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Health Survey**

2004

Bangladesh Demographic and Health Survey 2004

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Dhaka, Bangladesh

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PREFACE

The Bangladesh Demographic and Health Survey 2004 is the fourth survey of this type conducted in Bangladesh. The main objective of this survey is to provide policy-makers and program managers in health and family planning with detailed information on fertility and family planning, childhood mortality, maternal and child health, nutritional status of children and mothers, and awareness of HIV/AIDS. The survey consisted of two parts: a household-level survey of women and men and a community survey around the sample points from which the households were selected. Preparations for the survey started in mid-2003 and the fieldwork was carried out between January and May 2004. Financial support for the BDHS survey was provided by the United States Agency for International Development (USAID)/Dhaka. It was implemented through a collaborative effort of NIPORT, Mitra and Associates, and ORC Macro.

The findings of this report will be instrumental in assessing the achievements of family planning, nutrition, and health programs. The report provides estimates of key indicators by socioeconomic and demographic differentials. The preliminary results of the 2004 BDHS, with its major findings, were officially announced through a national seminar in September 2004. The final report supplements the preliminary report, which was released earlier. I believe that the information obtained from this survey will help the policymakers and program managers in the formulation of new programs and monitoring the ongoing programs.

The Technical Review Committee (TRC) consisted of experts from government, non-government, and international organizations, as well as researchers and professionals working in the health and population areas. The TRC contributed their valuable opinions in major phases of the survey. In addition, the Technical Task Force (TTF) was formed with representatives from NIPORT, Mitra and Associates, USAID/Dhaka, ICDDR,B, the NGO Service Delivery Program, and ORC Macro to design and implement the survey. I would like to extend my thanks and appreciation to the members of the TRC and TTF for their contributions at different phases of the survey.

I express my sincere thanks to the professionals of the Research Unit of NIPORT, ORC Macro, and Mitra and Associates for their sincere efforts in timely completion of the survey. USAID/Dhaka deserves special thanks for providing financial support for the survey.

(Lokman Hakim)



FOREWORD


The Bangladesh Demographic and Health Survey (BDHS) is a nationally representative survey designed to obtain and provide information on the basic indicators of social progress including fertility, childhood mortality, reproductive and child health, nutritional status of mothers and children and awareness of HIV/AIDS. Previously, BDHS surveys were carried out in 1993-1994, 1996-1997, and 1999-2000.

The findings of the 2004 BDHS presented in this report provide up-to-date, and reliable information on a number of key health and demographic topics of interest to planners, policymakers, program managers, and researchers that will guide the planning, implementation, monitoring and evaluation of the Health, Nutrition and Population Sector Program (HNPS) in Bangladesh. The data indicate there has been a decline in the total fertility rate and a steady increase in contraceptive use. After an almost decade-long stagnation, fertility declined to 3.0 children per woman in 2004. The 2004 BDHS findings also show a trend toward increasing utilization of health services for mothers and children. While the survey results are encouraging, there is still a long way to go to achieve the national health and demographic goals.

The findings of this report together with other national surveys will enhance the understanding of important issues related to the HNPS in Bangladesh. Information obtained from the 2004 BDHS can be used to review the progress of programs and to improve future policies and strategies.

Further analysis of the BDHS data is necessary. It is hoped that academicians, researchers and program personnel will carry out such analysis and provide in-depth knowledge to guide the future direction and effective implementation of the HNPS.

The successful completion of the 2004 BDHS was made possible by the contributions of a number of organizations and individuals. I deeply appreciate the United States Agency for International Development (USAID), Dhaka for providing financial support. I would like to thank NIPORT, Mitra and Associates, and ORC Macro for the effort they put into implementing the 2004 BDHS.


(A. F. M. Sarwar Kamal)

SUMMARY OF FINDINGS

The 2004 Bangladesh Demographic and Health Survey (2004 BDHS) is a nationally representative survey of 11,440 women age 10-49 and 4,297 men age 15-54 from 10,500 households covering 361 sample points (clusters) throughout Bangladesh, 122 in urban areas and 239 in the rural areas. This survey is the fourth in a series of national-level population and health surveys conducted as part of the global Demographic and Health Surveys (DHS) program. It is designed to provide data to monitor the population and health situation in Bangladesh as a followup to the 1993-1994, 1996-1997 and 1999-2000 BDHS surveys. The survey utilized a multistage cluster sample based on the 2001 Bangladesh Census and was designed to produce separate estimates for key indicators for each of the six divisions of the country—Barisal, Chittagong, Dhaka, Khulna, Rajshahi and Sylhet. Data collection took place over a five-month period from 1 January to 25 May 2004. Previous surveys included only ever-married women and currently married men; this is first DHS survey in Bangladesh to also include never-married and formerly married men, i.e., the sample for the survey was ever-married women age 10-49 and all men age 15-54.

The survey obtained detailed information on fertility levels, marriage, fertility preferences, awareness and use of family planning methods, breastfeeding practices, nutritional status of women and young children, childhood mortality and causes of death of children under five, maternal and child health, awareness and behavior regarding HIV/AIDS, and other sexually transmitted infections (STIs). In the previous surveys, anthropometric measurements (height and weight) were restricted to mothers who had a child under five years, and their young children. In the 2004 BDHS, all children under five in the household and all interviewed women had their height and weight measured. In addition, the 2004 BDHS collected information on the level of arsenic in drinking water.

The 2004 BDHS was conducted under the authority of the National Institute for Population Research and Training (NIPORT) of the Ministry

of Health and Family Welfare. It was implemented by Mitra and Associates, a Bangladeshi research firm located in Dhaka. Technical assistance was provided by ORC Macro through the MEASURE DHS program. Financial support for the survey was provided by the U.S. Agency for International Development (USAID)/Bangladesh.

FERTILITY

Fertility Levels and Trends. In 1971-1975, women in Bangladesh were having on average 6.3 children. The total fertility rate (TFR) declined to 5.1 fifteen years later, and to 4.3 in 1989-1991. The TFR plateaued at around 3.3 for most of the 1990s, when the three earlier BDHS surveys took place. Data from the 2004 BDHS indicate that after almost a decade-long stagnation, the Bangladesh fertility rate has declined slightly to 3.0 children per woman. Comparison of the Bangladesh TFR with fertility rates in other Asian countries that have implemented a DHS survey indicates that, with a TFR of 3.0, Bangladesh is in the mid-range among the countries—below Nepal (4.1 in 2001), Cambodia (3.8 in 2000), and the Philippines (3.5 in 2003), but above India (2.8 in 1998-1999), Indonesia (2.6 in 2002-2003), and Vietnam (1.9 in 2002).

Fertility Differentials. Differentials in fertility by background characteristics are substantial. Women in rural areas have more children than their urban counterparts (3.2 and 2.5 children per woman, respectively). The TFR is highest in Sylhet division (4.2) and lowest in Rajshahi (2.6). As expected, women's education is strongly associated with lower levels of fertility; the TFR decreases from 3.6 among women with no education to 2.2 among those who have at least completed their secondary education. Similar differentials are observed by wealth quintile, with the TFR decreasing from 4.0 among women in the lowest wealth quintile to 2.5 among those in the highest wealth quintile.

Unplanned Fertility. Despite a steady rise in the level of contraceptive use over the past thirty years, the 2004 BDHS data indicate that unplanned pregnancies are common in Bangladesh. Overall, 3 out of 10 births in Bangladesh are either unwanted (14 percent)

or mistimed and wanted later (16 percent). However, the proportion of unplanned births declined from 33 percent in 1999-2000 to 30 percent in 2004. The proportion of unwanted births did not change.

Fertility Preferences. There is considerable desire among currently married Bangladeshi women to stop having children. A total of 54 percent of women age 10-49 reported not wanting another child, and 6 percent are already sterilized. Twenty-one percent of women want to have a child but would prefer to wait two or more years. Thus, over 80 percent of women want either to space their next birth or to limit childbearing altogether. Only 13 percent of women would like to have a child soon (within two years). A comparison of the 1999-2000 and 2004 data shows that the proportion of women who want to limit childbearing has not changed.

As in the 1999-2000 BDHS, a majority of ever-married women and currently married men embrace the two-child family as an ideal (2.4 and 2.3 children, respectively).

FAMILY PLANNING

Knowledge of Contraception. Knowledge of family planning is universal in Bangladesh. Among ever-married women, the most widely known methods of family planning are the pill (100 percent), injectables (99 percent), female sterilization (96 percent), and condom (92 percent); these are followed by the IUD (85 percent), Norplant (76 percent), male sterilization (73 percent), periodic abstinence (70 percent), and withdrawal (58 percent).

Since overall knowledge of contraceptive methods was already high in 1999-2000, little change has taken place. However, knowledge of Norplant has increased from 56 to 77 percent among currently married women.

Use of Contraception. The contraceptive prevalence rate (any method) among currently married women is 58 percent. The most commonly used modern method is the pill (26 percent), followed by injectables (10 percent). Female sterilization and male condoms are used by 5

percent and 4 percent of married women, respectively, while Norplant, the IUD, and male sterilization are each used by only 1 percent. Periodic abstinence, used by 7 percent of married women, is the most commonly used traditional method.

Trends in Contraceptive Use. Over the past three decades, use of any method of contraception by married women has increased sevenfold, from 8 to 58 percent, while use of modern methods has increased almost tenfold, from 5 to 47 percent. The same trend was observed between the 1999-2000 BDHS and the 2004 BDHS, when use of any method increased from 54 to 58 percent and use of modern methods increased from 43 to 47 percent. Trends in the contraceptive method mix show that short-term methods, especially the pill, are gaining in popularity against long-term methods, such as the IUD, Norplant, and sterilization. The pill now accounts for 45 percent of all contraceptive use, compared with 35 percent in 1991. On the other hand, long-term methods now account for only 12 percent of all contraceptive use, compared with 30 percent in 1991.

Differentials in Contraceptive Use. Women in urban areas are slightly more likely to use contraceptive methods (63 percent) than their rural counterparts (57 percent); however, the condom is the only method that shows differentials in use by urban-rural residence: 8 percent in urban areas compared with only 3 percent in rural areas. Differentials are more marked by division: use of any method varies from 32 percent in Sylhet and 47 percent in Chittagong to 64 percent in Khulna and 68 percent in Rajshahi. Contraceptive prevalence is 54 percent in Barisal and 59 percent in Dhaka. There is little variation in contraceptive use by level of education. However, women in economically better-off households tend to use family planning more than those in households in the lowest wealth quintile (63 and 54 percent, respectively). The proportion of women using contraception increases with increasing number of children. Twenty-three percent of women with no children are currently using a contraceptive method, compared with 62 to 70 percent of women with two or more children.

Source of Modern Methods. In Bangladesh, both the public and private sectors are important sources of supply for users of modern methods (57 and 36 percent, respectively). The most common public sector source remains government fieldworkers (23

percent), although their share has declined substantially since 1993-1994 (42 percent). Upazila health complexes are the second most important public source (10 percent). Pharmacies (29 percent) provide most of the methods in the private sector (an increase from 21 percent in 1999-2000). Femicon, the most commonly used social marketing brand of pills, is distributed through a network of retail outlets including pharmacies. Of every ten pills used in Bangladesh, three carry the Femicon brand.

Contraceptive Discontinuation. One in two contraceptive users in Bangladesh stops using their method within 12 months of starting. The most common reason for discontinuation is side effects or health problems. Discontinuation rates are highest for condoms (72 percent) and withdrawal (60 percent), and lowest for periodic abstinence (41 percent).

Unmet Need for Family Planning. Eleven percent of married women have an unmet need for family planning. Unmet need is about equally divided between spacing and limiting births. Unmet need declined from 15 percent in 1999-2000 to 11 percent in 2004. It has remained high in Sylhet division (21 percent), while dropping substantially in Rajshahi (7 percent) and Khulna (8 percent). Overall, 84 percent of the demand for family planning is currently being met.

MATERNAL HEALTH

Antenatal Care. Antenatal care coverage increased sharply between the 1999-2000 BDHS and the 2004 BDHS. One-third of women received an antenatal checkup from a medically trained provider in 1999-2000 compared with one-half (49 percent) in 2004. Thirty-one percent of women received antenatal care from a doctor and 17 percent received care from a nurse, midwife, or paramedic. A relatively high proportion of women received no antenatal care (44 percent), especially in Sylhet (52 percent) and Barisal (53 percent).

Two in three women received at least two doses of tetanus toxoid for their most recent birth in the five years preceding the survey, 21 percent received only one tetanus toxoid injection, and 15 percent received none, which was an improvement since the 1999-2000 BDHS (19 percent).

Delivery Care. Nationally, nine in ten births in the last five years were delivered at home; only 9 percent were delivered in a health facility. Delivery in a health facility is substantially higher among women who have at least completed their secondary education (44 percent), and among those in the highest wealth quintile (30 percent). The data also show that only 13 percent of babies were delivered by medically trained providers, compared with 63 percent who were delivered by untrained birth assistants.

Postnatal Care. Only 15 percent of women who had a non-institutional live birth in the five years preceding the survey received postnatal care within two days of delivery; more than 80 percent received no postnatal care at all.

Maternal Complications around Delivery. One in four births in the five years preceding the survey had at least one of the following maternal complications around delivery—prolonged labor, excessive bleeding, baby's hands or feet came first, fever with foul-smelling discharge, convulsions/eclampsia. The most common complication was prolonged labor of over 12 hours, associated with one in six live births. For 11 percent of the births, the mothers experienced excessive bleeding, and 3 percent had convulsions. Two other problems, high fever with foul discharge and baby's hands or feet coming first, were reported for 5 and 1 percent of births, respectively.

Treatment was sought from a medically trained provider for only 29 percent of the cases that had maternal complications around delivery. Nearly four in ten women with complications did not seek any care. The 2004 BDHS data confirm the findings of the 2001 BMMS, that there are two main problems regarding the treatment of maternal complications: first, a large proportion of women with potentially life-threatening maternal complications seek no health care; and second, among those who do seek health care, about half seek assistance from providers that are not medically trained.

CHILD HEALTH

Childhood Mortality. Data from the 2004 BDHS show that under-five mortality (88 deaths per 1,000 live births) has continued to decline thanks primarily to the substantial decline (20 percent) in child mortality (age 1-4 years) over the past five years. However, this still means that for the most recent five-

year period, one in every eleven Bangladeshi children dies before reaching age five, while one in fifteen children dies before reaching the first birthday (65 deaths per 1,000 live births). A majority of infant deaths occur during the first month of life (neonatal mortality). The 2004 BDHS also collected information on causes of death. Overall, for all children under five, the two most important causes of death were: possible serious infections (31 percent) including possible ARI and diarrhea and ARI (21 percent), which particularly affect children age 1-11 months. Birth asphyxia (12 percent), which occurs in the first 28 days, diarrhea (7 percent), and prematurity/low birth weight (7 percent) were responsible for most of the other deaths.

Childhood Vaccination Coverage. Seventy-three percent of Bangladeshi children age 12-23 months are fully immunised—most of them by 12 months of age as recommended—while 3 percent have received no vaccinations. More than nine in ten children have received BCG and the first dose of DPT and polio vaccines. While coverage for the first dose of DPT and polio is high, there is a decline with subsequent doses, with only about 81 percent of children receiving the recommended three doses of these vaccines. Seventy-six percent of children have received measles vaccine. Full vaccination coverage is highest in Khulna division (83 percent) and lowest in Sylhet division (62 percent). Mother's education is strongly associated with children's vaccination coverage: only 60 percent of children of mothers with no education are fully vaccinated compared with 92 percent of children of highly educated mothers.

Child Illness and Treatment. Among children under five years of age, 21 percent were reported to have had symptoms of acute respiratory illness in the two weeks preceding the survey. Of these, only one-fifth were taken to a health facility or provider for treatment, and one-third received no treatment at all. Eight percent of children under five years had diarrhea in the two weeks preceding the survey. Of these, 16 percent were taken to a health provider. Use of oral rehydration therapy (ORT) for children with diarrhea has remained unchanged since 1999-2000, but there has been a shift toward greater use of the commercially available packets of oral rehydration salts (ORS), from 61 to 67 percent. Overall, 83 percent of the

children with diarrhea received ORS, recommended home fluids (RHF), or increased fluids.

Forty percent of children under five years had a fever in the two weeks preceding the survey. Of these, nearly two-thirds were taken to a provider for treatment, but only 19 percent were taken to a medically trained provider/facility.

NUTRITION

Breastfeeding Practices. Almost all (98 percent) Bangladeshi children are breastfed for some period of time. Twenty-four percent of infants were put to the breast within one hour of birth, and 83 percent started breastfeeding within the first day. This is a substantial increase when compared to the 1999-2000 BDHS data. The median duration of any breastfeeding in Bangladesh is 32 months, but it varies among divisions from 36 months in Khulna and Rajshahi to around 26 months in Chittagong and Sylhet.

Exclusive breastfeeding of children under six months (based on 24-hour period before the survey) has not improved in the past 10 years; it remained unchanged at around 45 percent between 1993-94 and 1999-2000, and has declined to 42 percent most recently.

Supplementary feeding of children who are also breastfed has greatly improved over the past decade. In 1993-1994, only 29 percent of children age 6-9 months received complementary foods while being breastfed, compared with 62 percent in 2004. The most commonly used complementary foods are rice, wheat, and porridge (over 60 percent); 20 to 25 percent of the children in this age group received other complementary foods (fruits, meat/fish/eggs, and green leafy vegetables), and a smaller proportion received *dal*.

Feeding children with a bottle with a nipple starts very young, and three in ten infants age 2-3 months receive some food this way. Also, commercially produced baby formula is more popular than it was at the time of the 1999-2000 BDHS.

Intake of Vitamin A. Ensuring that children 6-59 months receive enough vitamin A may be the single most effective child survival intervention because deficiencies in this micronutrient can cause blindness and increase the severity of infections such as measles

and diarrhea. Between the 1999-2000 BDHS and the 2004 BDHS, vitamin A supplementation among children 12-59 months increased from 80 to 84 percent, but it actually dropped by half for children age 9-11 months (from 73 to 38 percent). Consumption of fruits and vegetables rich in vitamin A is another way to ensure that children are protected from blindness or infection. Overall, 7 in 10 children under three consumed such foods.

Only 15 percent of mothers with a birth in the past five years reported receiving a vitamin A dose postpartum. Three percent of interviewed women reported night blindness during pregnancy.

Nutritional Status of Children. According to the 2004 BDHS which measured all children under five in the household, 43 percent of children are stunted and 17 percent severely stunted. Thirteen percent of children under five are wasted and 1 percent severely wasted. Weight-for-age results show that 48 percent of children under five are underweight, with 13 percent severely underweight. Comparison of children whose mothers were interviewed shows that in spite of the fact that child nutritional levels showed a substantial improvement from 1996-1997 to 1999-2000, since then no noticeable improvement has occurred except that the severe stunting has slightly decreased and overall wasting has increased from 10 to 13 percent.

Nutritional Status of Women. The mean height of Bangladeshi women is 151 centimetres, which is above the critical height of 145 centimetres. A high proportion of women (16 percent) are below 145 centimetres. Thirty-four percent of women were found to be chronically malnourished, their body mass index (BMI) being less than 18.5. One in ten women was found to be overweight or obese (BMI 25 or higher). A woman's place of residence, level of education, and household wealth quintile are strongly associated with her nutritional status. For example, 37 percent of rural women are considered thin (<18.5), compared with 25 percent of their urban counterparts. Among divisions, Sylhet has the highest proportion of women who are thin (48 percent) and Khulna the least (29 percent). Although Bangladeshi women with children under five years are not getting taller, there is a substantial improvement in mother's nutritional status as

measured by BMI. Since 1996-97, the proportion of mothers below the cutoff point of BMI of 18.5 continued to drop, from 52 percent in 1996-97 to 38 percent in 2004—a decline of 27 percent in less than ten years.

Arsenic in Drinking Water. Arsenic in drinking water is a hazard to human health. Its main source is arsenic-rich rocks through which the water has filtered. It may also occur because of mining or industrial activity. In Bangladesh, arsenic-contaminated water is found particularly in tubewells. Overall, in the 2004 BDHS, one in twelve households were found to have elevated levels of arsenic (equal to or greater than 50 parts per billion) in their drinking water. The problem is especially severe in Chittagong, where 22 percent of the households tested had arsenic-contaminated water; arsenic contamination is almost nonexistent in Barisal and Rajshahi (1 and 2 percent).

HIV/AIDS AND STIS

Awareness of HIV/AIDS. Knowledge of HIV/AIDS among ever-married women increased from 19 percent in 1996-1997 to 31 percent in 1999-2000, and then it almost doubled to 60 percent in 2004. For currently married men, the corresponding proportions are 34, 51, and 78 percent.

A respondent's place of residence, level of education, and household wealth quintile are strongly associated with HIV/AIDS awareness. Whereas 82 percent of women and 93 percent of men in urban areas have heard of AIDS, only 54 percent of women and 78 percent of men in rural areas have heard of the disease. Education is positively associated with knowledge of HIV/AIDS. It ranges from 37 percent among women with no education, to 71 percent among those who have completed primary school (only), to virtually all women (98 percent) who have completed secondary education. A similar pattern can be found when analyzing the data by wealth quintile.

Thirty-seven percent of ever-married women, 57 percent of never-married men, and 45 percent of currently married men know that condom use is a way to avoid contracting HIV/AIDS, a clear improvement over the results of the 1999-2000 BDHS. About one in three married women and one in eight among all men or currently married men know that limiting the number of sexual partners can prevent HIV/AIDS. Overall, six in ten women and 42 percent of men do not know any way to avoid the disease.

Among respondents who know of HIV/AIDS, seven in ten women and 84 percent of men correctly reported that a healthy looking person can have the AIDS virus.

In 2004, 29 percent of ever-married women were able to cite two or more correct ways to avoid contracting HIV/AIDS. Since 1999-2000, the unprompted knowledge of at least two correct ways to avoid HIV/AIDS has increased substantially among ever-married women (from 7 to 29 percent) and moderately among currently married men (from 19 to 26 percent).

Awareness of Sexually Transmitted Infections (STIs). Knowledge of STIs is generally lower than that of HIV/AIDS. Ninety-four percent of women and 78 percent of married men still do not have any knowledge of STIs. Knowledge of STIs is highest among women and men who have completed secondary education, 19 and 38 percent, respectively.

