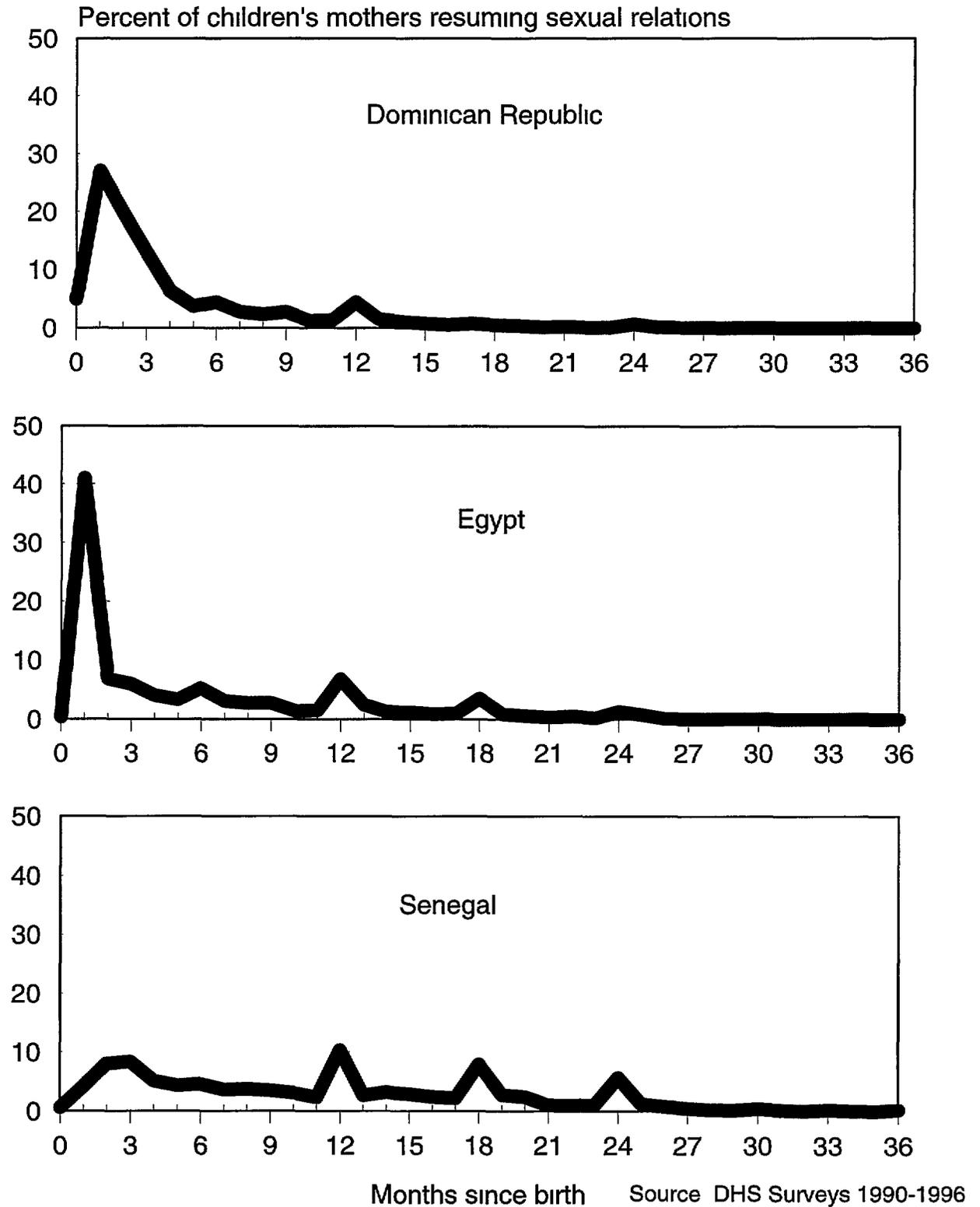
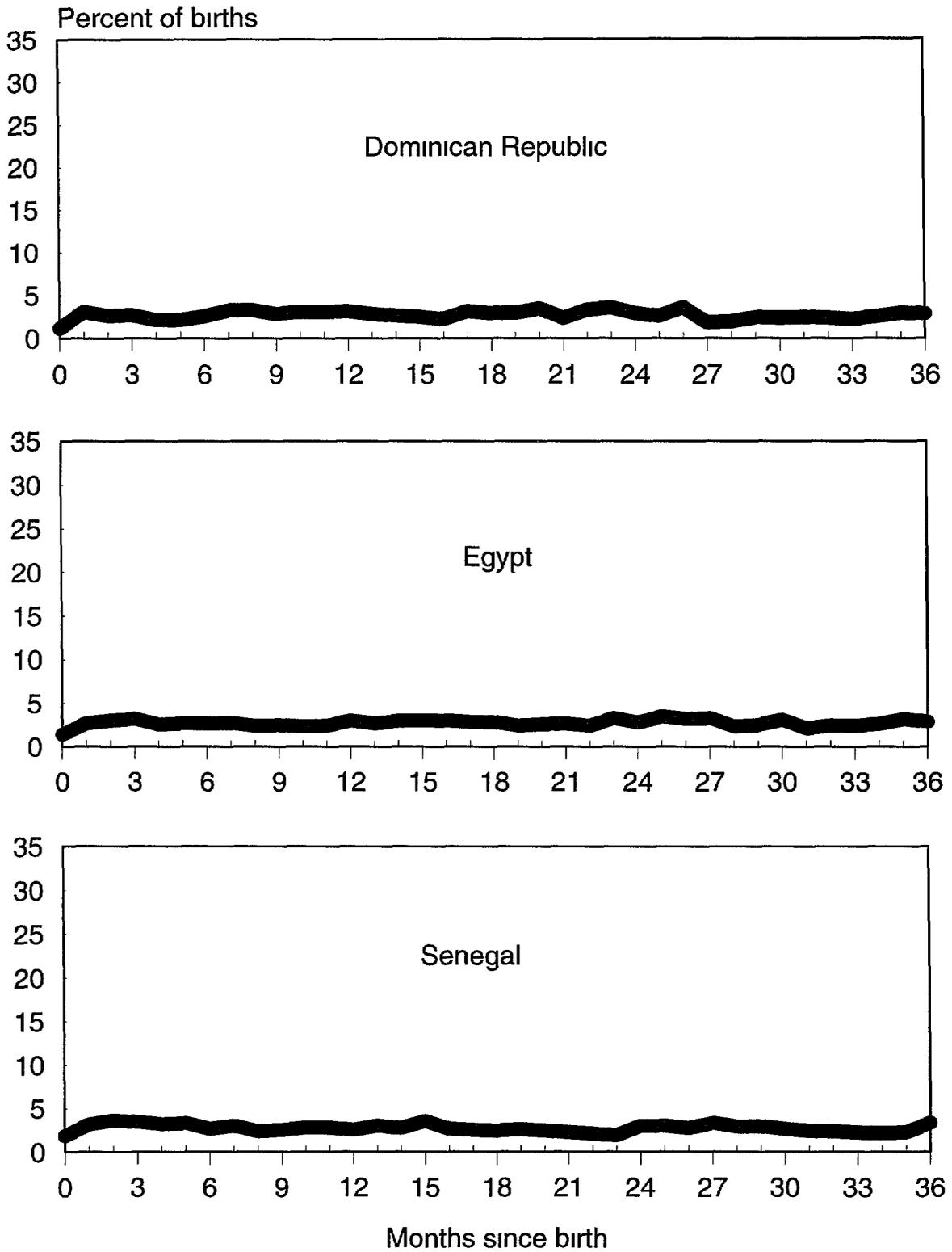
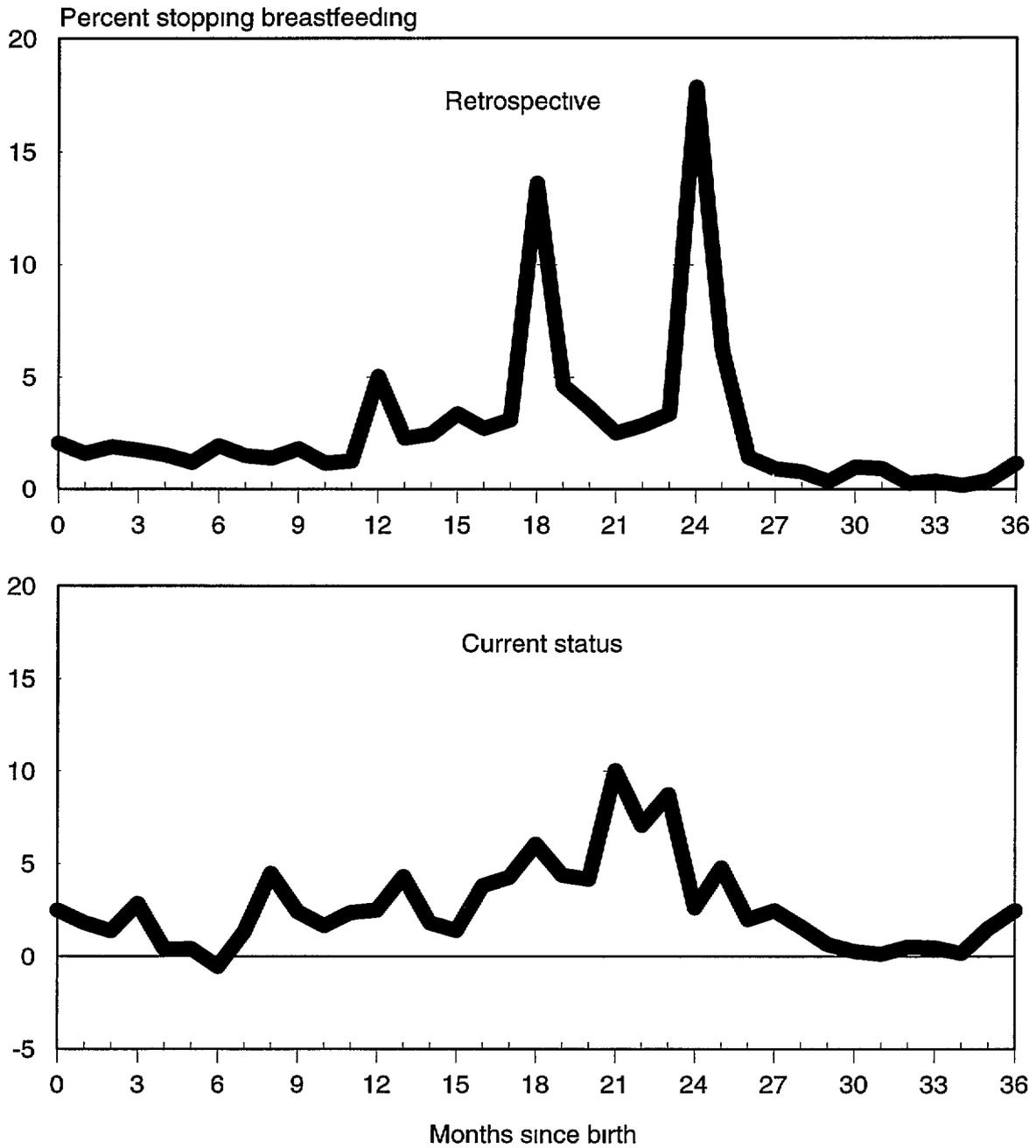


Figure D.4 Reporting of time since birth



Source DHS Surveys 1990-1996

Figure D.5 Reporting of duration of breastfeeding in Egypt, retrospective data and current status data



Note Retrospective based on life-table

Source DHS Surveys 1990-1996

Appendix E

Median Duration of Breastfeeding, by Selected Background Characteristics

Table E 1 Median duration of breastfeeding, by mother's age at birth and child's birth order

Median duration (months) of breastfeeding by mother's age at birth and child's birth order Demographic and Health Surveys 1990-1996

Region country and date	Mother's age at birth				Child's birth order			
	15-19	20-24	25-34	35+	1st	2-3	4-5	6+
Sub-Saharan Africa								
Burkina Faso 1993	22.3	24.6	25.2	27.9	22.6	25.0	25.2	28.0
Cameroon 1991	16.4	18.2	16.3	(17.7)	17.5	15.8	17.3	19.9
Central African Republic 1994-95	19.0	20.9	21.8	22.7	19.3	21.0	22.2	22.1
Côte d'Ivoire 1994	19.5	21.0	21.0	23.2	19.3	20.0	21.4	22.8
Ghana 1993	(18.8)	20.9	21.7	24.4	19.5	22.5	20.3	24.9
Kenya 1993	19.5	20.2	21.4	24.3	19.7	20.7	21.4	21.9
Madagascar 1992	18.8	18.3	19.8	23.5	17.9	18.1	19.6	22.7
Malawi 1992	18.4	21.4	21.2	22.7	20.5	20.8	21.9	22.5
Mali 1995	21.5	21.2	22.5	23.5	18.8	20.6	22.3	23.2
Namibia 1992	19.3	15.4	17.1	19.5	18.9	14.9	17.2	19.1
Niger 1992	21.2	20.7	22.5	22.9	20.9	21.4	21.1	22.7
Nigeria 1990	21.0	19.4	19.4	21.7	19.3	19.4	19.3	22.5
Rwanda 1992	(21.9)	27.2	26.8	33.3	23.7	27.7	27.7	31.8
Senegal 1992-93	19.5	19.2	21.0	22.1	19.5	19.0	22.6	21.6
Tanzania 1991-92	21.1	20.8	22.6	22.1	21.0	21.0	21.8	22.2
Uganda 1995	18.0	19.4	18.5	21.3	17.5	19.1	20.9	21.0
Zambia 1992	17.8	18.0	19.2	21.5	17.4	18.9	18.1	20.7
Zimbabwe 1994	17.6	17.3	17.8	(20.2)	17.6	17.7	18.4	19.9
Near East/North Africa								
Egypt 1992	20.8	18.8	19.7	21.9	19.1	18.4	20.4	21.6
Jordan 1990-91	11.1	12.0	12.0	15.8	9.7	11.5	12.2	15.4
Morocco 1992	(11.5)	14.6	15.8	18.1	10.5	14.6	16.4	19.2
Turkey 1993	5.7	11.0	12.5	(14.7)	10.6	11.9	(13.8)	(17.5)
Asia								
Bangladesh 1993-94	>36	31.3	29.9	>36	26.4	>36	>36	29.7
India 1992-93	24.2	23.8	24.3	33.4	23.2	24.1	27.7	24.3
Indonesia 1994	23.2	23.6	23.6	25.2	23.3	23.5	24.4	25.8
Kazakhstan 1995	*	(10.4)	(17.2)	*	(8.8)	15.0	*	*
Nepal 1996	27.3	28.0	>36	>36	27.4	30.7	>36	>36
Pakistan 1990-91	13.8	16.3	21.8	20.1	16.9	18.4	22.7	22.6
Philippines 1993	14.9	14.8	15.0	16.9	12.1	14.7	15.5	17.2
Latin America/Caribbean								
Bolivia 1993-94	15.7	16.4	19.0	17.9	15.8	16.8	19.0	21.4
Brazil 1996	6.8	4.2	7.9	4.3	7.1	8.6	7.5	(10.6)
Colombia 1995	9.7	10.1	11.4	(10.2)	9.3	10.4	11.9	(16.5)
Dominican Republic 1991	6.3	5.7	5.2	(11.5)	5.1	6.1	11.4	(11.3)
Guatemala 1995	18.9	18.7	21.3	22.1	17.6	19.1	22.2	22.2
Haiti 1994	(18.6)	15.1	17.9	19.6	17.0	16.8	18.3	19.2
Paraguay 1990	7.9	11.1	12.0	13.4	7.9	9.7	13.7	14.2
Peru 1996	18.7	19.5	20.7	21.2	17.3	19.4	21.3	21.9

Note > 36 indicates median cannot be calculated because less than 50 percent have stopped breastfeeding

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table E 2. Median duration of breastfeeding, by delivery characteristics

Median duration (months) of breastfeeding by mother's perception of birth size, birth weight, maturity and type of delivery. Demographic and Health Survey 1990-1996

Region, country and date	Birth size		Birth weight		Maturity		Delivery	
	Average or larger	Small or very small	2.5 kg or over	Less than 2.5 kg	Full term	Premature	Vaginal	Caesarean
Sub-Saharan Africa								
Burkina Faso 1993	25.4	24.0	23.6	*	25.5	*	25.5	*
Cameroon 1991	16.5	(19.7)	15.9	*	17.7	*	18.6	*
Central African Republic 1994-95	21.3	18.4	20.1	(18.9)	21.4	*	21.4	*
Côte d'Ivoire 1994	20.5	20.9	19.7	(20.0)	20.7	*	20.7	*
Ghana 1993	21.4	(23.7)	18.2	*	21.7	*	21.8	*
Kenya 1993	22.3	19.8	20.6	(20.3)	21.6	*	21.6	(19.6)
Madagascar 1992	19.3	19.9	18.3	(22.6)	19.6	*	19.6	*
Malawi 1992	21.4	21.1	20.9	*	21.4	*	21.4	*
Mali 1995	21.9	20.4	20.3	(17.7)	22.5	*	22.5	*
Namibia 1992	16.3	19.7	16.3	(11.9)	18.1	*	17.6	(12.4)
Niger 1992	22.9	20.8	20.7	*	21.7	*	21.7	*
Nigeria 1990	19.8	18.8	16.1	*	19.9	*	19.9	*
Rwanda 1992	27.9	28.5	26.5	*	28.0	*	27.9	*
Senegal 1992-93	20.5	20.1	19.5	*	20.2	*	20.4	*
Tanzania 1991-92	21.7	20.2	21.7	21.6	21.7	*	21.7	*
Uganda 1995	18.9	21.9	17.8	*	19.3	*	19.3	(11.1)
Zambia 1992	18.5	18.5	18.4	(17.0)	18.6	(17.0)	18.4	*
Zimbabwe 1994	18.0	19.0	17.8	(17.7)	18.1	*	18.1	(18.8)
Near East/North Africa								
Egypt 1992	19.8	19.4	14.0	*	19.7	*	19.9	(16.9)
Jordan 1990-91	12.5	11.3	12.3	10.6	12.1	11.8	12.2	(8.0)
Morocco 1992	15.2	17.2	8.5	*	15.6	*	15.5	*
Turkey 1993	*	*	*	*	11.8	*	11.9	(7.5)
Asia								
Bangladesh 1993-94	*	*	*	*	a	*	*	*
India 1992-93	24.2	23.9	20.3	22.9	24.2	18.5	24.0	19.7
Indonesia 1994	23.6	23.8	23.3	6.1	23.7	*	23.7	(12.0)
Kazakhstan 1995	14.5	*	14.7	*	14.6	*	14.6	*
Nepal 1996	31.1	31.7	*	*	31.3	*	31.3	*
Philippines 1993	15.3	15.9	14.2	15.0	15.3	*	15.5	(14.6)
Latin America/Caribbean								
Bolivia 1993-94	17.4	16.4	16.0	*	17.5	*	17.9	13.8
Brazil 1996	8.4	7.0	8.2	*	7.8	*	8.9	7.2
Colombia 1995	10.5	9.0	10.1	*	10.3	*	12.6	9.5
Dominican Republic 1991	6.0	5.3	5.9	(5.0)	6.1	*	6.4	5.2
Guatemala 1995	20.0	21.1	20.0	12.2	20.2	*	20.2	13.5
Haiti 1994	17.7	17.6	*	*	17.7	*	17.6	*
Paraguay 1990	11.8	11.5	11.1	(10.5)	11.8	*	12.1	(7.1)
Peru 1996	20.1	20.7	19.7	19.4	20.2	*	20.5	16.0

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table E 3 Median duration of breastfeeding, by mother's work status and mother's and father's occupation

Median duration (months) of breastfeeding by mother's work status and mother's and father's occupation, Demographic and Health Surveys 1990-1996

Region country and date	Mother's work status				Mother's occupation				Father's occupation			
	No Work	Works at home	Works family self	Away for others	Professional, technical managerial clerical	Sales and service	Manual and domestic labor	Agricultural	Professional, technical managerial, clerical	Sales and service	Manual and domestic labor	Agricultural
Sub Saharan Africa												
Burkina Faso 1993	25.8	23.7	25.6	*	*	25.6	23.5	(26.6)	*	23.2	22.8	26.5
Cameroon 1991	16.1	(17.2)	19.0	*	*	17.6	*	19.3	14.5	(17.2)	16.7	19.8
Central African Republic 1994-95	17.9	(21.1)	22.0	*	*	19.8	*	22.2	(18.0)	17.9	20.5	22.7
Côte d'Ivoire 1994	19.6	20.7	21.5	*	*	20.6	*	22.3	17.9	18.2	21.0	22.6
Ghana 1993	18.1	21.1	22.6	*	*	19.7	(20.8)	23.9	(19.3)	*	20.7	23.6
Kenya 1993	21.5	21.3	20.9	20.1	*	20.7	(22.0)	20.7	18.2	20.7	21.7	18.5
Madagascar 1992	19.6	18.9	19.4	(16.5)	*	17.5	19.2	19.7	(18.8)	*	18.3	19.6
Malawi 1992	21.1	22.7	12.2	*	*	*	21.4	(12.3)	20.5	20.1	18.5	22.4
Mali 1995	21.7	22.4	22.9	*	*	21.5	16.1	22.9	17.5	20.7	21.7	23.0
Nambia 1992	19.3	(16.1)	*	11.1	(4.1)	*	12.3	*	(12.4)	(14.6)	16.8	(18.7)
Niger 1992	20.3	18.2	23.2	*	*	21.2	20.6	23.4	(17.7)	19.8	20.6	22.0
Nigeria 1990	22.6	18.3	19.8	(11.8)	(12.1)	18.8	*	20.4	15.8	18.2	(17.1)	22.7
Rwanda 1992	*	(24.3)	27.9	(24.4)	*	*	*	28.1	(10.5)	*	27.5	28.3
Senegal 1992-93	19.9	18.1	21.8	*	*	20.6	*	22.7	(17.9)	18.3	20.0	22.6
Tanzania 1991-92	21.4	22.0	21.4	(22.5)	*	*	21.6	21.7	20.5	*	21.9	21.5
Uganda 1995	19.6	19.4	19.3	(4.5)	*	20.5	(15.5)	19.0	18.7	17.8	18.3	20.1
Zambia 1992	18.4	20.2	18.7	(16.1)	*	18.4	20.4	19.0	16.3	19.1	18.3	18.7
Zimbabwe 1994	18.2	18.0		17.6	*	(17.8)	17.9	18.5	(13.9)	18.0	18.1	18.9
Near East/North Africa												
Egypt 1992	19.7	*	*	19.9	18.7	*	*	20.0	19.4	20.5	18.6	21.0
Jordan 1990-91	12.2	*	*	8.5	6.3	*	*	*	12.1	11.6	12.2	(16.0)
Morocco 1992	15.9	(16.8)	*	11.4	*	*	12.2	(14.8)	8.0	14.5	14.6	17.6
Turkey 1993	11.6	*	*	*	*	*	*	6.1	(12.0)	11.2	11.2	11.9
Asia												
Bangladesh 1993-94	> 36	> 36	> 36	*	*	(33.6)	> 36	*	(22.1)	> 36	> 36	> 36
India 1992-93	24.0	23.6	28.7	24.4	*	*	*	*	*	*	*	*
Indonesia 1994	*	*	*	*	20.6	24.1	24.3	24.3	22.8	23.2	23.7	24.0
Kazakhstan 1995	14.6	*	*	*	(12.8)	*	*	*	*	*	11.9	(13.0)
Nepal 1996	26.7	28.0	32.2	a	*	*	*	32.1	(24.3)	(30.7)	28.2	32.0
Pakistan 1990-91	18.3	19.6	*	*	*	*	21.6	*	14.1	18.2	18.3	22.2
Philippines 1993	15.5	14.4	14.7	7.1	6.9	14.7	11.8	19.3	6.8	11.6	14.3	16.9

continued

Table E 3 *continued*

Region country and date	Mother's work status				Mother's occupation				Father's occupation			
	No Work	Works at home	Works family self	Away for others	Professional technical managerial clerical	Sales and service	Manual and domestic labor	Agricultural	Professional technical managerial clerical	Sales and service	Manual and domestic labor	Agricultural
Latin America/Caribbean												
Bolivia 1993 94	15 8	17 1	18 5	18 5	(9 8)	16 1	(16 6)	18 0	17 6	16 3	16 2	17 7
Brazil 1996	8 3	(7 2)	*	*	8 1	7 0	6 8	(9 6)	7 5	7 8	8 5	10 4
Colombia 1995	11 0	13 0	(9 1)	9 4	(6 1)	9 5	*	*	(9 1)	9 5	12 7	11 9
Dominican Republic 1991	6 5	6 7	*	(2 3)	(2 1)	6 3	5 8	(11 2)	(4 9)	5 3	5 8	11 2
Guatemala 1995	20 5	19 6	19 0	(15 2)	(9 9)	*	19 2	(19 2)	10 6	14 3	19 5	21 6
Haiti 1994	17 5	(16 8)	18 1	*	*	17 4	*	(19 9)	(12 7)	(14 3)	17 1	18 3
Paraguay 1990	11 7	12 8	*	(2 3)	(2 5)	8 1	(10 4)	(14 1)	(7 2)	(6 5)	10 8	14 1
Peru 1996	19 6	20 0	21 5	16 8	12 1	20 8	19 8	21 5	15 5	18 7	20 9	20 7

Note > 36 indicates median cannot be calculated because less than 50 percent have stopped breastfeeding

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table E 4 Median duration of breastfeeding, by person providing antenatal care, by delivery facility, and by person assisting at delivery

Median duration (months) of breastfeeding by person providing antenatal care by delivery facility and by person assisting at delivery Demographic and Health Surveys 1990-1996

Region, country and date	Antenatal care			Delivery facility			Person assisting at delivery			
	Doctor	Other medical	TBA other no one	Public hosp clinic	Private hosp clinic	Non medical (home)	Doctor	Other medical	Traditional birth attendant	Other no one
Sub Saharan Africa										
Burkina Faso 1993	*	24.9	27.2	24.6	*	27.1	*	24.0	26.8	26.9
Cameroon 1991	15.9	16.2	(24.7)	16.2	15.8	20.1	(9.0)	16.1	(16.0)	19.9
Central African Republic 1994-95	*	20.9	23.2	19.2	*	22.1	*	18.5	23.7	21.8
Côte d'Ivoire 1994	*	20.6	22.8	19.1	*	21.9	*	19.1	21.4	21.9
Ghana 1993	20.6	22.3	(25.0)	19.5	(16.1)	24.0	(16.3)	19.9	24.4	23.5
Kenya 1993	19.4	21.4	(21.3)	20.7	18.8	21.2	19.5	20.7	23.0	18.1
Madagascar 1992	(19.9)	19.5	19.0	19.5	*	19.5	16.5	18.9	19.4	(21.7)
Malawi 1992	(17.2)	21.3	(24.2)	21.1	21.7	22.8	(12.2)	21.2	20.4	21.1
Mali 1995	*	21.9	22.8	21.2	*	22.9	*	21.6	23.1	20.5
Namibia 1992	(10.9)	18.7	17.9	16.9	*	19.9	4.3	17.2	(15.7)	20.2
Niger 1992	*	18.2	22.5	18.2	*	22.7	*	18.2	20.6	23.0
Nigeria 1990	16.5	19.1	22.9	15.9	*	22.9	14.6	17.0	19.6	22.8
Rwanda 1992	*	27.8	*	26.6	*	29.4	*	25.6	30.8	28.5
Senegal 1992-93	*	19.8	23.0	19.3	(17.6)	20.9	*	19.0	20.0	21.6
Tanzania 1991-92	22.0	21.6	18.1	21.6	21.5	21.8	(21.0)	21.7	21.9	21.7
Uganda 1995	17.1	19.6	20.2	17.6	17.9	20.3	(12.2)	18.0	22.9	20.1
Zambia 1992	(19.3)	18.5	17.8	17.6	19.1	19.2	*	17.9	18.4	19.4
Zimbabwe 1994	17.3	18.3	(10.3)	18.0	*	18.4	18.7	17.9	18.1	(18.5)
Near East/North Africa										
Egypt 1992	19.3	*	20.8	19.1	19.0	20.1	19.4	(16.1)	20.5	(20.5)
Jordan 1990-91	11.7	11.3	15.0	11.9	10.1	14.5	11.6	12.1	12.1	(14.6)
Morocco 1992	4.4	15.2	16.4	11.5	*	16.3	(7.6)	10.5	16.1	16.7
Turkey 1993	10.5	11.0	16.9	11.0	*	15.4	8.1	11.9	(11.6)	(14.3)
Asia										
Bangladesh 1993-94	> 36	(33.6)	> 36	*	*	> 36	(25.5)	(22.7)	> 36	> 36
India 1992-93	23.5	24.1	24.4	23.3	18.1	24.5	22.6	23.7	24.4	26.8
Indonesia 1994	21.4	23.8	23.8	23.1	21.7	23.8	16.4	23.4	23.8	23.0
Kazakhstan 1995	13.1	(12.2)	*	14.5	*	*	12.1	(14.4)	*	*
Nepal 1996	26.3	a	30.8	(25.2)	*	31.3	(24.9)	(25.8)	32.4	31.2
Pakistan 1990-91	17.1	(16.2)	21.8	15.8	(13.9)	21.8	14.4	(17.9)	21.1	22.6
Philippines 1993	8.2	15.8	17.0	11.9	7.0	16.3	9.6	15.5	16.4	*

continued

Table E 4 *continued*

Region country and date	Antenatal care			Delivery facility			Person assisting at delivery			
	Doctor	Other medical	TBA other no one	Public hosp clinic	Private hosp clinic	Non medical (home)	Doctor	Other medical	Traditional birth attendant	Other no one
Latin America/Caribbean										
Bolivia 1993-94	16 2	*	20 6	15 8	14 7	20 6	15 3	(18 7)	17 4	20 9
Brazil 1996	7 7	(6 8)	10 6	7 9	(7 6)	(7 8)	7 3	9 3	(9 8)	*
Colombia 1995	10 0	*	11 9	10 0	8 5	12 5	9 9	13 3	(12 3)	*
Dominican Republic 1991	6 9	4 8	*	5 9	4 9	(2 4)	5 8	5 8	(11 2)	*
Guatemala 1995	18 9	20 0	21 4	19 3	(2 4)	20 3	12 5	*	20 1	21 6
Haiti 1994	16 8	18 9	17 7	(12 1)	*	18 0	(11 4)	17 8	18 1	(17 2)
Paraguay 1990	(13 3)	11 4	13 0	7 6	(8 9)	13 3	(5 5)	10 9	13 6	*
Peru 1996	19 3	20 5	20 3	19 4	16 7	20 7	16 4	20 4	20 1	21 4

Note > 36 indicates median cannot be calculated because less than 50 percent have stopped breastfeeding

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

TBA = traditional birth attendant

Table E 5 Median duration of breastfeeding, by household asset level and possession of refrigerator

Median duration (months) of breastfeeding by household asset level and possession of a refrigerator Demographic and Health Surveys 1990-1996

Region country and date	Household asset level			Refrigerator	
	Low	Medium	High	No	Yes
Sub Saharan Africa					
Burkina Faso 1993	26.6	23.3	*	25.5	*
Cameroon 1991	19.7	16.1	(12.3)	18.9	12.1
Central African Republic 1994-95	21.8	18.0	*	21.4	*
Côte d'Ivoire 1994	22.3	19.7	(18.5)	21.1	16.0
Ghana 1993	23.2	18.6	*	22.3	(16.4)
Kenya 1993	22.3	21.0	*	21.8	*
Madagascar 1992	19.6	16.2	*	19.5	*
Malawi 1992	21.8	19.9	*	21.4	*
Mali 1995	22.7	20.3	*	22.6	(18.3)
Namibia 1992	19.3	12.4	3.9	19.0	4.4
Niger 1992	22.2	18.5	*	21.8	(16.3)
Nigeria 1990	22.8	18.2	(12.5)	20.2	12.3
Rwanda 1992	28.1	(18.0)	*	28.0	*
Senegal 1992-93	21.5	19.1	(17.7)	20.4	(17.1)
Tanzania 1991-92	21.8	19.7	*	21.7	*
Uganda 1995	19.6	16.6	*	19.4	*
Zambia 1992	19.2	17.7	(17.6)	18.6	(16.9)
Zimbabwe 1994	18.4	17.5	*	18.2	(16.6)
Near East/North Africa					
Egypt 1992	19.6	21.0	18.6	20.4	19.2
Jordan 1990-91	8.3	12.5	11.4	12.4	12.0
Morocco 1992	17.3	15.9	7.9	16.3	6.5
Turkey 1993	(17.0)	11.7	9.2	12.1	11.5
Asia					
Bangladesh 1993-94	> 36	24.1	*	> 36	> 36
India 1992-93	24.5	22.9	16.4	24.2	17.1
Indonesia 1994	23.9	23.2	14.9	23.8	20.8
Kazakhstan 1995	*	14.9	(5.9)	(15.0)	13.3
Nepal 1996	31.5	24.4	*	31.3	*
Pakistan 1990-91	22.3	17.6	12.4	22.6	13.5
Philippines 1993	16.5	13.3	(5.1)	16.0	6.1
Latin America/Caribbean					
Bolivia 1993-94	18.0	15.7	14.6	19.0	12.7
Brazil 1996	10.1	8.5	7.9	7.8	7.8
Colombia 1995	14.9	11.4	9.4	14.6	9.5
Dominican Republic 1991	10.5	6.1	(2.3)	6.2	5.3
Guatemala 1995	21.5	18.4	9.7	20.6	10.1
Haiti 1994	18.2	16.2	*	17.8	*
Paraguay 1990	13.7	11.2	2.3	12.8	6.0
Peru 1996	20.6	19.6	14.9	20.4	14.6

Note > 36 indicates median cannot be calculated because less than 50 percent have stopped breastfeeding

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Appendix F

Number of Nighttime Breastfeeds, by Age and Selected Background Characteristics

Table F 1 Average number of nighttime breastfeeds, by age of child and mother's education

Among children born in the preceding two years average number of nighttime breastfeeds by age of child and mother's education Demographic and Health Surveys 1990-1996

Region country and date	Less than 6 months			6 to 11 months			12 to 17 months			18 to 23 months		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Sub Saharan Africa												
Burkina Faso 1993	11.7	11.7	(11.1)	13.4	12.4	*	12.4	11.5	*	12.6	(12.9)	*
Cameroon 1991	11.0	10.1	9.1	10.8	10.8	9.4	11.5	10.4	8.7	11.7	(9.5)	*
Central African Republic 1994-95	13.5	12.3	(10.7)	14.9	13.8	11.5	14.3	12.9	12.1	14.2	14.8	*
Côte d'Ivoire 1994	12.3	11.8	(11.7)	12.6	11.8	(11.8)	12.2	12.2	(11.1)	11.7	9.0	*
Ghana 1993	12.8	10.8	*	12.8	11.8	*	12.4	11.3	*	11.1	11.5	*
Kenya 1993	11.9	11.3	10.4	11.1	10.0	9.0	10.4	9.0	8.5	10.0	7.8	6.4
Madagascar 1992	12.6	11.0	9.8	12.1	10.3	8.7	10.6	9.5	8.5	(10.2)	7.5	(8.3)
Malawi 1992	10.1	10.5	*	10.5	9.7	(8.5)	9.3	10.0	*	9.1	7.9	*
Mali 1995	11.6	10.8	(9.7)	11.4	11.9	(10.8)	11.2	10.5	(9.5)	10.6	9.9	*
Namibia 1992	(12.9)	12.8	11.7	14.9	13.1	11.2	(11.5)	12.2	10.4	*	11.1	*
Niger 1992	11.5	10.4	*	11.1	11.2	(9.5)	10.8	10.6	*	10.3	(8.8)	*
Nigeria 1990	12.1	13.3	11.5	13.1	13.1	11.9	11.3	11.2	9.8	12.6	(14.0)	*
Rwanda 1992	8.7	10.0	(8.8)	10.3	10.0	(10.3)	8.7	9.1	(8.5)	7.8	8.1	(8.7)
Senegal 1992-93	11.0	11.1	(9.0)	11.7	12.2	(9.3)	11.4	10.4	*	10.6	*	*
Tanzania 1991-92	11.7	11.1	*	10.4	10.2	(9.9)	10.4	9.8	*	9.9	8.9	*
Uganda 1995	11.0	10.3	9.9	10.4	10.0	8.9	9.9	9.7	7.8	9.5	8.9	(5.7)
Zambia 1992	12.6	11.6	9.9	11.4	11.6	9.5	11.3	11.4	9.4	9.5	10.1	*
Zimbabwe 1994	(12.2)	11.4	11.7	11.5	11.6	11.1	(10.6)	10.0	8.9	(9.4)	8.1	(8.7)
Near East/North Africa												
Egypt 1992	11.7	11.2	10.1	12.0	11.6	10.4	11.7	11.8	10.4	11.2	11.5	11.2
Jordan 1990	11.0	9.7	9.2	10.9	10.4	9.0	10.8	10.5	8.8	10.1	(7.8)	(8.8)
Morocco 1992	9.7	*	*	10.4	(7.9)	*	9.8	*	*	9.2	*	*
Turkey 1993	13.3	10.3	(10.8)	13.2	9.6	(8.9)	9.8	8.5	*	(10.6)	*	*
Asia												
Bangladesh 1993-94	15.5	14.5	14.0	13.9	12.5	11.7	12.9	12.0	11.1	11.6	11.1	10.6
India 1992-93	10.8	10.2	10.0	10.3	9.5	9.1	9.6	8.9	8.5	9.3	8.5	7.7
Indonesia 1994	10.7	11.9	11.9	10.6	10.6	10.5	11.3	10.7	10.0	9.0	10.1	9.2
Kazakhstan 1995	*	*	7.6	*	*	6.9	*	*	6.1	*	*	(5.0)
Nepal 1996	11.0	10.6	10.9	10.2	10.8	9.1	9.7	9.6	9.3	8.8	8.9	(9.1)
Pakistan 1990	19.4	9.8	9.3	9.4	(9.0)	10.0	9.3	(8.1)	(8.7)	8.4	*	(8.2)
Philippines 1993	*	10.7	9.8	*	10.2	9.3	(8.8)	9.0	9.2	*	7.7	7.4

continued

Table F 1 *continued*

Region country and date	Less than 6 months			6 to 11 months			12 to 17 months			18 to 23 months		
	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher	No education	Primary	Secondary or higher
Latin America/Caribbean												
Bolivia 1993-94	10 0	8 9	8 8	9 2	8 7	7 6	9 2	8 0	7 3	(7 3)	7 6	5 5
Brazil 1996	(11 6)	11 9	11 8	*	10 7	10 0	*	10 7	9 0	*	(9 2)	(8 9)
Colombia 1995	*	7 8	8 2	*	7 5	6 8	*	5 9	5 7	*	6 2	(4 9)
Dominican Republic 1991	*	9 5	9 3	(10 5)	9 9	(7 5)	*	9 5	*	*	(7 3)	*
Guatemala 1995	10 2	10 2	9 7	10 0	9 7	7 9	8 9	8 8	(9 1)	7 8	7 8	*
Haiti 1994	10 9	10 3	(6 4)	9 7	9 5	*	10 2	9 0	*	9 3	(9 1)	*
Paraguay 1990	*	8 3	7 1	*	8 2	(6 5)	*	7 2	*	*	(7 5)	*
Peru 1996	11 6	11 1	11 8	10 0	10 8	10 3	11 0	10 1	8 3	10 0	9 5	7 2

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table F 2 Average number of nighttime breastfeeds, by age of child and urban-rural residence

Among children born in the preceding two years average number of nighttime breastfeeds by age of child and urban rural residence Demographic and Health Surveys 1990 1996

Region country and date	Less than 6 months			6 to 11 months			12 to 17 months			18 to 23 months		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Sub Saharan Africa												
Burkina Faso 1993	11.7	11.3	11.7	13.2	13.3	13.1	12.3	12.4	12.2	12.6	12.3	12.6
Cameroon 1991	10.3	9.8	10.7	10.5	10.8	10.4	10.4	10.1	10.6	11.1	(11.7)	10.9
Central African Republic 1994 95	12.7	11.5	13.4	14.1	13.1	14.8	13.4	11.6	14.6	14.2	12.7	14.9
Côte d'Ivoire 1994	12.2	12.2	12.1	12.3	11.7	12.6	12.1	12.4	12.0	11.2	10.7	11.3
Ghana 1993	11.8	11.4	11.9	12.0	11.5	12.3	11.8	10.8	12.1	11.2	(11.7)	11.1
Kenya 1993	11.2	(11.1)	11.2	10.0	8.8	10.1	9.1	8.4	9.3	7.9	(7.5)	8.0
Madagascar 1992	11.0	10.2	11.2	10.3	8.9	10.5	9.5	7.9	9.7	8.3	(8.1)	8.3
Malawi 1992	10.2	u	u	10.1	u	u	9.5	u	u	8.7	u	u
Mali 1995	11.4	10.7	11.7	11.4	11.4	11.4	11.0	10.5	11.2	10.6	10.9	10.5
Namibia 1992	12.5	11.8	12.7	12.9	13.6	12.7	11.7	10.6	12.0	11.0	(11.6)	10.7
Niger 1992	11.4	11.3	11.4	11.0	11.5	10.9	10.7	10.8	10.7	10.1	10.3	10.1
Nigeria 1990	12.4	12.1	12.5	12.9	12.7	13.0	11.2	10.5	11.3	12.7	(11.6)	12.8
Rwanda 1992	9.4	10.7	9.3	10.2	9.5	10.2	8.9	9.0	8.9	8.0	(8.7)	7.9
Senegal 1992 93	10.9	10.8	10.9	11.6	11.4	11.8	11.1	10.7	11.4	10.5	10.5	10.5
Tanzania 1991 92	11.3	11.2	11.3	10.3	10.8	10.1	9.9	10.2	9.9	9.2	8.4	9.4
Uganda 1995	10.5	10.6	10.4	10.0	9.3	10.1	9.6	8.5	9.7	8.9	8.8	8.9
Zambia 1992	11.5	10.0	12.9	11.1	10.0	12.1	11.0	9.9	11.9	9.9	9.2	10.3
Zimbabwe 1994	11.6	11.5	11.6	11.4	10.7	11.6	9.7	7.9	10.3	8.5	(7.5)	8.8
Near East/North Africa												
Egypt 1992	11.2	11.5	11.0	11.5	11.3	11.5	11.4	10.7	11.8	11.3	11.3	11.3
Jordan 1990 91	9.4	9.3	9.7	9.7	9.5	10.0	9.6	9.3	10.3	9.0	9.0	9.1
Morocco 1992	9.4	8.0	9.9	10.1	8.5	10.6	9.7	8.6	9.9	9.0	*	9.2
Turkey 1993	11.2	10.9	11.7	10.8	10.5	11.2	9.1	8.2	9.9	9.6	*	(9.8)
Asia												
Bangladesh 1993 94	15.0	14.6	15.0	13.2	12.5	13.2	12.4	12.2	12.4	11.3	(10.8)	11.3
India 1992-93	10.6	10.0	10.7	10.0	9.5	10.1	9.3	8.7	9.4	9.0	8.2	9.2
Indonesia 1994	11.7	12.3	11.5	10.6	10.5	10.6	10.5	10.2	10.7	9.7	8.9	10.0
Kazakhstan 1995	7.6	(7.7)	7.5	6.9	(7.4)	6.6	6.1	(6.4)	(5.8)	(5.0)	*	*
Nepal 1996	11.0	(11.5)	10.9	10.2	9.1	10.3	9.7	9.6	9.7	8.9	9.8	8.8
Pakistan 1990 91	9.4	10.1	9.1	9.4	9.6	9.3	9.1	8.8	9.2	8.5	9.0	8.3
Philippines 1993	10.2	9.9	10.4	9.8	9.6	9.9	9.1	9.0	9.1	7.7	7.6	7.9

continued

Table F 2 *continued*

Region country and date	Less than 6 months			6 to 11 months			12 to 17 months			18 to 23 months		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America/Caribbean												
Bolivia 1993-94	90	89	92	84	78	90	80	74	85	69	62	74
Brazil 1996	119	119	119	104	102	108	98	97	(102)	91	90	*
Colombia 1995	79	77	83	71	70	73	59	56	63	56	54	(59)
Dominican Republic 1991	96	93	101	94	90	99	96	(88)	100	(75)	*	(82)
Guatemala 1995	102	103	101	96	91	98	89	96	86	78	76	79
Haiti 1994	102	85	107	96	93	97	96	92	98	91	(85)	92
Paraguay 1990	81	73	86	80	72	84	69	(55)	75	(69)	*	(66)
Peru 1996	115	117	111	105	104	106	94	85	105	86	76	96

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

u = unknown (not available)

Table F.3. Average number of nighttime breastfeeds, by age of child and mother's access to mass media

Among children born in the preceding two years: average number of nighttime breastfeeds, by age of child and mother's access to mass media. Demographic and Health Surveys 1990-1996

Region, country, and date	Less than 6 months					6 to 11 months					12 to 17 months					18 to 23 months				
	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media
Sub-Saharan Africa																				
Burkina Faso 1993	11.9	*	11.4	11.4	(9.6)	13.6	*	12.5	13.7	*	12.7	*	11.5	13.0	*	12.8	*	11.9	(13.9)	*
Cameroon 1991	10.5	*	11.0	9.4	*	10.5	*	11.0	10.1	*	11.1	*	(9.4)	10.0	*	11.5	*	*	*	*
Central African Republic 1994-95	13.2	*	12.9	(11.5)	*	14.4	*	14.5	(12.0)	*	14.0	*	13.5	(10.3)	*	15.2	*	14.2	*	*
Côte d'Ivoire 1994	12.0	*	13.8	12.0	(12.0)	12.6	*	12.2	12.1	(12.3)	12.1	*	12.4	12.5	(11.2)	11.3	*	(10.5)	11.6	*
Ghana 1993	12.0	*	11.7	11.5	*	12.3	*	12.3	11.9	*	12.0	*	11.9	11.6	*	10.6	*	(12.1)	(11.7)	*
Kenya 1993	11.2	*	11.6	*	(10.0)	10.3	*	9.7	(9.4)	(9.5)	9.3	(9.4)	9.3	*	(8.3)	8.3	*	8.1	*	*
Madagascar 1992	11.3	*	10.9	*	(8.9)	10.7	*	9.5	*	(8.4)	9.9	*	8.9	*	*	8.6	*	7.8	*	*
Malawi 1992	10.2	*	10.2	*	*	10.1	*	10.1	*	*	9.5	*	9.5	*	*	9.2	*	8.2	*	*
Mali 1995	12.3	*	11.0	10.6	*	12.1	*	11.3	10.6	*	11.6	*	10.9	10.3	(9.3)	11.1	*	10.8	9.6	*
Namibia 1992	12.2	*	13.0	*	11.3	12.6	*	13.2	*	(13.2)	12.0	(12.5)	12.2	*	(8.8)	(10.9)	*	11.6	*	*
Niger 1992	12.0	*	10.9	9.5	*	11.5	*	10.4	9.9	(10.5)	11.5	*	9.9	9.2	*	10.4	*	10.2	9.0	*
Nigeria 1990	12.5	*	12.5	12.0	*	12.7	*	13.0	13.1	*	11.6	*	10.8	10.7	*	13.4	*	11.7	(11.7)	*
Rwanda 1992	9.4	*	*	*	*	10.2	*	*	*	*	8.9	*	*	*	*	8.0	*	*	*	*
Senegal 1992-93	10.9	*	11.3	10.4	(10.5)	11.7	*	11.8	11.6	(10.0)	11.6	*	11.5	10.4	(9.5)	11.3	*	10.3	(9.4)	*
Tanzania 1991-92	11.3	(11.2)	11.4	*	*	10.2	(11.6)	10.1	*	(11.8)	10.0	(8.8)	10.0	*	*	9.3	*	9.2	*	*
Uganda 1995	10.9	(9.0)	10.1	*	*	10.3	10.5	9.5	*	(8.9)	9.7	(9.0)	9.3	*	*	8.9	*	9.4	*	*
Zambia 1992	12.5	10.6	11.7	(10.3)	9.5	12.3	10.7	10.7	(9.9)	9.6	11.8	(9.7)	11.5	(9.0)	9.1	10.7	*	9.5	*	*
Zimbabwe 1994	11.6	11.7	11.7	*	(10.8)	11.9	12.0	10.5	*	10.4	10.5	8.8	(10.7)	*	(7.5)	9.1	*	*	*	*
Near East/North Africa																				
Egypt 1992	11.1	(11.3)	11.2	*	*	12.1	(10.0)	11.1	*	*	12.2	*	10.8	*	*	11.7	*	10.8	*	*
Jordan 1990-91	9.4	*	*	*	*	9.7	*	*	*	*	9.6	*	*	*	*	9.0	*	*	*	*
Morocco 1992	10.5	*	10.0	8.7	*	11.2	*	10.9	9.2	*	9.9	*	10.2	9.2	*	(9.7)	*	(9.1)	(8.3)	*
Turkey 1993	*	*	*	11.2	10.8	(15.9)	*	*	10.5	9.4	*	*	*	9.2	(8.2)	*	*	*	(10.0)	*
Asia																				
Bangladesh 1993-94	14.9	*	15.6	14.5	(13.9)	13.4	*	13.5	12.3	*	12.6	*	12.2	12.3	*	11.2	*	11.3	11.4	*
India 1992-93	10.9	*	10.6	9.8	*	10.4	*	10.0	9.2	*	9.6	*	9.4	8.5	*	9.4	*	9.1	7.7	*
Indonesia 1994	12.1	*	10.8	12.1	11.5	10.0	*	10.0	11.3	10.1	9.9	*	10.7	11.2	9.8	9.2	*	9.4	10.3	9.4
Kazakhstan 1995	*	*	*	*	7.7	*	*	*	(6.0)	7.5	*	*	*	*	(6.2)	*	*	*	*	*
Nepal 1996	11.1	*	10.4	(11.8)	*	10.4	*	9.7	(10.7)	*	9.7	*	9.5	(10.6)	*	9.1	*	8.4	(8.2)	*
Pakistan 1990-91	9.1	*	(9.3)	9.9	10.0	9.4	*	(9.2)	9.4	10.1	9.3	*	(9.3)	8.3	(8.9)	8.5	*	(7.5)	9.0	(9.4)
Philippines 1993	10.2	*	10.4	10.7	9.9	10.4	*	9.9	10.8	9.2	9.3	*	9.4	8.6	9.0	(9.8)	*	8.3	*	7.0

continued

Table F 3 *continued*

Region country and date	Less than 6 months					6 to 11 months					12 to 17 months					18 to 23 months				
	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media
Latin America/Caribbean																				
Bolivia 1993 94	9 5	*	9 0	8 8	8 9	9 0	*	9 1	8 2	7 4	8 6	*	8 6	8 0	6 5	7 6	*	7 8	(6 1)	5 2
Brazil 1996	*	*	(13 0)	12 4	11 2	(9 8)	*	*	10 5	10 1	*	*	*	9 8	10 2	*	*	*	(10 2)	(8 5)
Colombia 1995	(8 6)	*	(7 6)	7 8	7 9	*	*	(7 4)	7 2	7 1	*	*	*	(5 7)	5 8	*	*	*	(5 0)	6 0
Dominican Republic 1991	9 6	*	(11 2)	8 9	*	10 4	*	(9 7)	7 7	*	9 7	*	(9 0)	(10 2)	*	*	*	*	*	*
Guatemala 1995	10 6	(10 1)	9 8	10 8	9 5	10 1	(7 8)	10 1	9 3	8 9	9 3	(8 1)	8 6	8 9	9 0	8 1	*	8 3	7 0	6 8
Haiti 1994	10 9	*	10 5	(9 1)	*	10 0	*	9 3	(9 5)	*	10 0	*	9 4	(8 7)	*	9 5	*	(8 8)	*	*
Paraguay 1990	(8 2)	*	8 4	8 4	7 8	(7 6)	*	8 8	(8 4)	7 6	*	*	(7 1)	(8 1)	6 3	*	*	*	*	*
Peru 1996	11 3	(10 9)	11 5	11 3	11 6	11 3	(11 4)	10 6	10 6	10 1	10 5	9 1	10 9	9 5	8 5	10 4	(7 6)	9 9	9 0	7 3

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

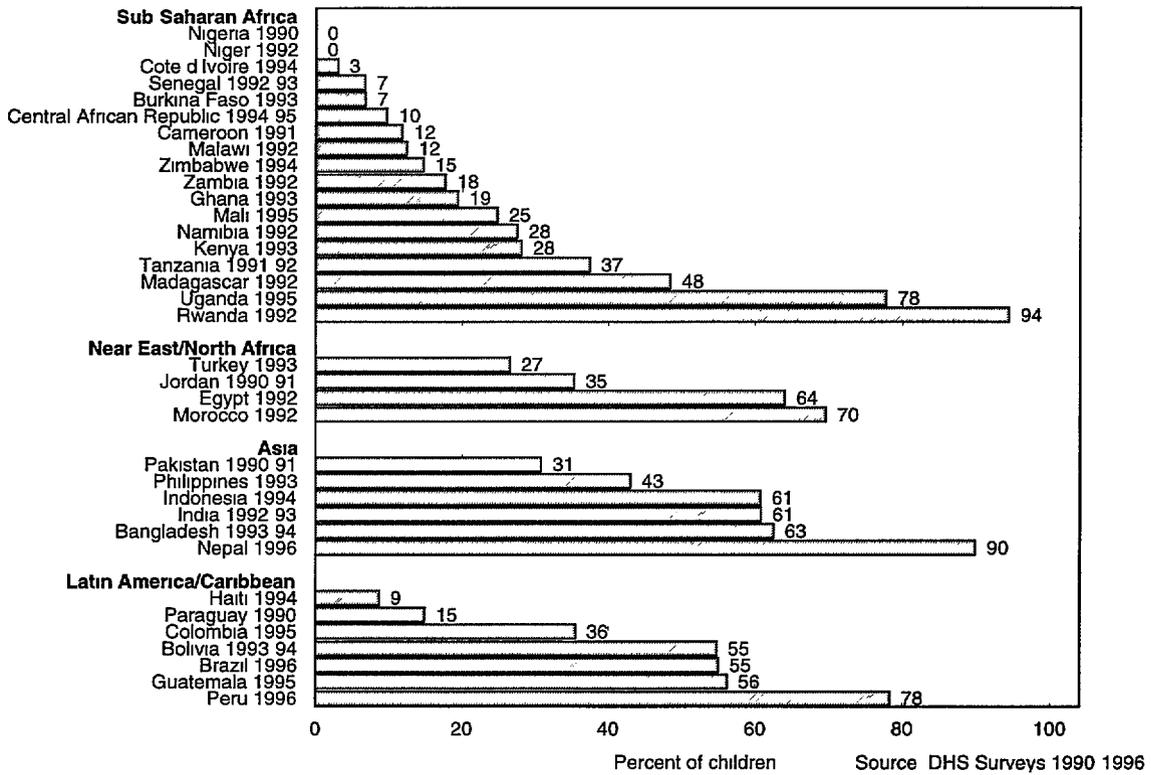
Appendix G

Exclusive Breastfeeding Rates among Children 0 to 5 Months, by Age in Months

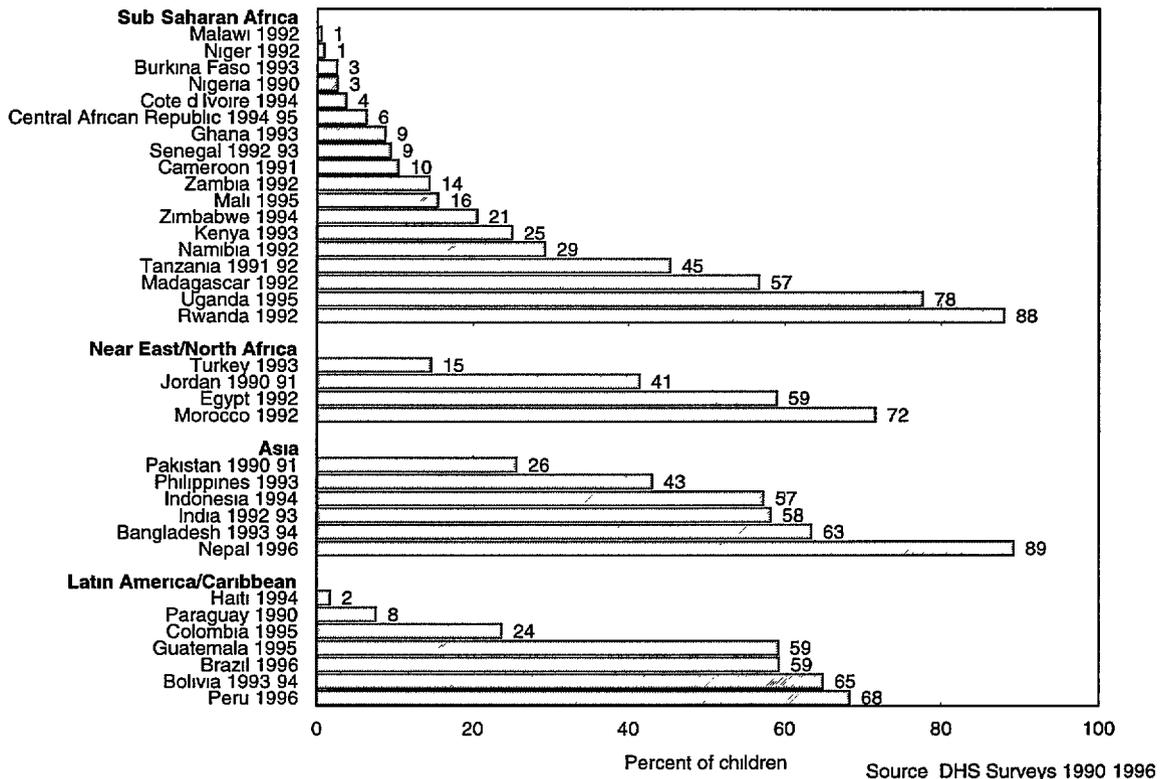
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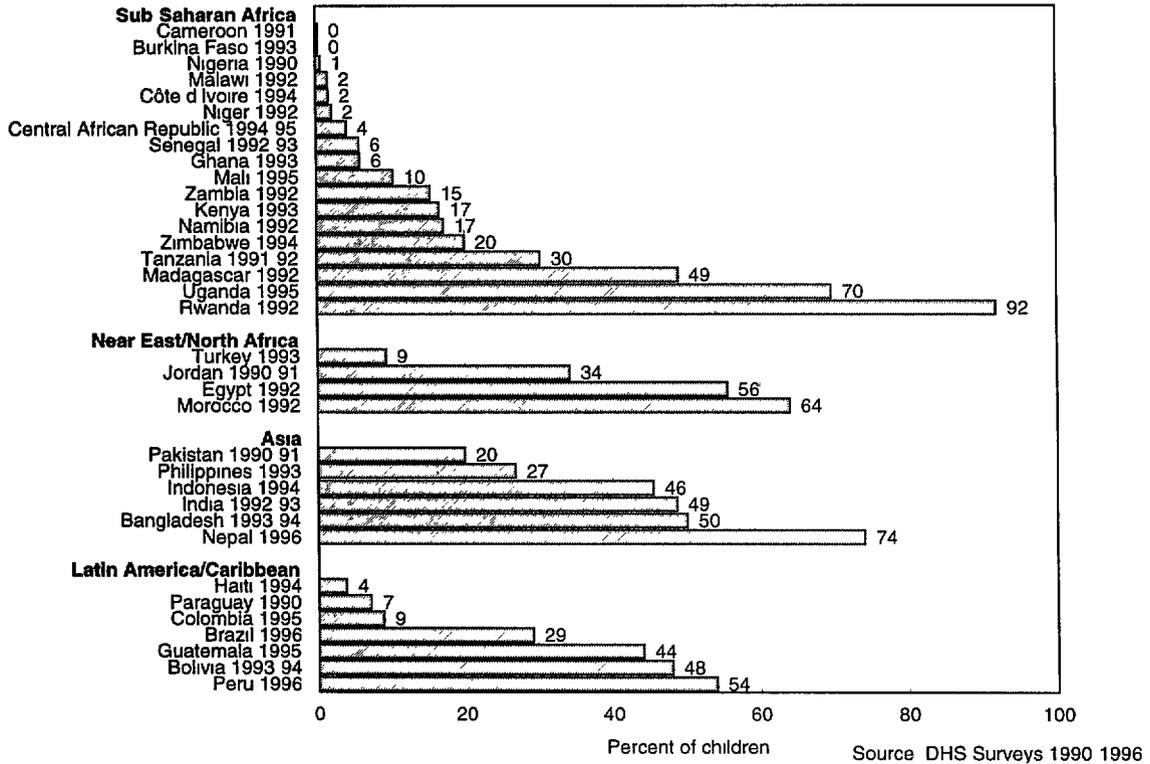
G.1 Exclusive breastfeeding at 0 months



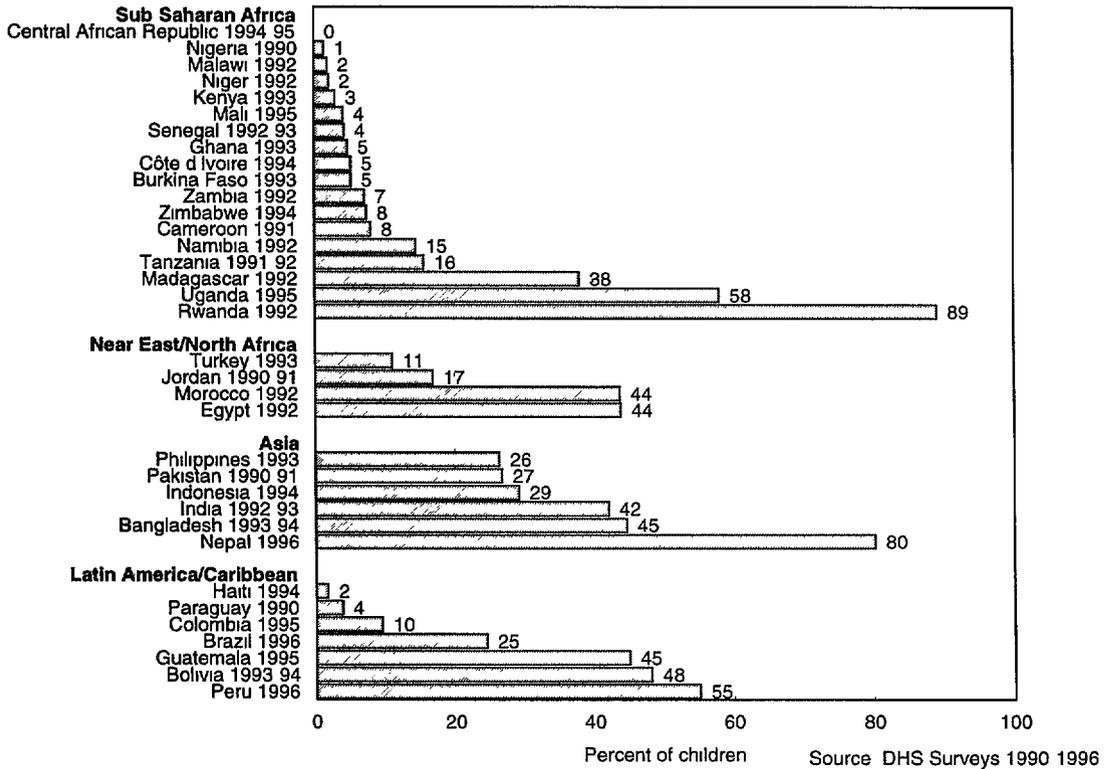
G.2 Exclusive breastfeeding at 1 month



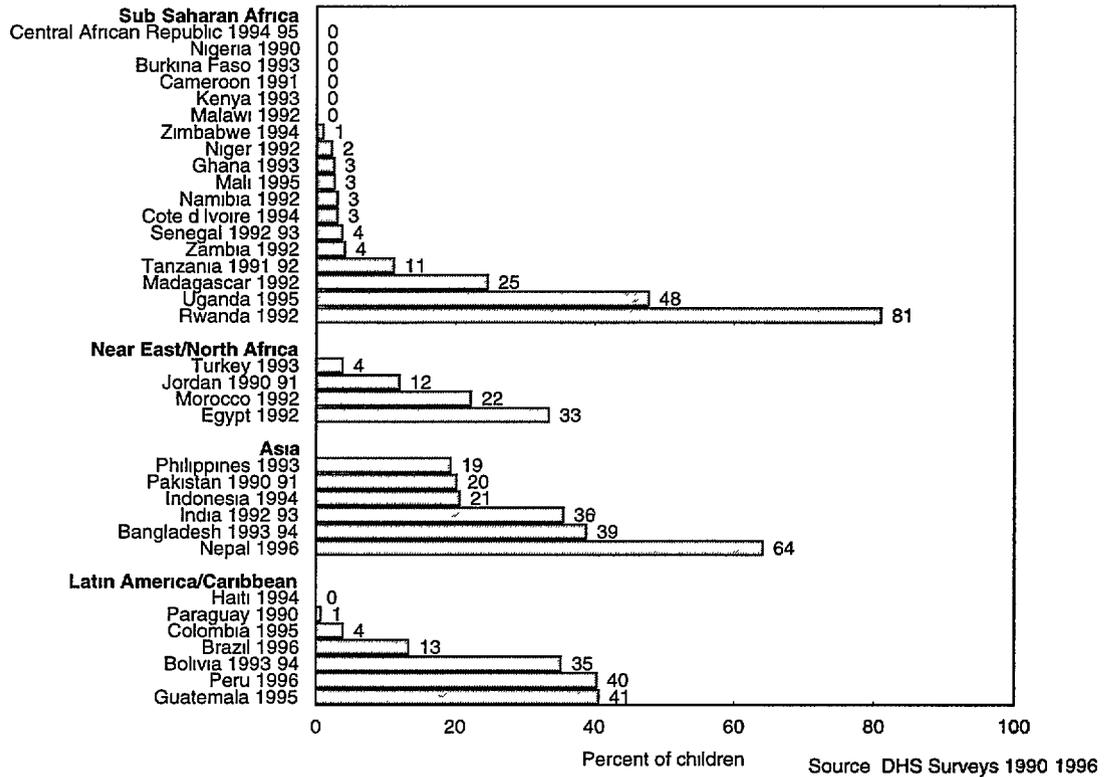
G.3 Exclusive breastfeeding at 2 months



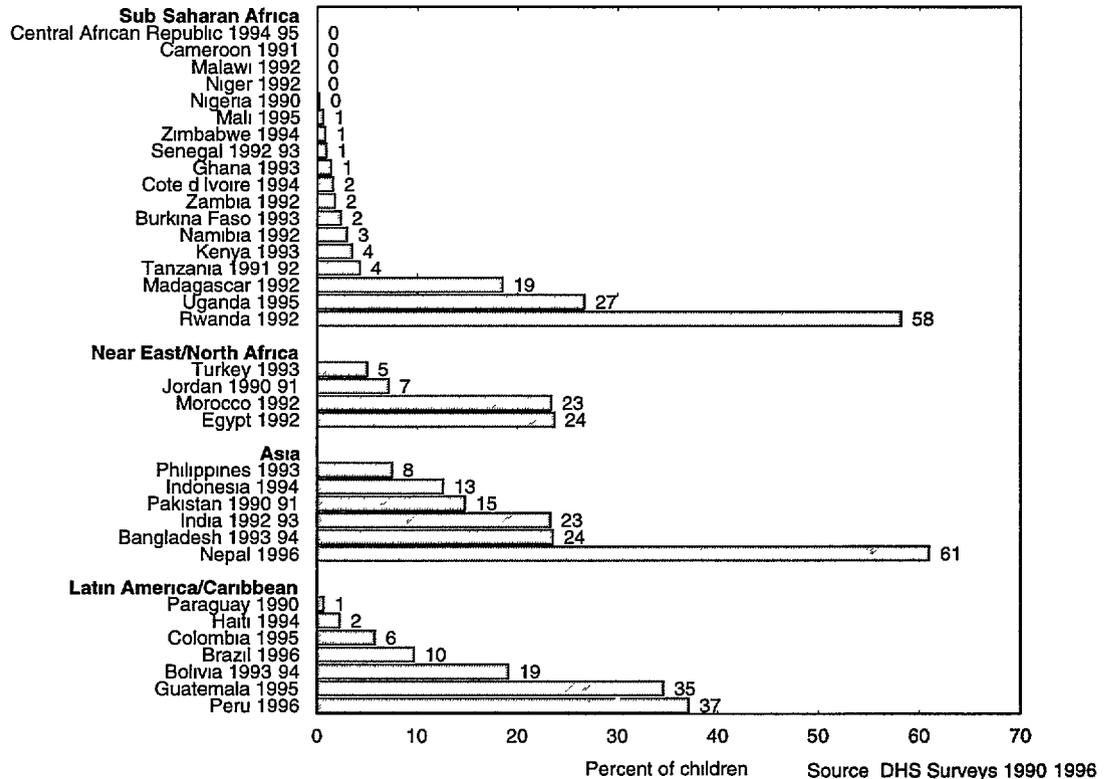
G.4 Exclusive breastfeeding at 3 months



G 5 Exclusive breastfeeding at 4 months



G.6 Exclusive breastfeeding at 5 months



Appendix H

Median Age at Introduction of Complementary Foods, by Selected Background Characteristics

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Table H 1 Median age at introduction of complementary foods among last born, currently breastfed children, by mother's work status

Median age in months at introduction of complementary foods among last-born currently breastfed children < 3 years by mother's work status Demographic and Health Surveys 1990-1996

Region country and date	Complementary foods				Number of children			
	Not working	Works at home	Works away for		Not working	Works at home	Works away for	
			Family self	Others			Family self	Others
Sub-Saharan Africa								
Burkina Faso 1993	9.2	8.5	8.3	*	1 246	571	1 284	53
Cameroon 1991	3.4	(3.9)	3.1	*	663	241	734	56
Central African Republic 1994-95	2.3	(2.5)	2.7	*	453	213	1 543	23
Côte d'Ivoire 1994	6.3	4.8	5.7	*	861	266	2 076	131
Ghana 1993	10.0	9.6	9.6	*	378	350	1 045	97
Kenya 1993	2.8	2.5	2.6	(2.5)	1 408	664	538	291
Madagascar 1992	5.3	4.6	5.0	*	549	403	1 329	144
Malawi 1992	2.1	(2.2)	(1.8)	*	1 614	264	221	45
Mali 1995	8.9	9.3	9.1	*	2 201	603	1 760	88
Namibia 1992	6.4	(4.6)	*	8.4	1 369	224	101	364
Niger 1992	5.8	4.7	5.7	*	1 901	655	657	21
Nigeria 1990	10.1	7.8	5.9	(5.3)	1 309	917	1 454	142
Rwanda 1992	(5.9)	5.8	6.7	(5.5)	56	233	2 353	116
Senegal 1992-93	6.8	5.3	6.9	*	1 499	272	879	59
Tanzania 1991-92	6.1	6.8	7.2	(8.0)	1 201	1 002	1 757	155
Uganda 1995	7.1	5.9	6.2	(5.4)	1 382	1 039	1 068	128
Zambia 1992	3.3	3.2	3.3	(2.8)	1 461	505	935	199
Zimbabwe 1994	2.7	(2.0)	(1.5)	*	978	486	399	175
Near East/North Africa								
Egypt 1992	7.8	*	*	6.2	3 214	58	65	683
Jordan 1990-91	0.0	*	*	*	3 223	51	22	269
Morocco 1992	0.0	*	*	9.6	2 000	169	31	282
Turkey 1993	a	*	*	*	1 403	0	0	0
Asia								
Bangladesh 1993-94	11.3	10.1	*	*	2 998	282	109	3
India 1992-93	10.1	9.0	10.3	9.3	2 438	1 343	3 438	3 468
Kazakhstan 1995	4.1	*	*	*	535	6	25	5
Nepal 1996	7.6	6.7	6.3	*	887	365	2 104	228
Pakistan 1990-91	14.3	(7.2)	*	*	2 674	213	146	120
Philippines 1993	7.2	7.9	8.1	a	2 786	450	338	626
Latin America/Caribbean								
Bolivia 1993-94	5.0	5.3	4.7	(4.0)	1 243	366	893	266
Brazil 1996	a	a	*	*	1 540	201	0	0
Colombia 1995	3.8	2.8	(3.6)	4.0	1 554	312	228	524
Dominican Republic 1991	0.0	(0.0)	*	0.0	1 232	200	58	417
Guatemala 1995	6.7	6.3	(5.9)	7.6	3 416	406	264	274
Haiti 1994	0.9	*	0.7	*	991	116	550	47
Paraguay 1990	5.1	5.0	*	(0.0)	1 337	266	57	242
Peru 1996	5.8	5.0	5.9	5.7	4 167	957	1 769	838

Note: Question not asked in Indonesia

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Table H 2 Median age at introduction of complementary foods among last-born, currently breastfed children of working mothers, by mother's occupation

Median age in months at introduction of complementary foods among last born currently breastfed children < 3 years of working mothers by mother's occupation Demographic and Health Surveys 1990-1996

Region, country, and date	Complementary foods				Number of children			
	Prof tech manag clerical	Sales and services	Manual and domestic labor	Agricultural	Prof tech manag clerical	Sales and services	Manual and domestic labor	Agricultural
Sub-Saharan Africa								
Burkina Faso 1993	*	8.0	(8.7)	(9.3)	22	1 232	337	326
Cameroon 1991	*	(2.0)	*	3.5	47	321	48	616
Central African Republic 1994-95	*	2.5	*	2.7	19	437	13	1 381
Côte d'Ivoire 1994	*	5.1	*	6.0	42	1 053	70	1 304
Ghana 1993	*	8.9	(9.7)	10.6	47	428	247	775
Kenya 1993	(2.8)	2.7	*	2.5	150	476	185	686
Madagascar 1992	*	4.3	4.5	5.0	51	241	454	1 387
Malawi 1992	*	*	(1.9)	*	27	114	246	145
Mali 1995	*	8.3	10.0	9.7	43	1 055	396	1 080
Namibia 1992	(8.4)	*	5.3	*	193	42	448	11
Niger 1992	*	4.7	5.2	5.9	23	507	309	492
Nigeria 1990	(4.9)	6.4	*	6.3	121	1 412	29	972
Rwanda 1992	*	*	*	6.6	48	41	28	2 590
Senegal 1992-93	*	5.5	*	8.2	26	583	95	525
Tanzania 1991-92	*	*	5.9	7.4	108	7	516	2,177
Uganda 1995	*	5.9	(6.6)	6.1	75	270	143	1 814
Zambia 1992	(3.4)	3.1	2.8	3.4	120	712	251	557
Zimbabwe 1994	*	(2.0)	*	2.0	95	262	253	559
Near East/North Africa								
Egypt 1992	5.8	*	*	7.4	432	114	120	391
Jordan 1990-91	*	*	*	*	328	26	97	48
Morocco 1992	*	*	(0.0)	(7.0)	85	10	243	214
Turkey 1993	*	*	*	(0.0)	51	59	55	298
Asia								
Bangladesh 1993-94	*	(8.9)	(10.2)	*	23	139	205	9
Indonesia 1994	2.4	2.8	(1.7)	2.1	408	898	511	1 927
Kazakhstan 1995	(4.0)	*	*	*	242	80	140	68
Nepal 1996	*	*	*	6.5	38	75	91	2 794
Pakistan 1990-91	*	*	(8.7)	*	41	11	220	208
Philippines 1993	0.0	8.3	(0.0)	5.6	382	811	429	376
Latin America/Caribbean								
Bolivia 1993-94	(3.2)	4.4	(5.1)	4.9	155	691	179	723
Brazil 1996	12.1	^a	^a	(0.0)	345	312	383	143
Colombia 1995	(3.9)	3.8	*	(3.1)	269	730	183	162
Dominican Republic 1991	(0.0)	0.0	(0.0)	*	283	460	425	82
Guatemala 1995	*	*	6.7	(8.0)	170	140	711	140
Haiti 1994	*	(0.7)	*	*	29	506	10	167
Paraguay 1990	*	5.8	*	(4.4)	149	549	144	160
Peru 1996	5.5	5.2	6.0	6.0	643	1 491	890	1 321

Note: Question not asked in India.

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Table H 3 Median age at introduction of complementary foods among last-born, currently breastfed children, < 3 years, by access to mass media

Median age in months at introduction of complementary foods among last born currently breastfed children < 3 years by access to mass media
Demographic and Health Surveys 1990 1996

Region country and date	Complementary foods					Number of children				
	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media
Sub-Saharan Africa										
Burkina Faso 1993	94	*	81	59	*	1,909	12	1 013	173	65
Cameroon 1991 ¹	37	u	25	31	u	861	u	332	503	u
Central African Republic 1994-95	27	*	28	(20)	*	766	22	1 136	203	141
Côte d'Ivoire 1994	62	*	56	55	4 2	1 619	40	310	1 048	317
Ghana 1993	98	*	103	89	*	786	16	451	492	134
Kenya 1993	26	*	28	*	(2 2)	1 165	143	1 274	106	232
Madagascar 1992	50	*	50	(5 4)	(4 3)	1 801	94	621	82	104
Malawi 1992	23	*	19	*	*	1 136	46	965	0	0
Mali 1995	94	*	92	84	*	1 772	9	1 686	1 098	153
Namibia 1992	63	*	58	*	a	454	142	950	72	457
Niger 1992	54	*	59	53	(3 6)	1 907	9	950	318	56
Nigeria 1990 ¹	73	u	84	64	u	1 802	u	1 283	765	u
Senegal 1992-93	75	*	72	55	(3 8)	847	13	1 043	663	170
Tanzania 1991 92	75	(4 9)	62	*	(5 6)	2 370	257	1 360	60	103
Uganda 1995	67	65	63	*	(5 6)	2 385	210	869	55	112
Zambia 1992	33	39	35	(2 5)	27	1 265	304	844	192	505
Zimbabwe 1994	26	19	32	*	(2 0)	901	381	250	129	395
Near East/North Africa										
Egypt 1992	89	(5 2)	67	*	*	1 598	196	2 226	0	0
Morocco 1992	00	*	89	a	(0 0)	545	3	586	1 075	274
Turkey 1993	*	*	*	a	a	152	6	78	897	752
Asia										
Bangladesh 1993-94	108	*	115	118	(15 3)	1 965	35	844	388	160
India 1992 93 ¹	105	u	93	91	u	6 601	u	5 911	8 266	u
Indonesia 1994	29	*	30	28	27	1 706	66	1 032	3 871	2 213
Kazakhstan 1995	*	*	*	(5 1)	37	25	19	2	174	462
Nepal 1996	71	*	65	(4 3)	*	2 299	16	991	220	96
Pakistan 1990-91	130	*	(10 6)	138	83	1 883	51	308	566	357
Philippines 1993	59	*	57	124	a	386	127	894	600	2 204
Latin America/Caribbean										
Bolivia 1993 94	52	*	54	49	40	625	45	673	702	807
Brazil 1996	*	*	*	a	a	159	37	154	1 023	1 076
Colombia 1995	(3 9)	*	44	37	3 5	141	68	257	687	1 483
Domincan Republic 1991	00	*	(0 0)	00	*	641	35	341	759	132
Guatemala 1995	74	(6 1)	75	61	57	1 098	150	1 166	864	1 160
Haiti 1994	08	*	06	(1 5)	(4 1)	824	47	479	210	149
Paraguay 1990	(3 7)	*	48	52	60	188	68	271	344	1 039
Peru 1996	60	(6 0)	62	61	53	1 109	214	1 154	1 324	3,968

Note In Jordan and Rwanda the question was not asked

* = based on too few cases to show (0-24)

() = based on a small number of cases (25 49)

u = unknown (question not asked)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

¹ Newspaper reading was not asked

Table H 4 Median age at introduction of complementary foods among last-born, currently breastfed children < 3 years, by household asset level and possession of a refrigerator

Median age in months at introduction of complementary foods among last born currently breastfed children < 3 years by household asset level and possession of a refrigerator Demographic and Health Surveys 1990-1996

Region country and date	Complementary foods					Number of children				
	Household asset level			Refrigerator		Household asset level			Refrigerator	
	Low	Medium	High	No	Yes	Low	Medium	High	No	Yes
Sub-Saharan Africa										
Burkina Faso 1993	93	64	*	86	*	2 531	601	39	3 120	520
Cameroon 1991	36	26	(39)	32	(40)	987	556	153	1 486	210
Central African Republic 1994-95	26	(23)	*	26	*	1 889	335	42	2 212	55
Côte d'Ivoire 1994	59	55	(63)	58	47	1 822	1 304	209	2 999	336
Ghana 1993	99	92	*	97	*	1 353	466	60	1 727	152
Kenya 1993	27	23	*	26	*	2 205	587	83	2 853	68
Madagascar 1992	49	50	*	50	*	2 457	223	19	2 676	24
Malawi 1992	21	17	*	21	*	1 878	254	15	2 147	0
Mali 1995	93	80	*	91	(80)	3 838	792	87	4 574	145
Nambia 1992	60	59	a	60	a	1 341	434	301	1 700	376
Niger 1992	56	48	*	55	(35)	2 921	277	41	3 174	66
Nigeria 1990	80	65	(75)	75	80	2 529	1 177	144	3 525	326
Rwanda 1992	66	(54)	*	65	*	2 647	114	4	2 751	14
Senegal 1992 93	72	59	(44)	68	(51)	1 643	932	160	2 509	227
Tanzania 1991 92	68	65	*	68	*	3 609	504	37	4 105	45
Uganda 1995	66	57	*	65	*	3 336	285	11	3 614	18
Zambia 1992	36	30	29	33	(25)	1 837	1 064	210	2 889	222
Zimbabwe 1994	24	22	*	24	*	1 407	502	147	1 911	145
Near East/North Africa										
Egypt 1992	87	76	60	77	65	637	1 486	1 566	2 037	1 983
Jordan 1990 91	*	77	00	00	00	231	2 203	1 131	731	2 835
Morocco 1992	90	a	00	a	00	1 136	717	630	1 904	579
Turkey 1993	(87)	a	00	64	a	187	675	624	257	1 629
Asia										
Bangladesh 1993 94	110	(185)	*	111	111	2 916	339	82	3 392	3 392
India 1992-93	100	95	125	99	118	2 291	6 657	1 828	9 152	1 626
Indonesia 1994	29	28	(27)	28	32	4 946	3 741	199	8 347	540
Kazakhstan 1995	*	42	(36)	(52)	38	47	484	150	152	530
Nepal 1996	70	45	*	68	*	3 310	261	32	3 622	0
Pakistan 1990-91	123	a	89	126	a	1 780	790	302	2 725	439
Philippines 1993	62	a	(00)	70	00	1 999	1 959	252	3 380	830
Latin America/Caribbean										
Bolivia 1993 94	53	50	38	52	35	1 095	1 033	724	2 215	637
Brazil 1996	(00)	a	a	a	a	263	787	994	763	1 685
Colombia 1995	36	36	38	38	36	425	856	1 357	1 271	1 366
Dominican Republic 1991	(00)	00	(00)	00	00	437	1 060	411	1 164	744
Guatemala 1995	73	62	57	69	54	2 233	1 709	496	3 736	703
Haiti 1994	09	07	*	08	*	1 164	491	52	1 612	95
Paraguay 1990	49	48	a	50	a	825	692	392	1 169	740
Peru 1996	60	56	53	58	54	3 453	2 866	1 450	5 764	2 007

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Table H 5 Median age at introduction of complementary foods among last born, currently breastfed children < 3 years of working fathers, by father's occupation

Median age in months at introduction of complementary foods among last born currently breastfed children < 3 years of working fathers by father's occupation Demographic and Health Surveys 1990-1996

Region, country, and date	Complementary foods				Number of children			
	Prof tech manag clerical	Sales and services	Manual and domestic labor	Agricultural	Prof tech manag clerical	Sales and services	Manual and domestic labor	Agricultural
Sub-Saharan Africa								
Burkina Faso 1993	*	8.2	8.5	8.8	48	337	266	2 473
Cameroon 1991	(2.7)	(3.6)	3.1	3.7	234	164	359	712
Central African Republic 1994-95	(2.1)	(2.3)	2.7	2.7	198	291	385	1 127
Côte d'Ivoire 1994	(4.7)	5.9	5.8	5.9	290	436	587	1 568
Ghana 1993	(11.8)	(9.8)	(8.6)	10.3	246	180	365	984
Kenya 1993	3.1	3.5	2.6	2.4	385	429	798	924
Madagascar 1992	(4.8)	(4.4)	4.6	5.1	152	106	342	1 804
Malawi 1992	(2.1)	(1.9)	1.9	2.3	231	251	555	1 055
Mali 1995	(8.4)	7.9	8.9	9.5	244	873	303	3 086
Namibia 1992	(8.1)	*	5.6	(5.9)	161	136	442	178
Niger 1992	(3.9)	4.7	5.1	5.8	77	283	377	2 429
Nigeria 1990	6.0	7.7	(6.4)	8.0	471	966	109	2 214
Rwanda 1992	(6.2)	*	5.7	6.7	92	99	310	2 153
Senegal 1992-93	(5.7)	6.5	5.8	7.4	256	483	643	1 069
Tanzania 1991-92	6.3	*	6.5	7.2	321	34	493	2 469
Uganda 1995	6.9	6.3	5.4	6.8	325	525	461	2 025
Zambia 1992	3.1	3.0	3.5	3.1	308	410	892	1 169
Zimbabwe 1994	(2.4)	2.6	2.1	2.2	320	363	687	506
Near East/North Africa								
Egypt 1992	6.2	6.9	7.6	8.2	812	624	1 243	1 252
Jordan 1990-91	0.0	(0.0)	0.0	(7.1)	1 004	482	1 867	194
Morocco 1992	(0.0)	0.0	0.0	9.5	252	410	847	898
Turkey 1993	a	0.0	a	6.4	214	428	749	323
Asia								
Bangladesh 1993-94	(10.2)	10.5	10.9	11.4	200	637	1 131	1 304
Indonesia 1994	2.9	2.7	2.7	3.0	1 058	1 638	2 458	3 591
Kazakhstan 1995	*	*	4.0	*	80	92	338	155
Nepal 1996	5.5	7.1	6.9	6.9	229	232	956	2 047
Pakistan 1990-91	8.3	a	11.6	14.4	328	601	1 114	952
Philippines 1993	(0.0)	a	0.0	6.1	310	534	1 546	1 672
Latin America/Caribbean								
Bolivia 1993-94	3.4	(5.4)	5.0	5.2	303	251	1 081	986
Brazil 1996	a	a	a	a	629	610	573	432
Colombia 1995	4.4	3.9	3.5	3.3	294	513	901	683
Dominican Republic 1991	(0.0)	(0.0)	0.0	(0.0)	280	420	628	447
Guatemala 1995	6.3	(6.5)	6.3	7.0	457	243	1 330	2 264
Haiti 1994	*	*	(1.1)	0.7	162	160	286	970
Paraguay 1990	*	(6.1)	5.0	4.8	173	265	453	720
Peru 1996	5.2	5.6	5.7	6.0	1 175	998	2 467	2 649

Note: The question was not asked in India

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Table H 6 Median age at introduction of complementary foods among last-born, currently breastfed children < 3 years, by mother's age at birth

Median age in months at introduction of complementary foods among last born currently breastfed children < 3 years by mother's age at birth Demographic and Health Surveys 1990-1996

Region country and date	Complementary foods				Number of children			
	15-19	20-24	25-34	35+	15-19	20-24	25-34	35+
Sub Saharan Africa								
Burkina Faso 1993	8.9	8.7	8.5	8.3	474	844	1 326	527
Cameroon 1991	3.3	3.2	3.2	(3.7)	354	478	664	200
Central African Republic 1994-95	2.5	2.9	2.4	3.1	447	616	933	272
Côte d'Ivoire 1994	5.0	6.6	5.9	5.1	664	873	1 371	427
Ghana 1993	(9.1)	10.3	9.6	11.3	251	481	846	301
Kenya 1993	2.4	2.4	2.8	3.2	465	868	1 193	396
Madagascar 1992	5.0	5.0	4.8	5.1	481	682	1 078	459
Malawi 1992	2.2	2.0	2.2	(1.6)	366	577	809	395
Mali 1995	8.5	8.9	9.4	8.7	773	1 129	2 030	786
Namibia 1992	6.0	6.9	5.9	6.8	351	525	827	372
Niger 1992	5.2	4.9	5.8	5.7	615	894	1 288	444
Nigeria 1990	10.4	6.7	7.6	6.0	625	995	1 664	567
Rwanda 1992	(7.2)	6.0	6.7	6.5	188	618	1 350	609
Senegal 1992-93	7.4	5.9	6.6	7.6	394	665	1 173	504
Tanzania 1991-92	6.6	6.9	6.9	6.5	735	1 185	1 593	637
Uganda 1995	6.8	6.7	6.1	6.5	760	1 078	1 364	430
Zambia 1992	3.1	3.4	3.4	2.9	644	879	1 161	427
Zimbabwe 1994	1.9	2.4	2.3	(3.4)	364	627	785	279
Near East/North Africa								
Egypt 1992	7.8	8.5	6.4	7.8	393	1 172	1 908	547
Jordan 1990-91	8.1	6.3	0.0	7.0	284	929	1 725	627
Morocco 1992	*	0.0	0.0	a	179	539	1 212	553
Turkey 1993	(0.0)	0.0	a	(4.3)	277	676	785	148
Asia								
Bangladesh 1993-94	11.7	12.1	9.9	(12.4)	856	1 187	1 132	217
India 1992-93	9.7	10.0	10.1	10.5	6 441	1 682	947	1 708
Indonesia 1994	3.1	2.8	2.6	3.3	1 194	2 511	4 077	1 105
Kazakhstan 1995	*	(4.0)	4.5	*	94	248	280	61
Nepal 1996	7.6	6.6	6.8	5.7	624	1 208	1 415	375
Pakistan 1990-91	12.7	11.1	14.9	12.9	320	862	1 518	464
Philippines 1993	7.5	7.6	8.5	6.9	310	1 063	2 093	745
Latin America/Caribbean								
Bolivia 1993-94	5.0	4.5	5.0	5.0	374	771	1 231	477
Brazil 1996	a	a	a	a	475	698	1 012	264
Colombia 1995	4.0	3.4	3.5	(4.9)	438	840	1 078	281
Dominican Republic 1991	(0.0)	0.0	0.0	*	318	682	775	132
Guatemala 1995	6.2	6.3	7.2	6.9	766	1 287	1 732	655
Haiti 1994	*	1.0	0.7	(0.9)	201	397	758	351
Paraguay 1990	5.3	5.9	5.1	5.4	262	486	823	339
Peru 1996	5.7	5.6	5.7	5.8	1 079	2 194	3 267	1 230

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Table H 7 Median age at introduction of complementary foods among last born, currently breastfed children < 3 years, by birth order

Median age in months at introduction of complementary foods among last-born currently breastfed children < 3 years by birth order Demographic and Health Surveys 1990-1996

Region, country, and date	Complementary foods			Number of children		
	1 2	3-5	6+	1 2	3-5	6+
Sub Saharan Africa						
Burkina Faso 1993	8 3	8 7	8 9	1 051	1 191	930
Cameroon 1991	3 2	3 0	3 7	599	620	477
Central African Republic 1994-95	2 4	3 0	2 4	869	862	535
Côte d'Ivoire 1994	5 6	6 0	5 6	1 199	1 315	821
Ghana 1993	9 1	9 9	(11 1)	762	770	347
Kenya 1993	2 3	2 9	3 1	1 101	1 065	755
Madagascar 1992	4 6	5 5	4 6	926	922	852
Malawi 1992	1 9	2 3	2 0	698	771	677
Mali 1995	8 4	9 5	9 1	1 391	1 700	1 628
Namibia 1992	6 4	6 3	6 0	958	701	417
Niger 1992	5 3	5 6	5 5	918	1 212	1 109
Nigeria 1990	7 7	8 0	6 4	1 266	1 500	1 085
Rwanda 1992	6 5	6 6	6 5	907	1 007	851
Senegal 1992 93	6 3	6 4	7 1	842	971	923
Tanzania 1991 92	6 8	7 0	6 3	1 634	1 464	1 051
Uganda 1995	6 8	6 5	6 0	1 365	1 278	989
Zambia 1992	3 3	3 4	3 0	1 204	1 066	841
Zimbabwe 1994	2 2	2 3	2 9	974	648	434
Near East/North Africa						
Egypt 1992	6 8	7 6	7 7	1 596	1 541	882
Jordan 1990-91	(0 0)	0 0	7 9	1 001	1 216	1 349
Morocco 1992	0 0	0 0	10 3	866	894	723
Turkey 1993	a	0 0	(7 6)	1 139	540	206
Asia						
Bangladesh 1993-94	11 7	11 2	10 1	1 593	1 283	517
India 1992 93	9 7	10 1	10 4	5 428	1 682	3 667
Indonesia 1994	2 8	2 8	3 0	4 712	3 044	1 131
Kazakhstan 1995	3 7	(5 1)	*	460	197	26
Nepal 1996	6 7	7 1	6 2	1 558	1 461	603
Pakistan 1990-91	11 2	16 1	12 3	1 033	1 283	848
Philippines 1993	a	8 0	6 5	1 746	1 610	856
Latin America/Caribbean						
Bolivia 1993-94	4 7	4 8	5 2	1 164	1 039	649
Brazil 1996	a	a	(0 0)	1 600	652	197
Colombia 1995	3 7	3 2	(4 6)	1 601	831	206
Dominican Republic 1991	0 0	0 0	*	1 041	698	169
Guatemala 1995	6 1	6 9	7 4	1 742	1 590	1 107
Haiti 1994	1 2	1 1	0 6	674	631	403
Paraguay 1990	5 6	5 4	5 0	881	602	427
Peru 1996	5 5	5 9	6 2	3 886	2 679	1 205

* = based on too few cases to show (0 24)

() = based on a small number of cases (25-49)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Table H 8 Median age at introduction of complementary foods among last born, currently breastfed children < 3 years, by length of preceding birth interval

Median age at introduction of complementary foods among last-born currently breastfed children < 3 years by length of preceding birth interval Demographic and Health Surveys 1990 1996

Region country and date	Complementary foods				Number of children			
	First birth	<24 months	24-47 months	48+ months	First birth	<24 months	24-47 months	48+ months
Sub-Saharan Africa								
Burkina Faso 1993	8.2	(8.6)	8.6	9.0	577	29	1 712	507
Cameroon 1991	3.3	(4.6)	3.1	(3.3)	316	23	840	248
Central African Republic 1994-95	2.2	2.6	2.8	3.0	460	33	1 064	353
Côte d'Ivoire 1994	5.3	5.8	5.8	5.9	665	34	1 641	625
Ghana 1993	8.2	*	9.9	9.8	380	16	824	473
Kenya 1993	2.4	2.3	2.7	3.1	585	49	1 324	395
Madagascar 1992	4.6	5.2	4.9	5.7	502	59	1 108	382
Malawi 1992	2.2	(0.7)	2.2	1.9	364	31	1 049	370
Malta 1995	8.4	8.4	9.3	8.9	708	68	2 476	726
Namibia 1992	6.2	5.9	6.1	7.6	598	29	713	423
Niger 1992	5.3	5.2	5.5	5.6	455	60	683	387
Nigeria 1990	8.2	6.6	7.1	10.0	662	68	752	649
Rwanda 1992	6.3	6.4	6.6	6.5	472	35	511	352
Senegal 1992 93	6.6	6.1	6.6	7.5	439	361	1 424	443
Tanzania 1991 92	6.7	6.8	7.2	5.9	878	51	1 996	674
Uganda 1995	7.0	5.9	6.4	7.2	702	67	1 687	445
Zambia 1992	3.1	3.6	3.4	3.3	685	38	1 518	443
Zimbabwe 1994	2.1	(2.7)	2.2	2.7	543	145	835	498
Near East/North Africa								
Egypt 1992	7.4	8.8	6.5	6.7	813	838	1 555	685
Jordan 1990 91	*	0.0	8.2	7.5	505	14	1 183	332
Morocco 1992	(0.0)	(0.0)	11.7	a	443	45	1 029	471
Turkey 1993	a	10.0	7.1	(0.0)	643	31	466	421
Asia								
Bangladesh 1993 94	12.6	11.3	10.9	10.9	832	37	1 319	774
India 1992 93	9.5	10.3	10.2	9.9	7 955	49	1 839	5 167
Indonesia 1994	2.4	3.2	3.4	2.5	2 660	89	2 295	2 878
Kazakhstan 1995	3.6	(3.4)	(5.7)	*	247	12	151	138
Nepal 1996	6.9	7.2	6.7	6.5	779	55	1 602	555
Pakistan 1990-91	10.5	18.5	10.8	14.1	535	64	1 224	672
Philippines 1993	a	a	6.2	9.1	864	11	1 396	681
Latin America/Caribbean								
Bolivia 1993 94	4.4	5.4	5.1	4.3	657	54	1 104	481
Brazil 1996	a	a	a	a	871	40	505	634
Colombia 1995	3.8	3.9	3.2	4.0	924	45	624	582
Dominican Republic 1991	0.0	0.0	0.0	(0.0)	596	43	505	330
Guatemala 1995	5.9	6.9	7.1	5.9	896	97	1 779	627
Haiti 1994	(1.6)	(0.5)	1.0	(0.7)	362	28	747	251
Paraguay 1990	5.8	5.2	5.0	5.8	481	51	527	325
Peru 1996	5.5	6.2	5.9	5.4	2 253	1 234	2 361	1 726

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

^a Median cannot be calculated because less than 50 percent of breastfeeding children have received complementary foods

Appendix I

Median Duration of Postpartum Effects, by Selected Background Characteristics

Table I 1 Median duration of postpartum effects, by access to mass media

Median duration (months) of postpartum amenorrhea abstinence and insusceptibility by access to mass media Demographic and Health Surveys 1990 1996

Region country and date	Amenorrhea					Abstinence					Insusceptibility					Number of births				
	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media
Sub Saharan Africa																				
Burkina Faso 1993	16.9	*	13.8	11.9	8.5	20.7	*	14.4	14.9	5.1	23.1	*	22.2	19.3	11.9	2 256	14	1 200	190	77
Cameroon 1991 ¹	13.1	u	10.4	5.6	u	15.2	u	13.7	8.4	u	18.1	u	17.3	11.3	u	1 080	u	417	629	u
Central African																				
Republic 1994 95	17.3	(20.0)	14.0	9.4	9.4	12.4	(14.1)	9.5	5.3	5.1	19.7	(20.1)	16.3	12.5	10.6	929	27	1 448	267	166
Côte d'Ivoire 1994	14.0	(12.0)	10.9	11.8	7.7	12.4	(7.8)	9.8	13.8	8.0	18.3	(18.8)	18.8	15.8	10.2	1 941	48	372	1 245	383
Ghana 1993	15.4	*	13.7	10.1	7.6	11.5	*	9.8	7.9	4.9	19.6	*	15.9	15.3	7.9	928	19	547	565	145
Kenya 1993	12.5	10.1	11.5	7.5	4.5	2.6	0.6	3.7	2.9	2.8	14.7	11.6	13.2	7.9	10.7	1 479	168	1 593	135	270
Madagascar 1992	14.1	13.9	11.1	6.5	5.0	4.0	2.4	2.8	4.3	2.8	14.9	14.4	11.7	7.1	5.6	2 347	119	826	106	126
Malawi 1992	14.9	5.2	9.8	*	*	0.4	0.4	0.4	*	*	14.9	5.2	9.8	*	*	1 467	68	1 318	0	0
Mali 1995	14.9	*	13.7	11.8	9.8	2.9	*	2.5	3.4	4.2	15.6	*	14.4	12.9	10.7	2 253	11	2 183	1 391	180
Namibia 1992	8.9	7.6	11.3	2.5	2.6	5.8	6.2	6.4	5.4	5.2	15.7	16.9	13.8	6.0	8.9	546	177	1 167	82	524
Niger 1992	16.1	*	17.0	12.2	8.5	2.4	*	2.2	2.4	2.1	16.7	*	17.2	13.7	11.2	2 534	11	1 269	421	64
Nigeria 1990 ¹	18.0	u	14.8	12.4	u	9.9	u	10.9	12.9	u	21.2	u	20.1	15.1	u	2 245	u	1 659	977	u
Senegal 1992 93	15.8	*	15.8	13.3	4.5	4.2	*	3.2	3.5	2.5	18.0	*	17.0	14.1	8.3	1 043	15	1 270	813	220
Tanzania 1991 92	14.8	13.2	12.0	7.8	4.8	6.9	9.0	6.0	7.2	0.7	16.8	15.3	13.9	8.0	6.2	2 921	317	1 683	83	127
Uganda 1995	13.7	12.9	12.1	5.5	5.6	2.3	2.7	2.1	1.3	2.3	14.8	13.3	12.6	7.0	6.3	3 028	271	1 152	73	135
Zambia 1992	13.9	11.1	11.5	9.4	7.9	4.3	5.2	4.4	4.4	4.0	15.1	12.4	12.4	13.2	10.1	1 640	397	1 111	260	655
Zimbabwe 1994	14.8	11.4	12.4	12.2	12.5	4.3	2.8	3.6	3.4	2.6	15.3	14.5	14.0	12.6	13.0	1 039	444	292	145	444
Near East/North Africa																				
Egypt 1992	6.6	2.4	8.1	5.4	3.9	1.8	1.9	1.8	1.9	1.8	7.1	2.9	8.1	5.9	4.1	2 676	134	67	1 407	689
Morocco 1992	5.5	*	5.9	3.2	1.7	1.3	*	1.7	1.5	0.5	6.1	*	5.9	3.4	1.7	719	3	737	1 296	300
Turkey 1993	4.8	*	3.1	4.0	3.2	1.8	*	1.7	2.0	1.7	5.5	*	3.1	4.3	3.7	198	8	103	1 082	843
Asia																				
Bangladesh 1993 94	11.9	(5.3)	9.7	9.7	6.0	2.1	(2.7)	1.9	2.2	1.5	12.3	(5.3)	10.2	9.9	7.2	2 296	37	975	444	175
India 1992 93 ¹	10.1	u	8.4	6.0	u	3.0	u	3.5	3.2	u	10.9	u	9.7	7.2	u	416	u	7 229	9 904	u
Indonesia 1994	9.1	5.8	9.2	6.6	4.1	2.6	1.6	3.3	2.3	2.2	9.5	7.4	9.5	7.7	4.4	2 006	80	1 190	4 398	2 456
Kazakhstan 1995	(2.2)	*	*	5.0	4.1	(1.6)	*	*	1.5	2.2	(2.2)	*	*	5.0	4.7	30	24	2	213	542
Nepal 1996	11.7	*	9.1	5.6	5.7	2.9	*	3.3	3.7	2.9	12.8	*	10.3	6.3	6.1	2 791	17	1 207	258	103
Pakistan 1990 91	8.8	4.5	5.5	5.7	3.3	2.4	2.1	2.6	2.2	2.1	9.3	4.5	6.4	6.4	3.6	2 381	68	399	767	463
Philippines 1993	9.9	5.5	8.6	5.0	4.4	2.1	2.4	2.2	2.3	2.3	10.5	5.5	9.1	5.6	5.5	500	162	1 173	779	2 779

continued

Table I 1 *continued*

Region country and date	Amenorrhea					Abstinence					Insusceptibility					Number of births				
	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media	No access	Print only	Radio only	TV w/wo radio	All media
Latin America/Caribbean																				
Bolivia 1993 94	13 9	7 1	12 4	9 7	6 0	2 7	4 9	2 9	2 2	2 3	14 5	8 1	13 8	10 6	8 6	809	61	887	885	974
Brazil 1996	2 2	(6 9)	2 9	3 2	3 0	0 7	(2 4)	2 3	2 3	2 1	3 6	(8 5)	4 1	4 2	4 3	227	42	201	1 215	1 181
Colombia 1995	5 4	4 5	5 7	4 1	4 0	2 6	4 4	2 2	2 0	2 2	6 1	5 7	8 7	5 6	5 2	172	83	312	817	1 692
Dominican																				
Republic 1991	3 6	(5 7)	4 2	3 2	2 3	2 3	(0 4)	2 5	2 0	1 8	4 5	(5 7)	4 8	3 8	3 6	829	39	424	937	168
Guatemala 1995	12 8	13 7	11 9	8 4	6 0	2 8	3 6	2 5	2 4	2 2	13 1	14 8	13 2	10 6	8 9	1 445	187	1 504	1 109	1 402
Haiti 1994	14 5	8 5	10 3	6 0	4 1	3 4	6 7	3 1	4 3	3 8	15 7	11 8	11 5	9 3	8 2	1 048	56	605	266	171
Paraguay 1990	9 1	4 0	6 3	4 8	4 0	2 2	0 5	2 1	2 3	2 0	10 9	4 7	7 2	5 4	4 8	252	96	366	447	1 265
Peru 1996	12 1	8 0	11 8	8 5	6 7	2 5	2 4	2 3	2 2	2 3	12 8	8 2	12 4	10 1	8 0	1 408	260	1 455	1 570	4 495

Note The question was not asked in Rwanda and Jordan

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

u = unknown (question not asked)

¹ Newspaper reading was not asked

Table I 2 Median duration of postpartum effects, by household asset level

Median duration (months) of postpartum amenorrhoea, abstinence and insusceptibility by household asset level Demographic and Health Surveys 1990-1996

Region, country and date	Amenorrhoea			Abstinence			Insusceptibility			Number of births		
	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
Sub Saharan Africa												
Burkina Faso 1993	16.3	12.3	(6.3)	19.9	12.0	(6.3)	22.9	20.6	(13.3)	3 003	688	46
Cameroon 1991	13.2	7.4	4.5	14.5	9.7	7.6	17.6	15.4	10.9	1 243	685	199
Central African Republic 1994-95	15.3	10.0	9.0	11.2	5.4	1.5	17.2	12.5	10.4	2 356	428	51
Côte d'Ivoire 1994	13.2	11.5	7.8	13.9	10.7	7.5	17.9	15.6	9.8	2 190	1 540	259
Ghana 1993	14.8	10.2	3.8	11.6	7.4	4.3	18.8	14.2	6.0	1 600	541	63
Kenya 1993	12.3	5.7	4.9	3.1	2.4	6.5	14.1	7.6	11.0	2 770	721	100
Madagascar 1992	13.2	7.5	*	3.6	4.6	*	14.1	7.9	*	3 226	276	23
Malawi 1992	13.7	8.8	*	0.4	0.4	*	13.7	8.8	*	2 488	345	20
Mali 1995	14.3	10.5	5.9	2.8	3.1	2.9	15.0	12.1	9.6	4 943	976	99
Namibia 1992	11.4	4.9	2.2	6.5	5.3	4.1	15.1	9.8	6.0	1 640	512	343
Niger 1992	16.6	11.4	(6.1)	2.3	2.4	(1.9)	16.9	11.9	(6.1)	3 890	360	49
Nigeria 1990	18.2	13.1	5.9	10.5	11.8	8.9	21.6	15.9	12.9	3 151	1 546	183
Rwanda 1992	17.1	5.6	*	0.6	1.0	*	17.6	6.2	*	3 255	148	4
Senegal 1992-93	15.4	13.7	8.2	3.5	3.8	2.4	16.8	15.6	9.6	2 016	1 144	200
Tanzania 1991-92	14.3	7.7	(1.8)	6.5	7.2	(2.2)	16.5	10.6	(2.5)	4 474	615	42
Uganda 1995	13.4	5.7	*	2.3	1.7	*	14.1	6.4	*	4 281	364	14
Zambia 1992	13.4	9.7	7.0	4.5	4.0	5.7	14.4	11.8	8.4	2 409	1 399	255
Zimbabwe 1994	13.3	13.0	5.2	3.8	3.0	3.1	14.7	13.4	5.7	1 631	575	158
Near East/North Africa												
Egypt 1992	10.7	6.8	4.1	1.9	1.8	1.8	11.0	7.3	4.4	825	1 896	1 851
Jordan 1990-91	5.4	4.3	3.2	1.7	1.9	1.9	5.4	4.4	3.3	359	3 094	1 518
Morocco 1992	6.4	3.0	2.1	1.5	1.6	1.2	6.7	3.1	2.3	1 453	870	732
Turkey 1993	4.3	3.8	3.7	1.8	2.0	1.8	4.6	4.2	4.0	239	813	706
Asia												
Bangladesh 1993-94	11.1	6.4	2.8	2.0	2.1	1.5	11.5	8.1	2.8	3 401	374	88
India 1992-93	9.8	6.1	3.9	3.2	3.2	3.1	10.7	7.4	5.1	7 455	7 987	2 107
Indonesia 1994	8.3	5.4	3.0	2.7	2.2	2.2	8.9	6.1	3.9	5 679	4 232	218
Kazakhstan 1995	2.3	4.6	4.1	1.7	2.2	1.3	2.3	5.3	4.3	57	583	170
Nepal 1996	10.9	7.9	(3.6)	3.0	3.5	(2.2)	12.1	8.3	(5.2)	4 011	306	36
Pakistan 1990-91	8.9	5.3	2.9	2.3	2.2	3.0	9.8	5.9	4.0	2 227	1 070	396
Philippines 1993	8.0	4.4	2.4	2.2	2.3	2.2	8.6	5.5	4.4	2 624	2 469	301
Latin America/Caribbean												
Bolivia 1993-94	13.0	10.2	6.2	2.9	2.3	2.5	14.0	11.6	7.4	1 427	1 317	870
Brazil 1996	3.8	2.2	3.8	2.1	2.1	2.3	4.3	4.0	4.7	366	948	1 069
Colombia 1995	6.1	4.2	3.9	2.6	2.0	2.3	9.7	5.3	5.1	541	1 033	1 504
Dominican Republic 1991												
Guatemala 1995	12.3	9.3	5.6	2.8	2.3	1.9	13.2	10.9	7.4	2 890	2 159	599
Haiti 1994	13.0	8.8	0.8	3.4	3.6	3.9	14.2	11.1	5.4	1 484	604	59
Paraguay 1990	5.7	4.0	3.7	2.2	2.1	1.8	6.6	5.0	4.3	1 116	856	453
Peru 1996	10.7	7.5	5.0	2.2	2.3	2.4	11.6	9.2	6.1	4 290	3 315	1 583

* = based on too few cases to show (0-24)

() = based on a small number of cases (25-49)

Table I 3 Median duration of postpartum effects, by mother's current work status

Median duration (months) of postpartum amenorrhea, abstinence, and insusceptibility by mother's current work status Demographic and Health Surveys 1990-1996

Region, country, and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for	
			Family self	Others			Family self	Others			Family self	Others			Family self	Others
Sub-Saharan Africa																
Burkina Faso 1993	14.0	14.5	15.9	9.9	19.9	15.8	21.2	4.7	23.4	20.0	22.7	14.6	1,472	673	1,514	50
Cameroon 1991	8.7	11.8	13.0	5.4	11.5	12.5	14.8	5.3	14.2	16.8	17.7	5.9	835	302	914	74
Central African Republic 1994-95	11.9	11.7	15.8	(8.5)	8.0	7.7	10.9	(5.3)	13.9	13.0	17.7	(8.5)	572	258	1,936	27
Côte d'Ivoire 1994	11.1	13.6	12.4	6.4	11.1	10.0	12.2	9.6	16.8	15.6	17.0	14.2	1,009	318	2,504	158
Ghana 1993	14.0	13.5	13.3	11.3	14.6	7.3	8.6	9.0	16.3	17.8	16.3	12.5	448	407	1,228	110
Kenya 1993	10.6	11.6	12.0	5.7	3.5	2.9	2.1	3.4	13.2	13.4	13.5	7.7	1,741	836	690	355
Madagascar 1992	13.5	10.6	12.6	6.3	3.6	3.2	3.4	5.0	14.3	11.0	13.6	8.6	710	532	173	1,189
Malawi 1992	12.7	12.8	12.3	9.3	0.4	0.4	0.4	0.4	12.7	12.8	12.3	9.3	2,153	343	292	58
Mali 1995	13.4	13.9	14.0	9.5	3.2	2.4	2.6	4.8	14.1	14.1	15.0	9.6	2,804	773	2,259	100
Namibia 1992	9.0	12.6	10.7	2.5	6.4	3.6	5.9	3.7	14.2	15.4	14.7	8.9	1,662	264	132	420
Niger 1992	15.5	15.4	17.0	*	2.5	2.1	2.1	*	16.7	15.7	17.4	*	2,501	898	863	22
Nigeria 1990	15.3	15.6	14.7	6.7	9.4	8.4	11.7	7.5	19.4	18.8	20.0	7.9	1,656	1,174	1,848	166
Rwanda 1992	9.7	16.1	17.3	13.2	2.0	1.2	0.5	1.4	9.8	16.1	17.6	15.4	72	274	2,906	146
Senegal 1992-93	13.9	12.5	16.3	8.5	3.8	2.1	3.2	3.9	15.7	17.4	17.6	8.5	1,826	331	1,102	69
Tanzania 1991-92	12.7	13.4	14.6	7.0	8.8	6.7	5.5	2.5	15.7	15.2	17.4	11.0	1,474	1,249	2,177	188
Uganda 1995	13.0	12.3	13.6	5.8	2.3	2.5	1.7	2.3	13.9	13.2	14.1	7.4	1,752	1,368	1,365	159
Zambia 1992	11.4	12.8	13.0	9.6	4.5	3.9	4.6	4.5	12.9	13.7	14.6	10.3	1,920	647	1,231	252
Zimbabwe 1994	13.8	11.4	14.7	15.0	4.2	2.9	2.5	3.8	14.8	12.0	15.2	15.2	1,132	563	446	205
Near East/North Africa																
Egypt 1992	5.5	10.6	6.4	6.8	1.8	2.1	1.8	1.8	5.9	10.7	6.4	6.9	3,978	77	84	834
Jordan 1990-91	4.0	6.4	(5.9)	3.7	1.9	2.0	(2.0)	2.0	4.1	6.4	(6.2)	3.8	4,486	67	29	389
Morocco 1992	3.6	4.8	(4.5)	4.2	1.4	1.7	(0.6)	1.7	3.8	4.8	(4.5)	4.2	2,464	201	40	349
Turkey 1993	3.9	3.1	3.1	3.1	1.9	1.9	1.9	1.9	4.2	3.7	3.7	3.7	1,658	568	568	568
Asia																
Bangladesh 1993-94	10.5	10.9	11.4	*	2.0	2.2	0.8	*	10.9	11.2	15.5	*	3,468	323	130	3
India 1992-93	8.2	8.8	9.9	10.3	3.1	2.5	3.3	3.6	9.2	11.3	10.7	11.3	7,494	1,622	4,135	4,177
Indonesia 1994	7.3	9.2	6.5	*	2.4	2.3	2.4	*	7.8	10.0	7.2	*	5,830	888	3,395	7
Kazakhstan 1995	4.0	*	(7.5)	*	2.0	*	(7.5)	*	4.3	*	(7.5)	*	638	8	27	5
Nepal 1996	10.0	10.2	10.6	13.6	3.7	2.4	2.7	3.0	10.6	11.0	12.0	14.3	1,100	448	2,502	276
Pakistan 1990-91	6.3	9.2	3.4	0.7	2.4	1.2	2.0	3.3	7.2	9.2	3.4	10.1	3,460	265	186	151
Philippines 1993	5.9	7.0	6.0	3.1	2.3	2.1	1.9	2.1	6.9	8.2	6.7	3.6	3,645	565	412	756

continued

Table I 3 *continued*

Region, country, and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for		Not working	Works at home	Works away for	
			Family self	Others			Family self	Others			Family self	Others			Family self	Others
Latin America/Caribbean																
Bolivia 1993 94	9 2	12 0	12 3	5 8	2 6	2 6	2 5	2 2	10 4	12 9	13 3	7 0	1 610	461	1,137	301
Brazil 1996	3 0	2 9	2 4	3 7	2 3	2 9	2 2	1 8	4 0	5 1	5 5	5 0	1 841	226	240	531
Colombia 1995	4 1	5 7	7 0	4 0	2 2	2 0	2 7	2 4	5 2	7 1	7 9	5 7	1 847	376	261	573
Dominican Republic 1991	3 7	3 2	3 4	2 5	2 2	2 0	2 5	2 0	4 1	4 1	4 8	4 3	1 583	242	74	496
Guatemala 1995	10 9	8 7	9 3	4 1	2 5	1 9	2 9	3 3	11 9	9 7	13 1	11 6	4 399	514	326	313
Haiti 1994	10 8	8 7	12 8	4 8	3 7	3 1	2 6	4 8	12 4	8 8	13 5	5 6	1 260	138	689	55
Paraguay 1990	4 5	5 2	3 3	4 0	2 1	2 2	1 9	0 4	5 2	6 0	4 5	5 9	1 740	329	72	276
Peru 1996	8 1	9 4	9 7	7 2	2 4	2 4	2 1	2 0	9 2	13 1	11 2	7 8	4 966	1 110	2,121	945

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table I 4 Median duration of postpartum effects, by mother's occupation

Median duration (months) of postpartum amenorrhea, abstinence, and insusceptibility by mother's occupation (working mothers) Demographic and Health Surveys 1990-1996

Region, country, and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	Prof tech manag clerical	Sales and service	Manual and domestic labor	Agricul tural	Prof tech manag clerical	Sales and service	Manual and domestic labor	Agricul tural	Prof tech manag clerical	Sales and service	Manual and domestic labor	Agricul tural	Prof tech manag clerical	Sales and service	Manual and domestic labor	Agricul tural
Sub-Saharan Africa																
Burkina Faso 1993	*	15.7	12.2	18.4	*	20.0	13.0	21.0	*	22.4	20.6	22.9	23	1 448	393	391
Cameroon 1991	5.8	11.3	6.3	13.9	5.8	12.8	7.1	15.8	8.4	16.1	9.5	18.8	61	392	62	775
Central African Republic 1994-95																
	*	11.8	*	17.0	*	7.5	*	11.4	*	13.6	*	19.0	20	558	16	1 714
Côte d'Ivoire 1994	3.5	12.6	9.0	12.9	5.6	12.5	10.0	12.3	6.0	16.6	10.1	17.9	51	1 264	83	1 574
Ghana 1993	9.4	10.0	13.2	15.0	4.5	7.5	8.1	10.5	9.4	16.1	17.7	16.4	54	491	288	918
Kenya 1993	5.2	11.2	13.7	12.2	2.8	2.2	2.5	2.8	6.1	13.1	15.2	14.0	186	587	223	889
Madagascar 1992	3.6	10.8	10.6	13.3	2.8	4.2	3.2	3.7	4.5	10.8	12.6	14.2	63	313	594	1 823
Malawi 1992	(8.9)	9.5	9.7	14.1	(0.4)	0.4	0.4	0.4	(8.9)	9.5	9.7	14.1	35	151	322	189
Mali 1995	(3.6)	13.9	13.0	14.7	(3.8)	2.3	2.4	3.0	(3.8)	14.5	13.6	15.8	45	1 349	504	1 383
Namibia 1992	3.3	2.5	10.8	*	2.0	1.9	6.0	*	5.3	2.5	14.6	*	228	50	528	14
Niger 1992	(4.9)	15.3	15.6	16.9	(1.8)	2.1	2.2	2.1	(4.9)	15.7	16.2	17.0	25	683	431	648
Nigeria 1990	10.5	14.3	(12.0)	17.4	10.1	10.4	(0.6)	11.5	11.2	17.7	(12.0)	20.6	151	1 786	39	1 242
Rwanda 1992	5.0	2.5	(5.8)	17.3	0.6	1.7	(3.1)	0.6	5.0	2.5	(5.8)	17.7	59	54	31	3 189
Senegal 1992-93	(2.2)	13.9	17.3	17.5	(3.3)	2.3	2.2	3.8	(4.5)	16.6	17.5	18.6	32	724	112	658
Tanzania 1991-92	5.2	*	12.9	14.6	2.4	*	11.5	5.0	11.0	*	17.3	16.1	134	9	615	2 734
Uganda 1995	9.0	7.8	10.7	13.6	2.5	2.1	4.2	2.0	9.1	10.1	11.9	14.2	96	345	184	2 354
Zambia 1992	10.1	10.7	12.1	14.1	3.8	4.3	4.2	4.3	10.1	13.0	18.3	14.7	152	924	332	720
Zimbabwe 1994	9.6	11.1	12.7	13.4	2.6	3.9	2.6	3.2	14.5	12.0	13.3	14.7	107	302	282	654
Near East/North Africa																
Egypt 1992	3.7	6.7	3.7	9.4	1.9	1.9	1.4	1.8	4.0	6.9	3.7	9.8	513	144	151	493
Jordan 1990-91	3.3	(4.9)	6.3	4.8	2.0	(1.9)	1.6	2.3	3.3	(4.9)	6.3	5.1	469	35	136	59
Morocco 1992	0.8	*	4.0	6.3	0.4	*	1.9	1.8	0.8	*	4.0	6.3	96	10	285	280
Turkey 1993	3.2	3.9	3.6	2.8	2.0	2.4	1.1	1.9	4.0	5.0	3.6	3.4	54	65	71	362
Asia																
Bangladesh 1993-94	(9.1)	10.8	10.3	*	(0.4)	2.2	2.0	*	(10.4)	11.6	12.1	*	25	159	237	12
India 1992-93	4.2	10.5	10.1	10.4	3.0	3.9	2.9	3.5	5.4	11.4	11.8	11.1	404	585	2 446	6 490
Indonesia 1994	3.3	6.8	8.6	8.0	2.3	2.2	2.6	2.6	3.4	8.6	9.5	8.5	447	1 015	572	2 262
Kazakhstan 1995	5.3	6.3	4.3	8.2	2.3	2.4	2.2	2.4	5.4	6.3	4.6	8.2	284	89	163	82
Nepal 1996	(8.2)	8.4	10.2	11.0	(2.4)	2.2	3.1	3.2	(8.3)	9.6	10.2	12.2	43	89	122	3 352
Pakistan 1990-91	0.6	*	9.5	10.1	3.1	*	1.5	2.2	3.2	*	9.7	11.5	54	12	269	269
Philippines 1993	2.5	5.1	5.7	8.6	2.1	2.1	2.6	2.5	3.4	6.5	6.9	8.8	469	1 013	529	484

continued

Table I 4 *continued*

Region, country and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	Prof tech manag clerical	Sales and service	Manual and domestic labor	Agricul- tural												
Latin America/Caribbean																
Bolivia 1993 94	3 9	8 6	7 7	14 6	2 0	3 5	2 3	2 4	4 5	11 1	8 9	15 3	173	847	223	927
Brazil 1996	4 9	2 2	2 9	2 4	2 0	2 2	3 2	0 6	5 1	4 0	5 6	5 6	378	350	440	173
Colombia 1995	4 0	5 2	4 3	10 7	2 5	2 4	2 2	2 2	4 7	6 7	5 6	14 9	289	830	205	198
Dominican Republic 1991	1 4	3 3	4 0	9 1	1 8	2 3	2 4	2 2	2 3	4 3	4 5	9 2	334	574	521	103
Guatemala 1995	5 2	8 4	6 2	11 8	3 3	1 5	2 3	4 3	7 7	9 7	12 0	12 0	189	170	877	178
Haiti 1994	(4 4)	11 7	*	13 7	(3 3)	2 9	*	2 7	(4 4)	12 5	*	15 1	35	628	12	205
Paraguay 1990	4 0	4 2	5 6	4 4	0 9	2 1	2 9	2 2	4 4	5 4	6 2	10 6	177	665	177	205
Peru 1996	5 8	8 0	8 1	12 1	2 1	2 3	2 4	2 2	6 6	9 3	11 7	12 8	701	1 724	1 025	1 638

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table 1.5 Median duration of postpartum effects, by father's occupation

Median duration (months) of postpartum amenorrhea, abstinence and insusceptibility by father's occupation Demographic and Health Surveys 1990-1996

Region, country and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	Prof tech, manag clerical	Sales and service	Manual and domestic labor	Agricultural	Prof tech, manag clerical	Sales and service	Manual and domestic labor	Agricultural	Prof tech, manag clerical	Sales and service	Manual and domestic labor	Agricultural	Prof tech, manag clerical	Sales and service	Manual and domestic labor	Agricultural
Sub Saharan Africa																
Burkina Faso 1993	6.9	12.1	13.2	16.3	6.9	18.2	13.9	20.2	8.5	20.6	21.4	23.0	54	390	56	331
Cameroon 1991	8.6	9.8	8.9	13.6	9.5	13.9	9.5	14.1	10.5	14.8	16.0	17.4	291	212	82	114
Central African																
Republic 1994-95	10.1	10.8	11.7	17.6	6.1	8.1	6.5	12.5	11.9	12.5	13.4	19.1	247	377	71	187
Côte d'Ivoire 1994	10.0	12.0	11.0	13.5	12.7	10.0	10.1	12.0	14.5	16.6	14.7	18.3	338	532	125	275
Ghana 1993	9.7	13.0	12.0	14.6	8.0	6.6	7.7	10.9	14.5	15.1	16.3	18.7	271	207	80	182
Kenya 1993	9.1	7.3	11.6	12.4	2.7	3.0	2.3	2.3	9.8	7.6	12.4	13.9	466	538	169	190
Madagascar 1992	9.7	9.7	9.2	13.6	2.6	2.2	3.3	3.4	9.7	9.7	9.3	14.1	185	142	103	349
Malawi 1992	11.8	10.3	11.3	13.4	0.4	0.4	0.4	0.4	11.8	10.3	11.3	13.4	284	328	133	194
Mali 1995	10.2	11.2	(12.5)	14.8	2.6	2.6	(2.4)	2.8	11.2	12.0	(14.6)	15.5	302	1 107	45	528
Namibia 1992	7.9	8.1	10.7	(7.7)	2.6	4.2	3.5	(4.3)	10.3	11.0	11.9	(9.6)	183	162	91	37
Niger 1992	9.3	15.8	12.4	16.7	2.6	2.0	2.9	2.3	9.4	16.0	13.4	16.9	91	371	128	291
Nigeria 1990	9.1	12.3	(12.7)	17.6	9.8	10.6	(12.7)	10.8	15.9	17.4	(17.3)	21.2	596	1 231	25	330
Rwanda 1992	4.9	8.3	16.2	17.3	0.6	0.5	0.5	0.6	5.2	9.1	16.2	17.6	116	129	80	374
Senegal 1992-93	13.2	15.1	13.8	15.8	2.7	3.3	2.9	3.6	13.9	17.0	15.1	16.6	322	597	126	197
Tanzania 1991-92	9.5	(14.8)	8.3	14.6	7.1	(11.0)	5.2	5.7	11.7	(14.8)	15.3	16.5	390	38	76	568
Uganda 1995	11.5	8.1	10.1	13.7	1.8	2.4	2.3	2.0	12.2	8.8	11.8	14.1	410	703	126	389
Zambia 1992	6.4	11.8	11.0	14.0	3.4	6.1	4.1	3.6	8.8	12.4	11.9	14.7	397	541	205	282
Zimbabwe 1994	8.1	14.2	13.2	13.7	3.0	3.5	3.4	3.2	9.5	15.0	13.8	14.2	369	427	123	99
Near East/North Africa																
Egypt 1992	4.5	7.2	4.3	8.3	1.9	1.5	1.9	1.8	4.7	7.4	5.0	8.9	962	767	224	257
Jordan 1990-91	3.9	3.2	4.2	(4.6)	2.0	1.8	1.8	(1.4)	4.0	3.2	4.3	(4.6)	1 409	659	428	47
Morocco 1992	1.7	2.4	3.8	5.2	0.7	1.7	1.7	1.3	1.9	2.4	4.0	5.2	292	487	179	170
Turkey 1993	3.0	3.7	3.7	3.6	2.1	1.8	1.8	1.8	3.2	4.0	4.0	4.1	239	502	169	75
Asia																
Bangladesh 1993-94	5.4	8.6	10.5	12.2	2.1	1.8	2.0	2.1	6.2	9.4	10.8	12.3	233	746	242	298
India 1992-93	6.0	6.4	9.1	9.6	3.2	3.1	3.1	3.2	7.6	7.9	10.2	10.4	3 298	5 987	11 785	15 366
Indonesia 1994	3.8	7.3	6.0	8.6	2.1	2.2	2.3	2.9	4.5	9.0	6.6	9.1	1 181	1 856	409	862
Kazakhstan 1995	4.3	5.1	4.3	(4.2)	2.4	2.0	2.2	(1.4)	4.6	6.0	4.9	(4.2)	95	102	68	28
Nepal 1996	8.1	7.0	10.0	12.0	2.9	2.1	3.2	3.0	8.5	8.8	11.1	12.7	266	272	222	443
Pakistan 1990-91	3.1	6.0	5.8	9.1	2.5	2.1	2.3	2.4	4.3	6.8	7.0	9.6	429	799	225	138
Philippines 1993	3.9	4.1	4.5	8.4	2.3	1.9	2.5	2.1	4.5	5.0	5.8	8.6	374	703	360	401

continued

Table I 5 *continued*

Region country, and date	Amenorrhea				Abstinence				Insusceptibility				Number of children			
	Prof tech , manag clerical	Sales and service	Manual and domestic labor	Agricul- tural	Prof tech , manag , clerical	Sales and service	Manual and domestic labor	Agricul tural	Prof , tech manag , clerical	Sales and service	Manual and domestic labor	Agricul- tural	Prof tech , manag , clerical	Sales and service	Manual and domestic labor	Agricul- tural
Latin America/Caribbean																
Bolivia 1993-94	62	81	93	131	20	29	24	26	72	102	102	135	347	310	263	228
Brazil 1996	37	33	25	25	21	22	19	17	43	40	31	35	706	678	126	105
Colombia 1995	54	41	42	48	16	20	20	21	58	54	44	58	331	584	174	147
Dominican Republic 1991	18	35	35	60	16	21	23	20	20	42	41	72	337	516	132	138
Guatemala 1995	60	58	91	122	22	22	22	25	65	73	104	128	551	290	282	629
Haiti 1994	41	90	109	137	28	41	52	29	74	94	112	142	191	205	57	188
Paraguay 1990	44	35	44	58	12	20	20	20	46	36	48	59	217	317	92	190
Peru 1996	59	80	80	116	23	23	19	23	64	88	86	122	1,325	1 185	477	791

() = based on a small number of cases (25 49)

Table I 6 Median duration of postpartum effects, by multiplicity at birth

Median duration (months) of postpartum amenorrhea abstinence and insusceptibility by multiplicity at birth Demographic and Health Surveys 1990 1996

Region country and date	Amenorrhea		Abstinence		Insusceptibility		Number of children	
	Single	Multiple	Single	Multiple	Single	Multiple	Single	Multiple
Sub Sahara Africa								
Burkina Faso 1993	14.8	11.0	18.9	14.9	22.4	23.0	3 619	118
Cameroon 1991	10.7	7.6	13.1	16.0	16.1	16.0	2 033	94
Central African								
Republic 1994-95	14.3	10.3	10.4	5.3	16.6	10.3	2 778	58
Côte d'Ivoire 1994	12.3	11.8	11.8	13.9	16.7	16.8	3 853	136
Ghana 1993	13.0	23.7	8.7	11.7	16.2	25.2	2 101	103
Kenya 1993	11.0	8.2	2.9	5.0	13.2	8.2	3 548	98
Madagascar 1992	12.5	20.9	3.6	5.1	13.5	20.9	3 440	83
Malawi 1992	12.1	17.4	0.4	1.6	12.1	17.4	2 744	109
Mali 1995	13.7	12.7	2.8	5.2	14.5	12.7	5 844	174
Namibia 1992	8.4	1.6	6.0	1.6	13.1	1.6	2 441	55
Niger 1992	15.5	10.1	2.3	2.7	16.1	10.1	4 139	161
Nigeria 1990	15.0	13.3	10.7	11.3	19.5	19.0	4 724	157
Rwanda 1992	16.7	4.3	0.6	0.4	17.2	4.3	3 348	59
Senegal 1992 93	14.6	14.5	3.5	6.5	16.6	14.5	3 278	83
Tanzania 1991 92	13.4	8.4	6.4	10.3	15.9	15.6	4 969	162
Uganda 1995	12.8	16.2	2.2	4.3	13.6	19.2	4 517	142
Zambia 1992	11.9	16.7	4.3	6.8	13.5	16.7	3 912	152
Zimbabwe 1994	12.9	16.2	3.5	5.2	14.3	16.2	2 298	66
Near East/North Africa								
Egypt 1992	5.7	4.9	1.8	1.6	6.1	4.9	4 844	130
Jordan 1990 91	4.0	3.9	1.9	2.2	4.1	3.9	4 841	130
Morocco 1992	3.9	2.5	1.4	1.8	4.0	2.5	2 982	73
Turkey 1993	3.7	(6.0)	1.8	(6.0)	4.0	(6.0)	2 192	42
Asia								
Bangladesh 1993 94	10.5	12.5	2.0	3.0	10.9	12.5	3 870	56
India 1992 93	8.7	10.0	3.2	1.3	9.6	11.3	6 949	601
Indonesia 1994	7.1	9.5	2.4	2.9	7.8	9.5	9 974	157
Kazakhstan 1995	4.2	*	2.1	*	4.6	*	797	13
Nepal 1996	10.4	12.3	3.0	6.8	11.5	12.3	4 310	65
Pakistan 1990 91	7.0	4.3	2.3	4.2	8.3	4.3	3 973	105
Philippines 1993	5.5	7.7	2.2	3.4	6.5	7.7	5 318	76
Latin America/Caribbean								
Bolivia 1993 94	10.3	13.4	2.5	3.8	11.5	14.3	3 560	54
Brazil 1996	3.0	(2.4)	2.2	(2.4)	4.3	(2.4)	2 828	37
Colombia 1995	4.3	(2.4)	2.2	(2.4)	5.6	(2.4)	3 042	35
Dominican Republic 1991	3.6	2.3	2.2	0.7	4.2	2.4	2 340	57
Guatemala 1995	10.6	7.2	2.4	2.4	11.7	7.2	5 570	78
Haiti 1994	11.1	11.0	3.4	7.9	12.6	11.0	2 088	59
Paraguay 1990	4.5	5.5	2.1	5.5	5.4	5.5	2 373	54
Peru 1996	8.5	5.3	2.3	3.9	9.7	12.9	9,031	157

* = based on too few cases to show (0 24)

() = based on a small number of cases (25 49)

Table I 7 Median duration of postpartum effects, by antenatal care provider

Median duration (months) of postpartum amenorrhea, abstinence, and insusceptibility, by antenatal care provider Demographic and Health Surveys 1990 1996

Region country and date	Amenorrhea			Abstinence			Insusceptibility			Number of births		
	Doctor	Other medical	TBA other no one	Doctor	Other medical	TBA, other no one	Doctor	Other medical	TBA other no one	Doctor	Other medical	TBA, other no one
Sub Saharan Africa												
Burkina Faso 1993	7.9	14.0	16.4	6.2	19.3	19.0	8.3	21.6	23.8	76	2,134	1 527
Cameroon 1991	7.1	10.6	14.3	8.5	13.8	13.3	13.4	15.8	18.1	312	1 346	469
Central African												
Republic 1994-95	10.9	13.4	17.8	8.1	9.6	11.4	13.3	15.2	19.8	119	1 779	938
Côte d'Ivoire 1994	6.1	12.0	13.5	6.4	11.0	16.1	16.3	16.3	19.4	165	3 155	669
Ghana 1993	10.9	14.1	13.6	6.7	11.5	15.3	15.3	17.5	17.9	582	1 304	318
Kenya 1993	10.7	11.3	6.7	3.3	2.8	5.5	11.4	13.5	16.3	863	2,587	195
Madagascar 1992	9.3	13.0	13.3	2.9	3.5	4.3	9.8	13.8	14.0	347	2,426	751
Malawi 1992	14.1	12.3	19.0	0.4	0.4	0.4	14.1	12.3	19.0	191	2 397	266
Mali 1995	7.7	12.9	14.5	4.3	2.7	3.0	7.7	13.6	15.2	64	2 758	3 196
Namibia 1992	2.1	9.4	8.3	4.2	6.4	4.8	5.5	14.2	13.5	351	1 835	310
Niger 1992	17.0	13.1	17.1	1.9	2.2	2.4	17.0	13.7	17.4	53	1 285	2 962
Nigeria 1990	15.0	12.3	19.1	12.2	11.9	7.4	18.4	19.2	21.0	1 745	1,149	1 988
Rwanda 1992	16.1	16.9	17.0	0.5	0.6	1.3	16.1	17.4	17.5	82	3 135	190
Senegal 1992-93	12.1	14.3	15.6	3.4	3.4	4.0	12.5	16.5	16.4	168	2,362	831
Tanzania 1991-92	9.9	13.8	12.7	8.7	6.4	9.2	16.9	15.9	15.4	325	4 388	419
Uganda 1995	10.3	12.8	16.8	2.1	2.2	2.2	12.2	13.6	16.8	448	3 802	410
Zambia 1992	5.7	11.7	14.5	4.0	4.3	5.5	7.4	13.5	14.9	199	3 548	316
Zimbabwe 1994	13.4	13.5	8.3	2.9	3.7	3.3	13.5	14.9	8.6	495	1 706	163
Near East/North Africa												
Egypt 1992	4.4	*	7.4	1.8	*	1.8	4.8	*	8.1	2 781	2	2 190
Jordan 1990-91	4.0	4.5	4.1	1.9	1.4	2.0	4.1	4.5	4.1	3 733	384	854
Morocco 1992	2.0	2.4	5.0	1.1	1.9	1.5	2.1	2.5	5.2	673	387	1 995
Turkey 1993	3.3	3.6	4.6	2.0	1.9	1.6	3.7	3.8	5.0	1 118	358	757
Asia												
Bangladesh 1993-94	6.3	7.9	11.3	2.1	2.2	2.0	8.7	8.1	11.7	742	275	2 910
India 1992-93	6.8	8.7	10.0	3.4	2.8	3.0	8.3	9.2	10.9	5 360	3 500	8 690
Indonesia 1994	3.7	7.4	8.6	2.1	2.5	2.4	4.3	7.9	9.6	1 149	7 393	1 589
Kazakhstan 1995	4.3	3.3	4.4	2.1	1.5	2.2	4.4	4.6	6.2	561	188	61
Nepal 1996	8.8	9.5	11.7	3.3	2.7	3.1	9.4	10.3	12.7	557	1 090	2 728
Pakistan 1990-91	3.7	4.6	8.6	2.2	2.6	2.3	4.5	6.1	9.2	968	129	2 982
Philippines 1993	3.7	7.1	7.5	2.3	2.2	2.3	4.7	7.7	8.7	2 108	2 441	844

Table 17 *continued*

Region country and date	Amenorrhea			Abstinence			Insusceptibility			Number of births		
	Doctor	Other medical	TBA other no one	Doctor	Other medical	TBA other no one	Doctor	Other medical	TBA other no one	Doctor	Other medical	TBA other no one
Latin America/Caribbean												
Bolivia 1993 94	7 7	15 6	12 3	2 3	2 8	3 0	9 5	17 4	13 4	1 788	109	1 718
Brazil 1996	3 1	2 4	2 8	2 2	1 6	2 3	4 4	2 6	3 7	2 363	132	371
Colombia 1995	4 0	5 1	6 3	2 2	1 8	2 4	5 1	6 7	9 2	2 491	87	499
Dominican												
Republic 1991	4 2	2 4	6 8	2 4	1 9	2 1	4 7	3 3	7 3	1 157	1 168	73
Guatemala 1995	9 0	12 6	11 1	2 3	1 8	2 8	11 1	13 0	12 1	2 519	462	2 666
Haiti 1994	7 6	13 5	14 0	3 6	3 3	3 4	9 6	14 7	14 9	867	565	715
Paraguay 1990	4 3	4 7	4 0	2 4	2 1	2 0	5 0	5 4	5 4	278	1 776	372
Peru 1996	6 4	8 8	10 1	2 3	2 2	2 3	7 6	10 1	11 5	2 946	3 398	2 845

* = based on too few cases to show (0-24)

TBA = traditional birth attendant

Appendix J

Summary of DHS-I, DHS-II, and DHS-III Surveys, 1985-1999

Appendix J

Summary of DHS-I, DHS-II, and DHS-III Surveys, 1985-1999

Region and Country	Date of Fieldwork	Implementing Organization	Respondents	Sample Size	Male/Husband Survey	Supplemental Studies and Additional Questions	Modules
SUB SAHARAN AFRICA							
DHS I							
Botswana	Aug Dec 1988	Central Statistics Office	AW 15 49	4 368		AIDS PC adolescent fertility	
Burundi	Apr Jul 1987	Département de la Population Ministère de l Intérieur	AW 15 49	3 970	542 Husbands	CA SAI adult mortality	
Ghana	Feb May 1988	Ghana Statistical Service	AW 15 49	4 488	943 Husbands	CA SM WE	
Kenya	Dec May 1988/89	National Council for Population and Development	AW 15 49	7 150	1 133 Husbands		
Liberia	Feb Jul 1986	Bureau of Statistics Ministry of Planning and Economic Affairs	AW 15 49	5 239		TBH employment status	
Mali	Mar Aug 1987	Institut du Sahel USED/CERPOD	AW 15 49	3 200	970 Men 20 55	CA VC childhood physical handicaps	
Ondo State Nigeria	Sep Jan 1986/87	Ministry of Health Ondo State	AW 15 49	4 213		CA TBH	
Senegal	Apr Jul 1986	Direction de la Statistique Ministère de l Economie et des Finances	AW 15 49	4 415		CA CD	
Sudan (Northern)	Nov May 1989/90	Department of Statistics Ministry of Economic and National Planning	EMW 15-49	5 860		FC M MM	
Togo	Jun Nov 1988	Unité de Recherche Démographique Université du Bénin	AW 15 49	3 360		CA SAI marriage history	
Uganda	Sep Feb 1988/89	Ministry of Health	AW 15 49	4 730		CA SAI	
Zimbabwe	Sep Jan 1988/89	Central Statistical Office	AW 15-49	4 201		AIDS CA PC SAI WE	
DHS II							
Burkina Faso	Dec Mar 1992/93	Institut National de la Statistique et de la Démographie	AW 15 49	6 354	1 845 Men 18+	AIDS CA MA SAI	
Cameroon	Apr Sep 1991	Direction Nationale du Deuxième Recensement Général de la Population et de l Habitat	AW 15 49	3 871	814 Husbands	CA CD SAI	
Madagascar	May Nov 1992	Centre National de Recherches sur l Environnement	AW 15 49	6 260		CA MM SAI	
Malawi	Sep Nov 1992	National Statistical Office	AW 15 49	4 850	1 151 Men 20 54	AIDS CA MA MM SAI	
Namibia	Jul Nov 1992	Ministry of Health and Social Services Central Statistical Office	AW 15 49	5 421		CA CD MA MM	
Niger	Mar Jun 1992	Direction de la Statistique et des Comtes Nationaux	AW 15 49	6 503	1 570 Husbands	CA MA MM SAI	
Nigeria	Apr Oct 1990	Federal Office of Statistics	AW 15 49	8 781		CA SAI	
Rwanda	Jun Oct 1992	Office National de la Population	AW 15 49	6 551	598 Husbands	CA	
Senegal	Nov Aug 1992/93	Direction de la Prévision et de la Statistique	AW 15 49	6 310	1 436 Men 20+	AIDS CA MA MM SAI	
Tanzania	Oct Mar 1991/92	Bureau of Statistics Planning Commission	AW 15 49	9 238	2 114 Men 15 60	AIDS CA MA SAI	
Zambia	Jan May 1992	University of Zambia	AW 15 49	7 060		AIDS CA MA	

DHS III						
Benin	Jun Aug 1996	Institut National de la Statistique	AW 15 49	5 491	1 535 Men 20 64	AIDS CA MA MM SAI
Burkina Faso	Nov Mar 1998/99	Institut National de la Statistique Ministere de l Economie et des Finances	AW 15-49	6 445	2 641 Men 15 59	AIDS CA FC MA MM
Cameroon	Feb Jun 1998	Bureau Central du Recensement et Etudes de Population	AW 15 49	5 501	2 562 Men 15 59	AIDS CA CD MA MM
Central African Republic	Sep Mar 1994/95	Direction des Statistiques Démographiques et Sociales	AW 15 49	5 884	1 729 Men 15 59	AIDS CA CD FC MA MM SAI
Chad	Dec Jul 1996/97	Bureau Central du Recensement	AW 15 49	7 454	2 320 Men 15 59	AIDS CA CD MA MM SAI
Comoros	Mar May 1996	Centre National de Documentation et de la Recherche Scientifique	AW 15-49	3 050	795 Men 15 64	CA MA
Côte d'Ivoire	Jun Nov 1994	Institut National de la Statistique	AW 15 49	8 099	2 552 Men 15 59	CA FC MA SAI
Cote d'Ivoire	Sep Mar 1998/99	Institut National de la Statistique	AW 15-49	3 040	886 Men 15 59	AIDS CA FC MA
Entrea	Sep Jan 1995/96	National Statistics Office	AW 15-49	5 054	1 114 Men 15 59	AIDS CA FC MA MM SAI
Ghana	Sep Dec 1993	Ghana Statistical Service	AW 15 49	4 562	1 302 Men 15 59	CA MA
Kenya	Feb Aug 1993	National Council for Population and Development	AW 15 49	7 540	2 336 Men 15 54	AIDS CA MA SAI
Kenya	Feb Jul 1998	National Council for Population and Development	AW 15 49	7 881	3 407 Men 15 54	AIDS CA FC MA MM
Madagascar	Sep Dec 1997	Institut National de la Statistique Direction de la Démographie et des Statistiques Sociales	AW 15-49	7 060		AIDS AT CA MA MM
Malawi (KAP) ^a	Jun Oct 1996	National Statistical Office	AW 15 49	2 683	2 658 Men 15 54	AIDS
Mali	Nov Apr 1995/96	CPS/MSSPA et DNSI	AW 15-49	9 704	2 474 Men 15 59	AIDS CA FC MA MM SAI
Mozambique	Mar Jul 1997	Instituto Nacional de Estatistica Ministério de Saude	AW 15 49	8 779	2 335 Men 15 64	CA MA MM SAI
Niger	Mar Jul 1998	Care International	AW 15 49	7 577	3 512 Men 15 59	AIDS CA FC MA SAI
Senegal (Interim)	Jan Apr 1997	Division de Statistiques Demographiques Direction de la Prévision et de la Statistique	AW 15 49	8 593	4 306 Men 20+	AIDS
South Africa	Nov Mar 1997/98	Dept of Health Medical Research Council	AW 15 19	11 735	13 827 Adult 15+	AIDS DV MA MM
Tanzania (KAP) ^a	Jul Sep 1994	Bureau of Statistics Planning Commission	AW 15-49	4 225	2 097 Men 15 59	AIDS PC
Tanzania (In depth)	Jun Oct 1995	Bureau of Statistics Planning Commission	AW 15-49	2 130		Adult and childhood mortality estimation
Tanzania	Jul Nov 1996	Bureau of Statistics Planning Commission	AW 15-49	8 120	2 256 Men 15 59	AIDS CA FC MA MM
Togo	Feb May 1998	Direction de la Statistique	AW 15 49	8 569	3 819 Men 15 59	AIDS CA MA MM
Uganda	Mar Aug 1995	Statistics Department Ministry of Finance and Economic Planning	AW 15-49	7 070	1 996 Men 15 59	AIDS CA MA MM SAI
Uganda (In depth)	Oct Jan 1995/96	Institute of Statistics and Applied Economics Makerere University	AW 20 44	1 750	1 356 Partners	Negotiating reproductive outcomes

Zambia	Jul Jan 1996/97	Central Statistics Office	AW 15 49	8 021	1 849 Men 15 59	AIDS CA MA MM
Zimbabwe	Jul Nov 1994	Central Statistical Office	AW 15 49	6 128	2 141 Men 15 54	AIDS CA MA MM PC SAI

NEAR EAST/NORTH AFRICA

DHS I						
Egypt	Oct Jan 1988/89	National Population Council	EMW 15 49	8 911		CA CD MM PC SAI WE WS
Morocco	May Jul 1987	Ministère de la Santé Publique	EMW 15 49	5 982		CA CD S
Tunisia	Jun Oct 1988	Office National de la Famille et de la Population	EMW 15 49	4 184		CA S SAI

DHS II						
Egypt	Nov Dec 1992	National Population Council	EMW 15 49	9 864	2 466 Husbands	CA MA PC SM
Jordan	Oct Dec 1990	Department of Statistics Ministry of Health	EMW 15 49	6 461		CA SAI
Morocco	Jan Apr 1992	Ministère de la Santé Publique	AW 15 49	9 256	1 336 Men 20 70	CA MA MM SAI
Yemen	Nov Jan 1991/92	Central Statistical Organization	EMW 15 49	5 687		CA CD FC SAI

DHS III						
Egypt	Nov Jan 1995/96	National Population Council	EMW 15 49	14 779		CA FC MA WS
Egypt (In depth)	Oct Mar 1999/97	National Population Council	EMW 15 49	2 579		Reasons for nonuse of family planning
Jordan	Jun Oct 1997	Department of Statistics	EMW 15 49	5 548		AIDS CA MA MM
Morocco (Panel)	Apr May 1995	Ministère de la Santé Publique	AW 15 49	4 753		
Yemen	Oct Dec 1997	Central Statistical Organization	EMW 15 49	10 414		CA CD FC MA MM

ASIA

DHS I						
Indonesia	Sep Dec 1987	Central Bureau of Statistics/ National Family Planning Coordinating Board	EMW 15 49	11 884		PC SM
Nepal (In depth)	Feb Apr 1987	New Era	CMW 15 49	1 623		KAP gap survey
Sri Lanka	Jan Mar 1987	Department of Census and Statistics Ministry of Plan Implementation	EMW 15 49	5 865		CA NFP
Thailand	Mar Jun 1987	Institute of Population Studies Chulalongkorn University	EMW 15 49	6 775		CA S SAI

DHS II						
Indonesia	May Jul 1991	Central Bureau of Statistics NFPCB/MOH	EMW 15 49	22 909		PC SM
Pakistan	Dec May 1990/91	National Institute of Population Studies	EMW 15 49	6 611	1 354 Husbands	CA

DHS III						
Bangladesh	Nov Mar 1993/94	Mitra & Associates/NIPORT	EMW 10 49	9 640	3 284 Husbands	PC SAI SM
Bangladesh	Nov Mar 1996/97	Mitra & Associates/NIPORT	EMW 10 49	9 127	3 346 EMM	CA MA SM SAI
Indonesia	Jul Nov 1994	Central Bureau of Statistics/ NFPCB/MOH	EMW 15 49	28 168		MM PC SAI SM
Indonesia	Sep Dec 1997	Central Bureau of Statistics/ NFPCB/MOH	EMW 15 49	28 810		SAI
Kazakhstan	May Aug 1995	Institute of Nutrition National Academy of Sciences	AW 15 49	3 771		AT CA MA

Kyrgyz Republic	Aug Nov 1997	Institute of Obstetrics and Pediatrics	AW 15 49	3 848		AT CA MA
Nepal	Jan Jun 1996	Ministry of Health/New ERA	EMW 15 49	8 429		CA MA MM
Philippines	Apr Jun 1993	National Statistics Office	AW 15 49	15 029		MM SAI
Philippines	Feb Apr 1998	National Statistics Office	AW 15 49	13 983		MM
Turkey	Aug Oct 1993	General Directorate of MCH/FP Ministry of Health	EMW <50	6 519		CA MA
Uzbekistan	Jun Oct 1996	Research Institute of Obstetrics and Gynecology	AW 15 49	4 415		AT CA MA
Vietnam	Aug Oct 1997	General Statistical Office	EMW 15 19	5 664		SAI

LATIN AMERICA/CARIBBEAN

DHS I

Bolivia	Feb Jul 1989	Instituto Nacional de Estadística	AW 15 49	7 923		CA CD MM PC S WE
Bolivia (In depth)	Feb Jul 1989	Instituto Nacional de Estadística	AW 15 49	7 923		Health
Brazil	May Aug 1986	Sociedade Civil Bem Estar Familiar no Brasil	AW 15 44	5 892		CA S SM abortion young adult use of contraception
Colombia	Oct Dec 1986	Corporación Centro Regional de Población Ministerio de Salud	AW 15 49	5 329		CA PC S SAI, SM
Dominican Republic	Sep Dec 1986	Consejo Nacional de Población y Familia	AW 15 49	7 649		CA NFP S SAI, family planning communication
Dominican Republic (Experimental)	Sep Dec 1986	Consejo Nacional de Población y Familia	AW 15 49	3 885		S SAI
Ecuador	Jan Mar 1987	Centro de Estudios de Población y Paternidad Responsable	AW 15 49	4 713		CD SAI employment
El Salvador	May Jun 1985	Asociación Demográfica Salvadoreña	AW 15 49	5 207		CA S TBH
Guatemala	Oct Dec 1987	Instituto de Nutrición de Centro América y Panamá	AW 15 44	5 160		CA S SAI
Mexico	Feb May 1987	Dirección General de Planificación Familiar Secretaría de Salud	AW 15 49	9 310		NFP S employment
Peru	Sep Dec 1986	Instituto Nacional de Estadística	AW 15 49	4 999		NFP employment
Peru (Experimental)	Sep Dec 1986	Instituto Nacional de Estadística	AW 15 49	2 534		
Trinidad and Tobago	May Aug 1987	Family Planning Association of Trinidad and Tobago	AW 15-49	3 806		CA NFP breastfeeding

DHS II

Brazil (NE)	Sep Dec 1991	Sociedade Civil Bem Estar Familiar no Brasil	AW 15-49	6 222	1 266 Husbands	AIDS PC
Colombia	May Aug 1990	PROFAMILIA	AW 15 49	8 644		AIDS
Dominican Republic	Jul Nov 1991	Instituto de Estudios de Población y Desarrollo (PROFAMILIA) Oficina Nacional de Planificación	AW 15 49	7 320		CA, MA S SAI
Paraguay	May Aug 1990	Centro Paraguayo de Estudios de Población	AW 15 49	5 827		CA SAI
Peru	Oct Mar 1991/92	Instituto Nacional de Estadística e Informática	AW 15 49	15 882		CA MA MM SAI

DHS III

Bolivia	Nov May 1993/94	Instituto Nacional de Estadística	AW 15 49	8 603 ^b			AIDS CA CD MA MM S SAI
Bolivia	Jul Sep 1997	Instituto Nacional de Estadística	AW 15 49	11 187	3 780 Men 15 64		CA MA
Brazil	Mar Jun 1996	Sociedade Civil Bem Estar Familiar no Brasil	AW 15 49	12 612	2 949 Men 15 59		AIDS CA MA MM PC S
Colombia	Mar Jun 1995	PROFAMILIA	AW 15 49	11 140			AIDS CA DV MA PC
Dominican Republic	Aug Dec 1996	CESDEM/PROFAMILIA	AW 15 49	8 422	2 279 Men 15 64		AIDS CA MA MM SAI
Guatemala	Jun Dec 1995	Instituto Nacional de Estadística	AW 15 49	12 403			AIDS CA MA MM S
Guatemala (In depth1)	Mar Jun 1997	Instituto Nacional de Estadística	Households	3 200			Health expenditures
Guatemala (In depth2)	Feb Jun 1997	Instituto de Nutrición de Centro América y Panamá	Facilities	375			Health providers
Haiti	Jul Jan 1994/95	Institut Haïtien de l'Enfance	AW 15 49	5 356	1 610 Men 15 59		AIDS CA CD MA SAI
Nicaragua	Nov Jan 1997/98	Instituto Nacional de Estadísticas y Censos	AW 15 49	13 634	2 912 Men 15 59		AIDS CA DV MA
Peru	Aug Nov 1996	Instituto Nacional de Estadística e Informática	AW 15 49	28 951	2 487 Men 15 59		AIDS AT CA MA MM

^a No health or birth history section in questionnaire

^b Household questionnaire was administered in 26 144 households

AIDS	acquired immune deficiency syndrome	EMW	ever married women	S	sterilization
AT	anemia testing	FC	female circumcision	SAI	service availability information
AW	all women	M	migration	SM	social marketing
CA	child anthropometry	MA	maternal anthropometry	TBH	truncated birth history
CD	causes of death (verbal reports of symptoms)	MM	maternal mortality	VC	value of children
CMW	currently married women	NFP	natural family planning	WE	women s employment
DV	domestic violence	PC	pill compliance	WS	women s status

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